

# 1997 SUPERFUND



## Permanent List of Priorities

Attached is the 1997 update of the Minnesota Permanent List of Priorities (PLP, the state Superfund list) as approved by the MPCA on June 30, 1997. The updated list comprises 138 MPCA-identified hazardous waste sites where investigation and cleanup are needed, cleanup is underway, or cleanup has been completed and long-term monitoring or maintenance continues. The sites are listed by county and then alphabetically, with a brief history, outline of actions to date, and future actions needed.

25 sites were removed this year and 2 were added. The deleted sites are:

- Becker County SLF
- Grand Rapids Area SLF
- Hanson and Mankato SLF
- Hopkins SLF
- Karlstad SLF
- Redwood County SLF
- Wadena SLF
- Dakhue SLF
- Red Rock SLF
- Bueckers SLF
- Korf Bros. SLF

- Meeker County SLF
- Leech Lake SLF
- La Grande SLF
- Burnsville SLF
- Clay County SLF
- Elk River SLF
- Fergus Falls SLF
- Greater Morrison SLF
- Kanabec County SLF
- Kandiyohi SLF
- Ponderosa SLF
- Yonak SLF
- Howe Soil Contamination
- Pine Bend SLF/Crosby American Demolition Landfill

Sites added to the list are:

- Docs Auto Salvage
- Pilgrim Cleaners

### PLP now available in electronic format!

The MPCA can provide the PLP list in a number of different formats:

- A full-size, printed version;
- An abbreviated version with more limited information;
- An electronic version on Microsoft Excel for IBM; and
- An electronic version which can be downloaded from the MPCA's web site after its introduction in January 1998.

The information included here is current data as of June 1997, however names of assigned project staff may change. Also, the PLP list includes only a brief summary of the sites' history and status. More information is available in the MPCA's files. To receive copies of the PLP in other formats, or to request more information about the Minnesota Superfund program, call the MPCA Public Information Office at (612) 297-1607; toll free 1 (800) 657-3864; TDD (612) 282-5332; or send an

e-mail to Katherine Carlson  
@pca.state.mn.us., or call  
Gary Krueger at (612) 296-6139.

Minnesota Pollution Control Agency - 520 Lafayette Road - St. Paul, Minnesota 55155

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# Minnesota Superfund Sites by County

## **Anoka County**

Anoka Municipal Sanitary Landfill (SLF)  
Boise Cascade/Medtronic  
Boise Cascade/Onan  
Dealers Manufacturing Co.  
FMC Corp./Fridley Plant  
Fridley Commons Park Well Field  
Kurt Manufacturing  
South Andover  
U.S. Naval Industrial Reserve Ordnance Plant (NIROP)

## **Beltrami County**

Bemidji Gas Manufacturing

## **Benton County**

Rice Municipal Well #2

## **Blue Earth County**

LeHillier Mankato  
Mankato Plating Co.

## **Carlton County**

Conoco, Inc./Wrenshall  
Jerry's Tank Service

## **Cass County**

Agate Lake Scrap Yard  
St. Regis Paper

## **Chisago County**

Pine Lane SLF

## **Cottonwood County**

Windom Dump

## **Crow Wing County**

Brainerd Former City Dump  
Burlington Northern  
Burlington Northern Car Shops  
Crow Wing County SLF  
SE Brainerd Ground-Water Contamination

## **Dakota County**

Castle Rock Ground-Water Contamination  
8701 Concord Blvd. Dump  
Freeway SLF  
General Coatings, Inc.  
Old Freeway Dump  
Pine Street Dump  
U of M/Rosemount Research Center

## **Dodge County**

Dodge County Sanitary Bypass Landfill

## **Fillmore County**

Ironwood SLF

## **Goodhue County**

Foot, S.B., Tanning Sludge Disposal Area

## **Hennepin County**

Archer Daniels Midland/Hwy. 280 Site  
Bassett's Creek/Irving Ave. Dump  
Brooklyn Park Dump  
B.J. Carney Pole Yard  
Cedar Services  
Control Data Corp./Printed Circuits Operations  
Docs Auto Salvage  
Electronic Industries, Inc.  
Flying Cloud SLF  
General Mills  
Glidden Co.  
Gopher Oil/Thornton  
Gopher Oil/Delaware  
Honeywell, Inc./Golden Valley Plant  
Interplastic Corporation  
Joslyn Manufacturing and Supply Co.  
McLaughlin Gormley King Co.  
Mibco  
Minnegasco/Minneapolis Gas Mfg.  
NL Industries/Taracorp/Golden Auto  
Pilgrim Cleaners  
Reilly Tar  
Robbinsdale Development Site  
Schloff Chemical

## **Shafer Metal Recycling**

Superior Plating  
Tonka Main Plant  
Twin Cities Air Force Reserve Base  
Union Scrap II and III  
Valentine-Clark  
Warden Oil. Co.  
West River Parkway Site  
White House Restaurant (former)  
Whittaker Corporation  
Woodlake SLF

## **Houston County**

Houston County SLF  
Spring Grove Municipal Well Field

## **Isanti County**

Isanti Solvent Site

## **Kandiyohi County**

Willmar City Dump

## **Koochiching County**

Boise Cascade Paint Waste Dump  
Koochiching County SLF  
Littlefork Ground-Water Contamination

## **Lake County**

Finland Air Force Base

## **Le Sueur County**

Elysian Former City Dump  
Tellijohn SLF

## **Mille Lacs County**

Westling Manufacturing, Inc.

## **Olmsted County**

Rochester Gas Manufacturing

## **Otter Tail County**

Battle Lake Area SLF  
Perham Arsenic Site  
Perham Municipal Airfield

## **Pine County**

Ashland Oil/Pine County  
3M Kerrick Disposal Site

## **Ramsey County**

Bell Lumber & Pole Co.  
Ecolotech, Inc.  
Highway 96 Dump  
Kaplan, H.S., Scrap Iron & Metal Co.  
Koppers Coke  
MacGillis & Gibbs  
Metals Reduction  
Northwestern Refining  
Pig's Eye Landfill  
St. Paul Levee Property  
Schnitzer Iron & Metal Co.  
Trio Solvent Site  
Twin Cities Army Ammunition Plant (TCAAP)

## **Rice County**

Faribault Coal Gasification Plant  
Faribault Municipal Well Field  
Nutting Truck & Caster Co.  
Sheldahl

## **Roseau County**

Salol (Roseau) SLF

## **St. Louis County**

Arrowhead Refining Co.  
Duluth Air Force Base  
Duluth Former City Dump  
St. Louis River/Interlake/Duluth Tar  
St. Louis River/U.S. Steel  
West Duluth Industrial Site  
Western Lake Superior Sanitary District SLF

**Scott County**

Anchor Glass Container  
Louisville SLF  
PCI, Inc.  
Voss Scrapyard

**Sterns County**

Burlington Northern Car Shop/Waite Park  
Electric Machinery  
Waite Park Ground-Water Contamination Site

**Todd County**

Killian SLF  
Long Prairie Ground-Water Contamination

**Wabasha County**

Wabasha County SLF

**Wadena County**

Ritari Post and Pole

**Washington County**

3M Chemolite Disposal Site  
Andersen Corporation  
Ashland Oil/Cottage Grove  
Ashland Oil/Park Penta/Sonford Oil  
Ashland Refinery  
Baytown Township Ground-Water  
Contamination  
General Fabrication Site  
Lakeland Ground-Water Contamination  
Oakdale Dump  
St. Paul Park Ground-Water Contamination  
Stillwater City Dump  
Tower Asphalt

**Winona County**

Lewiston Ground-Water Contamination  
Winona County SLF  
Winona Ground-Water Contamination

**Wright County**

Lindala SLF

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# MINNESOTA PERMANENT LIST OF PRIORITIES

## Explanation of terms and classifications

**Class A: Declared Emergencies.** This class includes all sites at which an emergency has been declared by the Commissioner of the Minnesota Pollution Control Agency or the Minnesota Department of Agriculture (MDA). According to state Superfund law, an “emergency” means the Commissioner has determined that immediate action is required to prevent, minimize, or mitigate damage to the public health or the environment. An “advisory” means a warning by the Commissioner, Minnesota Department of Health, Minnesota Department of Natural Resources, or MDA issued to the public concerning a hazardous substance, pollutant, or contaminant at or near a site.

**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 response actions is in progress. This class also includes all sites where activities are necessary to operate and maintain response actions that have been completed previously. Examples include continued operation of a ground-water pump-out system, long-term monitoring, and work necessary to maintain the integrity of the site, such as maintaining cover or closure.

**Class C: Response Actions necessary or in Progress or First-Year Operation and Maintenance at a Site.** This class includes all sites where Remedial Design and implementation of Response Actions (other than Class A or B) such as barrel removal, soil decontamination, first-year ground-water pump-out or monitoring, are necessary to effect a permanent remedy or cleanup of a site.

**Class D: Remedial Investigations and Feasibility Studies (RI/FS) Necessary or in Progress.** This class includes all sites that require a Remedial Investigation (RI) to determine the extent, magnitude, and nature of the release or threatened release, and a Feasibility Study (FS) to evaluate and select response actions.

**National Priorities List (NPL):** The federal Superfund list. To be eligible for inclusion on the NPL, and thus for federal funding, a site must have a HRS score of at least 28.50.

**Permanent List of Priorities (PLP):** The state Superfund list. These are sites that may be eligible for state funding.

**Score:** A site’s score on the federal Hazard Ranking System (HRS). This system, used for NPL and PLP site, uses a mathematical model to assign a score from 1 to 100 indicating the relative hazard posed by a site (1 indicating lowest hazard).



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June  
1997

## Site Name: **Archer Daniels Midland/Highway 280 Site**

Location: Minneapolis/St. Paul, Hennepin/Ramsey Counties

Address: 419-29th Avenue Southeast

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation and Feasibility Study

National Priority List: No Score: 14.51

### Site Description:

The Archer Daniels Midland/Highway 280 Site is located in an industrial corridor along the border of Minneapolis and St. Paul. During construction activities at the Site in 1991, buried drums were discovered. An investigation revealed buried drums, estimated at between 300 and 500, which contained various wastes. The drums were found in waste/fill materials that were disposed of at the Site. These waste/fill materials are estimated to be in excess of 200,000 cubic yards and contain incinerator ash, fly ash, construction debris, and "foots," a reported by-product of linseed oil production.

#### Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

#### MPCA

Frank Wallner  
Lifeng Guo  
Steven Schoff  
Alan Williams  
Kathy Carlson

#### Actions Taken To Date:

- Preliminary Remedial Investigation done at Site by Barr Engineering during July, August, and September 1991.
- Site Security Fencing.
- Removal Investigation carried out by ENSR in August and September 1992.
- Removal Action Work Plan submitted to MPCA November 1992.
- Limited Remedial Investigation by CRA submitted to MPCA February 1994.
- Interim Response Action Plan by CRA submitted to MPCA in February 1994.
- Focused Feasibility Study by CRA submitted to MPCA in February 1994.
- Land Treatment work plan by CRA submitted to MPCA in August 1994.
- Scope of Work Bio-venting Pilot Study by CRA submitted August 1994.
- Interim Response Action (removal of buried drums) completed in December 1994.
- Final Remedial Investigation Report submitted in January 1996.

#### Actions Needed:

- Review Final RI
- Set cleanup goals Implement final response action for contaminated soils.



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## Site Name: **Agate Lake Scrap Yard**

Location: Northwest of Brainerd, Cass County  
10 miles northwest of Brainerd, northwest of Agate Lake

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and Maintenance/Long-Term Monitoring Ongoing

National Priority List: No Score: 30

### Site Description:

The Agate Lake Scrap Yard accepted, stored, and scrapped transformers without the knowledge that they contained polychlorinated biphenyls. Transformer oil was burned in an uncontrolled scrap yard aluminum smelter. Contamination of soil from spilled transformer oils occurred on-site. The facility also accepted and stored drums of unknown liquids.

#### Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

#### MPCA

Steven Schoff  
Jim Pennino  
Steve Schoff  
Jocelyn Olson  
Stacy Casey

#### Actions Taken To Date:

- Burlington Northern removed transformers and drums of liquid in January 1983.
- Crow Wing Coop removed transformers in August 1983.
- Consultant for Crow Wing excavated contaminated soil and disposed of soil on-site August 1983 without prior MPCA staff approval.
- Trichloroethylene found in on-site drinking water well on September 20, 1984, and November 5, 1984.
- Minnesota Department of Health issued a health advisory to residents recommending not using water for drinking and cooking purposes.
- Request For Response Action was issued January 1986.
- Iron scrap, tires, garbage removed from site during June, July 1986.
- Monitoring wells installed and sampled, soil borings taken; lab results not yet obtained.
- Final Remedial Investigation report received January 1987.
- Submitted Feasibility Study and Response Action Plan in October 1987.
- Access Agreement was signed by all parties October 18, 1990.
- Additional confirmatory samples taken.
- Interim Response Action removing ash pile carried out September 1992.

(continued next page)

## Agate Lake Scrap Yard (continued)

- Final Feasibility Study was approved by EPA April 2, 1993.
- A Proposed Plan was developed by MPCA staff and approved by EPA in May 1993.
- A public meeting was held on June 1, 1993, to discuss the Proposed Plan.
- A final Record of Decision written by MPCA staff was approved by EPA January 13, 1994.
- Final Response Actions were completed September 1994.
- EPA with concurrence of MPCA staff affected lists site from NPL, July 1997

### Actions Needed:

- Long-term monitoring of the affected ground water.
- Five-year review in 2000.
- MPCA delisting from PLP, Fall 1997.



Site Name: **Anchor Glass Container**

Location: Shakopee, Minnesota

Address: 4108 Valley Industrial Boulevard

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 16

### Site Description:

Paints, chemical pigments, glass (cullet) and solvents were disposed of in a trench 14 feet deep in 1968, following property transfer. Soil and wastes contained dibromochloromethane, methyl ethyl ketone, xylene, toluene, 1,1,2-trichloroethane, and other contaminants. Ground water was contaminated with 1,1,2-trichloroethane, trichloroethylene (TCE), dibromochloromethane, xylene, toluene and others.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Dale Trippler
Technical Analyst	Liefeng Guo
Attorney General	
Public Information	Galynn Nordstrom

### Actions Taken To Date:

- Contaminated soil and contaminants excavated and shipped to off-site hazardous waste landfill, November 1987.
- Site investigation conducted.
- Ground-water monitoring wells installed and sampled.
- Waste Trench Excavation Field Report submitted March 10, 1988.
- Meeting with Anchor Glass and B.A. Liesch on November 15, 1988.
- Phase II ground water work plan submitted February 21, 1989.
- Phase II property boundary monitoring wells installed April 1989.
- Ground-water sampling at monitoring wells completed May 16, 1989.
- Ground-water monitoring results submitted June 22, 1989.
- Round two, ground-water sampling completed July 20, 1989.
- Hydrogeologic evaluation and 1989 Water Quality Analysis Report submitted March 6, 1990.
- Remedial Action Plan submitted July 18, 1990.
- Anchor sent Requirement to Provide Information on December 13, 1990.
- Anchor responds to Requirement to Provide Information on January 30, 1991.
- The 1990 Water Quality Analysis submitted on February 21, 1991.
- Ground Water Quality Results submitted on May 2, 1991.

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## Anchor Glass Container (continued)

- Minnesota Pollution Control Agency (MPCA) provides comments on 1989 Hydrologic Evaluation and 1989 Water Quality Analysis Report, 1990 Water Quality Analysis and Remedial Action Plan on May 15, 1991.
- MPCA met with Anchor Glass and B. A. Liesch to discuss MPCA comments to 1989 Hydrogeologic Evaluation and Water Quality Analysis Report, 1990 Water Quality Analysis, and Remedial Action Plan on May 16, 1991.
- Anchor Glass was sent an MPCA Commissioner's Notice Letter on May 17, 1991.
- Anchor Glass responded to Commissioner's Notice Letter on June 12, 1991.
- 1991 Ground-water monitoring Report submitted on February 3, 1992.
- Ground-water monitoring results for April 8, 1992, sampling event received by MPCA on June 24, 1992.
- Ground-Water Monitoring results for July 7, 1992, sampling event received by MPCA on August 10, 1992.
- MPCA received Project Plans for site from Anchor Glass on October 26, 1992.
- MPCA approved Anchor Glass project with modifications plans on November 25, 1992.
- MPCA received Residual Contamination Investigation Work Plan on December 24, 1992.
- MPCA approves the Residual Contamination Investigation Work Plan with modifications on January 20, 1993.
- MPCA received Limited Feasibility Study May 28, 1993.
- MPCA received revised Limited Feasibility Study workplan May 11, 1994.
- MPCA approved revised Limited Feasibility Study workplan July 26, 1994.
- MPCA issued a risk assessment to Anchor Glass on September 18, 1995.
- MPCA removed soil leaching pathway from further consideration on October 25, 1995.
- MPCA submitted draft MDD to interested parties for comment in January 1996.
- Anchor Glass submitted a "Remedial Action Design (RAD)" in May 1996.
- MPCA approved the RAD on July 17, 1996.
- On September 13, 1996, Anchor Glass filed for bankruptcy.

### Actions Needed:

- Request For Response Action (RFRA) or Consent Order (CO), only if necessary.
- Hold public meeting to present the MDD and solicit public comments. After taking all comments into consideration, issue final MDD.
- Design and implement Response Actions.



Site Name: **Andersen Corporation**

Location: Bayport, Washington County

Address: 100 4th Avenue North

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 24

### Site Description:

The Andersen Corporation has manufactured windows since the early 1900s, and has used wood preservatives in the process since the 1930s. The Site is adjacent to Andersen Bay of the St. Croix River. Local shallow ground water is contaminated with pentachlorophenol (PCP), tri-n-butyltin, hydrocarbon carriers, and other contaminants. Several response actions, including the installation of a ground-water pump-out system with carbon treatment, have been implemented by the Andersen Corporation.

### Assigned Staff:

Project Manager  
Technical Analyst  
Attorney General  
Public Information

### MPCA

Fred Campbell  
  
Alan Williams  
Kathy Carlson

### Actions Taken To Date:

- Spill of Milltreat E with PCP in September 1982, was followed by excavation of saturated soil, installation of recovery wells with oil-water separation, and carbon adsorption system and a monitoring program which mitigated potential damage to the environment by the spill.
- A tank test in November 1982 indicated a leak in a solvent-containing underground tank.
- Additional monitoring well programs, aquifer and soil characterization, and investigative activities were conducted between 1983-1986.
- Additional recovery wells were installed between 1986-1987.
- Andersen entered into a Response Order by Consent with the Minnesota Pollution Control Agency (MPCA) in January 1987.
- Remedial Investigation work plans and documents submitted in April 1987.
- Remedial Investigation Final Report submitted in March 1988.
- Alternatives for PCP mitigation have been evaluated, including bioremediation, UV oxidation, and soil excavation.
- Approximately 6,000 gallons of recovered Milltreat E shipped to Rollins for incineration on April 23, 1990.
- Feasibility Study submitted April 1994. Approved by MPCA May 18, 1994.

(continued next page)

## Andersen Corporation (continued)

- Focused Feasibility Study submitted September 1994. Approved by MPCA January 13, 1995.
- In-Situ Bioremediation Pilot Study Workplan submitted April 1995. Approved by MPCA July 13, 1995.
- Minnesota Decision Document completed and approved by MPCA July 20, 1995.
- Implementation of In-Situ Bioremediation Pilot Study January 12, 1996.

### Actions Needed:

- Maintain Response Actions.
- Monitor progress of Pilot Study.



## Site Name: **Anoka Regional Mixed Municipal Solid Waste Land Disposal Facility**

Location: City of Ramsey, Anoka County

Address: 14730 Northwest Sunfish Boulevard

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation

National Priority List: No      Score: 51

### Site Description:

The Anoka Regional Mixed Municipal Solid Waste Land Disposal Facility, is owned and operated by Waste Management of Minnesota, Inc. (WMMI), and received industrial and mixed municipal solid waste. Water samples from monitoring wells indicate the presence of volatile organic hydrocarbons and phthalate compounds in the ground water under the landfill site. No residential well contamination has been found to date. WMMI received a permit for a vertical expansion of the landfill on May 11, 1989. The landfill ceased accepting solid waste on October 8, 1993.

### Assigned Staff:

Project Manager	<u>MPCA</u> Larry Olson
Technical Analyst	Ingrid Verhagen
On-Site Inspector	Pat Hanson
Attorney General	Tibor Galo
Public Information	Julie Swiler

### Actions Taken To Date:

- The Minnesota Pollution Control Agency (MPCA) permit issued on September 28, 1972, was modified on October 24, 1978, and amended on April 11, 1984.
- Consent Order between MPCA and permittee was executed on May 30, 1985.
- The Evaluation Report and Remedial Investigation (RI) Work Plan Addendum was approved on May 21, 1986.
- The RI work plan was approved on October 20, 1987.
- The Quality Assurance/Quality Control (QA/QC) plan was approved by MPCA on December 5, 1986.
- The RI Final Report was submitted to MPCA on February 27, 1987.
- An Interim Studies Work Plan was submitted to MPCA on March 9, 1987, which identified additional studies necessary to obtain critical design and operational data.
- MPCA comment letter on RI Final Report, sent to WMMI on March 30, 1987, required additional tasks to be performed. This letter also approved the work proposed in the Interim Studies Report.

(continued next page)



**Anoka Regional Mixed Municipal Solid Waste Land Disposal Facility  
(continued)**

- The Alternatives Report (AR) was submitted on June 12, 1987.
- MPCA response letter on the AR was issued on August 4, 1987.
- The Interim Studies Report was submitted on October 5, 1987, to MPCA.
- Final approval for the RI and Interim Studies Report was issued by MPCA on November 13, 1987.
- The Detailed Analysis Report (DAR) was submitted by WMMI to the MPCA on January 8, 1988.
- The DAR was approved on July 19, 1988, by the MPCA.
- The Response Action Work Plan was submitted to the MPCA on September 30, 1988.
- The Response Action Work Plan was approved by the MPCA on December 16, 1988. This identified the components of the Response Action Plan (RAP) which must be submitted and approved before the Response Actions can be implemented.
- The Water Quality Confirmation Event Report and Aquifer Analysis Report were submitted to the MPCA for review in May 1989, as part of the RAP.
- The First Report Soil/Synthetic Final Cover Testing Program was submitted to the MPCA in August 1989.
- The Response Action Plan was approved by the MPCA on May 24, 1990.
- WMMI submitted an NPDES Permit application to the MPCA on August 6, 1990, for construction of a pipeline to discharge treated ground water from the proposed treatment facility to the Mississippi River.
- The Soil/Synthetic Final Cover Testing Program was approved by the MPCA on September 11, 1990.
- The MPCA issued the draft NPDES permit on January 24, 1991.
- On August 7, 1991, the MPCA granted a three-month extension to November 1, 1991, for implementation of the Response Actions due to delays encountered by WMMI while obtaining the required permits and approvals for the RAP.

The Response Action was completed and began operation on October 31, 1991. The Response Action consists of:

- Contaminated ground-water collection from 12 barrier and 8 recovery extraction wells.
- Contaminated ground water treated by two air strippers, and filtration of the stripped VOCs through two carbon filters.
- Treated ground water discharge via a pipeline from the treatment facility to the City of Ramsey storm sewer.

The treatment facility treats and discharges approximately 1.5 million gallons of water per day. WMMI submits Annual and Quarterly Reports on the operation of the treatment system.

**Anoka Regional Mixed Municipal Solid Waste Land Disposal Facility  
(continued)**

Final Cover:

- Final cover construction began in 1993 and was completed in 1994. Approximately 27 acres of the landfill area was covered in 1993. Approximately 40 acres of final cover and surface-water management system was completed in 1994.

Gas Extraction System:

- The landfill also includes an active landfill gas-extraction system. The extraction system consists of 43 gas-extraction wells, piping, two condensate drains, one condensate knockout, two blowers, and a flare. The blowers are housed in a 22' x 22' pole building.

A back-up gas venting system is also maintained along the west property boundary. This system consists of ten extraction wells and a blower installed outside the limit of the fill area. This system will be operated if methane gas concentration exceeds one percent of the LEL in any of the monitoring probes along the west property boundary.

Actions Needed:

- Continue to report operational and water quality data to demonstrate the system is in compliance with the cleanup standards.
- Negotiate a Binding Agreement with WMMI so that the State can accept long term operation and maintenance of the operating Response Action equipment.



**Site Name: Arrowhead Refinery Co.**

**Location:** Hermantown, St. Louis County

**Address:** 3519 Miller Trunk Highway

**Priority:** Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and Maintenance/Long-Term Monitoring Ongoing  
C: Response Action Design and Implementation

**National Priority List:** Yes      **Score:** 40

**Site Description:**

The company operated as a re-refiner of used oil from 1945-1977. The operation generated a highly acidic, metal-laden sludge, which was disposed of in a two-acre lagoon on company property. Sludge disposal resulted in the contamination of soil, surface water, and ground water around the site. Contaminants include oil and grease, heavy metals, cyanide, phenols, polynuclear aromatic hydrocarbons and polychlorinated biphenyls. Monitoring of adjacent private wells indicates that contaminants have not migrated off-site.

**Assigned Staff**

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

**MPCA**

John Moeger  
Pat Lannon  
Steve Schoff  
Steve Shakman  
Julie Swiler

**Actions Taken To Date:**

- The Minnesota Pollution Control Agency (MPCA) conducted an initial site investigation in April 1976.
- MPCA ordered Arrowhead to cease activities in December 1976.
- U.S. Environmental Protection Agency (EPA) completed an emergency cleanup action, under Section 311 of the Clean Water Act, which resulted in the diversion of surface water around the site and installation of a fence around the sludge lagoon in November 1980.
- EPA completed a preliminary hydrogeologic investigation; sludge was characterized, monitoring wells were installed, soil and ground water samples were collected for analysis in December 1980.
- EPA conducted a Remedial Investigation/Feasibility Study to determine the extent of contamination and to evaluate Remedial Action alternatives in May 1984 to August 1986.
- EPA issued Record of Decision for Response Action on September 30, 1986, without MPCA concurrence; concurrence furnished in early 1990.
- Pre-design investigations and treatability studies initiated; completed early 1990.

**Arrowhead Refinery Co. (continued)**

- Sludge treatability study initiated; study completed Fall 1989.
- MPCA erects a better security fence in January 1990.
- EPA issues Section 106 Order for ground water cleanup in April 1990; MPCA issues identical RFRA in May 1990.
- EPA issues Section 122 Special Notice for source cleanup in June 1990; MPCA issues identical RFRA in May 1990.
- Several RPs have come forward in response to Section 106 Order; RA of residential hookups to public water completed.
- Several RPs have undertaken RD/RA of ground water extraction and treatment system.
- EPA issues Section 106 order regarding soil and source material (sludge) on May 31, 1991.
- MPCA biotreatability study done.
- Completion of ground water RD/RA Phase I by the Minnesota Arrowhead Site Committee (MASC), the RP steering committee, in June 1993.
- EPA/MPCA approved MASC sludge reprocessing treatability study in August 1993.
- Negotiations initiated with MPCA, EPA, and MASC for a Mixed Funding Decree Settlement in December 1993.
- Amended Record of Decision by EPA, February 1994, revising remedy for source material and contaminated soils.
- Negotiations result in a draft Mixed Work Consent Decree, distributed September 1994, for RP signatures.
- Arrowhead Remedial Action Group (ARAG), the group of settling defendants to the Consent Decree, forms and begins RD in September 1994, and site preparation at the Site in October 1994, for the source material RD/RA.
- EPA begins RD for the soils operable unit in September 1994; completion is delayed due to federal budget freeze.
- Consent Decree lodged with the court March 1995, and entered on May 22, 1995.
- Minnesota Attorney General files a complaint joining the MPCA to the 106 Cost Recovery Litigation.
- ARAG begins source material RA in June 1995, completion is delayed due to weather, equipment problems and an unknown quantity of filter cake.
- MPCA takes over Long-term remedial action (LTRA) Operation & Maintenance of ground-water system in July 1996.
- EPA receives funding approval November 1995, and completes RD in March 1996; RA scheduled to begin May 1996.

**Actions Needed:**

- Provide EPA with management assistance during RA for soils and sediments cleanup.

(contin' d next page)

- Continue to provide EPA with oversight support during RPDRA for source material cleanup.
- Continued MPCA operation and maintenance of ground water system until cleanup levels are achieved.
- Completion of source material RA and final inspection.
- Completion of soils and sediments RA.
- Delisting of the site following source material and soils and sediments construction completions.



Site Name: **Ashland Oil Co. - Cottage Grove**

Location: Cottage Grove, Washington County

Address: 103rd Street South and Hadley Avenue

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 34

#### Site Description:

Disposal lagoons and barrel burial pit were utilized during the 1960s for petroleum wastes. Soil and ground water are contaminated.

#### Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

#### MPCA

Frank Wallner  
Jim Lundy  
Steve Schoff  
Beverly Conerton  
Kathy Carlson

#### Actions Taken To Date:

- "Hotline" complaint received in November 1980, regarding disposal of oil refinery waste at the site.
- Notice of Violation issued February 2, 1981, to Ashland Oil Company requiring soil and ground water study.
- U.S. Environmental Protection Agency Field Investigation Team contractor conducted soil borings and installed three monitoring wells at the site on June 28, 1982, and sampled a monitoring well the week of October 4, 1982. Results from well indicate elevated metal concentrations.
- Request for Information issued by Minnesota Pollution Control Agency (MPCA) staff to Ashland in November 1984.
- In December 1984, MPCA staff sampled buried waste and soil. Analysis indicates buried wastes are hazardous waste.
- The MPCA issued a Request for Response Action to Ashland in March 1985.
- Remedial Investigation (RI) started July 1986.
- RI Final Report Approved July 1987.
- Alternatives Report approved November 1987.
- Proposed Plan issued to community May 1989.
- Public Meeting held May 5, 1989.
- Selected remedy was capping; capping proposal abandoned in 1989.
- Ashland submits Preliminary List of Alternatives dated June 9, 1995.
- Ashland submits a new Remedial Action Plan dated August 3, 1995.
- Ashland submits a Soil Boring Investigation Report, dated December 6, 1995.
- On-going discussions about adequacy of soil boring data.

(continued next page)

Actions Needed:

- Select a Response Action Alternative.
- Design and implement Response Actions.



Site Name: **Ashland Oil Co. - Pine County**

Location: Chengwatana State Forest, Pine County  
7 1/2 miles east of Veroun on County Road 14

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 22

Site Description:

Soil and ground water are contaminated from refinery waste disposal by Ashland Oil approximately 30 years ago and phenol waste disposal by Burlington Northern Railroad 20 years ago.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Frank Wallner
Technical Analyst	Jim Lundy
On-Site Inspector	Steve Schoff
Attorney General	Beverly Conerton
Public Information	Stacy Casey

Actions Taken To Date:

- Meeting with representatives of Ashland Oil to discuss MPCA's investigation on December 12, 1980.
- Response received from Ashland Oil on February 9, 1981, to MPCA questions of December 12, 1980.
- On July 5, 1982, Environmental Protection Agency Field Investigation Team contractor conducted soil borings and installed monitoring wells on the site.
- Field Investigation Team sampled monitoring wells the week of October 4, 1982.
- Results from Field Investigation Team monitoring received by MPCA on January 5, 1983.
- MPCA sampled surface waters on-site on May 11, 1983.
- MPCA sampled surface and ground water in October 1984. Analysis indicates that surface and ground water are contaminated.
- MPCA issued a Request For Response Action to Ashland and Burlington Northern Railroad in December, 1984.
- Remedial Investigation (RI) began November 1985.
- RI Final Report submitted July 1986.
- RI Final Report approved February 27, 1987.
- Alternatives Report approved September 3, 1987.
- Treatability Study approved May 1990.
- Alternative selected and public meeting held on April 17, 1991.
- Spray irrigation/pumpout system installed in Fall 1992.

(continued next page)

Actions Needed:

- Ongoing monitoring and maintenance of system
- Review data to determine if site can be delisted



Site Name: **Ashland Oil/Park Penta/Sonford Products Site**

Location: St. Paul Park, Washington County

Address: 100 East Broadway

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 32

**Site Description:**

MPCA staff received complaints alleging frequent spills of pentachlorophenol and improper disposal of refinery wastes on-site. This resulted in PCP soil and ground-water contamination. There is oily/PCP contaminant free product down gradient of the site.

Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

MPCA

Frank Wallner  
Jim Lundy  
Paul Estuesta  
Beverly Conerton  
Kathy Carlson

Actions Taken To Date:

- Ashland hired a contractor in September 1984, to identify, package, and dispose of bulk quantities of abandoned hazardous wastes at the former Sonford, Park Penta facility.
- U.S. EPA Field Investigative Team (FIT) conducted a site inspection on October 23, 1984.
- U.S. EPA FIT sampled area well water for priority pollutants April 15, 1985.
- MPCA staff received a complaint that alleged refinery wastes were disposed of on-site on November 12, 1985.
- MPCA received U.S. EPA FIT inspection report and sample results which indicated significant ground-water contamination on-site on January 13, 1986.
- The site was nominated for inclusion on the National Priority List on May 27, 1986.
- Request for Information issued.
- Ashland submits Remedial Investigation (RI) Work Plan August 1988.
- MPCA staff approves RI Work Plan October 7, 1988.
- Ashland conducts RI.

## Ashland Oil/Park Penta/Sonford Products Site (continued)

- RI final report submitted to MPCA September 1990.
- Feasibility Study submitted November 1991.
- Commissioner Notice Letters sent to PRPs December 1992.
- RFRAs issued June 22, 1993.

- Ashland submitted the following documentation:
  - Supplemental RI work plan, September 15, 1993
  - Field Sampling Plan, September 15, 1993.
  - Health and Safety Plan, September 15, 1993.
  - Quality Assurance Plan, September 15, 1993.
  - Quality Assurance Manual, September 15, 1993.
  - Site Security/Safety Plan, November 19, 1993.
  - Feasibility Study, November 19, 1993.

All of the above approved by MPCA on February 8, 1994.

- Fact sheets sent to nearby residents in July 1994.
- Bay West submits Remedial Design/RAP to MPCA on May 1994. Approved by MPCA in August 1994.
- Thermal Desorption Work Plan for PCP-contaminated soils submitted in July 1995.
- Thermal desorption alternative approved January 10, 1996.
- Thermal desorption alternative abandoned. Ashland completed excavation of PCP-contaminated soils and disposed of them in a Laidlaw hazardous waste facility - completed January 1997.
- Ground-water pump-out and treatment system started in mid 1996.
- Free product pumpout system started in mid 1996.

### Actions Needed:

- Ongoing monitoring.
- Investigate the impact to the Jordan aquifer



Site Name: **Ashland Refinery**

Location: St. Paul Park, Washington County

Address: 639 - 2nd Street

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 32

### Site Description:

Ashland Oil, Inc. operates a refinery in St. Paul Park. Past refinery practices resulted in the release of very large volumes of petroleum. Ground water in a sensitive aquifer beneath the refinery is contaminated with several feet of free product and dissolved contaminants.

### Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

### MPCA

Frank Wallner  
Jim Lundy  
Steve Schoff  
Beverly Conerton  
Kathy Carlson

### Actions Taken To Date:

- Request For Information.
- Remedial Investigation (RI) Work Plan submitted to MPCA staff in May 1989.
- RI Work Plan approved July 1989.
- RI Phase I completed July 1990.
- RI completed February 1991.
- Detailed Analysis Report, July 1992.
- RAP Work Plan submitted, December 1993.
- RAP Work Plan approved, March 1994.
- Conceptual Design for Soils submitted December 1993; approved March 1994.
- Response Action Plan submitted September 1994; approved November 1994.
- Response Action Plan (recovery wells) initiated in summer 1994.
- North French Drain Investigation.
- Extension of North French Drain, spring of 1994.
- Additional groundwater pumpout wells installed in 1995/1996.
- Installation of free product system completed in 1996 but the system will likely need adjustments and/or additional wells.

### Actions Needed:

- Complete installation of response actions in river flats area.



Site Name: **B. J. Carney Pole Yard**

Location: Minneapolis, Hennepin  
47th Avenue North and Osseo Road

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation

National Priority List: No      Score: 37.99

**B.J. Carney Pole Yard (continued)**

Actions Needed:

- Complete a Minnesota Decision Document (MDD).
- Complete response actions.

**Site Description:**

B. J. Carney Company operated a pole-treating plant on property leased from Soo Line Railroad Company from 1923 until 1973. In July 1988, a preliminary site evaluation of soil and ground water was conducted by Bay West Environmental Services. Analytical results revealed the presence of fuel oil/creosote constituents, polynuclear hydrocarbons (PAHs), phenols and hexane extractables. A Screening Site Inspection (SSI) was conducted at the Site by MPCA as a follow-up to the Bay West findings. Analytical results of the SSI revealed PAHs, phenols, tentatively identified hydrocarbons and aromatics.

Assigned Staff:

Project Manager	<u>MPCA</u> Miriam Horneff
Technical Analyst	Bill VanRyswyk
On-Site Inspector	
Attorney General	
Public Information	Galynn Nordstrom

Actions Taken To Date:

- 1988-Bay West, Preliminary Site Assessment.
- 1989-MPCA Screening Site Inspection.
- October 20, 1992 - Soo Line Railroad Company agrees to perform a voluntary RI/FS.
- January 19, 1993 - draft RI/FS Work Plan and QAPP submitted to MPCA.
- July 27, 1993 - RI Work Plan approved.
- January 1994 - RI/FS field work completed. MPCA receives draft data.
- November 1994 - RI Report received.
- March 13, 1996 - Submittal of the Natural Attenuation Study.
- June 7, 1996- Submittal of the Risk Assessment Report.
- November 13, 1996 - RI Final Report approved.
- April 16, 1997 - Soo Line met with the Victory Neighborhood to discuss the site and potential remedial alternatives.
- April 21, 1997 - Submittal of the Focused Feasibility Study.
- The Proposed Plan was issued on May 30, 1997. The public comment period for the proposed remedy is from June 2, 1997-July 1, 1997.



**Site Name: Bassett Creek/Irving Avenue Dump**

**Location:** Minneapolis, Hennepin County  
Irving Avenue, 2 blocks south of Glenwood

**Priority:** Minnesota List of Priorities Classification  
B: Long-Term Monitoring Ongoing

National Priority List: No      Score: 10

**Site Description:**

The site began operating as an open dump in the 1930s, receiving unknown quantities of sludges, oily waste, various organic and inorganic compounds and heavy metals. Soils and ground water are contaminated at the site. Since 1964, the site has been a demolition and debris disposal location for concrete, brick, cinders, metal and wood. The site was subject to frequent flooding because a small 1.5 mile long tunnel which serves as the outlet for the entire Bassett Creek watershed is located at the eastern edge of the site, but the U.S. Army Corps of Engineers has corrected the problem.

Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

MPCA

Miriam Horneff  
Fred Campbell  
  
Galynn Nordstrom

Actions Taken To Date:

- The U.S. Army Corps of Engineers (U.S. COE) was authorized by the U.S. Congress in 1976 to design and construct flood-control measures along the Bassett Creek watershed.
- The U.S. COE conducted ground water and soil sampling at the site in July 1982. Ground water was found to contain low levels of nickel, zinc, and PCBs. Soil samples contained elevated levels of copper, zinc, lead, PCBs and Polynuclear Aromatic Hydrocarbons (PAHs).
- The U.S. COE conducted additional sampling at the dump along the creek channel in August 1983. Test results showed elevated E.P. ToxCity test levels for lead.
- The U.S. COE issued a Report For Tunnel Inlet Area Analysis which included a plan for on-site disposal of excavated material from the flood-control measures in April 1984.
- The MPCA conducted a Preliminary Assessment, recording a low hazard assessment in June 1984.
- A U.S. EPA Field Investigation Team conducted a site inspection in September 1984. The site received a Hazard Ranking System Score of ten based on the Preliminary Assessment and site inspection.

**Bassett Creek/Irving Avenue Dump (continued)**

- The City of Minneapolis conducted soil sampling on the western portion of the site in February 1988. Test results indicated the presence of heavy metals, PAHs, and volatile organic compounds.
- The MPCA issued a letter to the City's contractor (Barr Engineering) outlining a limited Remedial Investigation/Feasibility Study (RI/FS), plus requests for additional information in May 1988.
- The U.S. COE issued Design Memorandum No. 4 And Draft Supplement To Environmental Impact Statement Flood Control Project Bassett Creek Watershed (EIS) in October 1988.
- The City of Minneapolis stockpiled petroleum-contaminated fill material from the Minneapolis Washington Avenue construction site, on the site in October 1988.
- The City of Minneapolis submitted an Evaluation Report in April 1989, and RI Work Plan in August 1989.
- The U.S. COE completed testing soils along the proposed alignment of the underground conduit in August 1989.
- In December 1989, the MPCA requested that the City agree to disposal conditions and requirements for an RI, FS, and RA before allowing the City to dispose excavated material on the site. The City agreed to the condition and submitted the RI Work Plan in January 1990.
- The U.S. COE signed the ROD for the Supplement to the Final Environmental Impact Statement, Box Culvert and Channel Work, Bassett Creek Flood Central Project, Hennepin County, Minnesota in February 1990.
- A limited RI was submitted in August 1990.
- The soil storage piles were sampled and seeded in 1992.
- An End Use Plan for the site was received in September 1992.
- Potentially Responsible Party Search conducted in 1992.
- The Limited RI was approved on August 20, 1992.
- The Interim Action Plan for the dump was approved December 17, 1993.
- Implementation of the Interim Action Plan began in spring 1994 with installation of two new wells. Sampling revealed PAHs in the ground water.
- Minneapolis Public Works Department is putting together an updated End Use Plan, which will include additional actions to be done at the site.

Actions Needed:

- Need to identify fill boundaries.
- Ground-water monitoring
- Reevaluate the site





Minnesota  
Permanent  
List of  
Priorities  
June  
1997

Site Name: **Battle Lake Area Sanitary Landfill**

Location: Clitheral Township, Otter Tail County  
1 mile west of Battle Lake along 210

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation and Feasibility Study

National Priority List: No      Score: 34

**Site Description:**

This is a closed MPCA-permitted sanitary landfill which contains mixed-municipal refuse. The water monitoring system at the landfill has been recently upgraded. The new on-site monitoring wells are contaminated with volatile organic hydrocarbons and arsenic.

Assigned Staff:

Project Leader	Nile Fellows
Technical Analyst	Ingrid Verhagen
Public Information	Julie Swiler
Engineer	Randy Burnyeat

MPCA

Actions Taken To Date:

- Permit issued August 8, 1972 and amended March 14, 1984.
- Updated monitoring system installed and in operation May 1985.
- Wells sampled in May of 1985 found contaminated by organics and heavy metals.
- Organic contaminants were primarily petroleum derivatives, though no spills were ever reported taken to site. Arsenic was the metal primarily found.
- Residential wells were sampled in August 1985.
- Additional on-site wells were constructed and water samples were collected in late 1987 and 1988.
- Request for Information sent in August 1986 and January 1987 were returned with limited information.
- Responsible parties were identified in February 1987.
- Response Order by Consent drafted on September 26, 1986; wells are contaminated down gradient of the disposal site; county and permittee agreed to construct additional monitoring wells down gradient of the site.
- Closure plan approved January 22, 1991.
- Closure order and RFRA issued on April 23, 1991.
- RI (limited) performed summer of 1992 including installation of down gradient wells and site survey.
- Landfill determined to be a "qualified facility" under closed landfill program, September 1994.

**Battle Lake Area Sanitary Landfill (continued)**

- Design Response Actions November 1996.
- Begin Construction June 1996.

Actions Needed:

- Install approved cover system.
- Binding Agreement.
- Notice of Compliance.
- Continued ground-water monitoring.



Site Name: **Baytown Township Ground Water Contamination**

Location: Baytown Township, Washington County  
Surrounds Lake Elmo Airport area

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and Maintenance/Long-Term Monitoring Ongoing  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: Yes      Score: 38

**Site Description:**

Over 70 water supply wells (residential and business) in Baytown Township, West Lakeland Township and Bayport show volatile organic hydrocarbon concentrations from trace levels to above the Minnesota Department of Health's (MDH) Health Risk Limits. The list of contaminants include: 1,1,2-trichloroethylene, carbon tetrachloride, 1,1,2,2-tetrachloroethylene and cis-1,2-dichloroethylene. Probable sources for the contaminants include the Lake Elmo Airport and a former grain storage area.

Assigned Staff:

Project Manager	Allen Dotson
Technical Analyst	Eric Dott
On-Site Inspector	Steve Schoff
Attorney General	Jocelyn Olson/Bill Hefner
Public Information	Kathy Carlson

MPCA

Actions Taken to Date:

- Over 150 residential and airport hangar wells have been sampled by MDH and others.
- Requests For Information issued.
- A Limited Remedial Investigation began June 1988 at and around the Lake Elmo Airport.
- Responsible Party search ongoing.
- Request for Response Action issued to Metropolitan Airports Commission (MAC), August 27, 1991.
- Proposed for NPL as Lake Elmo Airport Ground-Water Contamination Site on October 14, 1992.
- Final NPL with HRS II score of 35.62 as Baytown Township Ground Water Plume, December 16, 1994.
- MPCA and MAC currently cooperating on additional RI activities.

**Baytown Township Ground-Water Contamination (continued)**

Actions Needed:

- Complete Remedial Investigation and Feasibility Study.
- Meet with responsible parties.
- Conduct any necessary additional site characterization and feasibility study activities.
- Design and implement Response Actions.



Site Name: **Bell Lumber & Pole Co.**

Location: New Brighton, Ramsey County

Address: 440 5th Avenue Northwest

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: Yes      Score: 48

**Site Description:**

Soils and shallow ground water are contaminated with pentachlorophenol (PCP) and polynuclear aromatic hydrocarbons (PAH).

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Doug Robohm
Technical Analyst	James MacArthur
On-Site Inspector	
Attorney General	Steven Shakman
Public Information	Stacy Casey

Actions Taken To Date:

- Phase II hydrogeologic study report was submitted on March 18, 1983.
- Bell Pole excavated its portion of disposal area and temporarily stockpiled wastes on its property from August to October 1983.
- Feasibility Studies (FS) underway for stockpiled wastes.
- Waste Management Board conducted biological treatment tests on materials from Bell Pole waste piles in Spring-Summer 1985.
- MPCA approved Consent Order with Bell Pole on May 30, 1985.
- Work plan received for Remedial Investigation (RI) on July 15, 1985.
- Interim Response Action Report: Clay Cap received on November 18, 1985. Approved December 11, 1985.
- Received Feasibility Study/Recommended Action Plan for incineration of stockpiled soils on January 3, 1986.
- Public meeting held to discuss site and incineration on March 26, 1986.
- Approval for stockpiled soil incineration on April 25, 1986.
- Received purge well pump test Interim Response Action Report on June 18, 1986.
- Received proposal for ground-water pump-out, treatment and discharge on July 31, 1986.
- Phase II RI work plan submitted to MPCA on August 25, 1986. Approved on October 1, 1987.
- PCP storage tank spill of approximately 300 gallons occurred on December 11, 1986.
- Draft Phase II RI submitted in March 1987.
- Well Search Report submitted in March 1987.

**Bell Lumber & Pole Co. (continued)**

- Construction of incinerator occurred between April - August 1987.
- RI Phase II Report submitted on June 26, 1987.
- Incinerator began operation on August 20, 1987.
- Incinerator stack test on September 15, 1987.
- Approval of RI Phase II Report on September 17, 1987.
- List of Remedial Action Objectives submitted on October 15, 1987.
- Installation of purge well in December 1987.
- Response Action Alternatives Report submitted on February 2, 1988.
- On April 22, 1988, the Air Quality permit for the incinerator extended to December 22, 1988.
- Petition form concerned citizens presented to New Brighton City council regarding Bell Pole incinerator and PCP use on May 25, 1988.
- Alternatives Report approved on May 25, 1988.
- New Brighton EQC meeting regarding Bell Pole incinerator and PCP use, in response to Greenpeace occurred on June 7, 1988.
- Ground-water monitoring Report (January 1988 samples) submitted on July 12, 1988.
- Bell Pole Detailed Analysis Report received on October 11, 1988.
- Interim Response Action Plan for ground water pump out received on October 26, 1988.
- Purge well 3 installed on November 1988.
- MPCA approval of Interim Response Action Plan on December 6, 1988.
- Incineration completed on February 27, 1989.
- Agriculture Department issues notice of intent to issue an order to cease and desist to Bell Pole regarding day-to-day process operation on June 19, 1989.
- August 30, 1990, letter to U.S. EPA stating MPCA does not consider Bell Pole as a RP for MacGillis and Gibbs site.
- November 30, 1989, U.S. EPA issues general notice letter to Bell Pole stating that EPA sees Bell Pole as a RP for MacGillis and Gibbs.
- Submitted soil excavation Interim Response Action on February 11, 1991.
- Variance given by MPCA Board on June 25, 1991, for use of CROW process.
- Public informational meeting on incineration of soils held July 17, 1991 at New Brighton EQC.
- Test Burn of incinerators conducted September 16-19, 1991.
- Began incineration of soils September 20, 1991.
- 30-day test of CROW conducted October 1991.
- MPCA approved Report on 30-day test July 14, 1992.
- Soil Incineration completed on August 30, 1992.
- Update MPCA Board regarding CROW, June 1993.
- Approved final CROW plans September 1993.

(continued next page)

## Bell Lumber & Pole Co. (continued)

- Continued review of sampling results from the pump treatment system and the monitoring wells.
- Testing of CROW process equipment during April and May 1995.
- Startup of CROW process in July 1995. System was shut down because of mechanical and treatment problems. Testing conducted to eliminate problems.
- Re-startup of CROW process scheduled for March 1996.
- CROW process operation resumed on March 4, 1996.

### Actions Needed:

- Continue pump and treat system.
- Continue implementation of CROW system.



Site Name: **Bemidji Gas Manufacturing**

Location: Bemidji, Beltrami County  
2nd Street & Mississippi Avenue

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 14

### Site Description:

The Site is located at 2nd Street and North Mississippi Avenue in the southwestern part of the City of Bemidji and has long been associated with energy production. Coal gas was manufactured at the site between 1917 and 1930, and butane-air gas processing until at least 1957. The Soo Line Railroad Company is the present owner, and leases it to Cenex (Bemidji Gas Coop). A drainage pipe discharged waste fluids from the gas plant into a ditch on an adjacent property, which is owned by Burlington Northern Railroad Company.

### Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

### MPCA

Miriam Horneff  
Jim Lundy  
Steve Schoff  
Mehmet Konar-Steenberg  
Kathy Carlson

### Actions Taken To Date:

- Preliminary Assessment (PA) completed August 1987. Potential pathways and contaminants identified.
- Site Inspection (SI) completed June 1992. On-site soil and ground-water contamination confirmed. Potential migration pathways identified.
- Phase I Investigation completed by Soo Line in July 1995.
- In October 1995 Burlington Northern Railroad was contacted regarding a possible voluntary investigation of the adjacent wetland.
- Phase II Investigation Report submitted by Soo Line in February 1996.
- Burlington Northern Railroad submitted a work plan in July 1996 to investigate the discharge pipe area. They submitted the results of their investigation on November 11, 1996.
- In a letter dated January 17, 1997, MPCA requested Soo Line and Burlington Northern to gather additional data to complete human and environmental risk assessments.

### Actions Needed:

- Human and ecological risk assessments on facility site and adjacent wetland.
- Design and implement Response Actions.



Site Name: **Boise Cascade/Medtronic**

Location: Fridley, Anoka County

Address: 1400 73rd Avenue Northeast

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and  
Maintenance/Long-Term Monitoring Ongoing

National Priority List: No      Score: 59

**Site Description:**

This site has buried disposal lagoons from a former pole treating operation. Contamination of soil, ground water and possibly surface water by creosote and pentachlorophenol exist.

Assigned Staff

Project Manager

Technical Analyst

On-Site Inspector

Attorney General

Public Information

MPCA

Steve Schoff

Kathy Carlson

Actions Taken To Date:

- Boise and Medtronic conducted ground water and soil investigations through 1982.
- Lawsuits regarding responsibility and remedy led toward trial scheduled to begin January 1984.
- Prior to trial, Boise, Medtronic, and MPCA reached agreement on responsibility and remedy.
- Consent Order signed January 25, 1984.
- Lagoons excavated and disposed of July 1984.
- EPA - Close Out Report on October 1, 1992.
- Delisted from National Priority List February 15, 1995.

Actions Needed:

- Continue operation and maintenance of ground-water monitoring system.



Site Name: **Boise Cascade/Onan**

Location: Fridley, Anoka County

Address: 1400 73rd Avenue Northeast

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and  
Maintenance/Long-Term Monitoring Ongoing

National Priority List: No      Score: 59

**Site Description:**

This is a site where a former pole-treating operation utilized creosote and pentachlorophenol. Ground water, soils, a deep (multi-aquifer) well, and perhaps surface water are contaminated.

Assigned Staff:

Project Manager

Technical Analyst

On-Site Inspector

Attorney General

Public Information

MPCA

Steve Schoff

Kathy Carlson

Actions Taken To Date:

- Studies and plans were submitted by Onan and Boise through 1983.
- Lawsuits involving Boise, Onan, and MPCA led to trial January 25, 1984.
- Court decision and Injunctive Order on December 28, 1984.
- Plans and specifications submitted and approved in Spring 1985.
- Implementation of Response Actions began in June 1985.
- Response Actions completed November 1985.
- EPA - Close Out Report on October 1, 1992.
- Delisted from National Priority List February 15, 1995.

Actions Needed:

- Continue operation and maintenance of ground-water monitoring system.



Site Name: **Boise Cascade Paint Dump**

Location: International Falls, Koochiching County  
1/2 mile west of the Point-O-Pines Church

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and  
Maintenance/Long-Term Monitoring Ongoing

National Priority List: No      Score: 17

#### Site Description:

Site operated as a paint waste dump from 1957-1974 in a gravel pit area. Disposal involved burning of approximately 8,760 barrels of paint wastes with burial of drums and ash.

#### Assigned Staff:

#### MPCA

Project Manager

Steve Schoff

Technical Analyst

On-Site Inspector

Attorney General

Public Information

Kathy Carlson

#### Actions Taken To Date:

- Company hired consultant in January 1982, to investigate site.
- MPCA sampled six residential wells for solvents - no contamination found.
- Exploratory trenching conducted at site in October 1983.
- Excavation conducted in August-September 1984, involved the removal and out-of-state disposal of approximately 650 drums of paint waste and a large amount of bulk hazardous solids. A large amount of lightly contaminated land spreadable soil was retained on-site for treatment.
- Response Order by Consent executed June 25, 1985.
- Excavation of several additional areas, soil treatment and cap construction began in July 1985.
- Response Action implementation completed fall 1985.
- Restoration of site completed July 1986.
- Response Actions completed May 1986.
- Final Report on Response Actions approved July 1987.

#### Actions Needed:

- Continue operation and maintenance of ground-water monitoring system.
- Continue maintenance of vegetative cover over clay cap.



Site Name: **Brainerd Former City Dump**

Location: Brainerd, Crow Wing County

Address: Northwest 7th Street

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 38

#### Site Description:

The Site is a closed dump which was operated by the City of Brainerd from 1905 to 1969 and by Crow Wing County from 1969 to 1973 when the dump was closed. The City of currently maintains ownership and leases the property to the Paul Bunyan Arboretum. Analysis of ground-water samples collected from on-site monitoring wells has shown that organic compounds have been released to the ground water.

#### Assigned Staff:

#### MPCA

Project Manager

Douglas Robohm

Technical Analyst

Jim MacArthur

On-Site Inspector

Attorney General

Public Information

Stacy Casey

#### Actions Taken To Date:

- September 1986, Preliminary Assessment is completed.
- November 1987, Screening Site Inspection is completed by U.S. Environmental Protection Agency contractor, Ecology and Environment.
- December 1990, site was placed on the Permanent List of Priorities.
- Initiate PLP search, issue RFIs January 1993.
- Potential responsible party search completed in 1994.
- Meet with local group to discuss voluntary cleanup of southern portion of the site, Summer 1994.
- Established acceptable areas for parking lots for the Paul Bunyan State Trail in July 1995.
- Met with Northland Arboretum officials to discuss plans and project in March 1996.
- Met with Brainerd City Engineer and Crow Wing County Solid Waste Officer in August 1996 to discuss the status of the Site, the results of the investigation thus far, and the steps necessary to complete the remedial actions.

## Brainerd Former City Dump (continued)

### Actions Needed:

- Signing the Memorandum of Agreement.
- Conduct a Limited Remedial Investigation and Focused Feasibility Study.
- Conduct RD/RA.
- In September 1996, a Memorandum of Agreement Between the MPCA, the City of Brainerd and Crow Wing County for Accelerated Superfund Investigation and Cleanup Agreement was sent to the City and County for signatures.



Site Name: **Brooklyn Park Dump**

Location: Brooklyn Park, Hennepin County  
Noble Avenue & 85th Street

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 35.5

### Site Description:

In the 1940s through 1960s, a dump was operated by a private party at the site. Following closure, the site was purchased by the City of Brooklyn Park and developed into roads, a park and municipal buildings. During the spring of 1989, a tar-like material was noted oozing out of one area of the old dump located along the east edge of Central Park. Testing conducted on the tar indicates it contains high levels of polychlorinated biphenyls (PCBs), chlorinated solvent compounds, petroleum product constituents, heavy metal compounds and a very acidic pH of 1.

### Assigned Staff

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

### MPCA

Douglas Robohm  
Bill VanRyswyk

Galynn Nordstrom

### Actions Taken to Date:

- Brooklyn Park notified the MPCA about the test results June 14, 1989. MPCA staff conducted initial site visit on June 16, 1989.
- The site was fenced by the City on June 21, 1989.
- On June 21, 1989, Property Transfer staff requested that the City prepare a Work Plan Proposal. This was received on September 25, 1989.
- In January 1990, U.S. EPA conducted a Site Investigation.
- U.S. EPA removed 2,519 tons of PCB-contaminated soil in December 1991.
- U.S. EPA returned to the site to oversee disposal of eight drums of PCB-contaminated material on February 10, 1992.
- The Documentation Report on the site was received in August 1992.
- U.S. EPA removed additional PCB-contaminated soil from the site in October 1992 but stopped work when too much contaminated soil was found. A fence was placed around the site again.
- MDH sampled four residential wells near the site in January 1992.
- EPA conducted geoprobe sampling in various areas of the dump during May 1993. Tar material containing PCBs were found on both sides of Noble Avenue.

(continued next page)

## Brooklyn Park Dump (continued)

- MPCA conducted a Screening Site Inspection (SSI) October 1993. Three monitoring wells were installed.
- EPA conducted cost recovery for their removal costs, which are approximately \$1.37 million.
- SSI report was completed September 1994.
- Site proposed for Region V's first State-Lead SAT.
- MPCA staff met with Brooklyn Park City Attorney in February 1995 to discuss possible voluntary response action.
- Brooklyn Park retained special legal representation in Spring 1995.
- MPCA staff completed screening assessment for soils in July 1995.
- EPA/DOJ negotiating with PRP's for reimbursement for removal action.

### Actions Needed:

- Issue RFRA to responsible parties.
- Complete Remedial Investigation/Feasibility Study.
- Design and Implement Response Actions.



Site Name: **Burlington Northern**

Location: Brainerd/Baxter, Crow Wing County  
S.E. of Highway 210-371 intersection

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and  
Maintenance/Long-Term Monitoring Ongoing

National Priority List: Yes      Score: 47

### Site Description:

Past disposal of wastewater occurred from a wood-treating process into unlined ponds on-site. Past spillages of creosote/coal tar have occurred at the site. Local ground water contaminated with polynuclear aromatic hydrocarbons, metals, salts, phenolic compounds.

### Assigned Staff:

Project Manager	<u>MPCA</u> Fred Jenness
Technical Analyst	Beth Gawrys
On-Site Inspector	Ken Moon
Attorney General	
Public Information	Stacy Casey

### Actions Taken To Date:

- Company installed monitoring wells and sampled the wells in July 1981.
- Company conducted sonar study in pond to determine sludge volume in August 1982.
- Company constructed pretreatment system prior to disposal of wastewater to sanitary sewer.
- Company installed additional off-site monitoring wells.
- Company hired a consultant in February of 1983 to initiate Remedial Investigation/Feasibility Study (RI/FS).
- RI/FS submitted February 1984.
- Administrative Order executed April 4, 1985.
- Pilot study on contaminated soils treatment completed and approved July 23, 1985.
- Response Action undertaken for ground water Fall 1985.
- Treatment area completed Fall 1985.
- RCRA Permit application submitted December 1985. Permit issued December 1986.
- Third year contaminated soil lifts placed on treatment area in 1988.
- Contaminated soils adjacent to treatment area excavated and placed in stockpiled treatment area in August 1989.
- Site transferred to Hazardous Waste Division.



## Burlington Northern (continued)

- Permit reissued September 1992. CERCLA five-year review January 1993.
- Air sparging unit installed and operating September 1992.
- Waste pile unit closed in August 1994.
- Land Treatment Unit (LTU) operations cease November 1994, Notification of LTU Closure in May 1995
- CERCLA and MPCA Final Site Inspection August 1995.
- Closure Plan approved October 20, 1995.
- Remedial Action Plan (RAP) received November 1995.
- EPA CERCLA Final Inspection Report November 1995.
- RAP approved by EPA January 1996.
- Final closure approved February 1996.
- RCRA Operation and Maintenance Inspection.
- RCRA Permit Application called in September 3, 1996.
- RCRA Site Inspection September 5, 1996.
- RCRA Operation and Maintenance Report, September 1996.
- RCRA Cap Inspection October 7, 1996.
- RCRA Part B Permit Application received, February 28, 1997.
- Monitoring Well Nest Installed, May 1997.
- RCRA Site Inspection, June 2, 1997.

### Actions Needed:

- Continue post closure care and monitoring of cap covering former RCRA lagoon.
- Continue to operate ground-water corrective actions and ground-water monitoring.
- Final MPCA approval of Revised Post-Closure Plan.
- Review and approve permit application, draft permit for Public Notice.
- Review Gradient Control Well System, and Air Sparging Wells.



Site Name: **Burlington Northern Car Shop**

Location: Brainerd, Crow Wing County  
South on 13th from 210

Priority: Minnesota List of Priorities Classification  
C: Response Action Design And Implementation

National Priority List: No      Score: 38

### Site Description:

Burlington Northern Railroad used the car shop for maintenance and repair of engines and cars for over a century. The site covers an area of 102.5 acres. The site also included a power plant and an acetylene-generating facility. A Preliminary Site Assessment indicated the presence of free petroleum product above the shallow water table, elevated levels of arsenic and lead, and some creosote-derived compounds in surface soils and ground water. Half of the property has been sold and is in the process of being prepared for major industrial development.

### Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

### MPCA

Maureen Johnson  
Jim Pennino  
Steve Schoff  
Stacy Casey

### Actions Taken To Date:

- A preliminary assessment of the site was conducted by a consultant to the U.S. EPA and by MPCA staff.
- Completed additional Remedial Investigations (RI).
- RI Report of all investigations submitted to MPCA in December 1990.
- Implement a Petroleum Pumpout System to recover free product.
- Implement an Interim Removal Action inside two former railroad buildings to remove heavy metal contamination and stabilize/immobilize the wastes.
- Determine extent of contamination above cleanup goals.
- Response Action design for remediation of hydrocarbon-contaminated soil and ground water approved in April 1995.
- Focused Feasibility Study for lead-contaminated soils submitted December 1995.
- Bioventing, Air Sparging, and Product Recovery Construction and Operation and Maintenance reports approved in April and May 1996.
- Proposed Plan on lead-impacted soil issued for comment in May 1996.
- Comment received from site owner in May 1996.

(continued next page)

## Burlington Northern Car Shops (continued)

### Actions Needed:

- Facilitate negotiations on cleanup levels between the responsible party and the site owner, and complete the Minnesota Decision Document.
- Design and implement Response Action for lead-impacted soils, the last operable unit.
- Continue operation and maintenance activities.



Site Name: **Burlington Northern Car Shop - Waite Park**

Location: Waite Park, Stearns County  
10th Avenue & Third Street

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 38.08

### Site Description:

The Burlington Northern Site, the Electric Machinery Site, and the Waite Park Ground-Water Contamination Site are considered one site on the Federal National Priorities List called the Waite Park Wells. Through investigative activities it has been determined that the majority of the contamination to the Waite Park Wells resulted from releases from the Electric Machinery Site.

### Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

### MPCA

Brenda Winkler  
Eric Porcher  
Paul Estuesta  
  
Kathy Carlson

Burlington Northern Railroad used the car shop for maintenance, repair and construction of railroad cars and other types of freight equipment since about 1894. The site covers approximately 200 acres. The Waite Park Water Supply wells and water supply treatment plant are located in the eastern one-third of the Site. About one-half of the site has been given to the City of Waite Park and the City has sold some other parcels for industrial development. Currently, the City is planning to build a recreational park on the west end of the site, adjacent to the Sauk River.

Remedial investigations indicated the presence of free petroleum product above the water table, elevated levels of lead and other heavy metals in surface soils, polychlorinated biphenyls (PCBs) in soil and ground water, and volatile organic compounds (VOCs) in ground water.

On July 15, 1994, a Record of Decision was issued for the cleanup of contaminated soil and ground-water monitoring at the Site. Approximately 37,000 cubic yards of PCB and metal-contaminated soil was stabilized/solidified and placed in an on-site landfill completed in the fall of 1995. Ground-water monitoring is required around the containment cell and is scheduled to be conducted in the soil removal areas to

(continued next page)

## Burlington Northern Car Shop - Waite Park (continued)

determine if ground-water remediation will be necessary. Industrial development activities and proposed recreation park have revealed additional areas of metal-contaminated soils. Soil removal activities have been completed in the proposed industrial development area. The complete extent of contaminated soil is currently being determined in the recreational park area.

The MPCA Tanks and Spills Section is addressing the petroleum releases. So far over 15,000 cubic yards of petroleum-contaminated soil has been removed and thermally treated on-site. Ground-water monitoring is currently being conducted and ground water is being evaluated to determine if ground-water remediation is necessary.

### Actions Taken To Date:

- The Waite Park City wells were found to be contaminated by VOCs in January 1985.
- The MPCA Commissioner issued a Declaration of Emergency in February 1985.
- A Limited Remedial Investigation (RI) was begun by the MPCA to identify the source of contamination for the City wells in March 1985.
- The MPCA issued a Request for Response Action to Burlington Northern requiring them to conduct a Remedial Investigation/Feasibility Study (RI/FS) at the site in October 1985.
- Burlington Northern completed the Final RI in August 1988.
- All known underground tanks at the Site were removed in August 1988. Additional studies on the nature and extent of contamination in known areas of releases continued through the remedial design stage. Since that time additional areas of contamination have been identified and investigation and cleanup activities are ongoing.
- July 17, 1991, MPCA received sandblast sand consolidation report.
- August 31, 1992, MPCA established Response Action Objectives and Cleanup Goals.
- December 2, 1992, BN submitted Risk Assessment Work Plan and FS Investigation Work Plan.
- Risk Assessment was resubmitted on March 24, 1993, and was determined unacceptable. MPCA developed remediation goals.
- January 4, 1994, issued cleanup goals for contaminated soils and monitoring requirements for ground water.
- May 18, 1994, presented Proposed Plan to the public.
- July 15, 1994, issued Record of Decision and began implementing Remedial Design/Response Action Plan.
- September 1995, completed excavation and treatment of contaminated soil (from Area A and Area C lagoons, the paint building and consolidated sandblast sands)

## Burlington Northern Car Shop - Waite Park (continued)

and construction of containment cell. December 1995 received Excavation Documentation Report and Containment Cell Construction Report.

- June 1997, completed the excavation and stockpiling of approximately 12,000 cubic yards of contaminated soil from Area B and utility excavations on the site, in preparation for industrial development. Restrictive covenant filed on Area B and C for commercial/industrial use only.

### Actions Needed:

- Provide approval on the Containment Cell Construction Reports once BN provides proof of property ownership.
- Implement a ground-water monitoring plan for the containment cell and soil removal areas.
- Complete Area B Pond soil remediation.
- Complete investigation and remediation of soil contamination in the proposed recreational park area.
- Develop deed restriction language for the site.



Site Name: **Castle Rock Ground-Water Contamination Site**

Location: Castle Rock, Dakota County  
Danbury Avenue & 280th Street

Priority: Minnesota List of Priorities Classification  
C: Response Action Necessary  
D: Remedial Investigation/Feasibility Study

National Priority List: No      Score: 25

**Site Description:**

Herbicides were detected in 1981 in two residential wells in Castle Rock at levels exceeding the Minnesota Department of Health's (MDH) Recommended Allowable Limits for drinking water. Later three additional wells exceeded MDH limits and all five wells were issued drinking water advisories from the MDH and were provided bottled water through the MDA. The source for the herbicides in the wells has been identified and is currently involved in corrective actions. The responsible party has been paying for all RI and CA costs. Another adjacent site was investigated for insecticides and is presently involved in CA. The site investigation RI and CA is being conducted by the MDA under the Minnesota Department of Agriculture's (MDA) Superfund program.

Assigned Staff:

Project Manager  
Technical Analysts

MDA

Robert Anderson  
Cathy Villas-Horns(FME project)  
Gary Elsner (CCC project)  
Paul Strandberg

Attorney General

Actions Taken To Date:

- Minnesota Pollution Control Agency (MPCA) began investigating the site in 1981.
- MPCA contacted MDA for assistance in evaluating the site in March 1986.
- MDH issued drinking water advisory to one residence in May 1986.
- U.S. EPA conducted a limited study in 1987; no responsible party or contamination source determined.
- MDA requested Farmers Mill and Elevator (FME) to conduct remedial site investigation in September 1990.
- MDA began supplying bottled water to five residences in January 1991.
- FME began remedial investigation in February 1992.
- MDA began remedial investigation of former Castle Chemical Company (CCC) property in 1992.
- FME began remedial actions for soil in November 1992.
- County began remedial actions in November 1993.

**Castle Rock Ground-Water Contamination (continued)**

- All residences with MDH advisories connected to new wells in 1994.
- Bottled water to residents discontinued in 1994.
- RI/FS completed at former Castle Chemical Company(CCC) property in 1995.
- FME begins ground water CA for North Site in 1996.
- Temporary soils cover installed at CCC site in 1996.

Actions Needed:

- Continue CA at CCC by excavating contaminated soil from adjacent properties.
- Continue ground water CA at FME - North Site.



Site Name: **Cedar Services**

Location: Minneapolis, Hennepin County, Minnesota  
University Avenue NE and 31st Avenue NE

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation/Feasibility Study

National Priority List: No      Score: 17

#### Site Description:

The site, consisting of 2.5 acres on the Soo Line Shoreham Yards in northeast Minneapolis, was the location of a wood-preserving facility operated from about 1915 until the 1970s. A 1989 MPCA site inspection revealed the soil is heavily contaminated with creosote and pentachlorophenol. The current landowner, CP Rail, has agreed to conduct the investigation and cleanup. The remedial investigation is partially completed. Corrective action options have been discussed and a final option will be selected based on additional information generated by current investigation activities.

#### Assigned Staff:

Project Manager	<u>MDA</u> Teresa McDill
Technical Analyst	Michele Puchalski
On-Site Inspector	Gary Gramms
Attorney General	

#### Actions Taken To Date:

- Screening Site Inspection completed.
- Responsible Party search initiated.
- Land owner agreed to site investigation and cleanup.
- Remedial investigation underway.

#### Actions Needed:

- Remedial Investigation/Feasibility Study.
- Design and Implement Response Actions.



Site Name: **City of Rice, Municipal Well #2**

Location: Rice, Benton County

Address: 250 North Division Street

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and Maintenance Ongoing

National Priority List: No      Score: 22.4

#### Site Description:

Municipal well #2 operated by the City of Rice is contaminated with tetrachloroethene (PCE). The well was taken out of service after the discovery became known to the City. The City of Rice built a water treatment facility to strip the PCE from the ground water.

#### Assigned Staff:

Project Manager	<u>MPCA</u> Steven Schoff
Technical Analyst	Pat Lannon
On-Site Inspector	Steve Schoff
Attorney General	Alan Williams
Public Information	Stacy Casey

#### Actions Taken To Date:

- The Minnesota Department of Health (MDH) identified PCE in well #2 during its regular monitoring program in November 1989.
- The well was re-sampled and PCE was again found. The well was taken out of service by the City of Rice in January 1990, immediately after MDH confirmed the presence of PCE.
- MPCA staff has done on-site inspections and sampled numerous private and commercial wells in the City of Rice. No PCE has been found in any non-municipal well samples.
- MPCA staff has requested and received Requests For Information (RFI) from local industrial facilities adjacent to Municipal Well #2.
- The Board issued a RFRA and a DIR on May 21, 1991, to WATAB, Inc.
- CDM retained to develop work plan. Final work plan received August 1991.
- CDM completed RI and submitted report on April 1992.
- MPCA and City of Rice entered into a Joint Powers Agreement on February 1993, to fund construction of a municipal water treatment plant.
- Water Treatment facility was completed and started supplying water to the City of Rice on July 22, 1994.

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City of Rice, Municipal Well #2 (continued)

Actions Needed:

- Long term monitoring of wells installed around Well #2 to determine when the PCE contamination has been abated.



Site Name: **Conoco, Inc. - Wrenshall Refinery**

Location: Wrenshall, Carlton County

Address: 10 North Broadway

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 41

Site Description:

Conoco Inc., presently owns a 240-acre oil refinery in Wrenshall, Minnesota. The refinery operated from 1953-1981 and is presently used as a pipeline terminal. Contamination resulting from the operation of the facility, from the landspreading of sludge, from the disposal of leaded tank bottoms in pits and from sludges disposed in slop oil pits are all under investigation.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Dale Trippler
Technical Analyst	Jim MacArthur
On-Site Inspector	Hans Neve
Attorney General	Steve Shakman
Public Information	Julie Swiler

Actions Taken To Date:

- Sampling conducted by U.S. EPA on September 26, 1984, detected 1,1-dichloroethane in ground water and heavy metals and organics in soil samples.
- U.S. EPA Field Investigation Team Site Inspection completed in September 1985.
- Request for Response Action issued June 23, 1987.
- Supplemental Remedial Investigation report received July 7, 1989.
- The Site was divided into eleven operable units.
- The FS/RAP for the Northland Farm Unit and the Slop Oil Pit Unit were approved July 1990.
- Remediation Actions were completed at the Northland Farm Unit and the Slop Oil Pit July-August 1990.
- A site QAPP was submitted October 1990.
- A supplemental investigation report for the soils and ground water operable units was submitted January 1991.
- A replacement sand and gravel aquifer monitoring well (RI-10) was installed in the fall of 1990.

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## Conoco, Inc. Wrenshall Refinery (continued)

- A Baseline Risk Assessment Report was submitted by Conoco on January 23, 1992. MPCA requested additional ecological risk assessment on February 26, 1992.
- A geophysical survey and trenching study was completed November 1991 and June 1992, respectively.
- MPCA issues MDD to Conoco on September 8, 1992.
- A supplemental ecological risk assessment for the springs, soils, and ground water was submitted November 1992.
- MPCA rejected the supplemental ecological risk assessment on March 18, 1993. In a seven page letter to Conoco, MPCA staff spelled out problem areas needing additional work or corrections.
- A Feasibility Study addressing the remaining operable units was approved June 3, 1994.
- Response Actions in the Process Area began in July 1994.
- Ecological Risk Assessment approved on October 28, 1994.
- Process Area Work Plan received on May 21, 1995 and approved on May 31, 1995.
- Pond and Process Area Investigation Report received on October 4, 1995 and approved on December 22, 1995.
- MPCA and Conoco agree to use Risk Based criteria to determine cleanup goals during March 5, 1996 meeting.
- In a letter dated May 10, 1996, the MPCA spelled out the restricted and unrestricted soil and ground-water cleanup goals for the refinery site.
- In a letter dated September 12, 1996, the MPCA spelled out the restricted and unrestricted access closure options for the refinery site.
- On March 12, 1997, Conoco submitted a proposed work plan for 1997 which was approved as amended by MPCA staff in a letter dated April 25, 1997.

### Actions Needed:

- MPCA will issue specific cleanup goals based upon Conoco's determination of future land use scenarios for the whole site.
- Initiate and complete Response Actions at the remaining operable units if necessary.
- Continue long-term O & M and complete deed restrictions if necessary.



## Site Name: Control Data Corporation - Printed Circuits Operation

Location: St. Louis Park, Hennepin County  
Address: 3965 Meadowbrook Road  
Priority: Minnesota List of Priorities Classification  
B: Remedial Actions Completed and Operations and Maintenance/Long Term Monitoring Ongoing  
National Priority List: No Score: 6

### Site Description:

Ground water and soil contamination were confirmed after a hole was discovered in the wastewater drainage system at the Control Data Corporation, Printed Circuits Operation Plant. Contaminants consist of heavy metals, 1,1,1-trichloroethane and other volatile organics.

### Assigned Staff:

Project Manager	John Moeger
Technical Analyst	Jim Lundy
On-Site Inspector	Steve Schoff
Attorney General	
Public Information	Stacy Casey

### MPCA

### Actions Taken To Date:

- Hole discovered in bottom of manhole which is part of the wastewater drainage system January 23, 1987.
- Ground water and soil contamination found January 25, 1987.
- Consultant hired to conduct ground water and soil investigation February 1987.
- Ground water Investigation Report submitted to MPCA May 1987.
- Consent Order negotiated; effective date April 26, 1988.
- Remedial Investigation/Alternatives Analysis Report submitted to MPCA September 1988.
- Interim ground water pump-out system activated November 1988.
- Remedial Actions: ground water pump out, air stripping, and vapor-phase carbon absorption activated July 1990.
- Additional lower sand ground-water pump-out well was added to system in January 1993.

### Actions Needed:

- Continue pump and treat and long-term ground-water monitoring.



Site Name: **Crow Wing County Sanitary Landfill**

Location: Oak Lawn Township, Crow Wing County  
Highway 210 6 miles northeast of Brainerd

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 14

**Site Description:**

This site consists of a closed (unlined) MPCA permitted sanitary landfill and a separate open (lined) paper mill sludge monofill. Several on-site monitoring wells show contamination with volatile organic compounds and other leachate constituents.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	
Technical Analyst	Amy Hadiaris
On-Site Inspector	Mike Dinndorf
Attorney General	
Engineer	Bill Armstrong
Public Information	Julie Swiler

Actions Taken To Date:

- Permit issued May 21, 1973; amended permit issued November 1, 1982.
- New monitoring wells were sampled in June 1985.
- Additional hydrogeologic work in progress in 1988.
- A Compliance Agreement was executed in July 1989, requiring the County to:  
(1) conduct a complete site assessment/hydrogeologic evaluation of the landfill and the adjacent unpermitted paper mill sludge disposal pit, (2) cease disposal of paper mill sludge in the pit, and (3) construct a lined monofill for the future disposal of the sludge.
- New lined paper mill sludge monofill was completed in November 1989; disposal in pit ceases.
- County completes major hydrogeologic investigation in April 1990.
- Sanitary landfill ceased accepting waste in October 1991 and has completed final closure, including installation of a synthetic final cover system.
- Installed active gas collection and flare system in 1992.
- MPCA has granted approval to spray-irrigate landfill leachate on vegetative cover of closed area.

Actions Needed:

- Conduct Remedial Investigation and Feasibility Study, if necessary.
- Design and implement Response Actions, if necessary.



Site Name: **Dealers Manufacturing Company**

Location: Fridley, Anoka County

Address: 5130 Main Street Northeast

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation

National Priority List: No      Score: 28.28

**Site Description:**

Dealers Manufacturing Company is a diesel engine and parts rebuilding facility. A solvent used on-site has been detected in the underlying ground water and soil. The wastes apparently leaked from an underground sanitary sewer sump. On-site remedial efforts include on-going ground water pumping of a single extraction well providing containment and operation of a UVB well designed to remediate source area soils and ground water.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Bill VanRyswyk
Technical Analyst	Bill VanRyswyk
On-Site Inspector	
Attorney General	

Actions Taken To Date:

- October 1988, a Site Screening Inspection was performed by Minnesota Pollution Control Agency to determine Site impacts and to obtain data for Hazard Ranking System scoring.
- Preliminary Site Characterization Work Plan for ground water submitted January 21, 1994.
- Field work commenced February 7, 1994 and has identified an on-site TCE source.
- January 11, 1996, WCEC submitted the Interim Response Action (IRA) Design Report.
- February 20, 1996, the MPCA approved the IRA Report.
- May 10, 1996, MPCA approved Interim Response Action As Built Report.

Actions Needed:

- Operation and Maintenance of Response Actions.
- Complete a Minnesota Decision Document (MDD).





Site Name: **Docs Auto Salvage**

Location: Minneapolis, Hennepin County

Address: 519 - 10th Avenue

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 12.46

#### Doc's Auto Salvage (continued)

- Determine potential impact to Bassett's Creek.
- Complete any necessary Remedial Investigations/Feasibility Studies.
- Design and implement Response Action.

#### Site Description:

Site was an auto scrap yard from approximately 1974 until 1994. Operations consisted of auto stripping and crushing. During its operation, the owner was cited on several occasions for improper storage and handling of hazardous wastes, improper discharges of contaminated storm/waste water and improper handling/disposal of petroleum products. The Site is in a predominately commercial/industrial area of the City of Minneapolis. Bassett's Creek flows under the site via a storm channel. Discharges of storm water from the Site go to Bassett's Creek, and eventually to the Mississippi River.

#### Assigned Staff:

Project Manager

Technical Analyst

On Site Inspector

Attorney General

Public Information

#### MPCA

Allen Dotson

Fred Campbell

Galynn Nordstrom

#### Actions Taken To Date:

- MCDA Environmental Assessment completed in August 1990.
- MPCA Preliminary Assessment completed in April 1991.
- MPCA issues Stipulation Agreement for alleged violations of Hazardous Waste and Water Quality Rules in October 1992.
- Site owner completes limited soils investigation in November 1993 as part of MPCA Stipulation Agreement.
- City of Minneapolis revokes operating license for site owner in June 1994.
- Site becomes a Tax-Forfeited property to State of Minnesota in July 1995.
- Hennepin County completes Phase I investigation at site in April 1997.

#### Actions Needed:

- MPCA Limited Phase II Site Investigation planned for September 1997.
- Conduct search(s) for potential responsible parties.



Site Name: **Dodge County Sanitary Bypass  
Landfill**

Location: Mantorville Township, Dodge County  
Approx. 3/4 miles south of inter of Hwys 57 & 14

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 25

**Site Description:**

This site was a MPCA-permitted sanitary landfill which received mixed municipal solid waste and currently accepts incinerator ash. Samples collected from on-site monitoring wells are contaminated with volatile organic hydrocarbons. Approximately 365 residents within a three mile radius of the landfill use ground water as a potable water supply.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Donald Adrams
Technical Analyst	Jean Olson
On-Site Inspector	Pat Hanson
Engineer	Peter Tiffany
Public Information	Julie Swiler

Actions Taken To Date:

- MPCA sanitary landfill permit issued on June 26, 1973 and amended on February 21, 1985.
- December 1979, seventeen barrels containing solvents were disposed of at the landfill. These barrels were subsequently removed by McNeilus Trucking in August 1980.
- Ground-water sampling of on-site monitoring wells on October 2, 1985, identified volatile organic hydrocarbon contamination.
- Six residential wells were sampled on October 2, 1985, by MPCA staff. Contamination has not been confirmed.
- Dodge County has completed closure of the site.
- EMS completed in 1994.
- County notified of eligibility for Closed Landfill Cleanup Program in September 1994.

**Dodge County Sanitary Bypass Landfill (continued)**

Actions Needed:

- Continue post closure care and monitoring.
- The site is a "qualified facility" under the closed landfill cleanup act. The owners were notified of the eligibility in September 1994. The MPCA will negotiate a binding agreement with the County and after a Notice of Compliance is issued the State will assume responsibility for long-term maintenance and monitoring of the facility. It is anticipated that the MPCA will assume responsibility for the site during the July/August 1997 time frame.



Site Name: **Duluth Air Force Base**

Location: Duluth, St. Louis County  
Duluth International Airport, Air Force Base

Address: Duluth Int'l Airport 7 miles northwest of Duluth

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 21

**Site Description:**

The Duluth Air Force Base (DAFB) site is composed of 26 different areas or Sites. Of these, 21 Sites fall under Superfund jurisdiction and 5 Sites fall under Hazardous Waste (RCRA) jurisdiction. In addition, Tanks and Spills Sites also exist at the DAFB site. Because of the large number of Sites numerous projects are ongoing and are at various stages of investigation and/or remediation.

Surface water contamination by pesticides, benzene and gasoline exists at this site. Soil and ground-water contamination by pesticides, organic solvents, gasoline, polychlorinated biphenyls and low-level radioactivity may also exist.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Brenda Winkler
Technical Analyst	Mark Rys
On-Site Inspector	Paul Estuesta
Attorney General	Mahmet Konar-Steenberg
Public Information	Julie Swiler

Actions Taken To Date:

- Chemical analysis of surface water samples in November 1978 showed traces of pesticides.
- MPCA letter submitted to Air Force with review of proposal for remedial actions in August 1982.
- Sampled area residential wells in October and November 1982; no contamination was found.
- MPCA staff performed additional site sampling and investigations in June, July and August 1986.
- Public meeting was held on March 1, 1990 to present findings to public.
- On August 28, 1990, the MPCA Board issued a Request for Response Action to the U.S. Air force and it's successor, the National Guard Bureau and the Minnesota Air National Guard.
- Provided no-action letter for Fire-Training Area 1 (FTA-1) at Site 2, which has been excavated.
- Completed interim remediation consisting of thermal treatment of contaminated soils at FTA-2 at Site 2, summer 1994.

**Duluth Air Force Base (continued)**

- Issued No Further Action Decision document at Site 24 Jet Engine Runup site Fall 1994.
- Site 2, 3, and 4: completed Minnesota Decision Document (MDD) on September 12, 1995; Completed Site 3 soil excavation in 1995.
- Site 1, 5, and 6: Drum removal operations were performed in 1992. Analytical results indicate that no further action is necessary at these Sites.
- Site 7: Interim remedial action for the removal of contaminated soil was completed in 1992.
- Site 8 and 9: Analytical results indicated that no further action is necessary at this Site.
- Sites 11, 12, 13, 14, 15, and 16: No action necessary.
- Site 26: Analytical results indicate that no further action is necessary.
- Site 17, 18, 19, 21, 22, and 25: Refer to Hazardous Waste (RCRA).

Actions Needed:

- Site 3 and 4: Biopile for soil remedial actions ongoing.
- Site 2, 3, 4 and 10: Long-term ground-water monitoring. Evaluate whether ground water remedial actions are necessary.
- Sites 1, 5, 6, 9, 26: complete a No Further Action (NFA) Document.
- Site 7: Complete Risk Assessment and Feasibility Study along with continued ground-water monitoring.
- Site 20: Complete data compilation and evaluation.



Site Name: **Duluth Former City Dump**

Location: Duluth, St. Louis County

Address: 5607 Rice Lake Road

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation

National Priority List: No      Score: 28

#### Site Description:

This is a closed City dump that accepted mixed waste, demolition material, and industrial waste from 1953 to 1959. Ground-water contamination and the potential for surface water contamination exist at the site.

#### Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

#### MPCA

Miriam Horneff  
Bill VanRyswyk  
  
Jocelyn Olson  
Julie Swiler

#### Actions Taken To Date:

- Ground-water contamination found at the site during the "Ground Water Analysis Near Open Dumps" study, 1984.
- Request for Information issued to Potential Responsible Parties August 1987.
- Site Investigation conducted by U.S. Environmental Protection Agency - Field Investigation Team, September 1987.
- MPCA Board issued a Request for Response Action to the City of Duluth on August 23, 1988.
- MPCA Board issued a Determination That Actions Will Not Be Taken In The Manner And Time Requested to the City of Duluth on November 22, 1988.
- The City of Duluth's consultant began the Remedial Investigation on July 12, 1989.
- Three additional monitoring wells were installed during 1992.
- MPCA screening ecological evaluation in July 1995.
- A Clemson beaver pond leveler was installed in August 1994 to lower the water level in the pond adjacent to the dump.
- Lepaks conducted an investigation of a former leaky UST adjacent to the dump in 1995.
- Additional PRP search work was conducted in 1995.
- The RI Final Report was approved September 1995.
- The Focused Feasibility Study was approved January 1996.
- The Proposed Plan was issued in August 1996. The public comment period went from August 26, 1996 to September 23, 1996 with an availability session on September 23, 1996 at the Duluth Public Library.

#### Duluth Former City Dump (continued)

- The Petition of Rice Lake Lumber, Inc. and the Estate of Stanley Lepak for a Contested Case Hearing regarding MPCA's selection of a final closure plan for the site was served on the MPCA Commissioner on September 23, 1996. The Petition was denied on April 23, 1997.
- The Minnesota Decision Document, detailing the remedy for the site, was signed on April 16, 1997. The remedy includes closure of the dump, relocation of the residence and businesses, access to the site by the City of Duluth, ground water and surface water monitoring plans, a site end use and maintenance plan and a site contingency plan.
- The Remedial Design/Response Action Plan was received on May 12, 1997 and approved by the MPCA on May 13, 1997.
- The City of Duluth is reaching its \$400,000 liability limit at the site and has applied for a Department of Trade and Economic Development grant to complete the necessary remedial actions.

#### Actions Needed:

- Remedy implementation.



Site Name: **Ecolotech, Inc. - St. Paul**

Location: St. Paul, Ramsey County  
769-775 Front Avenue

Priority: Minnesota List of Priorities Classification  
B: Remedial Actions Completed and Operations and  
Maintenance/Long Term Monitoring On-going

National Priority List: No      Score: 3

**Site Description:**

This facility operated from 1973-1984, and formerly stored approximately 32,800 gallons of solutions and organics, 292 cubic yards of solids and soils and 19,000 gallons of semisolids consisting principally of corrosive and/or EP Toxic wastes. Extensive deterioration of containers was observed at the site. Several complaints were received regarding the site. Releases and threatened releases were also observed by MPCA staff. Ground water beneath the site is contaminated by heavy metals.

Assigned Staff:

Project Manager	Doug Robohm
Technical Analyst	Jim MacArthur
On-Site Inspector	Hans Neve
Attorney General	
Public Information	Stacy Casey

MPCA

Actions Taken To Date:

- MPCA issued Ecolotech Inc., Brian Carriere and Carriere Properties, a Request for Response Action (RFRA) June 28, 1983.
- MPCA Board approved RFRA to 10 generating companies July 26, 1983.
- MPCA Board approved RFRA to 4 additional generating companies August 22, 1983.
- MPCA Board issued Determination of Inadequate Response February 28, 1984, to Brian Carriere, Carriere Properties and Ecolotech, Inc., for failure to take response actions.
- Consent Order executed between generators and MPCA March 27, 1984.
- Litigation for site access initiated March 2, 1984, and trial completed May 30, 1984. Court order issued September 18, 1984. Access to site to begin cleanup granted by court October 10, 1984.
- All wastes except miscellaneous lab chemicals removed by January 1986.
- Final cleanup, soil, sewer and ground water reports submitted January 1986. Ground water beneath the site is contaminated by heavy metals.
- Remedial Investigation (RI) Final Report submitted October 24, 1986.
- Met with Generator Group Representatives to discuss the RI Final Report December 8, 1986. Another round of ground-water sampling necessary.
- All wastes, including miscellaneous lab chemicals, removed February 1987.

**Ecolotech, Inc. - St. Paul (continued)**

- Court Cost Apportionment in February 1987 - 70% Carriere, 30% Generators. Carriere appealed.
- Discovered April 1987 that State/Ramsey County own 2 easternmost lots of Ecolotech through tax forfeiture; lots were to be auctioned April 24, 1987.
- Met with City and County on ownership and plans April 14, 1987.
- Follow-up meeting with City and County April 29, 1987. County acts as agent for the state.
- Runoff control measures proposed by Generators May 28, 1987.
- Runoff control measures (curbing, gutters) installed by Generators July 1987.
- Well survey report received November 2, 1987.
- Letter approving RI/FS and requiring Generator Group to perform three years of ground-water monitoring submitted February 23, 1988.
- Ramsey County files affidavit August 22, 1989.
- Met with City staff to discuss site building demolition October 1989; December 1989; March 6, 1990; May 23, 1990; and June 8, 1990 (generators also).
- July 24, 1990, informational Board Item to discuss status.
- August 16, 1990, generators submit RA work plan for demolition and a multi-layer cap.
- September 20, 1990, St. Paul City Council approves building demolition.
- September 25, 1990, Site status update to MPCA board and discussion of solidification options.
- Demolition of building and site preparations, October 2-10, 1990.
- October 23, 1990, RFRA request withdrawn, Board requested that staff negotiate remedy with generators.
- Installation of multi-layer cap begun on October 11, 1990 to November 23, 1990.
- December 28, 1990, Generators agree to monitoring of multi-layer cap remedy.
- Monitoring plan submitted to MPCA by generators March 5, 1991.
- Installation of up gradient well and first sampling of monitoring wells completed September 1993.
- Quarterly monitoring reports are submitted.

Actions Needed:

- Monitor remedy with continued ground-water sampling to determine if further remedial action is necessary.
- Delist the site.



Site Name: **8701 Concord Boulevard Dump**

Location: Inver Grove Heights, Dakota County

Address: 8701 Concord Boulevard

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation and Feasibility Study

National Priority List: No      Score: 28

**Site Description:**

The 8701 Concord Boulevard Dump (Site) is an inactive, unpermitted dump located on a property approximately 1.8 acres in area. Reportedly, the dump received a variety of waste including demolition debris, municipal garbage, paint sludge, barrels, and old tires. Dumping on the Site is believed to have started in the early 1950s and continued until the early 1970s.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Douglas Robohm
Technical Analyst	Mike Trojan
On-Site Inspector	Hans Neve
Public Information	Stacy Casey

Actions Taken To Date:

- December 1989, Site added to the Comprehensive, Environmental Response, Compensation, Liability Information System (CERCLIS).
- October 1990, Preliminary Assessment completed by Minnesota Pollution Control Agency (MPCA).
- September 1991, Screening Site Investigation completed by MPCA.
- Site owner has agreed to perform site investigation and cleanup if necessary under a voluntary agreement with the MPCA.
- Preliminary Site Investigation completed December 1994.
- In April 1995, MPCA approved Subsurface Environmental Assessment report.
- The owner submitted a Work Plan For The Dump Site Excavation in June 1995.
- The MPCA developed a Risk Assessment for the site in December 1995.
- The owner submitted an addendum to the excavation Work Plan in January 1996.
- The MPCA approved the Work Plan and addendum in February 1996.
- Excavation activities started February 26, 1996.
- Drums, containing mostly paint wastes, have been consolidated. Owner has negotiated with Dakota County and Inver Grove Heights for use of PAH-contaminated soils, which are below a risk level, as a road base.

Actions Needed:

- Complete response actions.
- Develop a Minnesota Decision Document.
- Delist site.



Site Name: **Electric Machinery**

Location: Waite Park, Stearns County

Address: 711 Anderson Avenue

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and Maintenance/Long-Term Monitoring Ongoing

National Priority List: No      Score: 38

**Site Description:**

The Electric Machinery Site, the Burlington Northern Site, and the Waite Park Ground-Water Contamination Site are considered one site on the Federal National Priorities List called the Waite Park Wells. Through investigative activities, it has been determined that the majority of the contamination to the Waite Park wells resulted from releases from the Electric Machinery Site.

The Electric Machinery Company discharged waste chlorinated solvents into soil and ground water from 1969 to 1975. Ground water beneath the Site is contaminated by chlorinated solvents at levels above drinking water criteria.

A Record of Decision for the remediation of contaminated ground water was issued on January 5, 1989. In 1989, the Electric Machinery responsible parties implemented a ground water cleanup remedy that consists of ground-water pump-out, and packed tower aeration system with discharge to the Sauk River. Operation and maintenance of the system is currently ongoing along with routine ground-water monitoring. The MPCA staff completed a Five Year Review of the Site in February 1995.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Brenda Winkler
Technical Analyst	Eric Porcher
On-Site Inspector	Paul Estuesta
Attorney General	
Public Information	Kathy Carlson

Actions Taken To Date:

- The Waite Park City wells were found to be contaminated by VOCs in January 1985. The MPCA issued a Declaration of Emergency in February 1985.
- MPCA received "hotline complaints" regarding past waste disposal by Electric Machinery in January 1985.
- MPCA issues Request For Information regarding the Electric Machinery Site in August 1985.
- MPCA monitoring indicates ground-water contamination beneath the Electric Machinery Site in October 1985.

## Electric Machinery (continued)

- Request For Response Action (RFRA) issued on March 25, 1986, to Brown Boveri and Company, Ltd. and Cooper Industries.
- Remedial Investigation (RI) initiated at Electric Machinery Site in July 1986.
- RFRA issued to Dresser Industries and Electric Machinery Manufacturing Company on September 23, 1986.
- Revised Supplemental RI report submitted in May 1988.
- Record of Decision for proposed response actions executed in January 1989.
- Remedial Investigation/Feasibility Study (RI/FS) and Remedial Action Plan Work Plan approved by MPCA January 1989.
- Response Actions (ground-water pump-out, packed tower aeration system with discharge to Sauk River) initiated in February 1989.
- Response Action Final Report submitted in March 1989.
- Response Action Final Report approved in June 1989.
- February 28, 1994, MPCA staff completed the Five Year Review.
- May 2, 1995, Requested RPs to complete Five Year Review Recommendations which included the evaluation of the effectiveness of the pumpout system. In June 1997 the MPCA concurred with the RPs evaluation that the pump-out system was effectively containing the contaminated ground water.

### Actions Needed:

- Monitor and maintain ground-water treatment system.



Site Name: **Electronic Industries, Inc.**

Location: New Hope, Hennepin County

Address: 7516 42nd Avenue North

Priority: Minnesota of Priorities Classification  
C: Response Action Design and Implementation

National Priority List: No      Score: 26

### Site Description:

The Company manufactures printed circuit boards. During a complaint investigation on September 23, 1983, MPCA staff observed that the sides of the company's underground wastewater settling tank had dissolved due to corrosion of the metal. Visible soil discoloration and strong solvent odors were noted in and around the area where the tank was located.

### Assigned Staff:

Project Manager

Technical Analyst

On-Site Inspector

Attorney General

Public Information

### MPCA

Crague Biglow

Galynn Nordstrom

### Actions Taken To Date:

- A Stipulation Agreement was negotiated with the Company effective January 24, 1984.
- As part of this Agreement, the Company developed a proposal to determine the extent of soil and ground-water contamination.
- Initial soil and ground water testing was conducted by May 4, 1984.
- A report was submitted to the MPCA on July 20, 1984, for review.
- The Company initiated a pumpout and treatment system in August 1986.
- Company is currently pumping and treating ground water.
- Company submitted an updated site characterization and long-term monitoring report, July 27, 1988.
- Quarterly and Annual Monitoring Reports are being submitted relating to the ground-water pump-out.
- Additional site investigations, e.g., deep well into regional aquifer, have been conducted.
- Second pumpout treatment system installed on City of New Hope property in April 1991. Both ground-water pump-out systems are currently in operation.
- Bioremediation options assessed.
- Determined the extent of ground-water contamination off facility property.
- Conducted Remedial Investigation and Feasibility Study.
- The Company initiated a Soil Vapor Extraction System in December 1992.

(continued next page)

## Electronic Industries, Inc. (continued)

- Installation of an air sparging system was completed in spring 1994.
- Demolition of the old building interfered with the startup of the air sparging system.
- Upon installation of air sparging system, TCE DNAPL was discovered. Approximately 1430 pounds of TCE DNAPL were removed through one of the sparge points.
- Air sparging system initiated October 1994, after DNAPL was removed.
- Air sparging system and recovery wells shut down October 28, 1994 due to slug of DNAPL, which reached Recovery well RW-1. DNAPL was removed and the pump and treat operation resumed on May 12, 1995. Air sparge system remains inoperable until further modification.
- As of December 31, 1995, remedial systems have removed approximately 6,700 pounds of TCE.
- City of New Hope purchased Electronic Industries property in 1993 and demolished building.
- Air Sparge system is currently operational.

### Actions Needed:

- Continue Response Actions.
- Review pumpout, soil vapor extraction, air sparging, and ground-water monitoring results on a quarterly basis.



Site Name: **Elysian Former City Dump**

Location: Elysian, LeSueur County  
NE of County Road 11 and County Road 60

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 22.82

### Site Description:

The Elysian City Dump (Site) is an inactive open dump which had accepted local municipal and industrial waste. Substances allegedly dumped at the Site include pesticides and mercury dust. The Site is located northeast of Elysian on the bed of Lake Tustin. Surficial sand and gravel aquifer is aquifer of concern.

### Assigned Staff:

Project Manager	James MacArthur
Technical Analyst	James MacArthur
On-Site Inspector	
Attorney General	
Public Information	Galynn Nordstrom

### MPCA

### Actions Taken To Date:

- August 17, 1988, U.S. Environmental Protection Agency Field Investigation Team collected 13 soil/sediment samples.
- August 18, 1988, Field Investigation Team collected water samples from three residential wells and two municipal wells.
- October 30, 1989, Minnesota Pollution Control Agency (MPCA) staff resampled two resident wells.
- On December 18, 1990, the MPCA Board approved adding the Site to the Permanent List of Priorities (PLP).
- On December 12, 1995, the MPCA sent a Request For Information (RFI) to the MDNR.
- On January 16, 1996, the MPCA received the MDNR response to the RFI.
- February 1996 the City of Elysian completed a Electromagnetic Survey of the former dump site.

### Actions Needed:

- Field work to further characterize extent of contamination.
- Look for other Potential Responsible Parties.





Site Name: **FMC Corp. - Fridley Plant**

Location: Fridley, Anoka County

Address: 4800 East River Road

Priority: Minnesota List of Priorities Classification  
B: Remedial Actions Completed and Operation and  
Maintenance/Long-Term Monitoring Ongoing

National Priority List: Yes      Score: 66

**Site Description:**

Past disposal of solvents, paint sludge and plating wastes occurred from the 1940s to 1969. Local ground water is contaminated with industrial solvents flowing toward and discharging into the Mississippi River. Minneapolis drinking water intake contained detectable levels of trichloroethylene.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	David Douglas
Technical Analyst	John Betcher
On-Site Inspector	Paul Estueta
Attorney General	Vacant
Public Information	Kathy Carlson

Actions Taken To Date:

- The MPCA conducted surface water sampling programs in 1982, including sampling of the Mississippi River water, FMC's National Pollutant Discharge Elimination System discharges, Minneapolis City water, and Fridley's municipal well #13.
- On June 8, 1983, the MPCA approved and adopted an "Administrative Order and Interim Response Order by Consent" among the MPCA, the U.S. Environmental Protection Agency and FMC which provided for the execution of a remedial action plan at the site which included excavation of waste and containment in an on-site vault. The Order also required further investigation to be conducted.
- Construction of containment facility began in May 1983, and all wastes were placed in the facility by July 1, 1983.
- FMC submitted a ground water cleanup Feasibility Study in May 1985.
- MPCA sent first draft of Consent Order to FMC in July 1985.
- Response Order by Consent executed between MPCA and FMC on October 28, 1986.
- Project Specifications, Quality Assurance Project Plan (QAPP), and Response Action Plan (RAP) schedule submitted by FMC for the RAP in January 1987.
- MPCA comments on QAPP submitted to FMC in March 1987.
- MPCA comments on Project Specifications etc. submitted to FMC in April 1987.
- Revised project specifications, schedule and QAPP submitted to MPCA in May 1987.

**FMC Corp. - Fridley Plant (continued)**

- Metropolitan Waste Control Commission gave conditional approval of RAP in June 1987.
- MPCA approved project specifications and QAPP in July 1987.
- Minnesota Department of Health approved project specifications in July 1987.
- MPCA approves termination of June 8, 1983 Consent Order on October 27, 1987.
- Ground water pump out system began operation on December 8, 1987.
- RW1 pump shut down on December 18, 1987.
- Meeting with FMC and Spills to discuss free product found February 4, 1988.
- Meeting with FMC on June 16, 1988. Insufficient water levels in RW1 due to drought conditions.
- Letter from FMC summarizing shutdown of RW1 received on July 8, 1988.
- RW2 pumpout rate increased on July 11, 1988.
- 1988 Annual RAP Report submitted on March 1, 1989.
- 1989 Annual RAP Report submitted on February 29, 1990.
- 1990 Annual RAP Report submitted on February 28, 1991.
- 1991 Annual RAP Report submitted on February 27, 1992.
- EPA completed a five-year CERCLA review of the site on September 30, 1992.
- 1992 RAP Report submitted March 1, 1993.
- 1993 RAP Report submitted March 2, 1994.
- On February 4, 1994, FMC informed MPCA that "FMC" site owner is now United Defense L.P.
- During 1995, the MPCA staff requested that United Defense L.P. re-examine the status of ground water capture at the site and requested capture zone modeling of the site.
- During 1996, FMC submitted a re-evaluation of the ground water recovery system and this re-evaluation is under MPCA staff review.

Actions Needed:

- Maintain ground water cleanup and long-term monitoring.
- Continue operation and maintenance of containment vault system.
- MPCA staff review of FMC's re-evaluation of the ground water recovery system.
- Completion of the second CERCLA Five-Year Review of the site remedial action.



**Site Name: Faribault Coal Gasification Plant Site**

**Location:** Faribault, Rice County

**Address:** Between Ninth Street NE and Tenth Street NE

**Priority:** Minnesota List of Priorities Classification:  
B: Response Actions Completed, Operation and Maintenance/Long-Term Monitoring Ongoing

National Priority List: No      Score: 46

**Site Description:**

This facility is the site of two former coal gasification plants that operated in sequence from 1873 to 1933. The facility is located on the east side of Faribault, on the west bank of the Straight River. Most of the facility structures have been removed. Wastes found at the site include coal-tar sludges, boiler slag, spent oxide residues (ferrocyanides), and oils. Trichloroethylene has been detected in some ground-water monitoring wells, the source of which is unknown.

Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Public Information

MPCA

Maureen Johnson  
Jim Pennino  
Steve Schoff  
Galynn Nordstrom

Action Taken To Date:

- Initial site investigation by Don Abrams (MPCA) and Michael Lein on June 8, 1981, confirms presence of coal tar and cyanide wastes.
- Northern States Power Company and City of Faribault conduct a series of investigations from 1983 through 1985, to identify sources of contamination and to assess the extent and magnitude of ground water and soil contamination.
- Northern States Power Company implements Phase II Remedial Investigation (RI) to better determine the extent and magnitude of ground water and soil contamination in September 1985.
- Northern States Power Company implements Source Removal Response Action in November 1985, to remove 500 cubic yards of coal tar and contaminated material. Coal-tar wastes were incinerated at the Riverside, coal-fired generator.
- RI completed March 1987.
- Alternative Report completed July 1987.
- Detailed Analysis Report completed February 26, 1988.
- Response Action Plan approved July 26, 1988.
- Consent Order approved June 28, 1988.
- Discovery and removal of 60 cubic yards of spent oxide box filler wastes on bank of Straight River.

**Faribault Coal Gasification Plant Site (continued)**

- Annual monitoring reports completed through 1997.

Actions Needed:

- Long term monitoring.



Site Name: **Faribault Municipal Well Field**

Location: Faribault, Rice County

Address: North 4th Street & Highway 35 East

Priority: Minnesota List of Priorities Classification

C: Response Action Design and Implementation

D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 36

#### **Fairbault Municipal Well Field (continued)**

- Conduct Remedial Investigation and Feasibility Study.
- Design and implement Response Actions.
- Responsible party search, implementing recommendations from the expanded site investigation report.

#### **Site Description:**

The Faribault Municipal Well Field Site is a municipal ground water supply contaminated with trichloroethylene. The extent of contamination lies within one mile of the Faribault municipal system. The City has been able to provide drinking water that meets federal and state regulatory criteria through blending with clean water. The contamination levels are unpredictable since the source is unknown. Concern exists for potential exposures near the unknown source(s). Several potential sources have been investigated.

#### **Assigned Staff:**

Project Manager

Technical Analyst

On-Site Inspector

Public Information

#### **MPCA**

Maureen Johnson

Jim Lundy

Steve Schoff

Galynn Nordstrom

#### **Actions Taken To Date:**

- October 1982, contamination detected.
- Issuance of Requests for Information 1983-1986.
- Investigation of the Nutting Truck and Caster Hazardous Waste Site, 1986-1988, provides insufficient evidence to associate Nutting with wellfield contamination.
- Continued monitoring of City wells for trends.
- Expanded Site Investigation was initiated in 1994 for NPL listing.
- The Expanded Site Investigation concluded in 1995 with a recommendation for additional investigation into other sources than the Nutting site.

#### **Actions Needed:**

- Monitor city wells, implement interim remedial action if needed.
- Prepare proposal for National Priorities List.
- Conduct Remedial Investigation and Feasibility Study.
- Design and implement Response Actions.
- Responsible Party Search, implementing recommendations from the Expanded Site Investigation report.



Site Name: **Finland Air Force Base**

Location: Finland, Lake County

Address:

Priority: Minnesota List of Priorities Classification:

A: Declared Emergency

C: Response Action Design and Implementation

D: Remedial Investigation, Feasibility Study

National Priority List: No Score: 13.02

#### Site Description:

The Finland Air Force Base is located in Crystal Bay Township, St. Louis County, Minnesota. The site was operated as a United States Air Force radar station from the late 1950s through approximately 1980. The site was sold to a private party in the early 1980s. A subsequent private owner is currently renting out the former base housing. In September 1995, a new drinking water supply well was installed by the property owner. Sampling by the Minnesota Department of Health detected trichloroethylene at concentrations above the Maximum Contaminant Level established by the United States Environmental Protection Agency. A Commissioner's Determination of Emergency was issued on November 17, 1995.

#### Assigned Staff:

Project Manager	Dagmar Romano
Technical Analyst	Mark Rys
On Site Inspector	Paul Estuesta
Attorney General	
Public Information	Julie Swiler

#### Actions Taken To Date:

- MDH advisory issued.
- Commissioner's Declaration of Emergency.
- Bottled water provided to Lookout Mountain Village trailer park.
- Area residential wells sampled by MPCA.
- New drinking water well installed by Corps of Engineers.
- New drinking water well sampled by MDH.
- Availability sessions and public meetings convened at the Site.

#### Actions Needed:

- Conduct Remedial Investigation and Feasibility Study.
- Design and implement response action.



Site Name: **Flying Cloud Sanitary Landfill**

Location: Eden Prairie, Hennepin County

Address: 9813 Flying Cloud Drive

Priority: Minnesota List of Priorities Classification

C: Response Action Design and Implementation

National Priority List: No Score: 40

#### Site Description:

The Flying Cloud Sanitary Landfill covers approximately 90 acres and contains in excess of 4,000 acre-feet of refuse. The site was initially permitted in 1970. Sampling of down gradient monitoring wells and surface water indicates the presence of volatile organic compounds.

#### Assigned Staff:

Project Manager	Ron Schwartz
Technical Analyst	Joe Julik
Attorney General	Eric Peck
Engineer	Peter Tiffany
Public Information	Julie Swiler

#### Actions Taken To Date:

- MPCA staff split samples on landfill monitoring wells and several nearby residential wells in 1985, 1986 and 1987.
- Consent Order executed between Flying Cloud Sanitary Landfill and MPCA September 24, 1985.
- Remedial Investigation report submitted August 1986.
- Feasibility Study Detailed Analysis Report submitted April 1987; approved September 14, 1987.
- Pump test work plan approved April 22, 1988.
- Approval of Installation of Phase I of Barrier Well system, May 11, 1990.
- Completion of Phase I pump test for ground water extraction wells, August 12, 1991.
- Submittal of Draft Cover System design, June 1991.
- Submittal of landfill gas extraction modification, August 1991.
- Cover construction Summer 1992 - Spring 1993.
- Barrier well system completed.
- BFI was sent a draft Binding Agreement the summer of 1995.
- Negotiations continue on the Binding Agreement, with BFI continuing to operate the Gas Energy Plant.

#### Actions Needed:

- Prepare a Response Action Plan.
- Implement response actions.



Site Name: **Freeway Sanitary Landfill**

Location: Burnsville, Dakota County  
Address: 1001 Blackdog Road  
Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study  
National Priority List: Yes      Score: 46

**Site Description:**

This site is an MPCA permitted sanitary landfill which disposed of mixed municipal solid waste. The landfill ceased accepting waste in May 1990. Down gradient monitoring wells located at the landfill show volatile organic compounds and metals contamination.

Assigned Staff:

Project Manager  
Technical Analyst  
Engineer  
Attorney General  
Public Information

MPCA

Donald Abrams  
Ingrid Verhagen  
Marty Osborn  
Alan Williams  
Julie Swiler

Actions Taken To Date:

- Original construction permit issued to landfill on October 14, 1971, and amended on January 10, 1972.
- Operational and leachate concerns at the landfill prompted the MPCA to attempt negotiations on two separate stipulation agreements dated July 1, 1977, and March 20, 1981. Neither agreement was finalized.
- Sampling data from down gradient on-site monitoring wells indicated contamination by volatile organic hydrocarbons in November 1984, and October 1985.
- Request for Response Action (RFRA) issued to landfill owner/operator on February 28, 1986.
- Landfill owner/operator refuses to sign the July 1986, Response Order by Consent, but does agree to comply with terms of RFRA.
- MPCA files Superfund reimbursement lawsuit against owner/operator in September 1987.
- Landfill owner/operator counter files against the MPCA in November 1987.
- Owner/operator submits Remedial Investigation (RI) final report in February 1988.
- MPCA disapproves RI final report in April 1988.

**Freeway Sanitary Landfill (continued)**

- Board directs MPCA staff to work with Department of Natural Resources (DNR) staff to resolve dispute regarding impacts of neighboring quarry's dewatering on landfill's monitoring wells (ground water flow reversal and dropping of water table) in June 1988.
- DNR informs owner/operator that it has no jurisdiction over monitoring well interference by neighboring ground water appropriations on January 3, 1989.
- MPCA requests owner/operator to resume RI activities on January 24, 1989.
- Dewatered monitoring wells were replaced in May 1990.
- Remedial Investigation activities are resumed in August 1990.
- Remedial Investigation Report submitted March 18, 1991.
- Remedial Investigation complete December 1991.
- Installation and monitoring of gas probes completed August 1993.
- Human Health and Ecological Risk Assessment completed November 1993.
- Owner notified of eligibility for Closed Landfill Cleanup Program July 1994.

Actions Needed:

- Complete Closure and Certification.
- Design and implement Response Actions.
- The landfill is a "qualified facility" under the Closed Landfill Cleanup Act. The owner was notified of eligibility in July 1994. The MPCA will negotiate a binding agreement with the owner and issue a notice of compliance. After the Notice of Compliance is issued, the State will assume responsibility for maintenance, monitoring and any additional remediation needed.



Name: **Fridley Commons Park Well Field**

Location: Fridley, Anoka County

Address: East of 7th Street between 63rd Ave. & 61st Avenue

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 42.24

#### Site Description:

The Fridley Commons Park Well Field (Site) is a 50-acre active well field with eight public wells, open to the Prairie du Chien Aquifer. The well field serves a population of about 29,000 in the City of Fridley (City). Several other public water supply wells for other municipalities are also located within a three-mile radius of the Site. In February 1984, trichloroethene (TCE) was detected in City well number nine. Subsequent testing detected several other organic chemicals in Commons Park wells. City well no. 9 was taken out of service in November 1989, due to contamination, but other wells are not affected. The source of the contamination is not known. Over 50 potential contaminant sources have been identified through file searches. The City has installed three glacial drift monitoring wells on-site to further assess the situation. The site is being proposed for the National Priorities List and an interim remedial action is being studied.

#### Assigned Staff:

Project Manager	Maureen Johnson
Technical Analyst	Pat Lannon
On-Site Inspector	Steve Schoff
Public Information	Kathy Carlson

#### MPCA

#### Actions Taken To Date:

- November 1989, City takes well no. 9 out of service, minimizes and manages pumping of Prairie du Chien wells.
- August 1990, three glacial drift monitoring wells installed on-site.
- February 1991, well field added to the Comprehensive Environmental Response, Compensation and Liability Information System.
- August 1991, Preliminary Assessment completed by the MPCA.
- June 1992, well field added to Permanent List of Priorities.
- Evaluation needed for Interim Remedial Action initiated in 1992.
- Pumping test conducted July 1993.
- August 1994, three newly installed and five area Prairie du Chien wells are sampled, results are inconclusive for Extended Site Investigation of the contaminant source.
- January 1995, work assignment issued for Interim Remedial Action Feasibility Study.

#### Fridley Commons Park Well Field (continued)

- June 1995, study limited to severity evaluation.
- Severity Evaluation recommended interim remedial action in March 1997.
- The U.S. Environmental Protection Agency agreed in April 1997 that this site should be listed on the National Priorities List and that an interim remedial action is appropriate, which are initiated.

#### Actions Needed:

- Conduct Limited Remedial Investigation and a Focused Feasibility Study for Interim Response Action.
- Design and implement Interim Response Action.
- Complete Remedial Investigation and Feasibility Study if appropriate.
- Design and Implement Response Actions if Feasibility Study indicates.



Site Name: **General Coatings, Inc.**

Location: Eagan, Dakota County

Address: 2805 Dodd Road

Priority: Minnesota List of Priorities Classification

C: Remedial Action Design and Implementation

D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 10.04

#### Site Description:

General Coatings, Inc. was in the business of refurbishing above-ground and below-ground storage tanks. The process involved stripping and then recoating the interior and exterior of the tanks. Operations began at the Site in 1970 and continued through 1987. Waste materials generated were allegedly disposed of in an on-site trench. Ground water samples taken from on-site monitoring wells detected tetrachloroethene at 6 ug/L, dichlorofluoromethane at 200 ug/L and trichlorofluoromethane at 100 ug/L.

#### Assigned Staff:

Project Manager

Technical Analyst

On-Site Inspector

Public Information

#### MPCA

Douglas Robohm

Mike Trojan

Stacy Casey

#### Actions Taken To Date:

- The Site was listed on U.S. EPA's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS).
- Geophysical (electromagnetic) survey was conducted on the Site in September 1986. The survey produced numerous anomalies that correlated with the alleged trench location.
- A Screening Site Inspection (SSI) was conducted in May 1988. The SSI included the installation of 22 soil borings and two monitoring wells.
- The site owner has agreed to perform the site investigation under a voluntary agreement with the MPCA. A test excavation was conducted in January 1994 through the alleged trench location to characterize materials in the trench.
- Additional monitoring well installed, wells sampled December 1994.
- The owner conducted ground-water sampling in April 1995. The MPCA split samples.
- The final investigation report was submitted in April 1996.
- A Work Plan for response actions was approved with modifications in April 1996.
- Response actions were started in April 1996, and completed in July 1996.
- A preliminary draft of the response action final reports were submitted in August and September 1996.

#### General Coatings, Inc. (continued)

- The MPCA received a list of Site concerns from Dakota County in October 1996.
- Final drafts of the response action final reports were submitted in March 1997.
- The site owner responded to Dakota County concerns in May 1997.

#### Actions Needed:

- Approve the response action final reports.
- Develop a Minnesota Decision Document.
- Delist site.



Site Name: **General Fabrication Corporation**

Location: Forest Lake, Washington County

Address: 921 Southwest 15th Street

Priority: Minnesota List of Priorities Classification  
C: Remedial Action Design and Implementation  
D: Remedial Investigation/Feasibility Study

National Priority List: No      Score: 33.62

#### Site Description:

The 5.76 acre parcel was originally developed as an industrial site in the early 1960s by General Fabrication Corporation. Circuit boards and electronic assemblies were manufactured on-site until the company ceased operations in 1985. Industrial and domestic waste was likely discharged into an on-site septic tank drain field system prior to 1968. Preliminary investigation reported high levels of chlorinated hydrocarbons in ground water on-site.

#### Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

#### MPCA

Douglas Robohm

Kathy Carlson

#### Actions Taken To Date:

- January 1990, Preliminary Subsurface Investigation conducted by Braun Environmental, Inc., on west portion of the Site. Eight soil borings and three monitoring wells were installed. Ground water was found to be highly contaminated with chlorinated hydrocarbons.
- August 1991, Minnesota Pollution Control Agency staff sampled private water wells in vicinity of the Site to determine if contaminated ground water has migrated off site and impacted private wells. Analysis of private wells did not detect contamination.
- August 1994, MPCA staff again sampled private water wells in the vicinity of the Site to determine if contaminated ground water has migrated off-site or impacted private wells. Analysis of the samples did not detect contamination in private wells.
- In June 1995, MPCA staff sampled monitoring and private wells. Sampling results detected a low concentration of TCE in one private well.
- August 1995, MPCA staff developed a Work Plan to identify the source of TCE contamination, delineate the TCE plume, and determine if the Jordan Aquifer has been contaminated.

#### General Fabrication Site (continued)

- In September 1995, the MPCA staff again sampled the private well with the low level TCE, plus wells located on either side of the residence. Analytical results did not detect any chemicals of concern.
- January 1996, MPCA staff developed an interim Work Plan to delineate the TCE plume, determine the direction of shallow ground water flow, and determine if free product exists beneath the building.
- MPCA staff sampled the residential well south of the site in December 1996. Analytical results did not detect any contaminants of concern.

#### Actions Needed:

- Remedial Investigation/Feasibility Study.
- Design and Implement Response Actions.





Site Name: **General Mills**

Location: Minneapolis, Hennepin County

Address: 2010 East Hennepin Avenue

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and Maintenance/Long-Term Monitoring Ongoing

National Priority List: Yes      Score: 39

#### Site Description:

Site was a laboratory owned by General Mills during period of disposal. Presently owned by Henkel Corporation. Disposal of organics, solvents, and small quantities of laboratory and pilot plant waste material from chemical specialties research facility in soil adsorption pits occurred from 1947 to 1962, resulting in contaminated soil and ground water.

#### Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

#### MPCA

Dagmar Romano  
Mark Rys  
Paul Estuesta  
Alan Williams  
Kathy Carlson

#### Actions Taken To Date:

- A total of 14 glacial drift piezometers, 7 glacial drift monitoring wells, and 14 piezometers/wells in Platteville Limestone were installed by October 1984.
- Site characterization study and Remedial Action Plan submitted in June 1983.
- General Mills investigated possibility of flushing/pumpout method of contaminant removal in Fall 1983. Conducting pumping tests.
- Water treatability test using an air stripping tower completed.
- Consent Order finalized October 23, 1984, includes Response Action Plan.
- Ground-water pump-out wells installed in April 1985.
- Air Stripping Tower and force mains completed in July 1985.
- Ground Water pump out began November 1985.
- Installation of depth specific sampling pumps in the St. Peter aquifer occurred in April 1987.
- Installation of pumpout and monitoring wells in July 1991.
- Record of Decision, September 1991.
- EPA Interim Close Out Report received June 1992.
- Start-up of Magnolia pump-out system in September 1992.
- EPA Five-Year Review Report completed September 1994.
- Inclusion of site in Enforcement Deferral Pilot Project.
- Response dated February 14, 1997 to MPCA request for receptor survey.

#### General Mills (continued)

#### Actions Needed:

- Continue operation and maintenance of ground-water pump-out and monitoring systems.
- Implementation of Five Year Review Report recommendations.
- Determination as to site-specific ground-water cleanup standard.



Site Name: **Glidden Company**

Location: Minneapolis, Hennepin County

Address: 1901 East Hennepin Avenue

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 11

#### Site Description:

The site is a former paint-manufacturing facility. Six underground storage tanks were removed in 1986. The soil is contaminated with ethyl benzene, toluene and xylene. The ground water is contaminated with toluene, xylene, ethyl benzene, cumene, benzene, chlorinated hydrocarbons, and polynuclear aromatic hydrocarbons.

#### Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

#### MPCA

Dale Trippler  
Hans Neve  
  
Alan Williams  
Galyann Nordstrom

#### Actions Taken To Date:

- Glidden removed six underground storage tanks.
- Glidden removed and disposed of approximately 220 cubic yards of contaminated soils.
- Glidden installed three ground-water monitoring wells in the area of the former tanks.
- Company accepted offer of doing a voluntary cleanup of the site on July 1, 1994.
- Word Plan for Phase II Investigation received on June 22, 1995 and approved with revisions on July 19, 1995.
- Field work for the Phase II Investigation completed during October 1995 and November 1995.
- Soil Leaching Values for Tier I scenario and industrial and residential Soil Reference Values for the Glidden site were sent on September 9, 1996.
- A Phase II Investigation Report was received on October 29, 1996.
- MPCA staff sent comments on the Phase II investigation and a Risk Analysis for the Glidden site on December 11, 1996.
- In a letter dated February 26, 1997, MPCA staff approved additional investigation activities for the site.

#### Glidden Company (continued)

#### Actions Needed:

- Phase II study must be completed and approved by MPCA. Complete Feasibility Study.
- Design and implement Response Actions.



Site Name: **Gopher Oil-Delaware**

Location: Minneapolis, Hennepin County

Address: 2500 Delaware Street Southeast

Priority: Minnesota List of Priorities Classification

C: Response Action Design and Implementation

D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 3

**Site Description:**

The former Gopher Oil Company - Delaware Street Site was the location of a bulk petroleum storage facility. Site investigations conducted from October 1982 to April 1985 indicated soil and ground-water contaminated by petroleum products and polychlorinated biphenyls (PCBs). A product recovery well and gradient control system began operation in December 1985, but were discontinued due to PCB contamination found in the recovered petroleum product.

Assigned Staff:

MPCA

Project Manager

Technical Analyst

Lifeng Guo

On-Site Inspector

Attorney General

Public Information

Kathy Carlson

Actions Taken To Date:

- City of Minneapolis discovered possible contamination in soil borings for construction of proposed Motley bypass in September 1983.
- City of Minneapolis authorized four soil borings to determine extent of contamination in October 1983.
- MPCA requested Gopher Oil Company conduct an investigation to further determine the extent of contamination in March 1984.
- Limited Remedial Investigation conducted by Gopher Oil in June 1984 including the installation of three soil borings and three monitoring wells.
- MPCA requested a ground water pump out recovery system be installed in March 1985.
- Recovery well/gradient control system began operation with discharge to sanitary sewer in December 1985.
- Associated Transportation Services retained property and agreed to maintain the pump out system in October 1986.

**Gopher Oil - Delaware (continued)**

- Ground-water pump-out system shut down 1988 when PCBs were detected in the recovered petroleum product.

Actions Needed:

- Issue Request for Information
- A National Pollutant Discharge Elimination System (NPDES) permit was issued in July 1987, for discharge to storm sewer.
- Ground water pump out discharge rerouted to storm sewer in November 1987.



**Site Name: Gopher Oil-Thornton**

**Location:** Minneapolis, Hennepin County

**Address:** 825 Thornton Street

**Priority:** Minnesota List of Priorities Classification  
C: Response Action Design and Implementation

National Priority List: No      Score: 3

**Site Description:**

The Gopher Oil - Thornton Street Site was the location of a solvent and petroleum processing and blending and repackaging facility for approximately eighty years. Accumulated spillage of petroleum products and organic solvents has resulted in a large area of soil contamination.

A Record of Decision for the cleanup of soil and ground water at the site was issued on December 29, 1993. Remediation activities are currently being conducted and consist of dewatering the perched ground water and treating the water with carbon filters. Soil remediation will consist of in-situ vapor extraction and bioremediation.

**Assigned Staff:**

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information Office

**MPCA**

Brenda Winkler  
Barb Gnabasik  
Paul Estuesta  
  
Kathy Carlson

**Actions Taken To Date:**

- Gopher Oil purchased property from W. H. Barber Company in 1980.
- MPCA staff conducted a site inspection in response to a citizen complaint in December 1983.
- MPCA staff requested Gopher Oil conduct an investigation to determine the extent of soil and ground-water contamination at the site in May 1984.
- Gopher Oil submitted a preliminary subsurface investigation report showing significant soil contamination with petroleum products in September 1985.
- Compliance agreement signed by Gopher Oil and the MPCA for cleanup of Site in October 1986.
- Trial biodegradation and Remedial Action Summary Report submitted in August 1987. Soil biodegradation was not found to be a suitable Response Action.
- Request for Response Action issued to Gopher Oil Company and Union Oil Company on August 28, 1990.
- July 1992, Unocal submitted a Risk Assessment. This assessment was rejected in October 1992.

**Gopher Oil - Thornton (continued)**

- October 1992, Unocal began demolition of office building, boiler building, and blending and packaging building.
- November 1992, MPCA sent Unocal Response Action Objectives and Cleanup goals for Ingestion and Dermal contact.
- January 15, 1993, MPCA received Supplemental Remedial Investigation Report.
- January 27, 1993, MPCA received Interim Response Action Plan for product and ground-water recovery.
- Presented Proposed Plan to the public on October 11, 1993.
- December 29, 1993, MPCA issued the Minnesota Decisions Document for soil and ground-water contamination.
- Remedial Design and Response Actions have been initiated.

**Actions Needed:**

- At the request of the community and the RPs the MPCA staff is evaluating commercial/industrial land use cleanup numbers in addition to the residential cleanup numbers.
- Complete Remedial Design and Response Actions. The RPs are evaluating the ground water dewatering system effectiveness and developing a sampling plan for evaluating current site conditions for industrial/commercial land use.



## Site Name: Highway 96 Dump

Location: White Bear Lake Township, Ramsey County  
Address: 935 East Highway 96  
Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study  
National Priority List: No      Score: 31

### Site Description:

This site is a closed township dump that accepted hazardous waste materials from several industrial waste generators during the early 1960s to the early 1970s. Ground-water contamination and the potential for soil contamination exists at the site.

### Assigned Staff:

Project Manager	MPCA Douglas Robohm
Technical Analyst	Bill VanRyswyk
On-Site Inspector	Hans Neve
Attorney General	
Public Information	Stacy Casey

### Actions Taken To Date:

- Whirlpool Corporation, Reynolds Metals Company, and Red Arrow Waste Disposal refuse to conduct hydrogeologic study.
- Site investigation conducted by U.S. EPA-Field Investigation Team in March 1985.
- Ground-water samples from wells installed by U.S. EPA showed down gradient wells contaminated with volatile organics in spring of 1986.
- An Interim Response Action consisting of trenching and barrel removal occurred in August 1987.
- Request for Response Action issued to Reynolds Metals Company, Whirlpool Corporation, and Red Arrow in July 1986.
- Remedial Investigation Final Report submitted March 1988.
- Alternatives Analysis Report submitted on October 18, 1988.
- Interim Response Action Plan for installation of ground water extraction well submitted on September 2, 1988.
- Detailed Analysis Report submitted April 1989.
- Ground water extraction well installed and in operation in May 1989.
- Two residences down gradient from the site issued drinking water advisories by the Minnesota Department of Health due to the presence of four or more contaminants in their wells January 1990.
- Responsible parties supply the two residences with bottled water.

## Highway 96 Dump (continued)

- A third drinking water advisory issued to a resident down gradient of the site in May 1990.
- Responsible parties supply the residence with bottled water.
- Drinking water advisories for all three residences rescinded by the Minnesota Department of Health in December 1990 based on sampling data showing contaminants no longer present or present at barely detectable levels.
- A number of barrels were found on the face of the south disposal area in November 1992.
- Interim Response Action: scrap removal began March 1993.
- April 5, 1993, MDH issued two drinking water advisories. Throughout the summer, the residential area down gradient of the dump was sampled, and ten more drinking water advisories were issued.
- A supplemental ground water investigation was performed May 1993.
- Interim Response Action: approximately 350 drums were removed from the south disposal area May 1993.
- RFRA was issued to Mrs. Helen Krawczewski May 25, 1993.
- The Feasibility Study for the drinking water system for the affected area of North Oaks was approved June 1993.
- The Detailed Analysis Report was approved July 1, 1993.
- Numerous public meetings were held during the summer to discuss issues pertaining to the dump.
- Minnesota Decision Document was signed October 7, 1993.
- Additional ground water investigation the south disposal area took place in the Fall of 1993.
- The Remedial Design for the water system began November 1993.
- Construction of the water system began November 1993, and 20 residences were hooked up to the system before construction stopped due to cold weather. The other 40 residences in the affected area were hooked up spring 1994.
- The Remedial Design for the source control operable unit was received January 1994.
- Source control RA began in fall 1994 and completed in spring 1995.
- Consent Order between MPCA and the four RPs was signed on January 9, 1995.
- A new extraction well was installed in January 1995 to replace the old well which was not functioning properly.
- The RPs submitted the Remedial Action Final Report in January 1996. The report was approved with modifications in April 1996. Modification details were provided in June 1996 and accepted by the MPCA in September 1996.
- The 1995 Annual Monitoring Report was approved in July 1996.
- A passive vent system plan was submitted in September 1996 and installed in November 1996.
- Residential well sampling was conducted in October 1996.

(continued next page)

**Highway 96 Dump (continued)**

**Actions Needed:**

Long term ground-water monitoring.



Site Name: **Honeywell, Inc. - Golden Valley Plant**

Location: Golden Valley, Hennepin County

Address: 1885 Douglas Drive

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation

National Priority List: No      Score: 31

**Site Description:**

Spills and leaks of wastes have led to contamination of ground water by trichloroethylene, trichloroethane, other solvents, and metals.

**Assigned Staff:**

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

**MPCA**

Frank Wallner  
Jim Pennino  
Steve Schoff  
  
Galynn Nordstrom

**Actions Taken To Date:**

- Preliminary reports submitted by company: soils, building layout, monitoring results December 1982 - December 1984.
- Request by MPCA in March 1983, for company to define extent of contamination and propose Remedial Actions.
- Request for Response Action issued May 30, 1985.
- Response Order by Consent executed November, 1985.
- Response Action Plan - Phase I submitted March 1986.
- Response Action Plan - Phase I approved May 1, 1986.
- Response Action Plan - Phase II submitted April 15, 1987.
- Response Action Plan - Phase II approved May 20, 1987.
- Response Actions implemented August 1987.
- Record of Decision issued by MPCA June 1990.
- Investigation of nearby gasoline station.
- Installation of an additional purge well completed.
- Record of Decision dispute resolved.

**Actions Needed:**

- On-going monitoring.



## Site Name: **Houston County Sanitary Landfill**

**Location:** Houston Township, Houston County  
About 1 mile east of Houston off of Highway 16

**Priority:** Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation and Feasibility Study

National Priority List: No      Score: 25

### **Site Description:**

An MPCA-permitted sanitary landfill which disposed of mixed-municipal solid waste until the winter of 1984. On-site monitoring wells and one down gradient residential well have been contaminated by volatile organic compounds. The Minnesota Department of Health (MDH) has recommended that the residential well not be used for drinking or cooking purposes.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Leader	Don Abrams
Technical Analyst	Jean Olson
Engineer	Marty Osborn
On-Site Inspector	Pat Hanson
Attorney General	Mehmet Konar-Steenberg
Public Public Information	Julie Swiler

### Actions Taken To Date:

- MPCA permit was issued August 23, 1973, to Houston County which leased landfill property from Ralph and Anita Lee.
- Notice of Violation was issued to Houston County on April 27, 1983.
- Inspection records from January 9, 1974 to October 18, 1983 document only two occasions when violations of landfill operating rules did not occur.
- Houston County ceased solid waste disposal at the landfill in February/March, 1984.
- Site was not closed according to the approved closure plan.
- Sampling of down gradient domestic wells on November 11, 1984, has shown one is contaminated by volatile organics. MDH has advised the home owner not to use the water for drinking or cooking purposes.
- A new water supply well was drilled for the home owner and sampled November 18, 1985. None of the volatile organic compounds analyzed for were detected.
- A Consent Order with Houston County was drafted August 5, 1986, but was not signed.
- County installed new monitoring wells in March 1987; ground-water contamination was confirmed.

## **Houston County Sanitary Landfill (continued)**

- The county submitted the document entitled Remedial Investigation Report for Houston County Sanitary Landfill to the MPCA on October 16, 1989. This investigation proceeded without an approved work plan.
- RFRAs issued to Houston County and several of the original owners of the property in February 1992.
- In lieu of issuing RFRAs to present property owners, the MPCA, Houston County, and all past and present property owners enter into a written agreement which assigns contractual rights of property owners to MPCA and waives county's liability limit.
- Supplemental RI work commences in March 1992.
- Phase 1 supplemental RI work completed in October 1992.
- Phase 2 supplemental RI work commences in November 1992.
- Focused Feasibility Study on Final Cover System completed 1993.
- Phase 2 supplemental RI completed May 1994.
- County and Owners were notified of eligibility for Closed Landfill Cleanup Program September 1994.
- Remedial action design completed July 1996, to be implemented as soon as a binding agreement is finalized.

### Actions Needed:

- The landfill is a "qualified facility" under the Closed Landfill Cleanup Act. The MPCA is negotiating a binding agreement with the parties. After an agreement is made and a Notice of Compliance is issued, the State will complete the necessary response actions. The State will also assume responsibility for long-term maintenance and monitoring of the landfill.
- Design and implement Response Actions.



Site Name: **Interplastic Corporation**

Location: Minneapolis, Hennepin County

Address: 2015 Northeast Broadway

Priority: Minnesota List of Priorities Classification

C: Response Action Design and Implementation

D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 17.96

#### Site Description:

Interplastic Corporation manufactures polyester resin used in the making of plastics. The corporation maintains many above and below ground storage tanks for various organic liquids, including styrene, which are used in their manufacturing process. Investigations have shown that styrene and acetone have been released to the ground water. The site is located in an industrial area in northeast Minneapolis.

#### Assigned Staff:

Project Manager	<u>MPCA</u> Douglas Robohm
Technical Analyst	Bill VanRyswyk
On-Site Inspector	
Attorney General	Alan Williams
Public Information	Kathy Carlson

#### Actions Taken To Date:

- December 1985, a subsurface contamination investigation was conducted by Twin City Testing Corporation. Three monitoring wells were installed. Styrene and acetone were detected in ground water at the site.
- February 1986, hydrogeologic study is conducted by Hatcher Incorporated. One monitoring well is installed. Results confirm the presence of acetone and styrene in the ground water.
- April 1986, electromagnetic survey is conducted by Hatcher Incorporated in response to a 1985 complaint alleging drums of hazardous materials were buried on-site. The electromagnetic survey covered 1/2 of the site area. A soil boring was drilled in an anomalous area and revealed no reason for the anomaly according to Interplastic Corporation representatives.
- September 1986, the Minnesota Department of Natural Resources and the Minnesota Pollution Control Agency conducted a second electromagnetic survey over the other 1/2 of the site area. Results show large anomalies interpreted as one large or a number of smaller metallic objects below the ground surface.
- November 1988, Interplastic Corporation began quarterly sampling of the monitoring wells and submitting results to the MPCA. Results indicate fluctuating concentrations of styrene and acetone.

#### Interplastic Corporation (continued)

- December 18, 1990, Interplastic Corporation placed on state PLP.
- July 23, 1991, RFRA issued to Interplastic Corporation.
- December 1991, Interim Response Action to excavate and remove 80 drums and 380 cubic yards of soil from the area of the geophysical anomaly.  
May 8, 1992, RI Work Plan approved.
- April 2, 1993, Interim Ground Water Pumping Plan submitted and approved  
April 15, 1993; pumping plan initiated June 21, 1993.
- July 29, 1993, Draft RI Report submitted.
- September 10, 1993, RI Addendum - Pumping Program Analysis submitted.
- December 22, 1993, Soil Vapor Extraction Pilot Study Work Plan submitted and approved January 25, 1994.
- January 5, 1994, Ground Water Response Action Plan submitted; approved  
May 19, 1994.
- March 4, 1994, final RI Report submitted.
- May 1994, ground water Response Action Documentation Report submitted.
- August 25, 1994, Remedial Design approved.
- November 1994, extraction well installed.
- The MPCA issued an Air Quality permit amendment in February 1996, allowing incorporation of the SVE discharge into the facility's air handling unit.
- The MPCA approved a request in May 1996, to revise monitoring for DCPD and also the frequency of ground-water monitoring.
- Interplastic requested approval in October 1996, to modify the RD/RAP. They proposed a separate oxidizer for SVE emissions. They are working with the Air Quality Division to revise the Air Monitoring Plan.

#### Actions Needed:

- Implement SVE Response Action.





Site Name: **Ironwood Sanitary Landfill (Advance Transformer)**

Location: Spring Valley, Fillmore County  
4 miles south of Spring Valley

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and  
Maintenance/Long-Term Monitoring Ongoing

National Priority List: No      Score: 34

**Site Description:**

Approximately 1400 drums of hazardous waste were disposed of at this sanitary landfill in 1979-1980. Ground water and soil are contaminated by industrial solvents.

Assigned Staff:

Project Manager	Donald Abrams
Technical Analyst	Jean Olson
Engineer	Marty Osborn
On-Site Inspector	Pat Hanson
Attorney General	Tibor Gallo
Public Information	Julie Swiler

Actions Taken To Date:

- On March 30, 1981, the excavation, transport and off-site disposal of Advance Transformer waste was completed.
- The ground-water pump-out and treatment system was designed and constructed in June through October 1981.
- MPCA filed complaint against Advance and Ironwood on August 19, 1981.
- Advance submitted a report on ground water investigation, including remedial action recommendations on April 16, 1984.
- Advance installed additional pump-out wells in July 1984.
- Contamination was detected in monitoring wells on southeast side of landfill not within influence of pump-out wells in July 1984.
- Additional pump-out wells were installed to address the southeastern contamination in December 1984.
- MPCA informed Advance of concern with new contamination; requested a reevaluation of the hydrogeologic conditions at site on December 31, 1984.
- Advance retained a consultant with experience in karst geology. The consultant conducted a geophysical investigation at the landfill from January through July 1985.
- Advance added new pumpout wells, continued water well monitoring and commenced Ordovician investigation, July 1985 - January 1987.

**Ironwood Sanitary Landfill (Advance Transformer) (continued)**

- Response Order by Consent was executed on July 22, 1986.
- Owners and Advance were notified of eligibility for Closed Landfill Cleanup Program September 1994.

Actions Needed:

- The landfill is a "qualified facility" under the Closed Landfill Cleanup Act. The MPCA is negotiating a binding agreement with the owners and Advance. After an agreement is reached, and a notice of compliance is issued, the State will assume responsibility for the long-term operation and maintenance of the remediation system, as well as site monitoring. It is anticipated the Consent Order will be terminated at that time.
- Tracking of the Response Order by Consent continuing.
- Continue postclosure care and monitoring programs.



Site Name: **Isanti Solvent Site**

Location: Cambridge, Isanti County

Address: Route 5

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 30

#### Site Description:

The Isanti Solvent Site is a property located in rural Isanti County owned by Charles Schumacher. Barrels containing hazardous wastes were stored above and below ground. Ground-water contamination exists at the site.

#### Assigned Staff:

#### MPCA

Project Manager

Technical Analyst

On-Site Inspector

Attorney General

Public Information

James McArthur

Alan Williams

Stacy Casey

#### Actions Taken To Date:

- Notices of Violation sent to all involved parties February 10, 1981.
- Tank at Isanti Creamery removed and contents disposed July 8, 1981.
- U.S. EPA contractor disposed of barrels at sites January 1982 through May 1982.
- Hydrogeologic study completed by U.S. EPA in September 1982.
- Requests for Response Action issued on July 17, 1983.
- Determinations of Inadequate Response issued on September 28, 1983.
- MPCA Board authorized funds (\$50,000) for bottled water and staff investigation at Schumacher property in August 1983. Water being supplied and staff investigation completed.
- Cost recovery request sent to potential responsible parties on November 9, 1984.
- Consent Decree entered into with potential responsible parties in August 1987.
- Remedial Investigation (RI) field work completed by Potential Responsible Parties (PRPs) May 1988.
- PRPs take over supplying bottled water May 1988.
- Draft Remedial Investigation and Feasibility Study (RI/FS) report submitted November 1988.
- Prudent and feasible analyses regarding water quality submitted September 1989.
- Air quality analyses submitted September 1989.
- Natural Resources for the purpose of implementing the Response Action at the Schumacher site.

#### Isanti Solvent Site (continued)

- Completed RI/FS, November 1989.
- Develop and execute Record of Decision (ROD) June 1990.
- On March 15, 1991, the MPCA Board approved an Amendment to the Consent Decree between the State of Minnesota and Settling Defendants. Also approved was an interagency agreement between the MPCA and the Minnesota Department of Natural Resources for the purpose of implementing the response action at the Schumacher site.
- On May 24, 1991, the Trust submitted the Response Action Work Plan (RAWP) for the Schumacher site.
- The Response Action Work Plan for the Schumacher Site was approved by the MPCA staff on July 29, 1991, with contingencies.
- The Remedial Design Response Action Plan (RAP) was submitted on September 20, 1991 and approved with modifications on October 13, 1992.
- RD/RA Implementation January 1993.
- Submittal by the Trust on February 1, 1994, of the Phase I Report.
- The MPCA approved the Remedial Treatment System which commenced full-scale operation on September 27, 1993.
- Installation of Pumping Well P1 replacement well.

#### Actions Needed:

- Currently in Phase II (long-term operation and maintenance).



Site Name: **Jerry's Tank Service**

Location: Carlton County  
4/5 mile west of intersection of Hwy 210 & Rosicky Rd.

Priority: Minnesota List of Priorities Classification  
A: Declared Emergency  
C: Response Action Design and Implementation  
D: Remedial Investigation and Feasibility Study

National Priority List: No      Score: 8.94

**Site Description:**

The Site is a former tank salvaging facility which operated from 1987 to 1994. Site operations included the collection of thousands of gallons of petroleum sludge which were stored and land-disposed on-site. On-site soil sampling has documented a release to soils. A wetland adjacent to the Site has also been affected. A family currently occupies a home located on-site; no volatile organics were found in their well. A removal action has been completed under the guidance of the MPCA's Hazardous Waste Division.

Assigned Staff:

Project Manager	Alexis Cimaglio
Technical Analyst	Elizabeth Gawrys
On Site Inspector	Joe Henderson
Attorney General	Kris Hulsebus
Public Information	Galynn Nordstrom

MPCA

Actions Taken to Date:

- MPCA Hazardous Waste staff receive anonymous complaint alleging mismanagement of tanks bottom on Site, January 16, 1992.
- Hazardous Waste staff inspect Site and confirm allegations April 2, 1992.
- Notice of Violation is issued to the Company on May 29, 1992.
- Stipulation Agreement issued to the Company May on 19, 1993.
- Hazardous Waste staff request the Commissioner to commence legal action against the company, January 25, 1994.
- Emergency is declared December 13, 1994.
- Removal action initiated December, 1994.
- On-site residential well and soil samples taken December 21-22, 1994.
- Fall 1995, remaining tanks were emptied and removed; all oil, oil-water mixtures, and sludges were removed by Stewart Energy Products.
- Visibly contaminated soil was removed and was landfarmed on-site. Soil samples were taken.

**Jerry's Tank Service (continued)**

Actions Needed:

- Additional Site stabilization.
- Remedial Investigation and Feasibility Study.
- Design and implement Response Action.



Site Name: **Joslyn Mfg. & Supply Co.**

Location: Brooklyn Center, Hennepin County

Address: 4837 France Avenue North

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation

National Priority List: Yes      Score: 44

#### Site Description:

Wastewater from a wood-treatment process was disposed of in ponds on-site. Sludges from tanks were disposed of on the company property. Local soil and ground water is contaminated with polynuclear aromatic hydrocarbon (PAH) compounds, metals, phenol and pentachlorophenol.

#### Assigned Staff:

Project Manager	Dave Douglas
Technical Analyst	John Betcher
On-Site Inspector	Steve Schoff
Attorney General	
Public Information	Galynn Nordstrom

#### Actions Taken To Date:

- Plant shut down in September 1980.
- Company submitted report on ground water conditions at the site in October 1981.
- Company removed approximately 30,000 gallons of wood treating solutions to an out-of-state hazardous waste facility in December 1981.
- Company submitted report on hazardous waste evaluation of pond contents in January 1982.
- Company conducted exploratory excavations into alleged sludge burial areas in September 1982.
- Request for Response Action issued to the Company in September 1983.
- Consent Order executed May 30, 1985.
- Remedial Investigation completed January 1986.
- Alternative Reports submitted January 1986.
- Interim Response Action Plan for shallow ground water, middle sand ground water and dense non-aqueous phase liquids (DNAPL) submitted in May 1988.
- Interim Response Action Plan for contaminated soils submitted in May 1988.
- Removal of contaminated soils from Pond A during September and October 1988.
- Pump out well installation and start-up in January 1989.
- Feasibility Study completed March 1989.

#### Joslyn Mfg. & Supply Co. (continued)

- Record of Decision executed in July 1989.
- Response Action Plans initiated for excavating the remaining contaminated soil and soil bioremediation in July 1989.
- Excavation for the first lift of contaminated soil initiated in August 1989; completed September 1989.
- Construction of Land Treatment Unit (LTU) initiated August 1989; completed September 1989.
- Treatment of lift 1 soils initiated in September 1989.
- Shipment of Light Non-Aqueous Phase Liquid to ENESCO facility in Arkansas for incineration; June 1990.
- Treatment for lift 1 soils completed in July 1990; MPCA determined lift 1 soils meet treatment levels for pentachlorophenol and carcinogenic PAHs.
- Excavation for second lift of contaminated soil initiated in July 1990, completed in August 1990.
- Treatment for lift 2 soils initiated in August 1990.
- Remaining contaminated soil excavated July-August 1991.
- Treatment for lift 2 soils completed in July 1992; MPCA determined lift 2 soils meet treatment levels for pentachlorophenol and carcinogenic PAHs.
- Application of treatment lift 3 soil initiated in July 1992 and completed in August 1992.
- Additional remaining contaminated soil excavated in September-October 1992. Excavation is completed.
- LTU soil sampled for dioxin and furan analysis; results submitted May 1993.
- Three reports are submitted by Joslyn in May 1993; DNAPL Recovery System Storage Facility Plans and specs; Updated QAPP; and Revised Project Health and Safety Plan.
- MPCA approves three reports submitted in May 1993 (September 1993).
- MPCA staff completed a CERCLA Preliminary Site Close-out Report on December 21, 1995.
- MPCA staff completed a CERCLA Five-Year Review of the Site on December 28, 1995.
- DNAPL recovery system construction completed on December 31, 1995.
- MPCA and Brooklyn Center confirm that site's land use will be industrial.
- Joslyn and developer enter into negotiations to develop site for industrial use.

#### Actions Needed:

- Long-term ground-water monitoring and pump-out.
- Continue bioremediation of contaminated soils in land treatment unit.
- MPCA staff conducts limited risk assessment to determine closure requirements.
- Joslyn excavates and properly disposes of contaminated soil in Pond C and area adjacent to Soo Line Railroad.
- Joslyn submits a Final Close-out Report.
- MPCA staff completes EPA Final Close-out Report.



Site Name: **Kaplan, H.S. Scrap Iron & Metal Company**

Location: St. Paul, Ramsey County  
Address: 345 Shepard Road  
Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study  
National Priority List: No      Score: 4

**Site Description:**

The H.S. Kaplan Company processed scrap metal at the site until closure in 1988. An Environmental Assessment of the Site indicate soil contamination with lead and polychlorinated biphenyls (PCB) at various locations.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Dale Trippler
Technical Analyst	Jim MacArthur
On-Site Inspector	Hans Neve
Attorney General	
Public Information	Stacy Casey

Actions Taken To Date:

- Environmental Assessment dated June 1988 indicated area contaminated with PCB and lead in soil.
- Interim response action removing PCB-contaminated soils completed in April 1990 through May 1990.
- Remedial Investigation was completed June 1990.
- Response Action Report on PCB Contaminated Soil Removal and Disposal received October 15, 1990.
- Remedial Investigation/Feasibility Study dated September 1995 was received on October 30, 1995.
- MPCA approved the RI/FS report on December 22, 1995.
- A Response Action Plan (RAP) was submitted in March 1996 for the Kaplan site.
- MPCA staff responded in a letter dated April 1, 1996 with modifications to the RAP.
- A Superfund Fact Sheet was written in April 1996 for the Site. The Fact Sheet described the alternatives considered in the FS and the selected Response Action (RA) to be implemented. The Fact Sheet was distributed to the residents in the local neighborhood. No comments were received following the distribution.

Actions Needed:

- Implement the recommended Response Actions.
- Delist the site when the RA is complete.



Site Name: **Killian Sanitary Landfill**

Location: Motley, Todd County  
Address: Route 1  
Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study  
National Priority List: No      Score: 18.64

**Site Description:**

The Killian Landfill is located in the northwest corner of the southeast quarter of Section 28, T133N, R32W, Todd County, Minnesota. The landfill was closed by closure order in 1985.

Seven monitoring wells installed by MPCA have detected nonhalogenated and halogenated organic compounds which dissipate 200 feet down gradient of the site.

<u>Assigned staff</u>	<u>MPCA</u>
Project Manager	Nile Fellows
Technical Analyst	Ingrid Verhagen
On-Site Inspector	
Attorney General	Alan Williams
Engineer	Randy Burnyeat
Public Information	Julie Swiler

Actions Taken to Date:

- MPCA completed a limited site investigation in September 1989 and June 1990.
- Baseline sampling of monitoring wells was completed in fall and winter of 1989.
- MPCA staff sampled Killian residential well and no volatile organic compounds were detected in December 1989.
- Sampling Round, August 1992.
- Surveying, March 1993.
- Site determined to be a qualified landfill under the Closed Landfill Program September 1994.
- Ground-water monitoring undertaken by MPCA in 1995-1996.

Actions Needed:

- Reach Binding Agreement.
- Notice of Compliance.
- Complete closure of landfill.
- Delist from PLP.
- Post-closure Care.



Site Name: **Koochiching County Sanitary Landfill**

Location: International Falls, Koochiching County

Address: 2 miles south of International Falls Old Hwy #11

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 27

#### Site Description:

This MPCA-permitted sanitary landfill closed in November 1992 for disposal of mixed municipal solid waste and nonhazardous industrial waste. Some of this waste was deposited below the water table. Heavy metals and volatile organic hydrocarbons have been found in samples from on-site monitoring wells. In addition, leachate discharging to adjacent surface waters contain volatile organic hydrocarbons.

#### Assigned Staff:

Project Manager  
Technical Analyst  
Engineer  
On-Site Inspector  
Attorney General  
Public Information

#### MPCA

Larry Olson  
Gregg Rocheford  
Peter Tiffany  
Travis Peterson  
Dwight Wagenius  
Julie Swiler

#### Actions Taken To Date:

- MPCA permit issued May 23, 1978. Prior to that, the site was operated as an open dump for 41 years.
- MPCA staff issued to the County a Notice of Noncompliance on September 27, 1979, and Notice of Violation on June 19, 1981, for MPCA solid waste rule violations.
- On July 24, 1984, a Stipulation Agreement was executed requiring the County to upgrade the landfill's engineering plans and ground-water monitoring system.
- Ground-water sampling conducted at on-site monitoring wells on July 18, 1979, August 5, 1983, and October 30, 1985, identified volatile organic hydrocarbon and heavy metal contamination.
- Leachate sampling conducted on June 14, 1982, and October 30, 1985.
- On October 3, 1985, the MPCA staff served the County a Request to Show Cause directing to bring the landfill into operational and water monitoring compliance with the prior Stipulation Agreement. On November 12, 1985, MPCA staff inspected the landfill, finding operation to be in compliance.
- Amended Stipulation Agreement executed on June 23, 1987.

#### Koochiching County Sanitary Landfill (continued)

- Permittee completed a site analysis and assessment in May 1991.
- Site closed in 1992.
- County notified of eligibility of Closed Landfill Cleanup Program, September 1994.

#### Actions Needed:

- The landfill is a "qualified facility" under the Closed Landfill Cleanup Program, established by the 1994 Landfill Cleanup Act. The owners/operators received notification that the landfill was a qualified facility in September 1994. MPCA staff will be working with the owners/operators to complete the necessary steps to receive a Notice of Compliance, after which the MPCA will assume responsibility for maintenance of the site and conducting any response actions.
- Binding Agreement to be executed early July 1997.
- Delist site.



Site Name: **Koppers Coke**

Location: St. Paul, Ramsey County  
Address: 1000 Hamline Avenue North  
Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study  
National Priority List: Yes      Score: 55

#### **Site Description:**

This is a site of a former coking operations. The operations contaminated soil and ground water at the site. Contaminated soils were removed in the 1980s and early 1990s. However, confirmation sampling to determine if contaminated soil removal was complete was not conducted. On April 21, 1994, the Record of Decision was issued requiring confirmation of soil removal and implementation of in-situ bioremediation of ground water. This remedy is currently being implemented.

#### Assigned Staff:

Project Manager	<u>MPCA</u> Brenda Winkler
Technical Analyst	Mark Rys
On-Site Inspector	Paul Estuesta
Attorney General	
Public Information	Stacy Casey

#### Actions Taken To Date:

- Building demolition completed.
- Surface coal tar material removed and disposed and the benzene sump area excavated (November 1980 - January 1981).
- Company completed Phase II chemical waste removal project, December 1981, including surface contamination and tank contents.
- Excavation and proper disposal of tar and contaminated soil in OW-10 area by company, Fall 1982.
- Sanitary lines containing tar and naphthalene crystals excavated and removed for hazardous waste disposal, Fall 1982.
- Cleanup of near surface contaminated soil complete in November 1982.
- Installation of off-site ground-water monitoring of wells by U.S. EPA Field Investigation Team (FIT). February 1983. Monitoring of wells completed.
- U.S. EPA FIT draft report completed June 1984.
- Discovered coal tar and contaminated soils on southeast corner of the property on October 21, 1985.
- Request for Response Action issued on March 25, 1986.
- Coal tar removal completed in October 1986.

#### **Koppers Coke (continued)**

- Received Revised Final Endangerment Assessment Report from U.S. EPA on May 19, 1987.
- MPCA was informed that Koppers Company, Inc. was acquired by Beazer Materials & Services, Inc. on April 12, 1989. Name was formally changed on January 26, 1989.
- Soil Disposal Assessment Work Plan submitted on March 30, 1992, for disposal of 20,000 cubic yards of soil associated with the ETA/Ryan Const./First Bank project.
- On April 15, 1992, the EPA signed the MPCA/EPA Enforcement Pilot Agreement for the site.
- MPCA approved the Ecological Risk Assessment QAPP on May 18, 1992.
- Ecological Risk Assessment received on July 15, 1992.
- MPCA letter sent on October 29, 1992, approving RI Report with modifications, setting cleanup levels, acknowledging Ecological Risk Assessment, and notification of FS work to be completed.
- Landspreading of soils completed in December 1992 (ETA/Ryan Const./First Bank project).
- Receipt of Alternatives Report on December 22, 1992.
- Proposed Plan was presented to the public on December 16, 1993.
- Record of Decision issued on April 21, 1994.
- Predesign field work started April 21, 1994 and completed June 1995.
- The in-situ pilot system began operation on February 1996. The data collected from the first year was presented in the Phase I RD/RA report and used for the recommendation for the Phase II RD/RA Report. The MPCA staff reviewed and is in agreement with the full scale treatment system consisting of the continuation of in-situ pilot system natural attenuation.

#### Actions Needed:

- Complete Implementation of Phase II RD/RA Plans. Complete an Explanation of Significant Difference for the inclusion of Natural Attenuation in the site remedy.



Site Name: **Kurt Manufacturing**

Location: Fridley, Anoka County

Address: 5280 Northeast Main Street

Priority: Minnesota List of Priorities Classification  
B: Remedial Actions Completed and Operation and Maintenance/Long-Term Monitoring Ongoing

National Priority List: Yes      Score: 31

#### Site Description:

Solvents were released at this site into a drainage pit beneath the metal shavings bin storage area. A 140 foot Prairie du Chien well used for industrial and potable purposes was found to be contaminated by tetrachloroethylene. Shallow ground water and soils are contaminated by tetrachloroethylene, trichloroethane, cis-1, 2-dichloroethylene and trichloroethylene.

#### Assigned Staff:

Project Manager	Bill VanRyswyk
Technical Analyst	Jim MacArthur
On-Site Inspector	Hans Neve
Attorney General	
Public Information	Kathy Carlson

#### MPCA

#### Actions Taken To Date:

- In November through December 1982, Kurt Manufacturing conducted a shallow ground water investigation on-site and the MPCA received a report summarizing the investigation in January 1983.
- Kurt Manufacturing installed additional upgradient wells to evaluate the source of contamination in May of 1983.
- Kurt Manufacturing also televised and gamma logged their 140-foot production well and their sanitary sewer lines.
- Kurt Manufacturing conducted soil borings and collected water samples beneath their metal shavings bins in October of 1983; results indicate that this area is the source of the ground-water contamination.
- A Request for Response Action calling for the negotiation of a Consent Order for Remedial Investigation/Feasibility Study (RI/FS) and design and implementation of response action was issued by the MPCA in April of 1984.
- The MPCA Board approved a Consent Order with Kurt Manufacturing on August 28, 1984.
- Remedial Investigation completed in August 1985.
- Final RI/FS Detail Analysis Report approved May 1986.
- Response Action Plan Work Plan approval letter drafted.

#### Kurt Manufacturing (continued)

- Remedial Actions implemented.
- Long-term monitoring of monitoring wells ongoing.
- Commenced operating pump-out wells November 23, 1986.
- Record of Decision written May 13, 1986.
- Pump out wells treated for bacteria and pump out resumed.
- Completed Five-Year Review in March 1994.
- Implemented remedial system improvements suggested in five-year review, Summer and Fall 1994.
- Minnesota Department of Health completed Site Review and Update in January 1997.

#### Actions Needed:

- Continue operation and maintenance of ground-water pump-out and monitoring system.
- Review adequacy of pump-out and propose modifications to improve system.
- Assess deep contamination in the Prairie du Chien and Jordan Aquifers.
- Reassess the extent and magnitude of contamination in the shallow ground water and Site soil.
- Complete Five-Year Review in December 1997.





e Name: **Lakeland Ground-Water Contamination**

Location: Lakeland, Washington  
City of Lakeland and Lakeland Shores

Priority: Minnesota List of Priorities Classification  
A: Declared Emergency  
C: Remedial Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 38

**Site Description:**

Approximately 100 private wells in Lakeland show volatile organic hydrocarbon concentrations at trace levels or higher. The contamination appears to be moving in an east-southeast direction and probably originates from the northwest area of Lakeland. Contaminants include: benzene, trichlorofluoromethane, 1,2-dichloroethane, 1,2-dibromoethane. Probable sources of contamination include old gas stations and/or refuse dumping.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Dagmar Romano
Technical Analyst	Mark Rys
On-Site Inspector	Paul Estuesta
Attorney General	Alan Williams
Public Information	Kathy Carlson

Actions Taken To Date:

- Approximately 400 private well samples collected.
- Contractor hired for Remedial Investigation/Feasibility (RI/FS) Study work.
- Contractor hired for RI work at Ray's Truck Stop.
- Contractor hired for Long-Term Water Supply Study.
- Field investigations begun at Tower Asphalt and Ray's Truck Stop.
- Long-term water supply feasibility study completed in May 1989.
- Responsible Party search in progress.
- Municipal water supply for Lakeland and Lakeland Shores.
- Design of municipal water supply system complete.
- Municipal water supply system completed.
- Well QW4D was sampled in July 1993 and showed contamination by multiple low level VOCs.
- Termination of applicable provisions of Joint Powers Agreement.
- Sampling to determine whether plume has spread, 1994.

**Lakeland Ground-Water Contamination (continued)**

- Additional sampling of selected residential wells, 1995, 1996, 1997.
- Completion of cost recovery for Lakeland.

Actions Needed:

- Additional sampling of select residential wells to verify status of plume.
- Termination of remaining provisions of Joint Powers Agreement.
- Delisting of site.



Site Name: **LeHillier/Mankato**

Location: South Bend Township/Mankato, Blue Earth County  
North and south of US 169 in LeHillier & Sibley Park neighborhoods

Priority: Minnesota List of Priorities Classification  
B: Remedial Actions Completed and Operations and Maintenance/Long-Term Monitoring Ongoing

National Priority List: Yes      Score: 42

#### **Site Description:**

Past disposal of unknown quantities of industrial solvents occurred in unknown location(s) in LeHillier. Local drift and bedrock aquifers are contaminated with trichloroethylene and other halogenated volatile hydrocarbons affecting approximately 60 residential wells and potentially affecting the City of Mankato well field located just north of LeHillier. Contaminant concentration fluctuations are associated with water levels in the nearby Blue Earth and Minnesota Rivers.

#### Assigned Staff:

Project Manager	<u>MPCA</u> John Moeger
Technical Analyst	James MacArthur
On-Site Inspector	
Attorney General	Alan Williams
Public Information	Galynn Nordstrom

#### Actions Taken To Date:

- MPCA sampling of residential wells identified trichloroethylene (TCE) in ground water in October 1981.
- U.S. EPA Field Investigation Team (FIT) investigated the site in September 1982.
- Blue Earth County applied for a HUD grant in January 1983, for a water supply system for LeHillier residents due to the TCE contamination. The application was later awarded and the water supply system is completed in 1985.
- U.S. EPA declared an Emergency in August 1983, for LeHillier because the contamination posed an imminent public health threat.
- The MPCA requested the U.S. EPA to undertake additional investigations to locate the source of the ground-water contamination and to provide a bottled water supply for affected LeHillier residents in September 1983.
- Approximately 170 LeHillier residents began receiving bottled water in December 1983, which continued for twelve months.
- U.S. EPA initiated a responsible party search in June 1984.
- U.S. EPA initiated the Remedial Investigation/Feasibility Study (RI/FS) with the installation of monitoring wells in August 1984. Additional wells were installed in April 1985. A total of 15 wells were installed for the RI/FS.

#### **LeHillier/Mankato (continued)**

- Final RI/FS received in August 1985.
- Record of Decision was completed and executed by U.S. EPA on September 27, 1985.
- MPCA Board concurred with the Record of Decision on October 22, 1985.
- State lead LeHillier Remedial Design added to the Multi-Site Cooperative Agreement on April 21, 1986.
- Final Plans and Specifications completed in May 1988.
- MPCA advertised for bids on June 17, 1988.
- Bids were opened on July 20, 1988.
- Remedial Design completed in June 1988.
- Contract awarded for Remedial Action Construction in August 1988.
- Construction of ground water treatment system initiated in September 1988.
- Inspection of ground water treatment system conducted in August 1989.
- System started operating September 18, 1989.
- Final inspection September 29, 1989.
- Well and river sampling 1990.
- Well and river sampling 1991.
- Well sampling 1992.
- Well sampling 1993.
- Well number one flooded in June and August 1993.
- Five-year assessment completed in 1994.
- Maintenance and repair of wells 4,5,6 and 7 in December 1995.
- EPA review of five-year assessment completed in March 1996.
- City of Mankato requests authorization to use well number one for potable water supply in March 1996.

#### Actions Needed:

- Operation and maintenance of ground water Remedial Action - approximately five to ten years.
- Completion and signing of five-year assessment.
- Response to request from City of Mankato.



Site Name: **Lewiston Ground-Water Contamination Site**

Location: Lewiston, Winona County  
Area within the city limits of Lewiston and SE of town

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation/Facility Study

National Priority List: No      Score: 34

**Site Description:**

Atrazine contamination was identified in six wells, including two municipal wells. In addition, two private wells show edalachlor contamination. Soil sample analyses indicated contamination of several pesticides at the three major agricultural chemical facilities in town. Investigations and corrective actions on all three facilities were completed in the spring of 1997. Contaminant levels continue to decrease or remain below the health risk limits in all wells where previously detected. The Minnesota Department of Agriculture (MDA) is the lead agency on this site.

<u>Assigned Staff:</u>	<u>MDA</u>
Project Manager	Teresa McDill
Technical Analyst	Michael Loughran
On-Site Inspector	Mike Benson
Attorney General	

Actions Taken To Date:

- Ongoing (July 1986 to the present) sampling to evaluate impacts to wells and to identify potential sources.
- MDA requested three commercial agricultural dealer facilities to initiate investigation and cleanup.
- Remedial investigations completed at all three of the facilities.
- Corrective actions approved at all three facilities.
- Corrective actions completed at all three facilities.
- Reviewed analysis of private and public well water samples to monitor ground water quality.

Actions Needed:

- Delist site from PLP



Site Name: **Lindala Sanitary Landfill**

Location: French Lake Township, Wright County  
4 miles SE of South Haven, just west of Hwy 3

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 28.80

**Site Description:**

The Lindala Sanitary Landfill began operation in April 1973. Amended permit expired April 2, 1990. No closure documentation received until draft closure plans on May 20, 1991. Verbal closure in September 1990. Inadequate cover system; contours out of compliance. Monitoring wells on-site indicate volatile organic compounds are being released to ground water.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Jean Hanson
Technical Analyst	Ingrid Verhagen
Engineer	Peter Tiffany
On-Site Inspector	Gary Zick
Attorney General	Eric Peck
Public Information	Julie Swiler

Actions Taken To Date:

- Draft copy of a Site Assessment Report submitted December 28, 1990. Consultant will not submit final copy until past due accounts are paid by landfill owner.
- Draft Closure Plans and Specifications submitted on May 21, 1991.
- Six monitoring wells and three surface water sites sampled 1987 through 1990 by Pace, Inc. Volatile Organic Compounds (VOCs) and heavy metals detected.
- Results from MPCA sampling (June 11, 1991) not reported as of August 12, 1991.
- Survey, March 1993.
- Owner notified of eligibility for Closed Landfill Cleanup Program, September 1994.
- Negotiating Binding Agreement and determination of RP's financial solvency at present time.
- RP signed access agreement with MPCA in June 1996.
- MPCA awarded design and oversight contract for construction of final cover system in September 1996.

## Lindala Sanitary Landfill (continued)

### Actions Needed:

- Complete final cover system.
- Long-term O&M of cover system.
- Long-term monitoring.



Site Name: **Littlefork Ground-Water Contamination**

Location: Littlefork, Koochiching County  
4th and Main Street

Priority: Minnesota List of Priorities Classification:  
A: Declared Emergency  
B: Response Actions Completed and Operation and Maintenance/Long-Term Monitoring Ongoing  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 22.56

### Site Description:

Several shallow residential drinking water wells were found to be contaminated with tetrachloroethene in October 1993. The Minnesota Department of Health (MDH) issued drinking water advisories to two well owners whose wells had contaminant levels above the MDH Recommended Allowable Limit for tetrachloroethene. A Commissioner's Determination of Emergency was declared December 14, 1993. Ground water probing and soil sampling has documented one source of the contamination and the lateral extent of the contaminant plume.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Allen Dotson
Technical Analyst	Jim Lundy
On Site Inspector	
Attorney General	
Public Information	Kathy Carlson

### Actions Taken To Date:

- Commissioner's Determination of Emergency, December 14, 1993.
- October 27-28, 1993, Residential wells sampled.
- December 1-2, 1993, Residential wells sampled to confirm volatile contamination.
- December 14, 1994, Commissioner's Determination of Emergency.
- March 14, 1994, Site placed on EPA Comprehensive Environmental Response Compensation, and Liability Information System (CERCLIS) inventory of potential hazardous waste sites.
- March 29, 1994, Integrated Assessment (IA/Phase I) work plan approved by EPA.
- April 11-14, 1994, Phase 1 of IA sampling.
- April 26-27, 1994, Phase 1 of IA sampling completed.
- August 29, 1994, Amended IA (Phase 2) work plan approved by EPA.

## Littlefork Ground-Water Contamination (continued)

- October 11, 1994 through October 20, 1994, Phase 2 of IA sampling conducted with assistance from EPA ESAT.
- Integrated Assessment fieldwork completed October 1994.
- MDH conducted a Public Health Exposure Assessment (MDH) 1995.
- MDH completed identification of private wells in site vicinity (MDH) 1995.
- MDH conducted additional private well sampling, 1996.
- MDH analyzed municipal wells, 1996.
- MDH conducted a pumping test on municipal wells, 1996.
- MDH notified well owners of results, 1996.
- MDH completed a Public Health Exposure Assessment, 1996.
- MPCA notified a responsible party under the Drycleaner Environmental Response and Reimbursement Law that it intends to take actions, 1997.
- MPCA is in the process of establishing a Joint Powers Agreement with the City to provide a permanent alternative drinking water supply for affected residents.

### Actions Needed:

- Provide a permanent alternative drinking water supply to affected residential well owners.
- Conduct Remedial Investigation and Feasibility Study (if appropriate).
- Conduct community relations activities.
- Design and implement Response Action (if appropriate).



## Site Name: Long Prairie Ground-Water Contamination

Location: Long Prairie, Todd County  
3 blocks east on Central Avenue

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and Maintenance/Long-Term Monitoring Ongoing  
C: Response Action Design and Implementation

National Priority List: Yes      Score: 32

### Site Description:

Contamination of municipal wells 4 and 5 was discovered in September 1983. Sampling of private wells throughout Long Prairie indicated contamination of approximately 50 wells in the northeastern quarter of the City. A Minnesota Department of Health Advisory was issued recommending that private wells in a 15 square-block area in northeastern Long Prairie not be used for drinking water and in 1994 the advisory area was expanded. Eleven individual well owners have been advised to not use their well water for any purposes. A plume of contaminated ground water extends approximately 3,000 feet northeast from downtown Long Prairie, containing high levels of 1,1,2,2-tetrachloroethylene and much smaller amounts of 1,1,2-trichloroethylene and cis-1, 2-dichloroethylene.

### Assigned Staff:

Project Manager	Maureen Johnson
Technical Analyst	Pat Lannon
On-Site Inspector	Steve Schoff
Attorney General	Jocelyn Olson
Public Information	Kathy Carlson

### Actions Taken To Date:

- Use of contaminated municipal wells 4 and 5 discontinued November 4, 1983.
- MPCA Executive Director declared Emergency to provide bottled water to private well owners in advisory area on November 4, 1984.
- Installation and sampling of 15 monitoring wells conducted during 1984.
- City is awarded a Small Cities Development Grant of \$600,000 in May 1984, to install a new municipal well, install a transmission line and water mains, and upgrade the treatment plant.
- Municipal water available to all affected private well owners, 1985.
- New well 6 connected to municipal supply system, 1985.
- Contamination traced to dry-cleaning operation at 243 Central Avenue, 1985.

## Long Prairie Ground-Water Contamination (continued)

- Public meeting held in Long Prairie on May 21, 1985, to update citizens.
- Multi-Site Cooperative Agreement (MSCA) provides federal funding, 1984.
- Remedial Investigation/Feasibility Study work plan approved September 1986.
- QAPP approved on October 8, 1986.
- Pump test conducted on March 13-16, 1987.
- Final RI Report submitted to MPCA on October 15, 1987.
- Public meeting in Long Prairie to discuss RI Report on October 26, 1987.
- Final FS Report submitted to MPCA on April 5, 1988.
- Public meeting in Long Prairie on April 19, 1988, on FS Report and cleanup alternatives. Recommended ground-water pump-out with treatment, soil venting.
- Record of Decision signed by MPCA/EPA June 1988.
- RD work plan received from MPI on June 6, 1989.
- Draft RD support document submitted on March 16, 1990.
- QAPP conference call with U.S. EPA and QAO on April 24, 1990.
- MPCA approves liquid phase granular activated carbon instead of air stripping on May 29, 1990.
- The QAPP amendment was approved on September 28, 1990.
- 15% design was submitted on December 27, 1990.
- 35% design was submitted on February 1, 1991.
- 90% design was submitted on March 5, 1991.
- June 1991, EPA concurrence on Explanation of Significant Difference for carbon filtration instead of air stripping.
- Remedial Design specifications, sampling, construction contract planning completed March 1993.
- No bids received on cleanup contract, June 1993.
- Rebid fails to produce competitive bids, July 1993.
- Analysis of bidding problem indicates liability, insurance, and bonding are the controlling factors preventing bid proposals.
- Plume sampling results cause private well sampling August 1993.
- Declaration of Emergency gives bottled water, September 1993.
- EPA approves emergency actions December 1993.
- Ground-water sampling program was conducted November 8, 1990.
- Five homes connected to municipal water, December 1993.
- Minnesota Department of Health expands advisory area for future risk, 1994.
- In 1994, extended health advisory area wells are sampled and some contaminated private wells in the original health advisory area are found; bottled water and municipal connections with abandonment of private wells are provided.
- May 1994, Explanation of Significant Difference to Record of Decision clarifies need for monitoring and alternate water supply.
- November 1994, EPA provides for increased funding and indemnification of construction contractor in cooperative agreement amendment award.
- November 1994, EPA approves QAPP, Round 6 ground-water sampling is conducted.

## Long Prairie Ground-Water Contamination (continued)

- December 1994, bid opening for ground-water treatment system construction yields two bids.
- Construction began spring 1995; tests indicate system must be larger than planned to control the plume.
- November 1996, water mains extensions construction contract was awarded.
- November 1996, ground water treatment system construction was completed.
- June 1997, water mains extensions construction and residential connections were completed.
- June 1997, soil vapor recovery contract was awarded.

### Actions Needed:

- Continue operation of the ground water treatment system.
- Complete construction and operate soil vapor extraction system.
- Long term monitoring.



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Site Name: **Louisville Sanitary Landfill**

Location: Rural Louisville Township, Scott County  
Approx. 1300 block between Chicago & Northwestern  
railroad tracks

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation and Feasibility Study

National Priority List: No      Score: 29

**Site Description:**

This site is a closed solid waste sanitary landfill which overlies a highly susceptible aquifer. There are few downgradient users of this aquifer. A downgradient impact may occur on Gifford Lake, a sensitive wetland. To date, no surface water discharge has been determined. Downgradient monitoring wells have shown the presence of organic contaminants in 1984, 1985, and 1988.

Assigned Staff:

MPCA

Project Manager	Doug Wetzstein
Technical Analyst	Joe Julik
On-Site Inspector	Pat Hanson
Attorney General	Dwight Wagenius
Engineer	Randy Burnyeat
Public Public Information	Julie Swiler

Actions Taken To Date:

- Permit issued May 12, 1971.
- Modified November 22, 1971, and amended April 10, 1980, and November 28, 1984.
- Permittee required to evaluate leachate movement, January 18, 1985; study to be completed October 1, 1985.
- Study of impacts on Gifford Lake received March 1985.
- Request for Response Action issued on September 23, 1986.
- Remedial Investigation (RI) has been completed, RI Final Report approved May 5, 1988.
- Alternatives Report approved by MPCA staff on March 27, 1989.
- Detailed Analysis Report received September 15, 1989; comments sent to contractor June 7, 1991.
- Landfill gas survey, 1994.
- The landfill was scored under the new Landfill Cleanup Program and is a qualified facility.
- Owner notified of eligibility for Closed Landfill Cleanup Program, September 1994.

**Louisville Sanitary Landfill (continued)**

Actions Needed:

- Cover needs to be upgraded to provide proper slope and drainage of surface water.
- Cover vegetation needs to be reestablished.
- Design and install a landfill gas control system.
- Continue ground-water sampling.
- Negotiate Binding Agreement with Joe Pahl as per Landfill Cleanup Program.



Site Name: **MacGillis & Gibbs Co.**

Location: New Brighton, Ramsey County

Address: 440th Avenue Northwest

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation

National Priority List: Yes      Score: 48

#### Site Description:

This facility is a wood-treating plant. Soils and shallow ground water are contaminated with metals, pentachlorophenol, and polynuclear aromatic hydrocarbons.

#### Assigned Staff:

	<u>MPCA</u>	<u>EPA</u>
Project Manager	Miriam Horneff	Darryl Owens
Technical Analyst	Jim Pennino	
On-Site Inspector	Steve Schoff	
Attorney General	Alan Williams/Ann Cohen Tom Williams	
Public Information	Stacy Casey	

#### Actions Taken To Date:

- Phase II hydrogeologic study report submitted on March 18, 1983.
- MPCA filed claim against MacGillis in bankruptcy court on May 31, 1983.
- Request for Response Action issued February 28, 1984.
- MPCA approves use of federal or state Superfund monies to do RI/FS on May 22, 1984.
- Contract signed for RI/FS in September 1985.
- RI work plan submitted on November 21, 1985, and approved on December 9, 1985.
- RI report submitted on May 20, 1986.
- Final RI report received on July 14, 1986.
- Contractor (Twin City Testing) proposed additional RI Work northeast of northernmost treatment tank in July 1986.
- Additional soil borings and wells installed in November 1986.
- Additional RI Report received on February 25, 1987.
- MPCA Board approves additional \$60,000 for RI and arsenic work on March 24, 1987.
- Received Remedial Alternatives Report from TCT and PEI in April 1987. RI data gaps suggested.
- Residential wells resampled for arsenic on June 1, 1987.

#### MacGillis & Gibbs Co. (continued)

- Williams Pipeline Company excavated pipeline for testing in MacGillis and Gibbs disposal area on June 16, 1987.
- Approval of Biotrol soil-washing pilot test on September 1, 1987.
- MacGillis and Gibbs submits work plan for interim response action on September 25, 1987 (i.e. barrel overpacking and movement, oil pumpout at TCT-35).
- U.S. EPA issues Administrative Order regarding interim response action on November 27, 1987.
- Limited Site investigation work plan submitted by MacGillis and Gibbs on February 17, 1988.
- Bankruptcy hearing in Milwaukee on April 28, 1988.
- U.S. EPA headquarters and Region V consider Bell Pole as a PRP for MacGillis and Gibbs soils on August 17, 1989.
- On October 23, 1992, the U.S. EPA notified MacGillis and Gibbs that the EPA will undertake the interim remedial response action at the site because MacGillis and Gibbs appears to lack sufficient funds to conduct the action.
- Cost-recovery actions were initiated against MacGillis and Gibbs by the MPCA January 1993.
- MPCA and U.S. EPA each brought legal action against MacGillis and Gibbs for cost recovery in U.S. District Court September 1994. The lawsuit was dropped in 1997 because agreement was reached on the Consent Decree.
- A Consent Decree among EPA, DOJ, MPCA and A.J. Bumby has been signed by all parties and is out for public comment. This document provides for reimbursement of EPA and MPCA costs, and also for ending operations at the MacGillis facility on July 1, 1997.
- A Prospective Purchaser agreement has been developed with the City of New Brighton, EPA, DOJ and MPCA, and will be signed off on in the near future.
- RCRA closure of the MacGillis facility will begin on July 7, 1997.
- OPERABLE UNIT 1 (MPCA lead)
- Biotrol requests approval for further soil tests on April 22, 1988.
- Letter proposing U.S. EPA removal action for disposal area soils on February 14, 1989.
- MPI dioxin sampling at Bell Pole and MacGillis and Gibbs on May 1, 1989.
- Proposal received from Biotrol for soil washing on June 2, 1989.
- Biotrol SITE program begins at site on July 24, 1989.
- U.S. EPA headquarters indemnifies MPI October 6, 1989.
- Support Document Work Plan submitted November 15, 1989.
- MPCA Board allocated use of state funds for Bell Pole incinerator use for OU1 test burn November 28, 1989.
- A work order was issued to MPI on August 7, 1991 to conduct an LRI/FFS.
- The trial burn for OU 1 was conducted on October 31 and November 1, 1991.
- The OU1 FFS was approved with modifications on July 29, 1992.

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MacGillis Gibbs Co. (continued)

- On September 21, 1992, the MPCA sent Requests For Information to Soo Line Railroad, Williams Pipe Line Company, Minnesota Commercial Railway Company, and MT Properties, Inc.
- The OU1 ROD signed December 31, 1992.
- OU1 RD initiated by the MPCA and its contractor, CDM, December 1993.
- MPCA requested, in a letter dated March 27, 1996, a revisit of the OU1 remedy. The City of New Brighton also requested that EPA allow a revisit of the remedy in their letter dated March 15, 1996. EPA agreed to this in their April 19, 1996 letter.
- A work order for a focused feasibility study was issued to CDM on April 8, 1997.
- Williams Pipeline has not been able to gain access from MT Properties for relocation of the pipeline. Condemnation proceedings are continuing in court.
- EPA and MPCA decided that the underground storage tanks and contaminated soil of OU 2 will be handled as part of OU 1.
- OPERABLE UNIT 2 (EPA lead)
- RI/FS Support Document Work Order issued January 25, 1990 for OU2.
- CDM, Inc., stopped work on O2 in June 1990 because of lack of funding.
- U.S. EPA took over lead for O2 in September 1990 and conducted the RI in 1990 and 1991.
- U.S. EPA consultant, Ecology and Environment, Inc., submitted a FFS report on August 29, 1991, which summarized the findings of the first phase RI for OU2.
- The Interim Action ROD for OU 2 was signed on September 30, 1991.
- OU2 RD was initiated by U.S. EPA and its contractor, Ecology and Environment May 1993.
- The OU2 RA began in the spring of 1997.
- OPERABLE UNIT 3 (EPA lead)
- Phase 2 of the RI for OU2 established as OU3, addressing all remaining contamination on the site.
- The OU3 RI/FS was completed by Ecology & Environment for September 1994.
- The OU3 ROD signed September 1994.
- The OU3 RA will begin in July 1997, with removal of the contaminated soil under the drip pad.

Actions Needed:

- Complete relocation of Williams Pipe Line.
- Decide on alternative for OU 1, and prepare a ROD amendment.
- Design and Implement OU1 RA.



Site Name: **Mankato Plating Company**

Location: Mankato, Blue Earth County

Address: 515 Riverfront Street

Priority: Minnesota List of Priorities Classification  
C: Remedial Action, Design and Implementation  
D: Remedial Investigation/Feasibility Study

National Priority List: No      Score: 7.58

Site Description:

The site is an inactive plating facility located in an urban area. Hazardous substances have been detected in soils beneath the building floor slab and in a sump pit located inside of the building. Activity at the site ceased in 1983 when the company went bankrupt.

Assigned Staff:

Project Manager	<u>MPCA</u> Fred Campbell
Technical Analyst	Fred Campbell
On Site Inspector	
Attorney General	
Public Information	Galynn Nordstrom

Actions Taken To Date:

- Site Inspection, 1990.

Actions Needed:

- PRP Search.
- Request For Information.
- Remedial Investigation/Feasibility Study.
- Remedial Action if necessary.



Site Name: **McLaughlin Gormley King Co. (MGK)**

Location: Minneapolis, Hennepin County

Address: 1715 Southeast 5th Street

Priority: Minnesota List of Priorities Classification  
B: Long-Term Monitoring/Operation and Maintenance

National Priority List: No      Score: 4

**McLaughlin Gormley King Co. (MGK) (continued)**

Actions Needed:

- Continue ground-water monitoring to see if benzene levels stay below 120 ug/l.
- Delist Site after residual contamination issues are addressed.

**Site Description:**

MGK is a manufacturer of insecticide products. Several below ground tanks were found to be deteriorated and leaking. All below ground tanks were subsequently removed or inspected. Contamination of soil and ground water exists on-site. Manufacturing operations at the site have been discontinued.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Fred Campbell
Technical Analyst	
On-Site Inspector	
Attorney General	Jocelyn Olson
Public Information	Kathy Carlson

Actions Taken To Date:

- MGK production well sampled on February 22, 1982, showed contamination of 1,2-dichloroethane at concentrations of 260 ppb.
- MPCA met with MGK on February 25, 1983, and their consultant to discuss their letter of February 16, 1983, and proposal for next phase of hydrogeologic investigation.
- Removal of six underground storage tanks on August 30 and August 31, 1983. Contaminated soils removed and stored on-site pending sampling for disposal.
- Proper abandonment of MGK production well completed in August 1983, as per Minnesota Department of Health (MDH) specifications.
- Receipt of Phase IV Hydrogeologic Investigation from MGK on February 6, 1984.
- Request for Response Action issued to MGK on January 22, 1985.
- Contaminated soils properly disposed.
- Consent Order executed November 1985.
- Recovery well/pumpout well placed on-site.
- Remedial Investigation/Feasibility Studies completed.
- Pumpout system designed and became fully operational in 1987.
- Implementation of Response Actions. Sampling of monitoring wells quarterly. Submission of quarterly reports.
- Pump-out system shut down in April 1995 because benzene levels below Consent Order cleanup level of 120 ug/l.



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Name: **Metals Reduction**

Location: St. Paul, Ramsey County

Address: 141 Water Street

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No Score: 2

#### Site Description:

Soil is contaminated with lead.

#### Assigned Staff:

Project Manager	Karen Kromar
Technical Analyst	Jennifer Haas
On-Site Inspector	
Attorney General	Alan Williams
Public Information	Stacy Casey

#### Actions Taken To Date:

- Lead oxides placed in sealed container in June 1979.
- Removal of battery casings and oxides started in November 1979.
- Soil borings completed in July 1980.
- Monitoring plan submitted in December 1980, to determine the extent of soil and ground-water contamination.
- MPCA requested additional information in June 1981.
- Company submitted consultant report in May 1981.
- City of St. Paul entered the Voluntary Investigation and Cleanup Program to investigate and remediate the site in March 1993.
- MPCA approves Phase I and Phase II workplan in May 1993.
- MPCA approves Response Action Plan in January 1994.
- On-site stabilization and off-site disposal of lead-contaminated soil completed in July 1994.
- Corrective Action Documentation and Disposal Documentation reports submitted for review September 1994.

#### Actions Needed:

- Potential issuance of No Further Action letter.



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Site Name: **Mibco Site**

Location: Minnetonka, Hennepin County

Address: 15000 Minnetonka Industrial Boulevard

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No Score: 39.65

#### Site Description:

The Mibco site (Site) is located in the City of Minnetonka. The Site consists of an office/industrial building which has housed numerous tenants since 1969, including printed circuit and electronics manufacturers. Prior to the connection of the building to a municipal sewer system in 1973, wastes (including volatile organic compounds [VOCs] and heavy metals) were discharged to a sump system consisting of seven bottomless concrete tanks. Analysis of ground water in the vicinity of the Site indicates VOC contamination of both surficial and deeper aquifers at levels above the Minnesota Department of Health's Recommended Allowable Limits for drinking contaminants.

#### Assigned Staff:

Project Manager	Joe Otte
Technical Analyst	Larry Quandt
On-Site Inspector	
Attorney General	Alan Williams
Public Information	Stacy Casey

#### Actions Taken To Date:

- October 1986, presence of old sump system is confirmed by backhoe test pit; subsequent soil sampling indicates the presence of tetrachloroethane, 1,1,1-trichloroethane and trichloroethene, ground-water sampling indicates the presence of dichloroethane, trichloroethane, and trichloroethene.
- February 1987, old drainage system is completely excavated; analysis of surrounding soil indicates presence of volatile organic compounds and heavy metals.
- May 1987, three underground storage tanks were removed, two of which were used for storage of organic solvents including 1,1,1-trichloroethane and methylene chloride.
- November 1988, Site owner requests assistance from the Minnesota Pollution Control Agency Property Transfer Review program, but later declines to continue in the program due to expense and lack of cooperation from previous and current tenants.

(continued next page)

#### Mibco site (continued)

- December 1988, Site is entered on the U.S. Environmental Protection Agency's Comprehensive Environmental Response, Compensation and Liability Information System (CERCLIS).
- November 1989, Preliminary Assessment is completed by the Site Assessment Unit (SAU).
- May 1990, sampling of monitoring and production wells indicates presence of chloroform and the presence of trichlorethylene, methylene chloride, dichloroethylene, tetrachloroethylene and dichloroethane above the RALs.
- September 1991, sampling by SAU staff of one municipal and four residential wells within one mile of the Site for VOCs, did not reveal the presence of contaminants above the detection limit.
- September 1993, Advance Circuits proposes interim response action involving pumping of ground water from two affected wells.
- January 1994, Advance Circuits, Inc. enters the VIC Program.
- March 1994, VIC program staff approve IRA pump and treatment system contingent on the company pursuing RI work to define extent and magnitude of the DNAPL release.
- September 1994, RI workplan is submitted.
- November 1994, VIC Program staff reject proposed workplan, reiterate need for workplan to establish extent and magnitude of release. Revised plan due within 90 days.
- February 1995, a revised Phase II Work Plan was approved with modifications. The workplan involved expanding the surficial monitoring well network and doing down-hole geophysics and video-logging of the production wells on-site.
- December 1995, a Progress Report and Work Plan Addendum was submitted for review and approval.
- March 1996, additional investigation approved with modifications and comments
- March 1997, additional investigation approved. VOC contaminated ground water in the surficial water table aquifer is migrating off-site. Additional investigation includes drilling deep soil borings to characterize the stratigraphy of the site.

#### Actions Needed:

- Conclude RI.
- Conduct Feasibility Study.
- Design and implement RA.



Site Name: **Minnegasco**

Location: Minncapolis, Hennepin County  
South bank of Mississippi River under Interstate 35W

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 42

#### Site Description:

A coal gasification facility operated here from 1870s to 1956, and produced gas, coal tar and coke. Soils are contaminated with benzene, toluene, xylene, coal tar, and petroleum based compounds and oxide box filler.

#### Assigned Staff:

Project Manager	Frank Wallner
Technical Analyst	Jim Pennino
On-Site Inspector	Steve Schoff/Paul Estuesta
Attorney General	Beverly Conerton
Public Information	Julie Swiler/Julie Shortridge

#### Actions Taken To Date:

- Minnegasco completed preliminary ground water investigation May 1983.
- Minnegasco began supplementary data collection December 1985.
- Minnegasco removes 720 cubic yards of spent oxide box filler (SOBF) during 1986 to 1988.
- Minnegasco and MPCA staff attempt to negotiate Response Order by Consent in April 1986. Negotiations were unsuccessful.
- Request for Response Action (RFRA) issued to Minnegasco in June 1986.
- Minnegasco will not comply with RFRA requirements for Response Action, but is proceeding with Remedial Investigation (RI).
- RI final report approved July 1990.
- Ground water DAR submitted June, 1991. Interim Response Actions for oxide box filler wastes approved July 1991.
- Minnegasco removed approximately 13,400 cubic yards of SOBF between 1991 and 1994.
- Minnegasco abandoned a deep production well in October 1991.
- Minnegasco abandoned an artesian well in November, 1991.
- Revised soils DAR submitted November 10, 1993. MPCA rejected this document.
- Community Advisory Council established in September 1994.
- Contaminated groundwater collection drain completed in December 1994.
- Minnegasco submits a Soil Investigation Report in July 1995.

- Interim Action - Ten cubic yards of pure tar removed in October 1995.
- Interim Action - Minnegasco thermally treated approximately 6,000 cubic yards of coal tar contaminated soil between December 1995 and March 1996.
- Remedial Action Plan for Soils submitted in February 1996.
- MPCA approves Soils RAP in March 1996.
- Installation of ground-water pumpout system begun in fall of 1995.
- System in full operation during 1996 but with some need for adjustments.

Actions Needed:

- Implement Response Actions for remaining coal tar contaminated soils.
- Complete rough grading of Great River Road.
- Final cover and grading.
- Long term operation and maintenance.



Site Name: **NL Industries/Taracorp/Golden Auto**

Location: St. Louis Park, Hennepin County  
3645 Hampshire Avenue South & 7003 West Lake Street

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and Maintenance / Long-Term Monitoring Ongoing

National Priority List: Yes      Score: 40

Site Description:

A secondary lead smelter, handling battery plates and other lead scrap, operated from 1940 to 1982 in central St. Louis Park. Surface soils on and adjacent to the site received lead contaminants from stack and fugitive emissions. Lead slag from the blast furnace operations were disposed on land now owned by Golden Auto.

Assigned Staff:

Project Manager	Doug Robohm
Technical Analyst	Jim McArthur
On-Site Inspector	
Attorney General	Alan Williams
Public Information	Stacy Casey

MPCA

Actions Taken To Date:

- NL and Taracorp submitted results of Phase I investigation to MPCA on July 16, 1982.
- Golden Auto submitted results of Phase II investigation to MPCA on November 18, 1982.
- MPCA requested NL/Taracorp/Golden Auto to install additional monitoring wells and conduct a well monitoring program for both properties on June 2, 1983.
- Request for Response Action issued January 1984, to all parties.
- Consent Order negotiations initiated with NL Industries in February 1984.
- Consent Order effective on March 8, 1985, with parties NL, MPCA, and U.S. EPA.
- NL submitted a draft "Program for Above Ground Response Measures (RMP)" on April 9, 1985.
- Two new monitoring wells were installed on Taracorp property in June 1985.
- NL's contractor submitted the Subsurface Structure Investigation and Response Measure Plan on June 30, 1985.
- NL's consultant submitted the off-site Soils Remedial Investigation including Phase I, Phase II, Safety Plan, QA/QC Plan, Sampling Plan and project schedule on July 8, 1985.

## NL Industries/Taracorp/Golden Auto (continued)

- Approximately 90 percent of on-site response measures completed.
- Short-term monitoring completed.
- Off-site soil lead survey completed (in review).
- Asphalt cap completed in September 1988.
- Record of Decision executed by U.S. EPA and MPCA on September 29, 1988.
- Monitoring wells are sampled semiannually.
- In November 1994, the MDH conducted soil sampling near the site. Elevated lead levels were found on railroad property adjacent to the site.
- The Five-Year Review was completed by the MPCA in March 1995.
- The railroad property owners adjacent to the site were contacted in January 1996 with a request to take necessary action to minimize the lead exposure for people frequenting their property.
- In February 1996, the MPCA received notice of a proposed railroad realignment that would cross a portion of the site.
- A meeting with Hennepin County Regional Railroad Authority, CP Rail and NL Industries was held in March 1996, to discuss actions necessary to minimize lead exposure.
- Elmwood residents contacted NL Industries in May and October 1996, requesting NL to take action for lead contamination on adjacent railroad property, alleys and yards.
- MNDOT applied to the VIC Program in July 1996, seeking state assurances and possible delisting of the portion of the site where the railroad realignment would take place.
- MDH and MPCA conducted soil sampling in the Elmwood Neighborhood alleys in September 1996. Lead concentrations were generally in the range of normal background levels in an urban area.
- NL repaired the asphalt cap in October 1996.
- MNDOT attempted to obtain an access agreement in February and April 1997.
- In May 1997, various bills were introduced to the state Legislature to fund purchase and cleanup of the site for economic development and to provide right-of-way for rail realignment.

### Actions Needed:

- Long-term ground-water monitoring.
- Maintain integrity of the asphalt cap.
- Minimize lead exposure to people frequenting railroad property.



Site Name: **Northwest Refinery, Former**

Location: New Brighton, Ramsey County  
Northwest of Old Highway 8 and 14 Street Northwest

Priority: Minnesota List of Priorities Classification  
C: Response Action and Implementation

National Priority List: No      Score: 9

### Site Description:

This is a site of a former petroleum refinery which operated from the 1940s to 1966. Tar material is rising to the surface in a couple of locations at the site. Low levels of contamination have been detected in the soil, sediment, and ground water at the site. In 1993 and 1994, the site team conducted three tar, soil, sediment, and ground-water sampling events to determine necessary remedial actions. Once all of the analytical data is received, the site team will complete their evaluation of the data and develop recommendations.

Assigned Staff:  
Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General

MPCA  
Brenda Winkler  
Barb Gnabasik  
Paul Estuesta

### Actions Taken To Date:

- County landfarmed some material from the site, 1976-1977.
- Sediment samples taken February 15, 1981, from marsh show phenol contamination at 10 feet.
- Received ground water study November 1981, indicating petroleum by-product contamination.
- Deep well found to be contaminated with mixture of solvents; shallow wells not contaminated with same solvents.
- 1,403 tons of petroleum sludge and visibly contaminated soil were removed and codisposed at the special waste landfill in Illinois in June 1985.
- Within one year after the excavation of the sludge, tar seeps appeared in the vicinity of the excavation. Ramsey County installed a snow fence around the seep area as an interim measure.
- Request for Response Action issued to Ashland Oil Inc. and the Minnesota Transfer Railway Company on April 22, 1986.
- Remedial Investigation Work Plan and Evaluation Report submitted in January 1987. This report was not accepted.

**Northwestern Lumber Company, Former (continued)**

- Response Actions outline submitted on September 17, 1987.
- Staff negotiated a very limited RI to determine the extent of ground-water contamination. One well was installed between the tar pools and the Long Lake Beach area. The water sample did not indicate the presence of contaminants.
- MPCA issued a request for additional sampling to the Responsible Parties on May 20, 1993.
- The RPs indicated their willingness to conduct the requested actions. The MPCA sampled tar, ground water, and sediment on November 23, 1993; April 4, 1994; and October 26, 1994.

**Actions Needed:**

- Complete evaluation of the tar, soil, sediment, and ground water data.
- Negotiate for recovery of expenses and response actions if needed.



Site Name: **Nutting Truck and Caster C**

Location: Faribault, Rice County

Address: 1201 West Division Street

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and Maintenance/Long-Term Monitoring Ongoing

National Priority List: Yes      Score: 38

**Site Description:**

The source of contaminants, an unlined impoundment, was excavated in 1980. Very high levels of trichloroethylene (TCE) persists in several monitoring wells on-site. Frequent monitoring of nearby municipal wells since September 1982 by Minnesota Department of Health (MDH) and a private lab shows TCE and dichloroethylene at levels below drinking water criteria for total water supply, but above drinking water criteria for one well.

**Assigned Staff:**

Project Manager  
Technical Analyst  
On-Site Inspector  
Public Information

**MPCA**

Maureen Johnson  
Jim Lundy  
Steve Schoff  
Galynn Nordstrom

**Actions Taken To Date:**

- Sludges removed from impoundment and area filled in and paved over. Six ground-water monitoring wells have been placed on-site. Five have shown the presence of TCE and other contaminants.
- Several off-site private wells have been monitored and are clean.
- Monitoring of municipal wells by MDH and private labs from 1982 to present.
- MPCA issued Request for Response Action in September 1983.
- Consent Order signed on April 26, 1984.
- September 1984, Phase I monitoring wells installed, soil borings completed.
- Phase II of Remedial Investigation (RI) work began May 28, 1985.
- Phase II RI work completed in July 1986.
- RI Report submitted on August 11, 1986.
- Response Action Plan submitted December 11, 1986.
- Response Action Plan approved on March 24, 1987.
- Response Order by Consent executed September 1987.
- EPA completes Construction Completion Report for site in September 1992.
- EPA and MPCA completed Five-Year Review in February 1994.
- Semiannual monitoring reports submitted.

**Actions Needed:**

- Continue long-term monitoring and ground-water pump-out.

**Site Name: Oakdale Dump**

**Location:** Oakdale, Washington County  
S of 35th St., N of 31st St., between Granada & Hadley  
Avenues, and SW of Granada and 32nd

**Priority:** Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and  
Maintenance/Long-Term Monitoring Ongoing

National Priority List: Yes      Score: 59

**Site Description:**

The Oakdale Dump Site is comprised of three chemical waste dump sites utilized during the late 1940s through the 1950s (Abresch, Brockman and Eberle sites, known collectively as Oakdale disposal site. Ground water and soil contamination exist on-site.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	David Douglas
Technical Analyst	Eric Porcher
On-Site Inspector	
Attorney General	Alan Williams
Public Information	Kathy Carlson

**Actions Taken To Date:**

- During the hydrogeologic investigations 3M conducted a surficial cleanup of the Oakdale Dump sites in November 1981.
- On July 26, 1983, 3M, the U.S. Environmental Protection Agency and the MPCA entered into a Response Order by Consent for the purpose of having 3M conduct excavation, multiaquifer well closure, monitoring, and ground water pump out remedial actions at the site.
- Excavation of the site was initiated on December 15, 1983.
- Multiaquifer well abandonment completed in October 1984.
- Excavation was completed in November 1984.
- Long term ground-water monitoring initiated in April 1985.
- Pumpout system began operation in August 1985.
- MPCA requested EPA to take enforcement lead on June 24, 1992.
- EPA completed 5-year CERCLA Review in March 1993.
- MPCA resumed enforcement lead on September 2, 1993.
- MPCA staff requested two years of monitoring contaminant removal from PW-3 in April 1995 to determine whether a more aggressive investigation and possible cleanup is required in the area around this well.

**Actions Needed:**

- Operate ground-water pump-out and monitoring systems pursuant to Consent Order.

**Site Name: Old Freeway Dump**

**Location:** Burnsville, Dakota County  
One-fifth mile north of the intersection of Cliff Road and  
Interstate 35W

**Priority:** Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 65.64

**Site Description:**

The Site is an inactive 28-acre unlined and unpermitted open dump situated upon a former freshwater wetland. It is located adjacent to the wetlands of the Minnesota Valley National Wildlife Refuge and within one mile of at least eight municipal supply wells which serve the City of Burnsville. It is reported that the Site received fly ash, municipal wastes, and concrete from the early 1960s to the 1970s. A release of metals and organic compounds to the wetlands and surface water is documented. It is undetermined as to whether or not a release of contaminants from the Site to ground water has occurred at this time.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Dale Trippler
Technical Analyst	Fred Campbell
On-Site Inspector	
Attorney General	
Public Information	Galynn Nordstrom

**Actions Taken To Date:**

- October 31, 1981, Bruce A. Liesch Associates study conducted to assess possible ground water impacts of proposed City wells; report titled: "Future Well Development and Security Program, Burnsville, Minnesota."
- November 11, 1985, U.S. Fish and Wildlife Service sediment sampling conducted along the perimeter of the Site as part of a nationwide inventory to assess potential hazardous waste problems in and near National Wildlife Refuges.
- June 19, 1987, Site was placed on the EPA Comprehensive Environmental, Response, Compensation, and Liability Information System (CERCLIS) inventory of potential hazardous waste sites.
- June 23, 1987, EPA approval of Preliminary Assessment (PA) for the Site prepared by MPCA staff.
- September 17, 1990, Commencement of MPCA Screening Site Inspection (SSI) at the Site.
- February 19, 1992, EPA approval of Old Freeway Dump SSI report.

(continued next page)



## Old Freer Dump (continued)

- Site added to PLP in June 1993.
- Potentially Responsible Party Search begun in 1995.
- MPCA staff attempted to arrange a limited RI to determine whether this site is adversely affecting the surrounding environment. However, the owner of the property would not allow monitoring wells to be placed on his property.

### Actions Needed:

- MPCA staff may request issuance of a commissioner's access order in order to complete the limited RI.
- Issue Request for Response Action to Responsible Parties if the limited RI shows adverse impacts are occurring on the surrounding environment from the old dump site.
- Conduct Ecological Risk Assessment to determine whether site is affecting surrounding ecosystem.
- If Ecological Risk Assessment shows negative impacts on the surroundings, conduct a complete Remedial Investigation and Feasibility Study.
- If Ecological Risk Assessment does not show negative impacts on the surroundings, then delist the site.



Site Name: **Pollution Controls, Inc. (PCI)**

Location: Shakopee, Scott County  
SW of the intersection of Hwy 101 and County Rd 89

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and Maintenance/Long-Term Monitoring Ongoing

National Priority List: No      Score: 52

### Site Description:

PCI, Inc. is a former hazardous waste incineration site located in an area of coarse sand. Contamination of soil and ground water by solvents and metals exists on-site. At one time, 28,000 drums and several hundred thousand gallons of ash and sludge had accumulated at the site. An on-site fire closed the facility after burning a significant quantity of waste.

#### Assigned Staff:

Project Manager	John Moeger
Technical Analyst	Eric Dott
On-Site Inspector	
Attorney General	
Public Information	Galynn Nordstrom

### Actions Taken To Date:

- By January 1982, all drums, liquids, sludge and ash removed in accordance with 1978 court order.
- Hydrogeologic and soil studies completed by company's consultant October 1982.
- Quarterly monitoring initiated November 1982.
- Meeting with Scott County October 1983, to review documents and photos relating to cleanup, spillage and allegations of buried material.
- Company conducted test trenching on November 2, 1983, to determine if wastes were buried on-site; MPCA staff observed trenching; results negative.
- MPCA met with company to discuss stipulation governing monitoring, final clean-up, and incinerator disassembly on November 10, 1983.
- Company began monitoring, incinerator disassembly and general clean-up during the Summer of 1984.
- Stipulation Agreement executed June 25, 1985.
- Final Response Actions completed October, 1985.
- Ground water samples indicate continued presence of contaminants.

### Actions Needed:

- Continue operation and maintenance of ground-water monitoring system.
- Issue RFRA.



Site Name: **Perham Arsenic Site**

Location: Perham, Otter Tail County  
East Otter Tail County Fairgrounds, South Co. Rd. 8

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation

National Priority List: Yes      Score: 38

**Site Description:**

Arsenic wastes, resulting from efforts to combat grasshopper infestations during the 1930s and early 1940s, were buried in numerous locations throughout Minnesota. In the late 1940s, unknown quantities of arsenic wastes were buried in a trench at the East Otter Tail County Fairgrounds. In 1972, eleven employees of the Hammers Construction Company were poisoned by arsenic which had contaminated a newly constructed well. The 1984 remedial investigation revealed that the extent of soil contamination is restricted to the burial trench vicinity and that the plume of contaminated ground water extends for approximately 350 feet in an east-southeast direction.

Assigned Staff:

Project Manager	Maureen Johnson
Technical Analyst	Pat Lannon
On-Site Inspector	Steve Schoff
Public Information	Kathy Carlson

MPCA

Actions Taken To Date:

- Arsenic poisoning incident reported to the MPCA in August 1972.
- MPCA conducted initial site investigation; numerous core samples were collected and the monitoring of the municipal well and nearby private wells was initiated in August-October 1972.
- U.S. EPA completed a preliminary soils and hydrogeologic investigation in October 1980; monitoring wells were installed, soil and ground water samples were collected for analysis.
- City of Perham capped site with a clay cover in Spring 1982.
- MPCA issued Requests for Response Action to the East Otter Tail County Fair Board and to the City of Perham in July 1983.
- MPCA issued Determinations of Inadequate Response in September 1983.
- MPCA contractor completed a Remedial Investigation/Feasibility Study to determine the extent of contamination and to evaluate response action alternatives in June 1984.
- MPCA contractor completed removal of the contaminant source and re-established the clay cap in May 1985.
- Ground-water monitoring program underway.

**Perham Arsenic Site (continued)**

- EPA lead agency, 1991.
- Phase II Remedial Investigation began Summer 1992.
- Completed Phase II Investigation the summer of 1993.
- Completed Feasibility Study in Fall 1993.
- Conducted public meeting on Proposed Plan, selected remedy, and issued Record of Decision, winter and spring 1994.
- Design by EPA began in fall 1994; preliminary design submitted December 1995.
- September 1996, prefinal design submitted.

Actions Needed:

- Continue operation and maintenance of ground-water monitoring system.
- Complete design and implement RA.



Minnesota  
Permanent  
List of  
Priorities  
June  
1997

Site Name: **Perham Municipal Airfield**

Location: Perham, Ottertail County, Minnesota  
1 mile NW of the intersectin of CSAHs 80 and 34

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 23.4

#### Site Description:

Dinoseb contamination, along with other pesticides, has been documented at high levels in the soils at the eastern portion of the airfield, which had been used by aerial applicators employed by local farms. Dinoseb is a canceled pesticide, due to health concerns. Area soils are sandy and permeable to the types of pesticides documented in the soil samples. An initial remedial investigation has determined which soils will require removal and that ground-water contamination has occurred.

#### Assigned Staff:

Project Manager	<u>MDA</u> Teresa McDill
Technical Analyst	Gary Elsner
On-Site Inspector	Mark Magnusson
Attorney General	Paul Strandberg

#### Actions Taken To Date:

- Soil samples were obtained to document level of contamination.
- The City of Perham is currently allowing ongoing aerial applicator operations but are requiring environmental safeguards installed.
- MDA has requested that the responsible parties investigate and clean up the contamination at the eastern corner of the airfield.
- On-site wells have been sampled for pesticides. Results from one well indicate that ground water may be affected.
- Negotiations with the responsible parties resulted in an agreement to begin the investigation and cleanup

#### Actions Needed:

- Conduct Remedial Investigation and Feasibility Study.
- Design and implement appropriate Response Actions.



Minnesota  
Permanent  
List of  
Priorities  
June  
1997

Site Name: **Pig's Eye Landfill**

Location: St. Paul, Ramsey County  
Warner Road and Childs Road, approx. 240 block

Priority: Minnesota List of Priorities Classification  
D: Remedial Investigation, Feasibility Study  
C: Response Action Design and Implementation

National Priority List: No      Score: 42.5

#### Site Description:

Pig's Eye Landfill is located in the flood plain of the Mississippi River just east of downtown St. Paul. The Site is 319 acres in size and is the largest landfill in Minnesota. The Site accepted greater than 70 percent of municipal, commercial and industrial waste from St. Paul and surrounding communities for 16 years. The Metropolitan Waste Control Commission was permitted to dispose of sewage sludge ash on 31 acres of the landfill. During the summer of 1988, the site caught fire and burned intermittently for two months. Hydrogen cyanide was emitted in the smoke. The Screening Site Inspection conducted on-site detected organic contaminants in the soil and ground water. The Expanded Site Inspection documented an observed release of contaminants to surface water.

#### Assigned Staff:

Project Manager	<u>MPCA</u> Dale Trippler
Technical Analyst	Bill VanRyswyk
On-Site Inspector	Hans Neve
Attorney General	Jocelyn Olson
Public Information	Julie Swiler

#### Actions Taken To Date:

- The Site was listed on U.S. EPA's Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS).
- A Screening Site Inspection was conducted in December 1988. The inspection included the installation of three monitoring wells.
- Requirement to Provide Information sent to potential RPs in August 1990.
- An Expanded Site Inspection was conducted in August 1992. EPA approved report in December 1992.
- HRS II Scoring Package completed August 1993 and submitted to EPA for review.
- Limited Remedial Investigation Report was completed by PRC for the MPCA on November 30, 1994.

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## Pig's Eye Landfill (continued)

- Five white-tailed deer were killed by DNR officers and analyzed for their exposure and uptake of possible contaminants at the Pigs Eye Dump site. Based on the investigation, it appears the deer may be adversely affected by their contact to the site. Elevated levels of zinc, lead, cadmium in the edible tissues of the deer, make human consumption of deer from this site inadvisable.
- October 24, 1995, MPCA staff invited the four principle parties to join with the MPCA to complete an investigation and take whatever actions might be necessary to delist the site from the PLP.
- The four parties met MPCA staff on November 14, 1995, to discuss the options for further investigations at the site.
- MPCA staff collected soil and sediment samples from the Battery Casing Area on the northeast corner of the site during the weeks of June 16 and June 23, 1996. The data collected indicate some isolated areas of high lead, but generally low to average soil and sediment lead concentrations. These data do not indicate a need for immediate response actions at the site.

### Actions Needed:

- Continue PRP Search.
- Additional remedial investigation to define nature and extent of contamination.
- Conduct a Focused Feasibility Study.
- Design and implement required response action.



Site Name: **Pilgrim Cleaners**

Location: Brooklyn Center, Hennepin County

Address: 6846 Brooklyn Boulevard

Priority: Minnesota List of Priorities Classification:  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 12.20

### Site Description:

The Pilgrim Cleaners Site is located at 6846 Brooklyn Boulevard in Brooklyn Center, Hennepin County, Minnesota. The Site has been operated as a dry cleaning facility since 1960. Prior to 1960, the site was operated as an implement repair facility. In September 1989, monitoring wells installed on an adjacent property as part of a leaking underground storage tank investigation documented the presence of tetrachloroethylene in surficial ground water. In 1994, in conjunction with the VIC Program, a limited Phase II investigation indicated the presence of tetrachloroethene in on-site soils at very low levels and in shallow ground water at higher levels. In October 1996, four residential wells in close proximity to the site were sampled by the MPCA. Results of the volatile analysis indicate that low levels of 1,1-dichloroethane and 1,1,1-trichloroethane were detected in one of the residential wells.

### Assigned Staff:

Project Manager	<u>MPCA</u> Frank Wallner
Technical Analyst	Pat Lannon
On Site Inspector	
Attorney General	
Public Information	Galynn Nordstrom

### Actions Taken To Date:

- A monitoring well installed in 1989 on an adjacent property documents the presence of tetrachloroethylene in shallow ground water.
- Three soil borings installed on-site in 1994 indicate the presence of tetrachloroethene soils in one location.
- Grab samples of water from the borings indicate the presence of tetrachloroethene in concentrations that range from 360 to 14,000 ug/L in the shallow ground water. A monitoring well was installed in the boring with the highest concentration and tetrachloroethene was detected at 6,000 ug/L.
- In 1996, four residential wells within one-fourth of a mile of the Site are sampled for VOCs and SVOCs. 1,1-dichloroethane and 1,1,1-trichloroethane are documented in one of the residential wells at concentrations below the HRLs.
- Bids for geoprobe work received May, 1996.

(contin      next page)

Actions Needed:

- Issue Work Order for Geoprobe work.
- Conduct Remedial Investigation and Feasibility Study.
- Design and Implement Response Actions if needed.



Site Name: **Pine Lane Sanitary Landfill**

Location: Wyoming, Chisago County  
Northeastern edge of Wyoming off County Road 84

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 25

Site Description:

This site was a MPCA-permitted sanitary landfill which received mixed municipal refuse. The landfill has six on-site monitoring wells. Volatile organic compounds (VOCs) have been detected in five wells, with one well showing elevated concentrations of VOCs that are presently below the Recommended Allowable Limits. The landfill closed in 1990 and was certified closed in 1994.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Jean Hanson
Technical Analyst	Joe Julik
Engineer	Marty Osborn
On-Site Inspector	Pat Hanson
Attorney General	Bev Conerton
Public Information Office	Julie Swiler

Actions Taken To Date:

- Permit issued on June 16, 1972.
- Amended permit issued on April 26, 1984.
- Ground-water sampling conducted at on-site monitoring wells on May 16, 1986, identified volatile organic hydrocarbon contamination.
- Residential wells sampled summer 1990 - no contaminants found in residential wells.
- Expanded Hydrogeologic Investigation - spring 1990 - Report and Proposed Monitoring System due but not submitted.
- Landfill closed in July 1990.
- Survey, March 1993.
- Closure certification completed.
- Installed methane gas monitoring system in October 1994.
- Phase II Hydrogeologic Report completed 1994.
- Phase III monitoring work plan approved 1994.
- Owner/Operator was notified of eligibility for Closed Landfill Program in September 1994.

## Pine Lane Sanitary Landfill (continued)

### Actions Needed:

- Continued monitoring of upgraded monitoring system to determine compliance with solid waste rules/ground water standards.
- Install passive gas ventilation system.
- Provide for maintenance of cover system.
- The site is a "qualified facility" under the Landfill Cleanup Act. The MPCA will negotiate a binding agreement with the owner/operator and after the Notice of Compliance is issued the State will assume responsibility for long-term maintenance and monitoring of the facility. These documents should be completed in 1997.



Site Name: **Pine Street Dump**

Location: Hastings, Dakota County  
The vicinity of 19th Street and Ridge Lane

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 31.94

### Site Description:

The Pine Street Dump site is located two blocks west of the intersection of Pine Street and 18th Street in Hastings. Pine Street Dump was operated by the City of Hastings from the 1930s until approximately 1957. Reports indicate the dump may have been used for disposal of industrial solvents. Hastings municipal well #2 was closed in May 1990 due to high levels of trichloroethylene (TCE). Municipal wells #3 and #7 have also showed low levels of TCE contamination which is likely attributable to the dump.

### Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

### MPCA

Joe Otte  
Michael Connolly

Galynn Nordstrom

### Actions Taken To Date:

- June 1990, Dakota County Public Health Contamination Assessment Team, with MPCA Site Assessment Unit assistance, conducted preliminary assessments of Pine Street and Todd Field dumps to determine possible source of TCE contamination.
- November 1990, Site Inspection was performed by Dakota County Public Health on Pine Street Dump. Temporary monitoring wells and soil borings were installed on-site and adjacent to dump to assess ground-water contamination from TCE. Private non-drinking water wells, downgradient from site, also showed TCE contamination with other volatile organic compounds present.
- Entered VIC Program in April 1994.
- March 1995, VIC Unit staff requests development of a hydrogeologic model to attempt to describe contaminant transport from the Site.
- December 1995, a report entitled "Fracture Trace Analysis" is submitted for MPCA review and comment. The report documents an analysis of bedrock fracture features associated with the Prairie du Chien aquifer system that likely influence

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**Pine Street Camp (continued)**

contaminant transport. The report also contains results of a geophysical survey (seismic reflection) that supports the identification of these subsurface features. Some recommendations for additional investigation are also a part of the report.

- January 1996, an addendum to the December 1995 report is submitted. This report includes the review of some additional historical photographic documentation of the site.
- April 1996, additional geophysical work is proposed to supplement the data set.

**Actions Needed:**

- Pending conclusion of the geophysical investigation and analysis of the results, a sampling plan must be established to verify the hydrogeologic model.
- Conduct Feasibility Study.



Site Name: **Reilly Tar**

Location: St. Louis Park, Hennepin County  
Louisiana Avenue and Walker Street

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and  
Maintenance/Long-Term Monitoring Ongoing

National Priority List: Yes      Score: 59

**Site Description:**

This site was the location of the old Republic Creosote operation from 1917 to 1972. Extensive soil and ground-water contamination has resulted from discharge of contaminated wastewater overland to wetlands adjacent to Minnehaha Creek and from spills. Polynuclear aromatic hydrocarbon (PAH) contamination in the Prairie du Chien-Jordan aquifer has resulted in the closing of one Hopkins and six St. Louis Park municipal wells.

**Assigned Staff:**

Project Manager	MPCAL Miriam Horneff
Hydrologist	Jim Pennino
On-Site Inspector	
Attorney	Stephen Shakman
Public Information	Stacy Casey

**Actions Taken to Date:**

- Investigation of subsurface contamination at site began in 1976; USGS ground-water modeling work began in 1979; Gradient control system proposed in 1981; Recommendation for granular activated carbon (GAC) treatment of contaminated drinking water in 1983.
- Work began on investigation and clean out of deep wells on-site (W23, W105) in 1982. Work completed on W23 (except for final reconstruction) in 1983. Work completed on W105 in 1984.
- Design and construction of GAC treatment system by Reilly Tar for municipal wells 10 and 15 began in 1985.
- Testing the GAC treatment system followed by approval to operate occurred in 1986.
- Initial wetland filling south of the Reilly Tar site to protect migratory waterfowl began in 1986.
- Feasibility Study of gradient control water discharge options continues; Remedial Investigation (RI) and Feasibility Study (FS) in St. Peter and Drift-Platteville aquifers started in 1988; soil borings south of Lake Street completed.

(continued next page)

## Reilly Tar (continued)

- St. Peter RI and Northern Area RI completed in 1989. Gradient control monitoring wells completed. Treatability study for source control well discharge started. Carbon life study completed.
- On July 23, 1990, a Supplemental RI Work Plan for the Drift-Platteville aquifer was submitted.
- St. Peter Aquifer ROD issued on September 26, 1990.
- On March 27, 1991, the City of St. Louis Park submitted a work plan for investigating leaking multi-aquifer wells in the St. Peter Aquifer.
- St. Peter Aquifer gradient control well (W410) placed in service May 30, 1991.
- Drift-Platteville Aquifer Northern Area Supplemental RI/ FS received in July 1991.
- On July 15, 1991, the MPCA placed the University of Minnesota under contract to pursue treatability studies of the source material on-site.
- Drift Aquifer Northern Area ROD was issued on September 26, 1992.
- October 1992, an estimated three-year study conducted by the U.S. EPA Bioventing Site Demonstration project was initiated.
- RA implemented December 15, 1994, for Drift Aquifer Northern Area.
- Drift Aquifer Northern Area gradient control well (W439) system approved January 3, 1995.
- ROD for the Platteville Aquifer Northern Area signed in June 1995.
- RD Work Plan for Platteville Aquifer Northern Area received in October 1995.
- Five-year review completed in 1996.
- Explanation of Significant Differences written for Operable Unit 5 (Platteville Aquifer Northern Area) in 1997, RA implemented in 1997.
- Preliminary Close-out Report will be completed in June 1997.

### Actions Needed:

- Continue with Operation and Maintenance of pumpout systems.



Site Name: **Ritari Post and Pole**

Location: Sebeka, Wadena County  
East 1 mile on Hwy 227

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and Maintenance/Long-Term Monitoring Ongoing  
C: Response Action Design and Implementation

National Priority List: Yes      Score: 30

### Site Description:

Past storage of pentachlorophenol (PCP) treated wood on owners property resulted in soil and ground-water contamination due to drippage and leaching. Possible disposal of small quantities of PCP sludge on property. The largest area of contamination is approximately 35' by 130' south of the wood treating plant. Moderate to high levels of shallow ground-water contamination exists on-site.

### Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

### MPCA

John Moeger  
Eric Dott  
Steve Schoff  
Alan Williams  
Julie Swiler

### Actions Taken To Date:

- MPCA installed three monitoring wells on-site in September 1980.
- Quarterly sampling from September 1980 to June 1982, by MPCA or Ritari's consultant verified ground-water contamination.
- MPCA requested Ritari to submit proposal for Remedial Action in October 1982.
- Proposal received in October 1982. Response Action postponed to Spring 1983, due to weather.
- U.S. EPA contractor performed a site inspection and sampled neighboring wells to gather information to update the HRS score on May 1, 1985 and May 2, 1985.
- Issued Request for Response Action February 1986.
- Issued Determinations of Inadequate Response (DIR) April 1986.
- MPCA sampled site May 1986.
- Remedial Investigation/Feasibility Study (RI/FS) funds awarded by U.S. EPA June 30, 1987.
- Malcolm Pirnie, Multi Site Contractor, assigned to perform RI/FS July 1987.
- U.S. EPA approves Quality Assurance Project Plan (QAPP) July 1989.
- Site reassigned to Delta Environmental Multi-Site contractor August 1989.
- Preliminary field work for the Remedial Investigation began May 1, 1990.

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## Ritari Pole (continued)

- Dioxin found in soils throughout the Site in October 1990.
- Additional funding requested and granted by EPA on March 6, 1991.
- Additional funding requested and granted by EPA on September 2, 1992.
- RI was approved by EPA September 8, 1993.
- FFS was approved by EPA January 14, 1994.
- The Proposed Plan was approved by EPA January 14, 1994.
- A public meeting was held in Sebeka, Minnesota, on February 1, 1994, to discuss the Proposed Plan and the selected alternatives planned for the final cleanup of the Ritari site.
- ROD signed by EPA and MPCA, June 1994.
- Funding requested and obtained from EPA for remedial design, December 1994.

### Actions Needed:

- Design and implement Response Actions.



Site Name: **Robbinsdale Development Site**

Location: Robbinsdale, Hennepin County  
41st Avenue & Broadway

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation

National Priority List: No      Score: 36

### Site Description:

Petroleum products were discovered in the soil and ground water at the site while conducting soil borings for foundation tests. Ground water samples indicate volatile organic compounds (VOC) (1,1,2,2-tetrachloroethene and 1,1,2-trichloroethene) and petroleum products present. The petroleum-contaminated soils and underground storage tanks have been removed. The VOC contamination is suspected to originate from one or more upgradient sources.

### Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

### MPCA

Doug Robohm  
Jim MacArthur

Galynn Nordstrom

### Actions Taken To Date:

- Requests for Information issued spring 1988.
- Limited Remedial Investigation conducted by City of Robbinsdale spring 1988, to Spring 1989.
- Supplemental Investigation Report received January 1993.
- Installed additional monitoring wells and continued ground-water monitoring.

### Actions Needed:

- Assess monitoring data and determine appropriate Response Actions.



**Site Name: Rochester Gas Manufacturing**

**Location:** Rochester, Olmsted County

**Address:** 201 Northeast 2nd Street

**Priority:** Minnesota List of Priorities Classification  
C: Response Action Design and Implementation.

National Priority List: No      Score: 37

**Site Description:**

Rochester Gas Manufacturing is an inactive utility facility that had produced coal gas for urban lighting and heating purposes. The facility had operated on-site from 1888-1940. Typical by products of coal gasification include aromatic and polynuclear aromatic hydrocarbons, ammonia, coke, tar, and heavy metal ash.

Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

MPCA

Doug Robohm  
Jim MacArthur

Galynn Nordstrom

Actions Taken To Date:

- The Site has been listed on Environmental Protection Agency's Comprehensive Environmental Response Compensation, and Liability Information System; and, a Preliminary Assessment and Screening Site Inspection has been completed.
- Response Action Plan Developed by U.S. Army Corps of Engineers for dealing with portion of contaminated soil.
- Rochester Coal Gasification Group submitted RI/FS Work Plan.
- Completed RI/FS April 1994.
- Completed Proposed Plan and conducted Public Meeting May and June 1994.
- Selected remedy, issued Decision Document July 1994.
- Site cleanup Consent Order with Peoples Natural Gas and Interstate Power companies August 1994.
- Conducted Supplemental Investigation of Zumbro River sediments and railroad track areas summer and fall 1994.
- Conducted Remedial Action Excavation July 1994 to February 1995.
- Responsible Parties submitted Report of Groundwater Sampling And Analysis in October 1995.
- RPs submitted Response Action Implementation Report in December 1995.
- RPs submitted Annual Response Action Monitoring Report in December 1995.
- RPs completed Supplemental Investigation Reports for the Railroad Trackage Area, and River Sediment Sampling in January and February 1996 respectively.

**Rochester Gas Manufacturing (continued)**

- In March 1996, RPs requested that six monitoring wells be abandoned. MPCA approved the plan in April 1996.
- RP's submitted Annual Response Action Monitoring Report in October 1996. MPCA approved the report in November 1996.

Actions Needed:

- Long-term ground-water monitoring.



Minnesota  
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e Name: **S.B. Foot Tanning Sludge Disposal  
Area**

Location: Red Wing, Goodhue County  
Approx. 1.5 miles south of US 61 east of Bench Street

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 25

**Site Description:**

Sludge from the tanning wastewater treatment plant is being disposed of on-site in solid form. Ground water is contaminated with heavy metals, chlorides, and volatile organic compounds.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Dale Trippler
Technical Analyst	Liefeng Guo
On-Site Inspector	Hans Neve
Attorney General	
Public Information	Galynn Nordstrom

Actions Taken To Date:

- Monitoring wells installed.
- Soil borings and sludge chemical sampling work performed.
- Hydrogeologic Evaluation report submitted and reviewed.
- Request for Information letters sent to company and City January 5 and 12, 1994, respectively.
- Company and City responded to RFI letters in required time frame.
- Company and City accepted offer of doing a voluntary cleanup of the site on May 24, 1994.
- MPCA approved Remedial Investigation work plan for the site on September 21, 1994.
- MPCA issues letter to S. B. Foot stating objectives and procedures for achieving those objectives on October 23, 1995.
- S. B. Foot submits Sludge Disposal Site Investigation Report in February 1996.
- In a letter dated April 8, 1996, MPCA staff accept the report with modifications and send S. B. Foot a copy of a Risk Assessment done for the site.
- S. B. Foot submitted written documentation in a letter dated May 31, 1996, addressing MPCA modifications to the Sludge Disposal Report. Based on their submittal, MPCA approved the report.

**S. B. Foot Tanning Sludge Disposal (continued)**

- On September 30, 1996, S. B. Foot submitted chromium results from the second sediment sampling event completed on September 6, 1996. MPCA staff determine the sludge may be adversely affecting the adjacent wetland. Additional samples are requested in a letter dated November 13, 1996.
- S.B. Foot submitted a Sediment ToxiCity Testing Work Plan on January 13, 1997. The MPCA approves the Work Plan as submitted on January 23, 1997.
- S.B. Foot submitted the data and recommendations from the Sediment Toxicity Testing study on April 4, 1997.

Actions Needed:

- Collect sediment samples to determine the cause of die-off during the Sediment ToxiCity Testing Study. Design and implement Response Actions, if deemed necessary.
- If Response Actions are not deemed necessary, delist the site.



Site Name: **St. Louis River/Interlake\*/Duluth Tar**

Location: Duluth, St. Louis County  
Southeast of Central Avenue & Soo Line RR

Priority: Minnesota List of Priorities Classification  
C: Response Action Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: Yes      Score: 32

\*The Interlake, Inc., site and the U.S. Steel site have been consolidated by U.S. EPA into one hazardous waste site which has been named St. Louis River/ Interlake/U.S. Steel on the National Priority List (NPL).

#### **Site Description:**

Past spills or disposal of coking coal tar by-products and by-products of coal tar refining occurred in and near St. Louis River. Soils, shallow ground water, surface water, and sediment contamination exists.

The Record of Decision (ROD) for the Tar Seep Operable Unit was issued in September 1990 and the remediation of the Tar Seeps was completed in September 1992. A ROD for the Soil Operable Unit was issued on September 26, 1995. Soil remediation began in the spring of 1996 and will be completed in the fall of 1997. Sediment investigations began in February 1996.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Brenda Winkler
Technical Analyst	John Betcher
On-Site Inspector	Paul Estuesta
Attorney General	
Public Public Information	Julie Swiler

#### **Actions Taken To Date:**

- Site inspections by MPCA staff occurred in July and November 1981.
- Present owner of site (Hallett Dock Companies) sampled on-site well in November 1981. No contamination found.
- Present owner cleaned up surficial deposits of coal tar material in December 1981.
- St. Louis River site (Interlake and U.S. Steel sites) included on the U.S. EPA's National Priorities List in September 1983.
- Cooperative Agreement application for a Remedial Investigation (RI) and Feasibility Study (FS) submitted to U.S. EPA in December 1984.
- U.S. EPA authorized MPCA to initiate RI and incur costs under Multi-Site Cooperative Agreement on January 21, 1986.
- Public meeting to discuss the findings of the RI (Phase I and II investigations) held in Duluth in March 1990.

#### **St. Louis River/Interlake/Duluth Tar (continued)**

- Three (3) operable units identified at the site: Tar Seeps; soil; and embayment/boat slip/river sediments.
- U.S. EPA takes lead on tar seep operable unit in July 1990.
- FS for tar seep operable unit submitted to U.S. EPA and MPCA in July 1990; approved by MPCA and U.S. EPA in August 1990.
- Public meeting held in Duluth in August 1990 to discuss cleanup options for tar seeps present on-site.
- Record of Decision for Tar Seep Operable Unit issued by U.S. EPA in September 1990.
- MPCA Commissioner Notice Letter for Tar Seep Operable Unit sent to potentially responsible parties in November 1990.
- MPCA Commissioner Notice Letter for Soils and Sediment Operable Units sent to potentially responsible parties in January 1991.
- Request for Response Action issued to the Interlake Corporation, Domtar, Inc., and Allied Signal, Inc. for the Tar Seep and Soil Operable Units, March 1991.
- U.S. EPA Enforcement Cooperative Agreement money established in MPCA accounts for oversight of RP directed activities; Multi-Site Cooperative agreement of January 21, 1986, to be phased out.
- MPCA Request for Information (RFI) letters sent to PRPs, past and current landowners, etc. from October 1991 through October 1992.
- Remedial action begins for the Tar Seeps Operable Unit in September 1992; excavation completed September 1992.
- Commissioner's Notice Letter to Beazer East, Inc., for the Tar Seeps and Soil OUs in October 1992.
- Baseline Human Health and Ecological Risk Assessments for the Soil OU submitted October/November 1992.
- Commissioner's Notice Letter to Interlake for additional areas of soil contamination in February 1993.
- Request for Response Action (RFRA) issued by MPCA Board on May 25, 1993, to Beazer East for the tar Seeps and Soil Operable Units, and to Interlake for additional areas of the Soil Operable Unit.
- MPCA sets Soil Operable Unit Cleanup Goals and Objectives in June 1993.
- Response Actions are completed for the Tar Seeps Operable Unit in November 1993; Interlake submits Remedial Action Completion Report on November 29, 1993.
- Commissioner's Notice Letters issued for the Sediments Operable Unit on December 30, 1993.
- MPCA approves Tar Seeps Operable Unit RA Completion Report with modifications (January 1994).
- March 22, 1994, Third RFRA issued to The Interlake Corporation for the Sed OU.

(continued next page)

**St. Louis River/Interlake/Duluth Tar (continued)**

- September 26, 1996, Soil Remedial Investigation and Feasibility Study complete and Record of Decision issued.
- August 10, 1996, MPCA issued Preliminary Remediation Goals for SedOU.
- October 26, 1995, Commissioners Notice Letter Sent to Beazer, Allied, and Domtar for the SedOU.
- November 1995, Received SedOU RI Work Plan; February 1995, MPCA provided partial approval for sediment investigation, requested additional revisions to the report.
- December 15, 1995, MPCA received Remedial Design/Response Action Plan for SOU.
- March 26, 1996, RFRA issued to Beazer, Allied and Domtar for Sediment OU.
- June 1996, began implementing the Soil Remedial Actions.

**Actions Needed:**

- Complete Response Actions for the SOU.
- RPs to complete the Remedial Investigation/Feasibility Study for the Sediments OU.
- Issue Record of Decision for the Sediments OU.
- Design and Implement Response Actions for the Sediments OU.



Site Name: **St. Louis River/U.S. Steel\***

Location: Morgan Park, St. Louis County

Address: 88th Avenue West (Morgan Park)

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation

National Priority List: Yes      Score: 32

\*The U.S. Steel Site and the Interlake, Inc. Site have been consolidated by U.S. EPA into one hazardous waste site which has been named St. Louis River/Interlake/U.S. Steel on the National Priority List.

**Site Description:**

The site is a former steel and coking operation, closed in 1979. Ground water, river sediment, surface water, and soil contamination due to disposal of petroleum heating-oil-tar residues, coal tars, and coke by-products exists.

**Assigned Staff:**

Project Manager	<u>MPCA</u> John Moeger
Technical Analyst	Andrew Streitz
On-Site Inspector	Steve Schoff
Attorney General	
Public Information	Julie Swiler

**Actions Taken To Date:**

- A Request for Response Action was issued to U.S. Steel on January 27, 1983.
- Response Order by Consent executed March 26, 1985.
- Remedial Investigation/Feasibility Study initiated July 1985.
- More than 747,000 gallons of coking by-products and contaminated water removed from 23 on-site tanks.
- Demolition of buildings begun in 1985.
- On-site demolition landfill completed May 1986.
- Monitoring well installation completed Spring 1986.
- Remedial Investigation Final Report approved February 2, 1987.
- Objectives and Alternative Response Action Plan approved April 21, 1987.
- Alternatives Report submitted September 1987.
- Alternatives Report approved November 25, 1987.
- Detailed Analysis Report submitted April 1988.
- Held public meetings on August 23 and September 6, 1988.
- Record of Decision signed February 1989.
- Innovative Technology Study, submitted July 1990.
- Conceptual Design for Slurry wall/bio-treatment system for Operable Unit J submitted July 1991.

(continued next page)

## St. Louis River/U.S. Steel (continued)

- Several operable units completed per the ROD.
- Slurry wall proposal rejected.
- Significant progress on demolition of buildings.
- Investigation of mercury contamination.
- Investigation of sediment contamination in St. Louis River.
- Investigation of remedial technologies for coal tar and coal-tar-contaminated soils.
- Operable Unit A coal tars removed summer/fall 1994.
- Demolition of buildings completed.
- USX has proposed a in-situ solidification and stabilization remedy for Operable Unit J. Proposal submitted in July 1995. Approved by MPCA.
- USX submitted proposal for Wire Mill Pond cleanup - February 1996. Approved with modifications by MPCA.
- Added to EPA/MPCA Enforcement Deferral Pilot project in the last quarter of 1995.
- Public meeting for Operable Unit J and the Wire Mill Pond held on April 24, 1996. Community Work Group established.
- Response Action implementation for OUJ and Wire Mill Pond began in June 1997.

### Actions Needed:

- Complete implementation of response actions for Wire Mill Pond and Operable Unit J.
- FS for contaminated sediments.
- Implement response action for contaminated sediments.
- Negotiate amended Consent Order.
- Continue public participation efforts.



Site Name: **St. Paul Levee Property**

Location: St. Paul, Ramsey County  
South of the Shepard Rd. & Randolph Ave. intersection

Priority: Minnesota List of Priorities Classification  
C: Remedial Action Design and Implementation  
D: Remedial Investigation/Feasibility Study

National Priority List: No      Score: 20.15

### Site Description:

From the late 1960s until April 1989, the Site was used by Auto Parts Supplier's for their auto salvage operation. During the period between 1970 and 1987, miscellaneous fill materials were placed on the levee property to elevate and reclaim a larger portion of the property from the flood plain. Fill materials placed on the property include demolition/construction debris, fly ash, glass, miscellaneous industrial debris, and crushed battery casings.

### Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

### MPCA

Fred Campbell

Beverly Conerton  
Stacy Casey

### Actions Taken To Date:

- September 22, 1989, Phase I Environmental Assessment completed and submitted to the Minnesota Pollution Control Agency (MPCA).
- December 1989, Environmental Assessment, including an electromagnetic survey, surficial soil and water sampling and analysis, and test trenching was completed and submitted to the MPCA.
- March 1990, Work Plan for Additional Investigation was developed and presented to MPCA for review and comment.
- July 29, 1991, Remedial Investigation Report submitted to MPCA. The investigation included additional test trenches, soil gas sampling, soil sampling and analysis, and the installation and testing of a monitoring well.
- June 1995, City removed tires from Site, in response to MPCA request.

### Actions Needed:

- Complete Remedial Investigation/Feasibility Study.
- Design and Implement Response Actions.



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Site Name: **St. Paul Park Ground-Water  
Contamination**

Location: St. Paul Park, Washington County  
Broadway Avenue, Ashland Oil Ref., BN RR tracks and  
Pullmann Avenue

Priority: Minnesota List of Priorities Classification  
A: Declared Emergency  
B: Response Actions Completed and Operation and  
Maintenance/Long-Term Monitoring Ongoing  
C: Response Action Design and Implementation  
D: Remedial Investigation/Feasibility Study

National Priority List: No      Score: 36

**St. Paul Park Ground-Water Contamination (continued)**

Actions Needed:

- Record of Decision.
- On-going monitoring and assessment.

**Site Description:**

Volatile organic chemicals including trichloroethylene (TCE), have been detected in private wells in St. Paul Park. These wells have been abandoned and the homes were connected to the municipal water supply system. MPCA Multi-Site contractor has completed a Limited Remedial Investigation, and a Remedial Design for a ground-water pump-out. The ground-water pump-out system has been installed and is operating.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Frank Wallner
Technical Analyst	Jim Lundy
On-Site Inspector	Steve Schoff
Attorney General	
Public Information	Kathy Carlson

Actions Taken To Date:

- Request For Information issued.
- Multi-Site contractor assigned to investigate site March 1987.
- Remedial Investigation started in August 1987.
- Multi-Site contractor completed Limited Remedial Investigation May 1989.
- Request for Response Action issued to Aero Precision Engineering in June 1989.  
Environmental lien placed on property.
- Contractor tasked to conduct focused Feasibility Study.
- Feasibility Study completed in January 1991.
- Fact Sheet completed, public meeting held on May 8, 1991.
- Municipal water supply extension completed Spring 1992.
- Contractor tasked to conduct RD/RA for contaminated soils and site ground water.
- Ongoing investigation of extent of plume.
- Ground water pump and treatment system installed.



Site Name: **St. Regis Paper Company**

Location: Cass Lake, Cass County  
2nd Street South & Central Avenue

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and  
Maintenance/Long-Term Monitoring Ongoing

National Priority List: Yes      Score: 53

#### Site Description:

Waste water from a wood-treatment plant was disposed of in ponds on-site (Operable Unit 1). Sludges were disposed of both on-site and in a pit at the City dump (Operable Unit 2). In 1974, the MPCA requested that St. Regis determine if ground-water contamination was occurring at the site; in 1977 monitoring indicated that the ground water was contaminated with hazardous substances. The site was placed on the NPL in September 1984. A Request for Response Action was issued in April 1984 to St. Regis, Burlington Northern, and the City of Cass Lake for Operable Units 1 and 2. Two Consent Orders with Champion International for a Remedial Investigation/Feasibility Study (RI/FS) and Response Action Plan for Operable Units 1 and 2 were approved in February 1985. The Minnesota Enforcement Decision Document (MEDD) for Operable Units 1, 3, and 4 was signed in March 1986, and the MEDD for Operable Unit 2 in July 1986. The response actions were completed and the site is currently in O & M. A five-year review was completed by MPCA in 1995. EPA and the Leech Lake Band of Chippewa are presently the lead on the site. EPA issued a 106 Unilateral Order to Champion for O&M activities in February 1995. Champion submitted a ground water modeling study to the EPA in 1996.

#### Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

#### MPCA

Miriam Horneff  
Bill VanRyswyk

Beverly Conerton  
Kathy Carlson

#### EPA

Linda Kern

#### Actions Taken To Date:

##### OPERABLE UNIT 1 - TREATMENT FACILITY:

- Contaminated soils and sludges excavated.
- Ground-water pump-out wells installed Fall 1985.
- Fish sampling and monitoring initiated Fall 1985 and Summer 1986.
- Activated carbon treatment plant completed December 1986.
- Ground-water pump-out operational Winter 1987.
- Two additional monitoring wells installed downgradient of the channel in Winter 1994.

#### St. Regis Paper (continued)

- Product recovery begun summer 1993.

##### OPERABLE UNIT 2 - CITY DUMP PIT:

- Contaminated sludges excavated from pit in 1985.
- Ground-water pump-out wells installed Fall 1987.
- Ground-water pump-out system operational Fall 1988.
- Additional deep monitoring well installed winter 1994.
- Product Recovery begun summer 1993.

##### OPERABLE UNIT 3 - WATER SYSTEM:

- Community water system extended to include the residential area potentially affected by the site.
- The resident who didn't want to be hooked up will get perpetual bottled water.

##### OPERABLE UNIT 4 - CONTAMINATED SOIL CONTAINMENT VAULT:

- Constructed Summer 1986.
- Closed and secure in 1987.

#### Actions Needed:

- Operation and maintenance of ground-water pump-out and ground-water monitoring systems.
- Response to concerns raised in five-year review.





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Site Name: **Salol Sanitary Landfill**

Location: Enstrom Township, Roseau County  
2 miles southeast of Salol, east of highway 13

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 22

**Site Description:**

The site is a permitted mixed-municipal solid waste disposal facility. Ground water is contaminated with chlorinated hydrocarbons, solvents, and arsenic.

Assigned Staff:

Project Manager	Larry E. Olson,
Technical Analyst	Kate Rolf
On-Site Inspector	Travis Peterson
Engineer	Randy Burnyeat
Attorney General	
Public Information	Julie Swiler

Actions Taken To Date:

- County completed hydrogeologic evaluation and installed the Compliance Boundary monitoring wells.
- Site ceased disposal operations and closed April 9, 1994.
- Binding Agreement executed in December 1995.
- County initiated Closure in 1996 and continued construction into 1997.

Actions Needed:

- Complete Cover System construction that includes a Gas Venting System.



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Site Name: **Schloff Chemical**

Location: St. Louis Park, Hennepin

Address: 3938 Meadowbrook Lane

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and  
Maintenance/Long-Term Monitoring Ongoing

National Priority List: No      Score: 6.97

**Site Description:**

This was the site of a chemical supply company primarily distributing bulk 1,1,2,2-tetrachloroethylene. The soil, ground water and surface water are contaminated by volatile organic compounds. Interim remedial actions were implemented by Schloff Chemical Company. The MPCA implemented the final remedial actions and are conducting operation and maintenance of the site.

Assigned Staff:

Project Manager	John Moeger
Technical Analyst	Jim Lundy
On-Site Inspector	Steve Schoff
Attorney General	Steve Shakman
Public Information	Stacy Casey

Actions Taken To Date:

- Request for Information issued to Schloff Chemical Company October 26, 1988.
- Consultant hired by Schloff Chemical Company to conduct ground water and soil investigation December 1988.
- A preliminary Remedial Investigation and Interim Response Work Plans are accepted by MPCA June 1989.
- Interim ground water pump out system activated February 1990.
- Commissioner's Declaration of Emergency for MPCA to continue operation of ground-water pump-out June 1991.
- Phase II Remedial Investigation Summer 1991.
- Phase II Remedial Investigation April 1992.
- Completed Final Alternatives Analysis May 1994.
- Proposed Plan sent out for public comment, May 1994.
- Selected remedy and issued Decision Document, June 1994.
- Completed Remedial Design, July 1994.
- Completed Remedial Action construction, September 1994.
- Initiated long-term O & M, September 1994.
- MPCA and the Attorney General's Office entered negotiations for settlement with the Schloffs.
- Installed down-hole pumps in April 1996, to augment the UVB systems.

Actions Needed:

- Long term O & M.
- Cost recovery settlement agreement.



Site Name: **Schnitzer Iron & Metal Co.**

Location: Minneapolis, Hennepin County/St. Paul, Ramsey County

Address: 2703 Territorial Road

Priority: Minnesota List of Priorities Classification

C: Response Actions Design and Implementation

D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 10

**Site Description:**

Scrap metal operations involved the handling of transformers, engine blocks and batteries which have also required the use of hydraulic oils, fuel oil, gasoline and cleaning solvents in the operation of on-site equipment. Chlorinated solvents, hydrocarbons, polychlorinated biphenyls and lead have been detected in soil borings taken at the site. Heavy metals, volatile organics and hydrocarbons are present in ground water samples taken from on-site monitoring wells.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Dale Trippler
Technical Analyst	Hans Neve
On-Site Inspector	Hans Neve
Attorney General	Jocelyn Olson
Public Information	Kathy Carlson

Actions Taken To Date:

- Voluntary Site Investigation by responsible party, initiated March 1985, is presently on-going.
- Consent Order negotiated, signed by MPCA Board at July 28, 1987, meeting.
- Remedial Investigation Phase I completed.
- Remedial Investigation approved May 17, 1989.
- Feasibility Study submitted March 9, 1990.
- Sampling obtained from above-ground storage tanks.
- Obtained bench-scale study of heavy metal removal from soils of this site in 1992.
- Investigate heavy metal contamination disposal options in pilot scale and full scale during 1993 for feasibility determination.
- Disposal of above-ground storage tanks and contents was completed in August 1994.
- Requests for Information (RFI) were sent to over 130 possible Responsible Parties (RPs) in 1994-95.
- A new fence was installed around the site in November 1994.
- MPCA tasks WCEC on March 3, 1995 to develop cost estimates for remediation of the site.

- WCEC submits their final report and is approved on April 11, 1995. South Parcel Report submitted on March 28, 1995 requesting delisting of the south parcel.
- MPCA approves returning the south parcel to other beneficial uses based on data supplied in the South Parcel Report.
- Work Plan for the North Parcel Investigation submitted on April 25, 1995 and approved on May 11, 1995.
- MPCA issues risk analysis document on November 3, 1995 showing the ground water pathway will not be a factor in determining the final cleanup goals and site closure.
- Commissioner Notice Letters sent between July 1995 and February 1996 to over 24 Potentially Responsible Parties and to 57 De Minimis Parties.
- The Revised Response Action Plan dated September 16, 1996, is approved by MPCA.
- A Pre-Cleanup Investigation and Focused Feasibility Study was submitted in September 1996.
- Site safety and health plan and an operations plan are submitted by Peer Environmental, Inc. in October and November 1996, respectively.
- An MDD is issued on April 7, 1997.
- March 27, 1997 MPCA enters into a Consent Order with three Remediating Parties. The Consent Order paves the way for remediation to begin.
- 57 De Minimis Consent Orders are sent out on May 30, 1997, requesting payment for response actions ongoing at the Site.
- Ramsey County portion of site delisted from PLP on May 30, 1997.

Actions Needed:

- Oversee final remediation of the site and delist Hennepin County portion of site.



Site Name: **Shafer Metal Recycling**

Location: Minneapolis, Hennepin County

Address: 129 Plymouth Avenue North

Priority: Minnesota List of Priorities Classification

C: Response Action Design and Implementation

D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 41

Site Description:

This Company operated a battery-scraping facility at this site since 1973. As a result of these operations, soils were contaminated with acids, sulfates, cadmium and lead. Initial sampling indicates soils contaminated with lead, but no confirmed ground-water contamination. The extent of the contamination beyond the site, if any, is currently unknown.

Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

MPCA

Dale Trippler  
Fred Campbell

Jocelyn Olson

Galynn Nordstrom

Actions Taken To Date:

- A Stipulation Agreement was negotiated with the Company and the effective date was August 23, 1993.
- As part of this Agreement the Company developed a proposal to determine the extent of soil and/or ground-water contamination at this site.
- The building was demolished in November 1982.
- Initial soil and ground water testing was conducted by mid-May 1984. This sampling showed that portions of the site was significantly contaminated with lead and cadmium. Ground-water monitoring revealed lead as high as 3 mg/l in the ground water.
- Additional monitoring will define a plan for corrective actions (if any) to be performed by the Company.
- Additional monitoring in July 1987, did not detect dissolved lead in any of the sampled wells.
- The Minnesota Department of Transportation (MnDOT), which owns the property, recognizes that they are the responsible party. MnDOT submitted data compilation in July 1988.
- A Commissioner's Notice was issued to MnDOT on March 14, 1991.

## Shafer Metal Recycling (continued)

The Request for Response Action was presented to the MPCA Board and issued on March 26, 1991.

MnDOT submitted a Remedial Investigation/Feasibility Study Work Plan on July 13, 1991. The Work Plan was approved with modifications by the MPCA on February 16, 1993.

City of Minneapolis disturbs area of contaminated soils during sidewalk installation.

MPCA meets with MnDOT to discuss additional investigation needed of disturbed area.

Requests for Information issued to potential owner/operators and generators, May 1994.

MPCA, MnDOT, and a group of potentially responsible generators meet to discuss entering into an Administrative Order for completion of the investigation and cleanup of the Site.

MnDOT completes a Remedial Investigation (RI) and a Focused Feasibility Study (FFS) and alternatives analysis. The RI/FS Report is submitted in September 1995.

MPCA approved the RI/FS Report with modifications on July 9, 1996.

### Actions Needed:

Issue a Minnesota Decision Document.

Enter into an Administrative Order with RPs for remedial design and implementation.

Design and implement Response Actions.



Site Name: **Sheldahl**

Location: Northfield, Rice County  
East of Highway 218 on Highway 3 North

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 21

### Site Description:

Sheldahl is a manufacturer of flexible circuitry, laminates, and metalized plastics with applications to aerospace and other industries. The plant is located along the Cannon River north of Northfield, Minnesota on Highway 3. The waste stream handled at the plant includes acid solutions, metal wastes, solvents and numerous other hazardous substances. The cleanup of a 1984 waste ammonia persulfate spill was performed by Sheldahl's consultant and was overseen by the MPCA and U.S. EPA. A buried tank containing waste solvents and sludge was excavated in 1985. The adjacent contaminated soils were also removed and were landspread on-site. A building expansion in 1988 required the removal of an above-ground solvent storage tank. The tank removal revealed solvent contaminated soils which were excavated and landspread on-site. At present a ground-water monitoring system has shown concentrations of solvent contaminants above Minnesota Department of Health Recommended Allowable Limits for drinking water.

### Assigned Staff:

Project Manager

Technical Analyst

On-Site Inspector

Attorney General

Public Information

### MPCA

John Moeger

Eric Dott

Galyann Nordstrom

### Actions Taken To Date:

- A ground-water monitoring program was initiated in November 1985, involving annual monitoring for metals and inorganics. Subsequent monitoring for volatile organic compounds (VOCs) in 1987 revealed the presence of solvents, one exceeded RALs. Quarterly monitoring for VOCs is presently being done.
- A Site Inspection was performed by the U.S. EPA Field Investigation Team in September 1987.
- A Site Inspection Follow-up was performed in June 1988, by MPCA staff in conjunction with Sheldahl's quarterly monitoring program.
- Deteriorated sump removed and cleaned up in June 1989.
- Spill of process water near transfer station in July 1991, required clean up and repair of leaking sump.

(continued next page)

Actions Needed:

- Continue quarterly monitoring program.
- Conduct Remedial Investigation and Feasibility Study.
- Design and implement Response Actions.



Site Name: **South Andover**

Location: Andover, Anoka County

Address: 2052 1/2 Bunker Lake Road

Priority: Minnesota List of Priorities Classification

B: Response Actions Completed and Operation and Maintenance / Long-Term Monitoring Ongoing

National Priority List: Yes      Score: 35

Site Description:

The South Andover site consists of the following properties upon which hazardous substances (solvents, paint sludges, and ink sludges) are stored, have been stored, or disposed of: (1) Cecil Heidelberger - junk yard and private residence; (2) Commercial Auto Parts - junk yard; (3) Pumpkin City - junk yard and private residence; (4) David Heidelberger - private residence; and (5) William Batson - steam bath.

Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

MPCA

Douglas Robohm  
James MacArthur

Kathy Carlson

Actions Taken To Date:

- MPCA Board authorized legal action against property owners on November 25, 1980.
- Letters to four waste generators asking for their proposal of financial assistance, September 1981; proposals not received.
- Preliminary U.S. EPA hydrogeologic studies conducted in 1979 and 1982.
- Demand letter to responsible parties sent January 1983; several generators initiated discussions for cleanup and further investigation of the site.
- Well on David Heidelberger property sampled on July 8, 1983; found to be contaminated with volatile organic hydrocarbons; advised not to drink water.
- Four residential wells sampled February 3, 1984, were not contaminated.
- Request to take Initial Remedial Measures (IRM) to include barrel removal and excavation and disposal of contaminated soils and to conduct a Remedial Investigation and Feasibility Study sent to U.S. EPA in March 1984.
- Sampled selected monitoring and residential wells in April 1984.
- Requests for Response Action sent to responsible persons June 1984.
- Removal of barrels and contaminated soils completed by potential responsible parties in fall of 1985.

#### South Andover (continued)

- Remedial Investigation and Feasibility Study addressing ground-water contamination started in summer of 1985.
- The Remedial Investigation and Feasibility Study for the ground water operable unit was completed in February 1988.
- The Record of Decision for the ground-water operable unit was signed in March 1988.
- A major tire fire occurred in February 1989 at the tire dump located on the Site. Approximately 300,000 tires were involved in the fire. The MPCA Commissioner issued a Declaration of Emergency following air quality monitoring of the smoke. An evacuation advisory was issued to 500 residents in the cities of Andover and Coon Rapids. One hundred ten (110) drums were found in the fire, having been buried by the tires. The final disposal of the drums took place in August 1989.
- In May 1989, the U.S. EPA tasked Donohue and Associates, Inc. to conduct a pre-design investigation to seal, repair, install and sample wells in the ground-water monitoring system.
- In June 1989, the MPCA issued a Work Assignment to Camp Dresser & McKee to begin the Remedial Design (RD) process for the ground water operable unit.
- In June 1989, the U.S. Environmental Protection Agency tasked Donohue and Associates, Inc. to conduct an RI/FS for the source operable unit.
- The MPCA conducted a tire shredding operation for tires not involved in the fire. This operation was completed in August 1989.
- The U.S. EPA completed installation of a security fence in August 1989.
- In June 1990, Donohue and Associates, Inc., started the source operable unit RI field activities.
- The pre-design investigation and source operable unit field activities were completed in October 1990.
- The Final Design Investigation Report for the ground water operable unit was issued in February 1991.
- The Final RI Report for the source operable unit was issued in July 1991.
- The Revised Draft FS Report for the source operable unit was issued in October 1991.
- A public comment period regarding the Proposed Plan for the source operable unit was held between October 11 and November 9, 1991.
- A public meeting to present the RI/FS results and the Proposed Plan was held on October 30, 1991.
- The Record of Decision (ROD) for the source operable unit was signed on December 24, 1991.
- The community was solicited for input concerning a proposed amendment to the original ground water operable unit ROD dated March 1988. A public comment period was held between March 26, 1992 and April 24, 1992.

#### South Andover (continued)

- A public meeting was held on April 8, 1992, to present the results of the Design Investigation Report, and the Proposed Plan for the ground water operable unit ROD amendment.
- On June 6, 1992, the amended ROD for the ground water operable unit was signed.
- Following an extended negotiation period with the U.S. EPA, a Consent Decree was signed on February 5, 1993, by the responsible parties to conduct the remedial design and remedial action for the source and ground water operable units. The remedial action includes existing drum removal.
- A Pre-Design Work Plan was submitted to EPA May 6, 1993.
- A Remedial Design (RD) Work Plan was submitted to EPA May 6, 1993 by Conestoga Rovers and Associates (CRA) for the South Andover Administrative Group (SAAG).
- EPA approved the Pre-Design Work Plan October 12, 1993.
- Drum removal activities began at the site October 13, 1993.
- Phase I well abandonment was completed November 24, 1993.
- EPA approved the RD Work Plan documents with the exception of the Quality Assurance Project Plan (QAPP).
- A Focused Feasibility Study regarding CPAH contaminated soil was submitted to EPA March 28, 1994.
- EPA approved the QAPP March 28, 1994.
- A Drum Removal Report was submitted to EPA April 7, 1994.
- The community was solicited for input concerning a proposed amendment to the original source operable unit ROD dated December 24, 1991. A public comment period was held between April 18 and May 18, 1994.
- A public meeting was held on May 4, 1994, to present the results of the Focused Feasibility Study for the CPAH contaminated soil and to present the Proposed Plan for the source operable unit ROD amendment.
- A ROD Amendment for the source operable unit was signed May 31, 1994, by EPA providing for thermal treatment of CPAH soils.
- A Final Design Report was submitted to EPA June 2, 1994.
- EPA approved the Final Design Report and Final Remedial Action Work Plan June 16, 1994.
- EPA issued a Notice of Proceed with Remedial Activities June 22, 1994.
- A Pre-Construction meeting was held July 8, 1994, with representatives of MPCA, EPA, SAAG, and Belair Builders.
- Remedial Action construction was initiated July 13, 1994.
- Phase II well abandonment was completed September 1994.
- A Prefinal Inspection was conducted by EPA and MPCA September 30, 1994.
- A Final Inspection of RA was completed by EPA and MPCA November 15, 1994.
- A Remedial Action Report was submitted December 2, 1994.

(continued next page)

- The Remedial Action Report was approved by EPA and MPCA December 12, 1994.
- Semi-annual ground water, surface water and sediment sampling continues.
- City of Andover started purchasing portions of the site in 1995. Their plan is to develop the site as a light industrial/commercial area.
- The City entered the VIC Program in June 1996, seeking a Certificate of Completion.
- In September to November 1996, approximately 6000 cubic yards of contaminated soil was identified and stockpiled during redevelopment activities.
- The City is developing a Response Action Plan for soil treatment and disposal.

Actions Needed:

- Semi-annual ground water, surface water, and sediment sampling will continue through May 1997 under the terms of the Consent Decree.
- Semi-annual sampling will be needed for an additional three years.



Site Name: **SE Brainerd Ground-Water Contamination**

Location: Brainerd, Crow Wing County  
29th and Oak Street

Priority: Minnesota List of Priorities Classification:  
A: Declared Emergency  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 20.40

Site Description:

A public water supply well at the Brainerd Seventh Day Adventist Church was found to be contaminated with carbon tetrachloride in January 1994. The Minnesota Department of Health issued a drinking water advisory to the well owner. A Commissioner's Determination of Emergency was declared on March 21, 1995. The source of the contamination has not been determined.

Assigned Staff:

Project Manager	<u>MPCA</u> Allen Dotson
Technical Analyst	Jim Lundy
On Site Inspector	
Attorney General	
Public Information	Stacy Casey

Actions Taken To Date:

- Commissioners Declaration of Emergency.
- Bottled water provided to Seventh Day Adventist Church.
- Integrated Assessment conducted.
- MPCA currently planning additional investigative activities.

Actions Needed:

- Provide a permanent alternative drinking water supply to affected residential well owners.
- Conduct Remedial Investigation to determine source of contamination.
- Design and implement Response Action.



Minnesota  
Permanent  
List of  
Priorities  
June  
1997

Site Name: **Spring Grove Municipal Well Field**

Location: Spring Grove, Houston County

Priority: Minnesota List of Priorities Classification

B: Response Actions Completed and Operation and  
Maintenance / Long-Term Monitoring Ongoing

National Priority List: No      Score: 28

#### Site Description:

In June 1984, the Minnesota Department of Health (MDH) determined that Spring Grove Municipal well #3 was contaminated with 1,1,2-trichloroethylene at 33 parts per billion. In September 1984, the MDH recommended that the City of Spring Grove discontinue the routine use of well #3. The MPCA issued a Declaration of Emergency in June 1985 due to the potential for water shortages during the summer months. A carbon infiltration system was installed on well number three in August 1985. The source, magnitude, and content of ground-water contamination is known.

#### Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

#### MPCA

Steve Schoff  
Pat Lannon  
  
Alan Williams  
Kathy Carlson

#### Actions Taken To Date:

- Minnesota Department of Health (MDH) routine municipal water supply monitoring program detected 1,1,2-trichloroethylene in municipal well number three in June 1984.
- MDH issued a health advisory to the City of Spring Grove on September 14, 1984, recommending that the routine use of well #3 be discontinued.
- MPCA staff sampled residential wells located near well number three east and southeast of Spring Grove on November 6, 1984. Levels of 1,1,2-trichloroethylene well below 27 ppb (U.S. EPA criteria level) were found in some of the wells.
- Requests for Information were sent to potential responsible parties on November 19, 1984.
- A Declaration of Emergency was issued by the MPCA Executive Director on June 10, 1985.
- A carbon filtration system was installed on municipal well #3 in August 1985.
- Long-term safe drinking water supply was provided in May/June 1986.
- Potential Responsible Parties have hired consultant to investigate contamination source(s) and extent, to develop Remedial Investigation/Feasibility Study and implement Remedial Actions.
- Installed a new municipal well for long-term assurance of safe water supply.

#### Spring Grove Municipal Well Field (continued)

- Remedial Investigation has been completed, which was approved by MPCA staff.
- Feasibility Study has been completed, which was approved by MPCA staff.
- A limited number of residences outside City limits that have been adversely affected are receiving bottled water.
- A Remedial Design has been submitted, which was approved by MPCA staff.
- Contracts have been let to implement the Remedial Designs.
- All required permits to implement Response Actions have been obtained.
- All Response Actions implemented March 1989.
- Long-term monitoring on-going.

#### Actions Needed:

- Long-term monitoring of ground water.





**e Name: Stillwater City Dump**

**Location:** Stillwater, Washington County  
Cr12 & Eagle Ridge Trail

**Priority:** Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 26.79

**Site Description:**

The Stillwater City Dump (Site) is located on the western edge of Stillwater, Washington County, Minnesota. The City operated the dump from 1948 until 1966 as a mixed municipal waste disposal facility. A scrap-metal dealer stored junk automobiles at the Site from 1966 through 1969. The dump was closed in the early 1970s. Transformers containing polychlorinated biphenyls (PCBs) were allegedly buried at the dump during its operation by the City.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Joe Otte
Technical Analyst	Mike Connolly
On-Site Inspector	
Attorney General	
Public Information	Kathy Carlson

Actions Taken To Date:

- Minnesota Pollution Control Agency (MPCA) staff completed a Preliminary Assessment (PA) of the Site on June 26, 1986. A Screening Site Inspection (SSI) was completed on November 29, 1989.
- Site added to PLP June 22, 1993.
- Site enters Voluntary Investigation and Cleanup (VIC) Program March 1994, with the understanding that it will be unable to commit financial resources to the site until calendar 1995.
- October 1995, City of Stillwater submits a Phase I and Phase II Investigation Work Plan.
- December 1995, MPCA staff approves Phase II Investigation with comments.
- May 1996, Phase II Investigation field work begins.

Actions Needed:

- Conduct a residential well search.
- Conduct Remedial Investigation and Feasibility Study.
- Design and implement Response Actions.



**Site Name: Superior Plating, Inc.**

**Location:** Minneapolis, Hennepin County

**Address:** 315 First Avenue Northeast

**Priority:** Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and Maintenance/Long-Term Monitoring Ongoing  
C: Response Action Design and Implementation

National Priority List: No      Score: 6

**Site Description:**

Metal-plating operation near Mississippi River since early 1950s. Ground water on-site is contaminated with metals, cyanide, solvents. Ground water off-site is contaminated with solvents.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Dale Trippler
Technical Analyst	Jim MacArthur
On-Site Inspector	
Attorney General	Jocelyn Olson
Public Information	Kathy Carlson

Actions Taken To Date:

- Ongoing construction inside the facility required some excavation work; excavated wastes have been disposed of out-of-state.
- MPCA staff have had meetings with the company to inform them of their responsibilities.
- The company has retained a consulting firm for remedial ground-water investigations.
- Leaks within the facility are currently being corrected.
- Remedial Investigation (RI) begun in September 1984.
- RI Phase I completed July 1985.
- RI Phase II completed August 1987.
- Installation of additional monitoring wells and recovery well underway.
- RFRA issued January 1991.
- Ground water remedy (UV Oxidation) operational.
- Emergency Response Action initiated for release of leachate from soils to railroad ditch in April 16, 1993.
- Quality Assurance Project Plan (QAPP) submitted in September 1993. A revised QAPP submitted on April 29, 1994. Final approval granted on August 8, 1995.

## Superior Plating, Inc. (continued)

- The Ground-water Remedial Action Evaluation Report dated July 1994 was received on August 1, 1994.
- Approval of RI and Limited Feasibility Study (LFS) for the soils unit, and Interim Response Action (IRA) Plan on October 4, 1994.
- Implementation of soils IRA consisting of excavation of contaminated soils and off-site disposal, installation of a leachate collection system (French drain), continued monitoring, October 1994.
- Hold a public meeting to discuss the options proposed in the Minnesota Decision Document (MDD).

### Actions Needed:

- Issue the MDD.
- Continue to monitor ground-water data collected as part of their annual plan.



Site Name: **3M Chemolite Disposal Site**

Location: Cottage Grove, Washington County

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation

National Priority List: No      Score: 33

### Site Description:

Several waste disposal sites (sludge pits, ash pits, burning pits, lagoons, barrel burial) were utilized during earlier operations of Chemolite complex.

#### Assigned Staff:

Project Manager	David Douglas
Technical Analyst	Eric Porcher
On-Site Inspector	
Attorney General	Alan Williams
Public Information.	Kathy Carlson

#### MPCA

### Actions Taken To Date:

- The MPCA issued a Request for Response Action to 3M in January 1985, regarding the site.
- The MPCA and 3M executed a Consent Order regarding the site in May 1985.
- The Remedial Investigation/Feasibility Study was completed in August 1986.
- Response Actions designed, implemented, and approved in 1987.
- An RI/DAR (and a Supplemental RI/DAR) for an acrylic acid release and a boiler ash fill area were completed and approved by MPCA. No threat to public health or the environment was identified. The ash fill area will be covered and vegetated.

### Actions Needed:

- Operate ground-water pump-out and monitoring systems pursuant to Consent Order.
- Additional characterization of waste disposal areas.
- Delist from PLP.



Site Name: **3M Kerrick Disposal Site**

Location: Kerrick, Pine County

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and  
Maintenance/Long-Term Monitoring Ongoing

National Priority List: No      Score: 9

**Site Description:**

Disposal sites were utilized for the disposal of 154 barrels of volatile organic compounds (VOCs) from 1966 through 1969. Trichloroethylene has been found within on-site drift ground-water monitoring wells. Another disposal site was repository of radioactive waste containing Uranium and Thorium.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Dale Trippler
Technical Analyst	Fred Campbell
On-Site Inspector	Hans Neve
Attorney General	
Public Information	Stacy Casey

Actions Taken To Date:

- MPCA requested 3M to implement ground-water monitoring, surface water control, and site security in a letter dated August 19, 1983.
- 3M submitted Improvement and Monitoring Plan on September 30, 1983.
- 3M entered into a Response Order by Consent for excavation of waste and monitoring of site on January 24, 1984.
- Excavation of waste completed in March 1984.
- Ground-water monitoring program initiated in May 1984.
- Request NRC participation in decision on radioactive waste.
- NRC undertook sampling at the site in July and October 1992.
- A draft "Site Dose Assessment" Report was received by MPCA October 1994.
- Annual monitoring of the ground water will continue until water quality criteria are no longer exceeded.

Actions Needed:

- Continue operation and maintenance of ground-water monitoring system.
- Determine if VOC site has been adequately cleaned up.
- Awaiting response from Nuclear Regulatory Commission on actions to be taken at radioisotope site.



Site Name: **Tellijohn Sanitary Landfill**

Location: South Ottawa Township, LeSueur County  
NW 1/4 of Sec. 23, T 111N, R 26W

Priority: Minnesota List of Priorities Classification  
C: Remedial Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 17

**Site Description:**

This is an 80-acre mixed-municipal landfill. It received a MPCA permit on April 20, 1972, and is currently operating. Other than household quantities, no known hazardous wastes were accepted. The ground water in the shallow glacial deposits is contaminated with volatile organic hydrocarbons.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Donald Abrams
Technical Analyst	Gregg Rocheford/Peter Tiffany
On-Site Inspector	Pat Hanson
Attorney General	Beverly Conerton
Public Information	Julie Swiler

Actions to be Taken:

- Permit issued on April 20, 1972.
- Landfill inspected periodically since 1972, few violations.
- Permittee is conducting corrective action to address Solid Waste Rules intervention limit exceedance.
- The landfill ceased operations October 1993.
- The landfill has completed closure activities and is conducting postclosure care at this time.
- Owner/operator notified of eligibility for Closed Landfill Program September 1994.

Actions Needed:

- This site is a "qualified facility" under the Landfill Cleanup Act. The MPCA will be negotiating a binding agreement with the owner/operator and after a notice of compliance is issued, the MPCA will assume responsibility for operation of the remediation system as well as long-term maintenance of the facility.
- Active gas control system needs to be expanded to include the entire facility.



Site Name: **Tonka Main Plant**

Location: Mound, Hennepin County

Priority: Minnesota List of Priorities Classification  
B: Response Action Completed and Operation and  
Maintenance Ongoing

National Priority List: No      Score: 31

## **Tonka Main Plain (continued)**

### Actions Needed:

- Develop and issue MDD for the site.
- Some additional monitoring of ground water is needed.
- When all conditions spelled out in the MDD have been satisfied, delist the site.

### **Site Description:**

Spillage and leakage occurred at this site from industrial solvent storage areas.  
Contamination of soil and ground water by solvents exists at the Tonka Main Plant.

### Assigned Staff:

#### MPCA

Project Manager	Dale Trippler
Technical Analyst	Fred Campbell
On-Site Inspector	
Attorney General	
Public Information	Stacy Casey

### Actions Taken To Date:

- At the request of the MPCA, Tonka agreed to conduct an investigation regarding the possible release of hazardous substances, pollutants or contaminants at the Tonka Main Plant in February 1985.
- Results of investigations showed ground-water contamination at the Tonka Main Plant in August 1985.
- Twelve monitoring wells were installed and sampled by August 1986.
- Storm sewer lines which had some paint residues were cleaned up in August 1986.
- Request For Response Action was issued in July 1986.
- Remedial Investigation Report submitted May 1987; approved by MPCA July 1, 1987.
- Supplemental Remedial Investigation Report submitted to MPCA in October 1987.
- Feasibility Study submitted to MPCA in October 1987; approved by MPCA December 11, 1987.
- Response Action Plan submitted to MPCA in April 1988; approved by MPCA May 4, 1988.
- Supplemental Evaluation of Groundwater Conditions Report submitted in 1991.
- Tonka proposed and MPCA staff approved a storm sewer sampling program on August 7, 1992.
- Tonka submitted a Supplemental Remedial Investigation/ Focused Feasibility Study (SRI/FFS) in November 1996.
- Additional ground-water monitoring will be done to assess the north plume, the last remaining concern at the Site. MPCA staff approved the Work Plan for the additional monitoring wells and data collection on May 8, 1997.



Minnesota  
Permanent  
List of  
Priorities  
June  
1997

Name: **Tower Asphalt**

Location: Lakeland, Washington County  
Address: 15001 Hudson Boulevard  
Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation and Feasibility Studies (RI/FS) Necessary

National Priority List: No      Score: 39.92

**Site Description:**

A 3,000-gallon solvent spill was reported in 1978 to the MPCA by Steve's Oil Service. Steve's Oil Service was operating on the Tower property. Ground-water contamination by volatile organic compounds (VOCs) has been documented by analysis of ground water from the Tower Production well and a monitoring well on the eastern edge of the Tower property. Two domestic wells southeast of Tower are contaminated with low levels of VOCs. The area is underlain by sand and gravel as well as regional bedrock aquifers which are the water source for the residents in the area.

Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

MPCA

Dagmar Romano  
Mark Rys  
Paul Estuesta  
Alan Williams  
Kathy Carlson

Actions Taken To Date:

- 3000-gallon solvent spill in July 1978.
- Excavation of surface four feet of soil contaminated by spill. Soil processed through Asphalt Plant, July 1978.
- Sampling of Tower production well, MW-2 and domestic wells in close proximity to the Tower facility, 1987, 1988.
- Installation of three monitoring wells on the Tower property (only one recharges sufficiently for sampling) October 1988.
- Limited soil borings on-site March and October 1988.
- Hydrogeologic work plan submitted to the MPCA in October 1989; approved by the MPCA in November 1989.
- Site placed on Permanent List of Priorities in December 1989.
- Five additional monitoring wells installed on-site in December 1989-January 1990.
- Ground Water Investigation, Drilling Report submitted to the MPCA in February 1990.

**Tower Asphalt (continued)**

- Monitoring wells and residential wells in the vicinity of the site were sampled in February 1990. VOCs found in several monitoring wells on-site.
- Environmental Investigation, Existing Conditions Report submitted to the MPCA in April 1990.
- Monitoring wells and three residential wells resampled in July 1990. Two residential wells southeast of the site contaminated with trace levels of VOCs.
- Results of June 1990 Soil Investigation submitted on September 28, 1990.
- Requests for Information (RFI) sent to various PRPs in July 1992.
- Responses to the RFIs received in July and August 1992.
- Request for Response Action issued to responsible parties May 1993.
- Domestic wells resampled in July 1993 and August 1993. One well was contaminated with trace levels of VOCs.
- Remedial Investigation/Feasibility Study Work Plan approved October 1993.
- Remedial Investigation was initiated October 1993.
- Three ground-water monitoring wells were constructed November 1993.
- Remedial Investigation Report submitted to MPCA April 1994.
- MPCA staff comments for Remedial Investigation Report provided April 1995.
- Discussions regarding Tower Asphalt as a potential source for the Lakeland ground-water contamination.
- Cost recovery against Tower completed.
- RI/CA Design Report submitted.

Actions Needed:

- Monitoring of wells to determine if additional action may be necessary.



Site Name: **Trio Solvent Site**

Location: New Brighton, Ramsey County  
W of 14th St. NW & Old Hwy 8

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed/Long-Term  
Monitoring Ongoing

National Priority List: No      Score: 21

#### Site Description:

U.S. Environmental Protection Agency (U.S. EPA) identified the Trio Solvent Site as a potential source of ground-water contamination in 1982. A solvent recycling facility was operated on the Site between 1971 and 1978. Volatile organic compounds (VOC) were detected in samples from monitoring and supply wells on the Site. A potential responsible party retained a consultant in 1985, whose remedial investigation report verified the presence of VOCs in ground water and established a link between contaminated soil on the Site and the ground-water contamination.

#### Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

#### MPCA

Fred Campbell  
  
Alan Mitchell  
Stacy Casey

#### Actions Taken To Date:

- U.S. EPA Field Investigation Team contractor installed monitoring wells on the Site and sampled from them in 1982. VOCs were detected in high concentrations.
- MPCA contractor identified the Trio Solvent Site as a potential source of contamination in 1985.
- Potential responsible party's Remedial Investigation (RI) report (January 1986) verified presence of VOCs in ground water and soil at the Site.
- MPCA issued a Request for Response Action in August 1986.
- Responsible Parties began additional RI work.
- Responsible party initiated interim soils remediation in September 1986.
- RI complete and Final RI Report approved in June 1988.
- Feasibility Study (FS) initiated.
- MPCA issued a Determination That Actions Will Not Be Taken In The Manner And Time Requested to the Responsible Parties in January 1989.
- Responsible party completes FS in May 1990.
- MPCA holds a public meeting on proposed cleanup plan in August 1990.
- Response Actions, including start-up of pumpout system, implemented May 1991.
- ROD signed April 27, 1993.
- Submittal of Work Plan for Phytoremediation Pilot Study in July 1996.

#### Trio Solvent Site (continued)

- MPCA approval of Pilot Study Work Plan and temporary shutdown of pumpout system in August 1996.
- Temporary shutdown of pumpout system in September 1996.
- Stipulation of Settlement Agreement (for recovery of past MPCA costs) signed in January 1997.

#### Actions Needed:

- Modify Ground-Water Monitoring Plan and Cleanup Levels.
- Review reports for Phytoremediation Pilot Study.
- Write Minnesota Decision Document (MDD).



Site Name: **Twin Cities Air Force Reserve Base**

Location: Minneapolis, Hennepin County  
Between Hwy 5/I-494 and river

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed/Long Term Monitoring  
C: Response Actions Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 34

**Site Description:**

There are five major and five minor hazardous substance storage and waste disposal sites on the Twin Cities Air Force Reserve Base (TCAFRB) in Minneapolis, Hennepin County. On Site 1, the Small Arms Range Landfill, 1,2-trans-dichloroethylene, chromium, and mercury were detected in a sample taken from a monitoring well. Contaminants from the landfill have been periodically released to the Minnesota River at times when the site is inundated. A leaking fuel storage tank was found at Site P-4. Site 7 consists of five (5) underground storage tanks where, in 1966, 250-500 gallons reportedly of aviation gas was spilled. Petroleum product was found on the ground water surface. At site B, the Hazardous Substance Storage Area, 1,1,1-trichloroethane was detected in a sample from the monitoring well. Contamination of the soil at Site 5, the suspected petroleum, oil, and lubricant (POL) spill area, was observed during removal of an above ground 7,500 gallon railroad tank car.

Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

MPCA

Dave Douglas  
Mark Rys  
  
Steve Shakman  
Kathy Carlson

Actions Taken To Date:

- Historical Records Search completed in March 1983. Sites on base rated according to potential for soil and ground-water contamination and for migration of hazardous substances.
- Initial Site Investigation completed in July 1985. Monitoring wells installed and sampled; three wells at Sites 1, P-4, 7 and 8, and one well at Site 5.
- NUS Corporation visited TCAFRB Small Arms Range Landfill to collect Hazard Ranking System (HRS) information on November 6, 1985. Talked with state and local officials.

**Twin Cities Air Force Reserve Base (continued)**

- HRS package submitted by NUS Corporation January 15, 1986.
- Site 7 Aviation Gas (AVGAS) Cleanup Statement of Work completed in August 1986.
- MPCA issued Request for Response Action to USAF in November 1989.
- USAF Reserve prepared Feasibility Study for Site and held a Public Meeting.
- USAF Reserve completed Site 1 Remedial Investigations.
- USAF Reserve consultant initiated investigations at various other sites.
- MPCA approved Remedial Investigation report for Sites 4, 5, 8, 9, and P-4.
- USAF Reserve implemented Remedial Investigation workplan for Site 7.
- EPA and MPCA approved FS, proposed plan, and Record of Decision for Site 1.
- Supplemental RI report for Site 7 completed.
- Remediation and closure of Former Indoor Firing Range site completed February 1994.
- Completed Site Investigation of Museum site February 1994.
- Closed Sites 2, 3, 6, 8, 9, P-1, Former Indoor Firing Range, and Museum; No Further Action Decision Document October 1994.
- Completed supplemental investigation at Site 4/5 October 1994.
- Investigation completed at Former Rifle Range site November 1994.
- Completed long-term monitoring at Site P-4 December 1994.

Actions Needed:

- Complete FS and implement additional Response Actions at Site 7.
- Long term ground-water monitoring of Site 1.
- Complete FS/remedy selection at Site 4/5.
- Complete closure of Former Rifle Range and P-4 sites.
- MPCA staff completes Minnesota Decision Document.



Site Name: **Twin Cities Army Ammunition Plant/New Brighton/Arden Hills/St. Anthony Site**

Location: Western Ramsey and Eastern Hennepin Counties

Priority: Minnesota List of Priorities Classification

B: Response Actions Completed/Long Term Monitoring

C: Response Action Design and Implementation (TCAAP)

D: Remedial Investigation, Feasibility Study (on and off-base)

National Priority List: Yes      Score: 59

**Site Description:**

The Twin Cities Army Ammunition Plant (TCAAP) is a federal facility of approximately four square miles on which are scattered 15 known waste disposal areas. The facility was used in manufacture of small arms ammunition and other activities since 1941. The New Brighton/ Arden Hills/ St. Anthony Area Ground-Water Contamination Site, with severe solvent contamination (mainly trichloroethylene and trichloroethane) in the Hillside and Prairie du Chien/Jordan aquifers, affected city and private water supplies over about 25-50 square miles. When TCAAP was determined to be the major source of the solvent contamination and the responsible parties (U.S. Department of the Army [Army], Honeywell, and Federal Cartridge Corporation [FCC] assumed the additional work required, the two sites were combined. On TCAAP, the contaminants in the soils include volatile organic compounds (VOC) including the solvent compounds in the regional area ground water, metals, polychlorinated biphenyls (PCB), benzene, toluene, xylene, semi-volatiles, explosives; propellants, phenol, pesticides, oil, dioxins, cyanide, and unknown compounds. The first Federal Facility Agreement in the nation now guides the currently active removal and interim remedial actions to mitigate serious health risks, investigations and final cleanup decisions of a hydrogeologically, sociologically and administratively complex site with the largest known Superfund database.

Assigned Staff:

Project Manager	Dagmar Romano
Project Manager (St. Anthony IRM)	Maureen Johnson
Technical Analysts	Barbara Gnasasik Eric Porcher

MPCA

**Twin Cities Army Ammunition Plant/(TCAAP)/New Brighton/Arden Hills/St. Anthony (continued)**

On-Site Inspector	Paul Estuesta
Soil Scientist	Mark Ferrey
Attorney General	Mahmet Konar-Steenberg
Public Information	Kathy Carlson

Assigned Staff

Remedial Project Manager  
Enforcement Attorney

U.S. EPA

Tom Barounis  
Jim Morris

Actions Taken to Date:

- MPCA identified threat to water supplies in May, 1981, from Army Report No. 129 (1978) about waste disposal activities at fourteen sites on TCAAP, and began extensive sampling of drinking water supplies including TCAAP wells, nearby private wells and municipal wells in the area.
- Minnesota Department of Health issued recommendations in 1981 and 1982 to find alternate water supplies to users of known contaminated water at acute or chronic risks levels, including seven of 31 New Brighton and Arden Hills residents with contaminated wells, the operators/owners of TCAAP, Arden Manor Trailer Park, City of New Brighton, City of St. Anthony, and several area industries.
- The MPCA formally requested the Army and others to conduct ground-water studies at TCAAP in July 1981.
- MPCA applied to U.S. EPA for federal Superfund money for emergency water supply assistance in 1981; U.S. EPA assigned its contractor to do a preliminary investigation.
- New Brighton, St. Anthony, and private well owners obtained alternate water supplies with non-monetary MPCA assistance (The state Superfund did not exist for emergencies) in 1981, 1982 and 1983.
- New Brighton abandoned several municipal wells, either placed on standby or deepened several others, drilled new wells and limited water consumption.
- St. Anthony closed one well in 1982 and limited water consumption. The area-wide ground water VOC contamination was added to the National Priority List in 1982.
- MPCA identified Butcher's Spur area with Trio Solvents, Old Northwest Refinery and Miller Dump as possible contamination sources in 1982.
- Army Phase I study determined TCAAP was a source of the ground-water contamination within facility boundaries in May 1983. Honeywell began investigation of Buildings 103 and 502 on TCAAP in May 1983. Army provided bottled water to several Arden Hills residents in 1983 and reimbursed Arden Manor Trailer Park for alternate water supply costs.



**Twin Cities Army Ammunition Plant/(TCAAP)/New Brighton/Arden Hills/  
St. Anthony (continued)**

- U.S. EPA funded the area ground-water contamination remedial investigation in June 1983 with 1.46 million dollars from the federal Superfund for two phases to be performed by MPCA, in a Cooperative Agreement (CA).
- CA was amended to fund water main for 12 New Brighton and Arden Hills residents with contaminated wells.
- MPCA issued a Request for Response Action (RFRA) to Army, Federal Cartridge, and Honeywell as responsible parties requiring expansion/acceleration of TCAAP studies in June 1983.
- U.S. EPA issued Notice letters to Army and other potential responsible parties requesting their investigation of area-wide VOC ground-water contamination in 1983; the requests were declined.
- U.S. EPA funded temporary carbon treatment for two New Brighton wells in 1983.
- MPCA issued an amended RFRA in October 1983 and January 1984 to clarify responsibilities and schedules for the TCAAP RI.
- Army Phases II and III studies further determined on-post sources of contamination; MPCA determined the studies were incomplete in June 1984.
- MPCA reimbursed a resident for his municipal well connection in 1984.
- The CA was amended for an interconnection to provide water to St. Anthony from Roseville in 1984.
- Honeywell submitted reports on Buildings 103 contaminants and migration to Rice Creek and on Building 502 contaminants and migration to the west or southwest in 1983, 1984 and 1985.
- Testing and investigation of the sewers, force mains and sumps began in 1983 and continued to 1986.
- Honeywell proposed a three-phase off-TCAAP limited study to supplement MPCA work to identify off-TCAAP sources in July 1984.
- In 1984, the Army submitted a Part A RCRA permit application for some currently active disposal areas, Sites F and G, with Army as owner, FCC as operator, and Honeywell as user.
- The CA was amended in February 1985, for additional RI and interim remedial action funding.
- In 1985 in an amended RCRA Permit application, Honeywell requested storage and treatment approvals with Honeywell as operator, at seven buildings on TCAAP including some of the disposal sites.
- Honeywell excavated and stored soil and related sewer and sump sediment and pipe bedding from Sites I (Building 502), J (sewers), and K (Building 103) in a RCRA-regulated containment structure in 1985 until remedy is decided.
- In February 1985 PCB-contaminated soil was excavated from Site D and stockpiled within plastic until treatment or transport was decided.
- In February 1985 the MPCA Board issued a Second Amended RFRA requesting completion of Buildings 103 and 502 investigations and implementation of response actions at those buildings.

**Twin Cities Army Ammunition Plant/(TCAAP)/New Brighton/Arden Hills/  
St. Anthony (continued)**

- In April 1985 the MPCA Board issued a Third Amended RFRA requesting adequate and timely completion of Army Phases II and III to address the past hazardous waste disposal activities at TCAAP.
- In May, 1985 the regional ground water RI Phase I report was completed by the MPCA contractor, identifying two areas on TCAAP (Sites A-K) as the probable major source and two areas off-TCAAP (including Trio Solvents) as potential source areas; Phase I Addendum (IA) work followed.
- In 1985 U.S. EPA initiated an RI of the force mains from TCAAP.
- In 1985 the Army proposed phased ground water recovery systems.
- In 1985 Honeywell constructed ground-water remediation drain at Building 103 (Site K).
- In 1985 Honeywell submitted its Phase I off-TCAAP report indicating contaminated ground water appeared to leave TCAAP in two plumes and proposing additional work.
- By July 1986 all sewer line cleaning was completed (Site J).
- In 1986 U.S. EPA asked Army to participate in the combined area ground water and TCAAP site studies since the TCAAP facility was a major source of the regional VOC-contaminated ground water.
- In 1986 an U.S. EPA Record of Decision provided that New Brighton's Well #7 be replaced with Well #13; intergovernmental agreements were signed and design was funded in 1987.
- U.S. EPA and MPCA attempted negotiation of a federal facility agreement (FFA) with the Army in 1986, but negotiations were continued, pending the reauthorization of the federal Superfund laws with its expected guidance for federal facilities.
- In 1986 the MPCA issued a Notice of Violation (NOV) to Army and FCC for RCRA-related violations at TCAAP, and later advised Army of its obligations under RCRA, including Sites D, F and G corrective actions to be included in the permit when issued.
- A Fourth Amended RFRA was issued in August 1986 requesting completion of all site investigations and interim response actions, and conduct of the feasibility study, remedial design, and final remedial actions; responses to the Third Amended RFRA were determined to be inadequate.
- Old Northwest Refinery and Trio Solvents were issued RFRA's in 1986 and became separate projects.
- The Army capped and installed in situ volatilization as innovative remediation technology at Sites D and G in July and August 1986.
- U.S. EPA completed a phased FS for ground-water remediation at St. Anthony with discharge to the City's water supply in 1986 and began the design in 1987.

(continued next page)

**Twin Cities Army Ammunition Plant/(TCAAP)/New Brighton/Arden Hills/  
St. Anthony (continued)**

- By March 1987, 83 underground storage tanks were investigated and remediated with excavation and removal or replacement with double-wall tanks having leak detection systems.
- St. Anthony installed a temporary carbon treatment system at its own expense, although contaminant levels had not exceeded MDH risk limits in the wells being used.
- The CA was amended twice in 1987 to increase RI and add FS funding.
- In August 1987, Honeywell installed a source control well at Site I (Building 502).
- Ten months after the reauthorization of federal Superfund clarified the authorities of Army, U.S. EPA and states with a specific section on federal facilities, the FFA was signed in August 1987; with the Army's previous presidential delegated authorities, the Army began the required on-TCAAP RI and other activities immediately although the effective date of the FFA was December 31, 1987.
- In 1987, the Boundary Ground Water Recovery System was installed with six pumpout wells; in 1988 six more wells were added to improve the system.
- The Army's Preliminary Assessment was approved in May 1988.
- The Army's approved on-TCAAP RI work plan and quality assurance project plan were implemented in 1988 and 1989.
- The Army performed a sampling program in 1988 for Shoreview residential wells adjacent to Site A and found one or two wells slightly contaminated with trace VOCs not above the MDH risk levels; the Army installed a pumpout at Site A in 1989.
- In 1988 Army and New Brighton entered a Litigation Settlement which provided a permanent carbon treatment system for potable water; in 1989 U.S. EPA amended its ROD stating that New Brighton no longer needed Well 13 to meet its potable quantity needs since the Army was providing that amount, and for other reasons.
- The Army cooperated with the MPCA by installing ten Phase IA and eventually additional Prairie du Chien wells at \$25,000 each in 1988.
- In 1988, the MPCA completed the Phase IA comprehensive time-based sampling of 135 wells coordinated with the Army's increased quarterly sampling; the MPCA data analysis determined that TCAAP was the major source of contamination at St. Anthony, which resulted in a settlement between the Army and St. Anthony.
- The CA was amended in 1988 to revise RI funding and add funding for MPCA assistance to U.S. EPA during the design and for MPCA lead in the St. Anthony carbon treatment facility construction.
- The U.S. EPA contractor completed the off TCAAP force mains RI in November 1988.
- The U.S. EPA contractor completed the design of the St. Anthony carbon treatment facility in November 1988.
- Phase I of the Army's Water Management Plan was completed in 1989.
- In 1989 the Army completed incineration of PCB-contaminated soils at Site D.
- Four source-control pumpout wells for Sites D, F, and G were installed into the ground-water remediation systems in 1989.

**Twin Cities Army Ammunition Plant/(TCAAP)/New Brighton/Arden Hills/  
St. Anthony (continued)**

- TCAAP staff carried legislation to enable St. Anthony to accept ownership of the Carbon Treatment Facility in 1989-1990.
- Construction of the St. Anthony Carbon Treatment Facility was begun in 1990 and completed in 1991 with operation and maintenance planned for ten years.
- The Army's design for regional model of regional flow was developed in 1990.
- U.S. EPA completed the Risk Assessment Scope of Work and first draft; MPCA assured that environmental assessment would also be performed.
- Army completed the innovative first stage of improving the ISV removal at Site D.
- The Army submitted major documents required by the FFA including the 1988 and 1989 Annual Monitoring Reports and the 1989 and 1990 Annual Monitoring Plans.
- In 1990, environmental assessment at the Army Reserve Training Center at TCAAP indicated need for RI which was begun by the Corps of Engineers.
- The CA was amended in 1990 to complete the RI and to support the work on the model.
- The Army deepened the in-situ volatilization experimentally in 1990.
- Community Relations Plan completed by Army in February 1991.
- Off-TCAAP RI Report completed by MPCA contractor in March 1991.
- Human Health Risk Assessment Report completed by EPA in May 1991.
- On-TCAAP RI report completed by Army in July 1991.
- Draft Environmental Risk Assessment Report prepared by Army submitted in May 1991.
- The Army conducts additional RI work at Site F under RCRA during Spring 1991.
- Army's proposed overall Project schedule was submitted in July 1991.
- Army hired a contractor for the FS in August 1991.
- MPCA and DOD entered into the DSMOA in July 1991.
- Army initiates IRA at Site A in July 1991.
- The final report of sewer cleanup (Site J) was submitted by the Army in August 1991.
- Army provided a draft report on the local ground water model in August 1991.
- Army was issued an NOV and fined \$5,000 for failure to monitor wells.
- Army in long negotiations with City of New Brighton regarding acceptance of water from proposed PGRS system throughout the summer of 1991.
- The Wehrlein case went to trial during the summer of 1991.
- Army completed the Ecological Risk Assessment Report in November 1991.
- A public meeting was held to present results from the On-TCAAP RI, the Off-TCAAP RI, HHRA, and ERA reports.
- The Wehrlein lawsuit settlement was completed out of court with 99 plaintiffs in April 1992.

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**Twin Cities Army Ammunition Plant/(TCAAP)/New Brighton/Arden Hills/  
St. Anthony (continued)**

- Feasibility Study for OU3, recommending ground water extraction for south plume containment using treated ground water for municipal water supply, was completed in July 1992.
- Proposed Plan for OU3 was developed and public meeting on the Proposed Plan was held in August 1992.
- Record of Decision for OU3 was signed in September 1992.
- Phase I of the Off-TCAAP Well Survey, recommending approximately 1,000 wells for further investigation, was completed in September 1992.
- OU1 Feasibility Study Work Plan was approved in September 1992.
- Well elevation survey was completed in October 1992.
- Work on the access agreements for additional off-post monitoring wells was completed in November 1992.
- Field work for the OU2 Feasibility Study was completed in November 1992.
- Army received concurrence in December 1992 to proceed with the response action at Site A under the Removal Authority under Section 104 CERCLA to speed up the implementation of the removal action.
- The Site F RCRA Alternatives Analysis and Supplement RCRA Alternatives Analysis were approved in December 1992.
- The OU3 Administrative Record was completed in December 1992.
- The Lowry Grove Trailer Park was connected to the municipal drinking water supply in December 1992.
- Agreements were reached defining responsibility and interactions among Alliant/New Brighton, Army/New Brighton, Army/Alliant and New Brighton/Fridley.
- The final design for the TCAAP Operable Unit 3 Treatment System - Plume Ground Water Recovery System was approved in March 1993.
- Location-Specific ARARs, Chemical-Specific ARARs and Action-Specific ARARs considered comprehensive, addressing all ARARs that currently apply.
- Installation of the Operable Unit 3 monitoring wells and PGRS production wells was completed in April 1993.
- Construction of the PGRS as part of the final remedy for Operable Unit 3 was initiated in May 1993.
- The Operable Unit 1 Feasibility Study was approved in July 1993.
- The Site F Feasibility and Closure Report, recommending soil washing for final closure at Site F, was completed in May 1993.
- The New Brighton/Fridley Interconnection Remedial Design was approved in June 1993.
- The Site A Engineering Evaluation/Cost Analysis (EE/CA) Final Report was provided to regulators in June 1993.
- The 1992 Annual Monitoring Report/1994 Annual Monitoring Plan was finalized in July 1993.

**Twin Cities Army Ammunition Plant/(TCAAP)/New Brighton/Arden Hills/  
St. Anthony (continued)**

- The New Brighton/Fridley Interconnection construction was begun in July 1993.
- The Operable Unit 1 Feasibility Study was approved in July 1993.
- The Proposed Plan for Operable Unit 1 was approved in August 1993.
- A public meeting to present the Operable Unit 1 recommended remedy to the public was held in August 1993.
- The Operable Unit 1 Record of Decision was approved in September 1993.
- Specifications for Site A Removal Action were provided to regulators in September 1993.
- The Administrative Record for Operable Unit 1 was completed in November 1993.
- Construction of the Site A Removal Action was initiated in November 1993.
- The Public Health Assessment was released by ATSDR for public comment in November 1993.
- A meeting to discuss roles, requirements, and responsibilities for accessing Army property was held in January 1994 with representatives from regulatory agencies, Army, and interested groups.
- The Draft Remedial Design/Remedial Action Work Plan for Operable Unit 1 was approved in March 1994.
- The PGRS construction was completed.
- Site J closure was completed December 1993.
- Site A removal action construction was completed.
- Phase III of the off-post well survey was completed.
- The 1993 Annual Monitoring Report/1994 Annual Monitoring Plan was finalized June 1994.
- The New Brighton/Fridley Water Supply Interconnection became operational May 1994.
- Grenade Range Phase II was completed in January 1995.
- PGAC Facility construction was completed in January 1995.
- OU1 Final Conceptual Design Report for the Containment/Production Wells was completed in March 1995.
- Preliminary Assessment for Well O3UO31 was completed in June, 1995.
- Sampling of Round Lake and Valentine Lake was performed in July 1995.
- Site F Soil Washing/Soil Leaching was completed in July 1995.
- Field investigation of the Outdoor Firing Range was completed in August 1995.
- Removal of Building 308 was completed in September 1995.
- OU1 Final Alternate Supply Plan was completed in September 1995.
- OU1 Final Performance Monitoring Plan was completed in September 1995.
- UXO search at CERCLA sites was conducted in September 1995.
- CAMU Conceptual Design was completed in September 1995.
- FY 1994 Annual Monitoring Report was approved in September 1995.
- OU3 Control System Integration Final Design was completed in September 1995.
- Construction of OU1 Raw Water Pipeline was completed in September 1995.

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**Twin Cities Army Ammunition Plant/(TCAAP)/New Brighton/Arden Hills/  
St. Anthony (continued)**

- OU1 Off-Post Monitoring Well Conceptual Design Report was completed in October 1995.
- TCAAP Restoration Advisory Board (RAB) was formed in December 1995. Arden Manor Trailer Park municipal water hook-up was completed in December 1995.
- Phase 1 Investigation Work Plan for the Residential Housing Area was completed.
- On July 2, 1996 MPCA staff provided Army with a response regarding TGRS Source Control Well SC1 Air Stripper.
- On August 5, 1996 MPCA staff participated in discussions with U.S. EPA and the National Remedy Review Board to discuss OU2 remedial alternatives.
- The regulators responded to a request by Army for a change to Well B7.
- On August 28, 1996 and September 25, 1996 the regulators approved the use of potable water in Building 116 as the CERCLA clean water source and the abandonment of wells 117A and 117B by Army, if needed.
- On August 30, 1996 the RD/RA QAPP for Performance Monitoring Activities for OU1 and OU3 was approved.
- The Final Design Report, OU1 Modifications, Control System Integration was approved in October, 1996.
- On October 1, 1996 the FY 1995 Annual Monitoring Report/Fiscal Year 1997 Annual Monitoring Plan were approved.
- On October 31, 1996, the regulators requested the participation of TCAAP in the BETA testing program for natural attenuation. In December 1996 and June 1997, certain select wells were sampled and data to be used in evaluating natural attenuation processes were gathered.
- Under the alternate water supply program, Army made offers to owners of certain wells to abandon and/or hook up their wells to an alternate water supply.
- On February 5, 1997 the Final Work Plan and Final Sampling and Analysis Plan for the Sites D & G Pilot Study were approved.
- On March 20, 1997 the Final Phase II Investigation Report for the Outdoor Firing Range was approved.
- On February 20, 1997 the Final Design report, Containment/Production Wells, Well 15 construction, Well 7 Abandonment was approved.
- On March 24, 1997 the Operable Unit 2 Feasibility Study was approved.
- On March 31, 1997 the Community Relations Plan was approved.
- The PGAC Facility Modification and Close-out Inspection were completed.
- The construction of Well 14 was completed.
- The Off-Post Monitoring Well Inventory was updated.
- On April 22, 1997 a public meeting to discuss the OU2 Proposed Plan was held.
- On April 24, 1997 the Addendum I, Remedial Design/Remedial Action Quality Assurance Project Plan was approved.
- On April 25, 1997 the Final Work Plan, Final Sampling and Analysis Plan, Final Safety and Health Plan, Site A Investigation were approved.

**Twin Cities Army Ammunition Plant/(TCAAP)/New Brighton/Arden Hills/  
St. Anthony (continued)**

- On May 27, 1997 the Final Operable Unit 1 Off-Post Monitoring Well Work Plan was approved.
- On June 18, 1997 the Final RD/RA Quality Assurance Project Plan was completed.
- On June 10, 1996, notice of a special well construction area in the vicinity of TCAAP was issued.

**Actions Needed:**

- Site F closure is needed.
- The Record of Decision for Operable Unit 2 needs to be finalized.
- OU1 production well #15 needs to be constructed and Well #7 needs to be abandoned. Eight OU1 Off-Post monitoring wells need to be constructed.
- Well 14 and 15 pump tests need to be performed.
- Design activities for Sites C,E,H,I,K,129-3,129-5,129-15 need to be initiated.
- Work Plans for Sites B,C,E,H,I,K 129-3,129-5 and 129-15 need to be completed.
- the all-soils QAPP needs to be completed.
- OU2 Remedial Design/Remedial Action Work Plan needs to be completed.
- Operation of the St. Anthony carbon treatment plant is continuing.
- Continuing operation and maintenance of interim actions/removal actions/remedial actions is needed.
- Aquatic Ecological Risk Assessment Report needs to be completed.
- Phase III of the Grenade Range (EE/CA) needs to be completed and RA initiated.
- OU2 RD/RA Work Plan needs to be completed.
- The Outdoor Firing Range EE/CA needs to be completed and RA needs to be initiated.
- The Ordnance Sweep Report needs to be completed.
- The FY 97 Annual Monitoring Report needs to be completed.



Site Name: **Union Scrap II and III**

Location: Minneapolis, Hennepin County

Address: 210 15th Avenue North

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 11.95

**Site Description:**

The Union Scrap II and III Site (Site) is located on the 1500 Block of Washington Avenue in the City of Minneapolis. The eastern half of the block has been referred to as Union Scrap III, while the western half has been referred to as Union Scrap II. The entire block had been used for either scrap metal storage and/or recycling from the 1940s to the 1980s. As part of investigative work on the adjacent Union Scrap Iron and Metal National Priorities List (NPL) site, environmental assessments done on the Site indicated soil contamination from lead and polychlorinated biphenyls (PCBs). Removal actions have taken place on the Union Scrap III portion because of concern of potential direct contact with contaminated soil. Ground-water monitoring was not conducted at the Site as part of the removal actions.

Assigned Staff:

MPCA

Project Manager

Doug Robohm

Technical Analyst

On-Site Inspector

James MacArthur

Attorney General

Public Information

Galynn Nordstrom

Actions Taken To Date:

- Union Scrap II Environmental Assessment done for Minneapolis Community development Agency by Twin City Testing, January 1988.
- Union Scrap III Site Assessment done for U.S. Environmental Protection Agency (EPA) by Roy F. Weston, Inc., Technical Assistance Team (TAT), January 1990.
- Preliminary Assessment (PA) done for combined Union Scrap II and III Site done by MPCA Site Assessment Unit, May 1991.
- Removal actions by EPA on Union Scrap III portion of Site, which has included soil excavation and stabilization.
- MCDA signed agreement to enter the VIC Program in 1996.
- Response Action Plan was approved in May 1996. Contaminated soil removal planned for 1997.

**Union Scrap II & III**

Actions Needed:

- Completion of removal action.
- Write an MDD and delist site.



Site Name: **U.S. Naval Industrial Reserve  
Ordnance Plant (NIROP)**

Location: Fridley, Anoka County

Address: 4800 East River Road

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: Yes      Score: 63

**Site Description:**

Past disposal of drummed waste occurred at this site during the 1970s. Ground water near facility is contaminated with solvents and flows to the Mississippi River. Three Prairie du Chien-Jordan wells on FMC and Naval property can no longer be used for drinking water purposes. Fridley municipal well 13 contains trace levels of trichloroethylene.

Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information Officer

MPCA

David Douglas  
John Betcher  
Paul Estuesta  
Steven Shakman  
Kathy Carlson

Actions Taken To Date:

- Navy initiated investigation of site in October 1982.
- Navy conducted internal investigation and prepared an Initial Assessment Survey of disposal site, following MPCA's request in June 1983.
- Navy submitted Final Design Plans and Specifications for the site cleanup.
- NIROP, Fridley, Minnesota report that detailed initial site cleanup actions in July 1983.
- Navy implemented initial site cleanup by excavating areas of waste disposal from December 1983 to January 1984.
- MPCA issued a Request for Response Action to the Navy and FMC for Remedial Investigation/Feasibility Study (RI/FS) and implementation of Response Actions in May 1984.
- MPCA approves location for off-site monitoring wells in November 1985.
- RMT selected a RI/FS Contractor in January 1986.
- Navy submitted written commitment for RI/FS completion in January 1987. RI by June 29 1987; FS by October 30, 1987.
- Navy submitted Interim RI/FS and draft RI in May 1987.
- Navy submitted Final RI on June 29, 1987.
- Navy submitted preliminary list of Site Response Action Alternatives (FS task 10) on July 22, 1987.

**U.S. Naval Industrial Reserve Ordnance Plant (NIROP) (continued)**

- Navy submitted initial screening of alternatives on October 20, 1987.
- Navy submitted draft FS on December 14, 1987.
- Navy submitted final A-E Quality Control and Sampling Plan on January 22, 1988.
- Navy submitted draft appendices A, C & E for draft FS on February 1, 1988.
- Navy submitted final Site-Specific Health and Safety Plan on February 3, 1988.
- Navy submitted draft Site Operations Plan on February 5, 1988.
- Navy submitted final A-E Quality Control Summary Report for the Soil Gas Survey on February 17, 1988.
- Comments on draft FS submitted to Navy on March 23, 1988.
- Navy submitted RI Addendum on July 8, 1988.
- Navy submitted Final FS Report on July 26, 1988.
- Navy submitted A-E Quality Control summary Report for Aquifer Tests on August 5, 1988.
- Navy submitted FS Addendum Report on August 22, 1988.
- Navy submitted A-E Quality Control Summary Report for Well Installations and Sampling on October 21, 1988.
- Letter from NIROP with intent to install two Phase I source-control pump-out wells received on March 2, 1989.
- Public Forum on RI/FS and plans occurred on May 22, 1989.
- NIROP listed as final site on NPL November 21, 1989.
- Proposed Plan issued May 1, 1990.
- Public meeting on proposed plan May 9, 1990.
- U.S. EPA issues special notice letter May 22, 1990.
- Phase I Soils workplan submitted September 1990.
- Ground water ROD signed September 28, 1990.
- Phase I ground water remedial design finalized October 1990.
- Construction awarded for Phase I ground water remedial system November 1990.
- RI/FS workplan meeting for soils operable unit February 19, 1991.
- Signing of IAG - March 28, 1991.
- Phase I soils ground-water sampling results submitted April 1991.
- Remedial Action Monitoring Plan submitted April 19, 1991.
- Community Relations Plan received May 6, 1991.
- Modified design of Phase I pumpout system approved June 1991.
- Community Relations Plan approved July 2, 1991.
- Construction of modified Phase I ground water system started July 1991.
- Subsurface Investigation Report and Soil Removal Action Plan for Hazardous Materials Building addition approved with modifications and comments on October 30, 1991.
- Draft final Soils RI Work Plan submitted January 23, 1992.
- Ground water RA Work Plan submitted April 22, 1992, including: RA Monitoring Plan, QAPP and Field Sampling Plan, and Site Safety and Health Plan.

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U.S. Naval Industrial Reserve Ordnance Plant (NIROP) (continued)

- Evaluation of Alternatives for Pretreatment of Extracted Ground Water for Phase I RA submitted on June 8, 1992.
- Beginning of soil RI field work, June 1992.
- Submittal of Soil Characterization Report for storm sewer soils and soils from the Hazardous Materials Building expansion on June 11, 1992.
- Emergency excavation of 31 barrels completed on June 26, 1992.
- Report on emergency removal received on August 24, 1992.
- Public Notice on emergency removal in Fridley Focus on August 25, 1992.
- Barrels in over packed drums shipped to El Dorado, Arkansas on August 27, 1992.
- Receipt of Ground Water Revision 2 RA Work Plan on September 21, 1992.
- Official startup date of the ground water extraction and pre-treatment system on September 21, 1992.
- MPCA and EPA approval of Ground Water Revision 2 Work Plan on September 28, 1992.
- Media Day November 5, 1992 (ground water extraction and pre-treatment system).
- Receipt of 90-day Determination Document (ground water extraction and pre-treatment system).
- MPCA review and comments on 90-day Determination Document submitted January 20, 1993.
- Soil from site (Hazardous Materials Building addition) was thermally treated; MPCA approval given on June 15, 1993 and January 5, 1994.
- RI Report for soils operable unit approved by MPCA on November 3, 1993, and by EPA on December 15, 1993.
- MPCA identifies soil cleanup numbers for site May 2, 1994.
- Navy submits GWES Annual Report June 1, 1994.
- EPA issues Navy a stipulated penalties letter on June 22, 1994, for noncompliance with the FFA.
- Navy submits work plan for upgrading GWES on July 7, 1994.
- Navy submits Alternatives Array Document (AAD) for the soils operable unit on July 7, 1994.
- Navy invokes dispute resolution under FFA on July 11, 1994.
- Navy submits Exceedance Control Plan to correct exceedance of allowable emission rates on July 26, 1994.
- MPCA approves AAD with modifications on July 29, 1994.
- EPA approves GWES upgrade work plan on August 4, 1994.
- NPDES permit for discharge to GWES effluent to Mississippi River put on public notice September 9, 1994.
- Navy submits final corrected version of AAD on December 5, 1994.
- MPCA requested the Navy conduct another geophysical study of the "North 40" of Operable Unit 2 (OU2) on January 5, 1995; the Navy subsequently agreed to conduct this study.
- Navy submitted the final Workplan for Improvement of Groundwater Containment System Effectiveness on January 26, 1995; MPCA staff approved work plan.

U.S. Naval Industrial Reserve Ordnance Plant (NIROP) (continued)

- Navy submitted 1994 annual ground-water monitoring report on January 30, 1995; MPCA staff approved report with modifications on October 2, 1995.
- MPCA staff approved geophysical work plan of "North 40" on April 21, 1995.
- MPCA staff rejected FS for OU2 on July 20, 1995 due to failure of the Navy to follow the requirements of the FFA.
- MPCA staff approved Plan of Action for OU3 on August 4, 1995.
- MPCA staff approved the concept of combining OU2 and OU3 on August 30, 1995.
- MPCA staff gave the Navy approval to incorporate MPCA staff modifications to the OU3 Site Evaluation Report in the OU3 RI/FS Work Plan.
- MPCA Citizens Board issued the Navy an NPDES permit to discharge treated water from the Phase II ground water treatment system into the Mississippi River.
- MPCA staff approved Navy documents to conduct geophysical investigation of "North 40."
- North 40 barrel removal completed in 1996.
- Seismic study of site completed in 1996.

Actions Needed:

OEPRABLE UNIT 1 (GROUND WATER)

- Continue to operate and maintain ground water pump and treatment system.
- Complete design of Phase II treatment system, an upgraded treatment system with discharge to the Mississippi River.
- Participate in preparation of the CERCLA Five-Year-Review of Remedy.

OPERABLE UNIT 3 (SOURCE AREAS)

- Complete the RI/FS, RD, RA, and implement RAs.



Site Name: **University of Minnesota - Rosemount Research Center**

Location: Rosemount, Dakota County

Address: 15325 Babcock Avenue

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation

National Priority List: Yes      Score: 46

**Site Description:**

Past disposal of chemistry laboratory wastes into a burn/disposal pit occurred at this site. This was the former site of the U.S. Army Gopher Ordnance acid waste lagoon. Past spills of polychlorinated biphenyls (PCBs) have occurred. Sixteen wells in area northeast of site were contaminated with chloroform.

Assigned Staff:

Project Manager	<u>MPCA</u> David Douglas
Technical Analyst	John Betcher
On-Site Inspector	
Attorney General	Alan Mitchell
Public Public Information	Galynn Nordstrom

Actions Taken To Date:

- Numerous private wells sampled in area for solvent contamination in July 1984.
- Minnesota Department of Health (MDH) issued Health Risk Advisory for chloroform contamination to twenty-seven families in area northeast of U of M property on July 19, 1984.
- U of M began delivery of drinking water on July 20, 1984.
- Official Request for Information sent to University on August 2, 1984.
- U of M began Remedial Investigation (RI) on August 29, 1984.
- Request for Response Action issued to the University on October 4, 1984.
- Phase I RI completed on March 13, 1985.
- Phase II RI begun on March 27, 1985.
- Public Meeting held in Rosemount to discuss proposed Response Action Agreement on May 23, 1985.
- Response Action Agreement executed by MPCA Board on May 30, 1985.
- Final Report on Ground Water Investigations submitted on November 26, 1985.
- Ground Water RI Final Report approved on December 26, 1985.
- Detailed Analysis Report on Alternative Drinking Water submitted on February 25, 1986.
- MDH increased chloroform RAL to 5 ppb, reducing the number of wells affected in March 1986; University includes all originals in plans.
- Public Meeting held to discuss alternatives on May 17, 1986.
- Ground Water Response Action Plan submitted on May 12, 1986.

**University of Minnesota Rosemount Research Center**

- Prototype well installed on July 14, 1986.
- MPCA Director approved installation of 21 additional wells in August 1986.
- PCB and lead alternatives report approved in February 1987.
- Final Detailed Analysis Report and Conceptual Design for PCB and lead soil contamination approved in July 1987.
- Public meeting held to present community water supply alternatives on July 30, 1987.
- Public meeting for comments on proposed PCB and lead alternative conducted in September 1987.
- Air stripper on pumpout approved in October 1987.
- Air stripper is operational in February 1988.
- MDH increases chloroform RAL to 57 ppb in May 1988, effectively removing basis of need for water supply alternative; public meeting held. University decided to continue with plans for community rural water system.
- Homes are hooked into the community rural water system in May 1989.
- Record of Decision (ROD) approved by MPCA on June 11, 1990; U.S. EPA concurred with ROD on June 29, 1990.
- MPCA approves Response Action Agreement Submittals on March 27, 1991.
- MPCA issues authorization to operate a thermal destruction unit for the PCB soil cleanup on February 18, 1992.
- University awards PCB soil cleanup contract to Roy F. Weston, Inc. on June 12, 1992; University begins PCB soil cleanup on June 30, 1992.
- University completes community rural water system and transfers new system to the City of Rosemount on June 16, 1992.
- University continues to monitor area ground water in 1993.
- MDH completes a risk assessment on December 9, 1992, on emissions from Weston incinerator; risk assessment concludes that there are no identifiable human health risks associated with emissions.
- University completed incineration of approximately 12,000 tons of PCB-contaminated soil.
- Material not suitable for incineration was hauled off-site to a TSCA-approved secure landfill in Utah.
- Soil contaminated with lead above cleanup levels was hauled off-site to an EPA-approved hazardous waste landfill in Indiana.
- After incineration was completed, about 40 cubic yards of material was shipped to the TSCA landfill in Utah.
- MPCA approves Interim Response Action Final Report June 21, 1994.
- EPA completes Preliminary Close-out Report on June 29, 1994.
- MPCA approves Response Action Final Report December 29, 1994.
- MPCA staff requests the University to conduct another round of VOC and PCB ground-water sampling on September 15, 1995.

(continued next page)



- MPCA staff approves VOC ground water report on February 1, 1996.
- University submits PCB ground water data on February 6, 1996.
- MPCA staff complete CERCLA Final Close-out Report in 1996.
- MPCA staff complete CERCLA Five Year Review of Site on June 6, 1997.

Actions Needed:

- MPCA staff need to terminate Consent Order and delist site from the PLP.



Site Name: **Valentine-Clark**

Location: St. Paul, Ramsey County/Minneapolis, Hennepin County

Address: 2516 Doswell Avenue

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 4

**Site Description:**

The site is the former Valentine-Clark Corporation pole-treating plant. Soil and ground water are contaminated with pentachlorophenol and polynuclear aromatic hydrocarbons. Bridal Veil Creek flows through contaminated soil at the edge of the property into Bridal Veil Pond.

Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

MPCA

Miriam Horneff  
Bill VanRyswyk  
Steve Schoff  
Beverly Conerton  
Kathy Carlson

EPA

Mary Tierney

Actions Taken To Date:

- Request for Information issued January 1988.
- U.S. EPA Field Investigation Team conducted site inspection in 1986.
- MPCA installed monitoring wells and took soil borings in June 1988.
- Property owner installed monitoring wells and conducted a Limited Remedial Investigation on southern third of site.
- As a result of a fish and duck kill on an adjacent creek, a Declaration of Emergency was issued on January 3, 1991.
- Fence erected to limit public access in April 1991.
- Limited Soils Investigation done on the southwest portion of the site in 1991.
- MPCA and EPA Site Assessment Team formed in spring 1993 to determine site strategy.
- August 26, 1993, EPA Regional Decision Team concurred with site strategy of Time-Critical Removal Action, Non-Time Critical Removal Action, and NPL listing.
- The construction of the storm drain diverting Bridal Veil Creek from the contaminated soils was completed by EPA and the City of Minneapolis in the Fall of 1996.
- EPA began the Engineering Evaluation/Cost Analysis study in spring of 1997.

Actions Needed:

- Design and Implement Response Actions.



**Site Name: Voss Scrapyard**

**Location:** Belle Plaine, Scott County  
S35, 511n R24w

**Priority:** Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 48

**Site Description:**

The 25-acre scrapyard is located adjacent to the Minnesota River at the northern edge of Belle Plaine. The site has been active from as far back as the 1940s. Automobile hulks and components, discarded appliances, tires, and other discarded consumer goods are scattered throughout the site. Wetlands exist to the immediate west and east of the site. Soil sampling conducted by MPCA staff in the spring of 1991 documented inorganic hazardous substances such as lead at 335 mg/kg and organic contaminants such as benzene, xylene, and several PAH compounds. The site has been known to flood almost annually. There are approximately 57 mobile homes and 30 single family homes located within three blocks of the site. The site is not fenced and the main entrance is not secured.

**Assigned Staff:**

Project Manager  
Technical Analysts  
On-Site Inspector  
Attorney General  
Public Information

**MPCA**

Douglas Robohm  
Bill VanRyswyk

Galynn Nordstrom

**Actions Taken To Date:**

- Geophysics survey conducted by the Minnesota Department of Natural Resources (DNR) on September 4, 1987, on a portion of the site showed numerous anomalies indicating possible buried metal and soil and ground-water contamination.
- Approximately 190,000 waste tires were removed in 1990/91 through the Waste Tire Program.
- MPCA staff conducted a Screening Site Inspection (SSI) of the site on July 24, 1991, documenting surface soil contamination by volatile and semi-volatile compounds and lead above background concentrations.
- MPCA and Scott County coordinated additional tire removal from the site in November 1993 and again November/December 1994.
- PRP search completed July 1994.
- Additional soil sampling conducted November 1994 by MPCA staff to further define areas of contamination.

**Voss Scrapyard (continued)**

- MPCA staff are in negotiations with the site owner, the City of Belle Plaine, and Scott County to install a gate at the site and develop an overall site management plan.

**Actions Needed:**

- Installation of a gate to restrict access to the site.
- Stockpile and remove remaining debris away from the reach of flood waters to prevent debris being carried off-site.
- Implement Response Actions/Site Management Plan.
- Delist the site.



Site Name: **Wabasha County Sanitary Landfill**

Location: Watopa Township, Wabasha County  
West of Hwy 61 in Watopa Township

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 22

#### Site Description:

The site is a MPCA-permitted sanitary landfill that ceased receiving mixed municipal refuse and demolition debris. The landfill was operated by Wabasha County on land leased from the Minnesota Department of Natural Resources. Recent ground-water monitoring at seven on-site wells indicates the presence of volatile organic compounds in several wells and heavy metals in three downgradient wells. Operational violations were commonplace when the landfill was open.

#### Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

#### MPCA

Don Abrams  
Gregg Rocheford/Marty Osborn  
Pat Hanson  
Tibor Gallo  
Julie Swiler

#### Actions Taken To Date:

- Permit for construction and operation issued to County in 1975, and amended January 30, 1986.
- Notice of Noncompliance issued to County on June 19, 1980.
- An extensive ground-water monitoring program was completed by Braun Engineering in April of 1984. This program included a hydrogeologic report submitted in December of 1983.
- Volume calculations submitted in March 1986, showed the landfill was over capacity.
- The geotechnical investigation was completed in 1987; stream monitoring was initiated, and subsequently upgraded.
- The facility stopped receiving waste in October 1989.
- The owner and operator of the landfill were notified of eligibility for the Closed Landfill Program in September 1994.

#### Wabasha County Sanitary Landfill (continued)

#### Actions Needed:

- This landfill is a "qualified facility" under the Landfill Cleanup Act. The MPCA will negotiate a binding agreement with the owner and operator. After a notice of compliance is issued for the facility, the MPCA will assume responsibility for remediation of the site, as well as long-term maintenance and monitoring of the landfill. Binding agreement to be executed late June 1997.
- The landfill property will be transferred from the DNR to MPCA control.



Site Name: **Waite Park Ground-Water Contamination Site**

Location: Waite Park, Stearns County

Address: 253 North 5th Avenue

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and Maintenance/Long-Term Monitoring Ongoing

National Priority List: Yes      Score: 32

**Site Description:**

The Waite Park Ground-Water Contamination Site, the Burlington Northern Site, and the Electric Machinery Site are considered one site on the Federal National Priorities List called the Waite Park Wells.

The City of Waite Park municipal wells are contaminated by 1,1-dichloroethylene and tetrachloroethylene at levels above the recommended drinking water criteria. Releases from the Burlington Northern and Electric Machinery Sites contributed to contamination of the municipal wells.

Burlington Northern and Electric Machinery responsible parties jointly implemented the remedial action for the Waite Park wells. The remedial action consisted of installing a ground water aeration system to remove the contaminants from the ground water. Through investigative activities it has been determined that the majority of the contamination to the Waite Park wells resulted from the releases at the Electric Machinery Site.

Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

MPCA

Brenda Winkler  
Eric Porcher  
Paul Estuesta  
  
Kathy Carlson

Actions Taken To Date:

- The Waite Park City wells were found to be contaminated by VOCs in January 1985.
- The MPCA issued a Request for Response Action to Burlington Northern on October 22, 1985, Brown Boveri and Company, Ltd. and Cooper Industries on March 25, 1986, and Dresser Industries and Electric Machinery Manufacturing on September 23, 1986.
- Using emergency authorization, an emergency hook-up was made between the St. Cloud and Waite Park water supplies in February 1985.

**Waite Park Ground-Water Contamination Site**

- Limited Remedial Investigation of contaminated ground water and the Feasibility Study for a long-term water supply were completed in April 1986.
- November 25, 1986, MPCA issued a Determination of Inadequate Response to Burlington Northern Railroad Company, Cooper Industries, Inc., BBC Brown Boveri and Company, Ltd., Dresser Industries, Inc., and Electric Machinery Manufacturing Company.
- Waite Park municipal water supply treatment system began operation in February 1988.
- December 2, 1994, a Draft Five-Year Review was sent to EPA for review and comment.
- February 7, 1994, EPA commented and concurred with the finding of the Draft Five Year Review.
- February 28, 1994, MPCA staff completed the Five Year Review.

Actions Needed:

- Monitor municipal water supply treatment system.



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Site Name: **Warden Oil Company**

Location: Minneapolis, Hennepin County

Address: 187 Humboldt Avenue North

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation and Feasibility Study

National Priority List: No Score: 49.58

#### Site Description:

The Site is a former waste oil refinery, which operated from 1927 to 1992. Approximately 60 aboveground storage tanks and one underground storage tank were present until their removal by EPA in 1995. Some of these tanks contained oils or other materials. Several buildings, including an office, a garage, and several warehouses have not yet been removed. The Site is located approximately 200 feet north of Bassett's Creek and has been periodically flooded. The Warden Oil property recently was forfeited due to unpaid property taxes and is currently being maintained by Hennepin County.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Miriam Horneff
Technical Analyst	Fred Campbell
On Site Inspector	
Attorney General	Jocelyn Olson
Public Information	Galynn Nordstrom

#### Actions Taken To Date:

- PRP search performed in 1995 and 1996.
- Limited RI funded by Hennepin County was completed in November 1996.
- Bassett's Creek Environmental Team (BaCET) formed to work with Harrison neighborhood.
- PRPs attempting to form a voluntary group for investigation and cleanup of the site.

#### Actions Needed:

- Issue of RFRAs to RPs if necessary.
- Remedial Investigation and Feasibility Study.



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Site Name: **West Duluth Industrial Site**

Location: Duluth, St. Louis County  
Area bounded by I-35, Central Ave, Lesure Street and Northern Pacific RR

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and Maintenance/Long-Term Monitoring Ongoing

National Priority List: No Score: 11

#### Site Description:

Prior to implementation of a Response Action in the Fall of 1986, the Site contained materials (battery fragments and soils) that were contaminated with lead believed to have resulted from a former battery-breaking operation at the Site. Analyses of surface materials showed total lead concentrations ranging between 25 and 130,000 ppm, and polychlorinated biphenyl (PCB) concentrations ranging between 0.3 and 15 ppm. Volatile organic hydrocarbons including trichloroethylene and dichloroethylene have been detected in monitoring wells at the Site.

The RA implemented in Fall 1986 consisted of disposing of lead-contaminated soils in an on-site securement vault and out-of-state disposal of PCB-contaminated materials. The VOC-contaminated ground water has been addressed by the installation of a pumpout system in November 1988.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Fred Campbell
Technical Analyst	
On-Site Inspector	
Attorney General	Steve Shakman
Public Information	Julie Swiler

#### Actions Taken To Date:

- MPCA staff site inspection in August 1985.
- Soil sampling and monitoring well installation by potential users of the Site in September 1985.
- Soil sampling by U.S. Environmental Protection Agency Technical Assistance Team (TAT) in October 1985.
- Remedial Investigation/Feasibility Study and RAPs have been completed.
- Lake Superior Paper Industries (LSPI) and MPCA staff have negotiated a Stipulation Agreement to implement a RAP.
- Response Actions for lead and PCB contamination (vault) implemented in the Fall of 1986 and completed in the fall of 1987.

(continued next page)

## West Duluth Industrial Site (continued)

- Remedial Actions for volatile organic hydrocarbon contamination (Well number seven area) implemented in the Fall of 1988.
- Environmental Assessment Worksheet for second paper mill reviewed Summer 1989.
- Annual Reports for well 7 and vault reviewed.
- Submittal of a revised Well 7 Area Performance Assessment Report on February 5, 1996.
- MPCA approval for discontinuation of ground-water monitoring at Union Compressed portion of site in February 1997.

### Actions Needed:

- Look at options to modify the Well 7 Area Groundwater Extraction System.
- Continue operation and maintenance of Remedial Actions.



Site Name: **Western Lake Superior Sanitary District Landfill/Duluth Dump**

Location: Rice Lake Township, St. Louis County  
NW of Rice Lake Road & Ridgeview Road inter.

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 29

### Site Description:

This site consists of a closed MPCA-permitted sanitary landfill that contains mixed-municipal solid waste (MSW) and ash from the Western Lake Superior Sanitary District (WLSSD) incinerator. Immediately to the east is a newly permitted WLSSD industrial solid waste disposal facility. Adjacent to the landfill is a former dump used by Duluth. Ground water at the landfill is contaminated with volatile organic hydrocarbons. A perimeter leachate/seep collection system was installed around the MSW landfill to control contamination. The ground-water monitoring system around the facility has confirmed the release of volatiles to the ground water.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	
Technical Analyst	Kurt Schroeder
Engineer	Jon Jordan
On-Site Inspector	Todd Eckberg
Attorney General	
Public Public Information	Julie Swiler

### Actions Taken To Date:

- MPCA permit issued on March 22, 1972.
- Permit reissued on October 3, 1978.
- Stipulation Agreement executed on August 7, 1979.
- Compliance permit issued on December 4, 1981.
- Request For Information issued in July 1987, and responsible parties identified.
- Solid Waste Compliance Order authorized on February 23, 1988.
- Upgraded monitoring system installed.
- Completed Site Analysis and Assessment.
- Permit reissued October 2, 1992.
- Permit expiration and site closure March 15, 1994.
- Remedial Investigation began for landfill and Duluth Dump II in 1993.

### Actions Needed:

- Continue tracking Compliance Permit for MSW landfill.
- WLSSD to complete non-Superfund RI/FS.



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Site Name: **West River Parkway**

Location: Minneapolis, Hennepin County  
West bank of Mississippi River, about 1/4 mile  
downstream of I-35W bridge

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 10.36

**Site Description:**

The West River Parkway (Site) is located along the west bank of the Mississippi River, approximately 1/4 mile downstream from the Interstate 35W bridge in Minneapolis. Approximately 20,000 yds of contaminated soil, containing polynuclear aromatic hydrocarbons and cyanide, has been identified on-site. The Site is presently owned by the Minneapolis Parks and Recreation Board.

Assigned Staff:

MPCA

Project Manager

Wayne Sarappo

Technical Analyst

Mike Connolly

On-Site Inspector

Attorney General

Jocelyn Olson

Public Information

Kathy Carlson

Actions Taken To Date:

- July 1989, Site investigation/chemical analysis of site soils conducted by Braun Environmental Laboratories.
- March 1990, Evaluation of On-site Encapsulation study completed by Braun Environmental Laboratories.
- PRP Search initiated.
- Fence placed around pile of waste.
- May 1994, Minnegasco and the Minneapolis Parks and Recreation Board entered into a court approved Settlement Agreement whereby both parties agreed to clean up the Site.
- A Response Action Plan (RAP) was submitted to MPCA staff in the Voluntary Investigation and Cleanup Program, which proposed removal and disposal of the contaminated soil at the U.S. PCI Landfill as the most feasible alternative.
- A public information meeting was held on September 29, 1994, at the Coyle Community Center in Minneapolis, to present the proposed cleanup alternative and obtain comments from the public. Approximately fifteen citizens were in attendance.
- The RAP was approved November 17, 1994, with modifications, and cleanup started January 1995. To date, approximately 20,000 cubic yards of contaminated soil has been removed and taken to the U.S. PCI Landfill.

**West River Parkway (continued)**

- The Park Board has submitted the analytical data from soil samples collected in September 1996, and March 1997, for review by MPCA staff.
- Review and approve Response Actions.
- Conduct public meeting regarding Response Actions.
- Conduct confirmation sampling at the Site.
- Establish final cover at the Site.

Actions Needed:

- Design and Implement Response Actions.



Site Name: **Westling Manufacturing Company**

Location: Princeton, Mille Lacs County

Address: 705 Highway 18 South

Priority: Permanent List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 31.94

#### Site Description:

The Westling Manufacturing Company is located in a combined residential/industrial area of Princeton, Mille Lacs County, Minnesota. The company rebuilds automotive parts such as generators, alternators and starters. In 1985, chemicals similar to those used at the Westling facility were detected in a sand point well, located inside the adjacent Airway Product's Inc. facility. In December 1989, three monitoring wells were placed, and three soil borings drilled on the Westling Manufacturing Site as part of a soil and ground water assessment conducted by the company and their consultants. Analytical results from this study revealed chlorinated solvents in both soil and ground water samples. On June 11, 1990, Minnesota Pollution Control Agency staff conducted a Screening Site Inspection. Analytical results confirmed a release of chlorinated solvents to both the soil and ground water. Although very low levels of volatile organic compounds were found in several wells, the Minnesota Department of Health determined that the water from all wells sampled was safe to drink.

#### Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

#### MPCA

David Douglas  
Barb Gnabasik  
Paul Estuesta  
Alan Williams  
Stacy Casey

#### Actions Taken To Date:

- MPCA Screening Site Inspection, June 1990.
- Additional ground water and soil sampling in 1991 by MPCA staff.
- Requests for Information (RFI) sent to Westling on October 23, 1991 and January 27, 1992; responses received on December 2, 1991 and January 14, 1992.
- Commissioner's Notice Letter issued on June 26, 1992.
- Staff offers Westling opportunity to proceed voluntarily; Westling accepts offer July 16, 1992.
- QAPP and Phase I Work Plan approved August 14, 1992.
- Site Safety and Security Plan comments sent to Westling on September 22, 1992.
- Westling performs additional soil borings and installs additional monitoring wells; samples analyzed.
- MPCA staff approves a ground-water monitoring plan.

#### Westling Manufacturing Company (continued)

- MPCA issues a SDS/NPDES permit for a ground water pump out and treatment system on April 13, 1994.
- Westling submits a Phase I RI Report.
- MPCA staff approves Phase I RI Report with modifications on March 21, 1994.
- Westling submits draft Phase II Work Plan on April 11, 1994.
- Westling submits Performance Monitoring Report on pump and treatment system on November 15, 1994.
- MPCA staff sets the soil and ground water cleanup levels on January 5, 1995.
- MPCA staff approves Operable Unit 1 (OU1) FS Report on November 7, 1995.
- MPCA staff completed a Minnesota Decision Document for Phase I of OU1 on January 19, 1996.
- Westling submitted a soil venting and air sparging study for OU1 on March 13, 1997.
- MPCA staff responded to soil venting and air sparging study on May 13, 1997.

#### Actions Needed:

- Continue to implement the ground water pump and treatment system for OU1.
- Design and implement soil cleanup portion of remedy for OU1.
- Continue Remedial Investigation for OU2.





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Site Name: **White House Restaurant, Former**

Location: Golden Valley, Hennepin County

Address: 4900 Olson Memorial Highway

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 39

**Site Description:**

The Site is an 18-acre parcel consisting of a 2.6-acre vacant plot of a former restaurant and a City-owned natural area. Previous on-site investigations have shown the Site to be underlain by contaminated fill material with ground-water contamination also present. The City met with Voluntary Investigation and Cleanup (VIC) staff on December 17, 1993, and expressed an interest in volunteering to investigate and remediate the site.

<u>Assigned Staff:</u>	<u>MPCA</u>
Project Manager	Joe Otte
Technical Analyst	Mike Connolly
On-Site Inspector	
Attorney General	Alan Williams
Public Information	Kathy Carlson

Actions Taken To Date:

- Phase I investigation completed September 15, 1989, by EnPro Assessment Corporation for the City of Golden Valley.
- Phase II investigation completed October 26, 1989, by EnPro Assessment Corporation for the City of Golden Valley.
- Phase III investigation completed January 1990, by Barr Engineering Company for the City of Golden Valley.
- Preliminary Assessment completed May 14, 1991 by MPCA.
- Non-sampling Screening Site Inspection (SSI) completed December 18, 1992 by MPCA.
- March 1994, City of Golden Valley enters the VIC Program and initiates RI work at the site in two phases to accommodate reconfiguration of a dangerous interchange on Highway 55.
- July 1994, VIC Program approves first phase of RI work plan which proposes approximately ten investigation trenches and soil samples in the area of proposed frontage road.
- October 1994, City submits draft results of initial phase soil investigation, requests approval of second phase of RI, which includes ten additional trenches as well as ground water, surface water, and sediment sampling.

**White House Restaurant, Former (continued)**

- November 1994, VIC Program staff approve additional RI work, discuss various interim response actions which may be necessary to accommodate reconfiguration of frontage road.
- January 1995, Barr Engineering submits a technical memorandum on behalf of the City of Golden Valley transmitting the results of the second phase of the subsurface investigation. Those results include ground water samples collected from six on-site monitoring wells in addition to three surface water samples and four sediment samples from the creek and wetlands area adjacent to the property.
- January 1995, a soil management proposal allowing a portion of the site to be redeveloped is approved by MPCA staff as an Interim Response Action (IRA) Plan. The IRA Plan allows the reconfiguration of the frontage road exchange by MnDOT, subject to the terms of an approved contingency plan.
- April 1995, MPCA staff issues a "no association determination" to the City of Golden Valley and the Minnesota Department of Transportation, explicitly stating that the proposed soil management plan, when implemented in accordance with an environmental contingency plan, will not associate the parties with the release in accordance with Minn. Stat. 115B.178.
- June 1995, MnDOT subcontractors, working under the oversight of Barr Engineering staff, discover lead-acid battery debris in the dump. In accordance with the contingency plan, work is stopped.
- June 1995, the lead-contaminated debris and soil is removed and segregated for future management. Construction of the road redevelopment is continued. A technical memorandum is transmitted to MPCA staff documenting lead-contaminated soil management plans.
- April 1996, Work Plan for Supplemental Characterization of the soils removed under the terms of the IRA Plan is submitted for MPCA review. The plan outlines further characterization of the debris removed to allow for the roadway construction. Based on the results of that characterization, remedial alternatives will be evaluated.
- December 1996, Site Characterization Report/Response Action Plan is submitted for MPCA review. The report provides remedial investigation sample results and presents a comprehensive plan for site remediation and redevelopment.
- March 1997, VIC Program staff approve Response Action Plan.
- June 1997, Implementation of Response Action begins.

Actions Needed:

- Conclude necessary Response Actions.



Site Name: **Whittaker Corporation**

Location: Minneapolis, Hennepin County

Address: 3134 N.E. California Street

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and Maintenance/Long-Term Monitoring Ongoing

National Priority List: Yes      Score: 40

#### Site Description:

Disposal of industrial waste on-site including paints, solvents, and incinerator ash occurred at this site. The ground water at the site has been found to be contaminated with chlorinated solvents.

#### Assigned Staff:

Project Manager	<u>MPCA</u> Dale Trippler
Technical Analyst	Jim MacArthur
On-Site Inspector	
Attorney General	Alan Mitchell
Public Information	Kathy Carlson

#### Actions Taken To Date:

- Meeting with Whittaker and Tool-Tech September 24, 1981, at which MPCA requested joint Whittaker-Tool Tech Phase I contamination study.
- MPCA met with Whittaker consultant in December 1981, to discuss scope of investigation.
- Whittaker and Tool-Tech submitted Phase I study proposal, March 1982.
- MPCA approved Whittaker/Tool-Tech study plan May 1982, which includes a Phase I historical and record search and review of known hydrogeology study due July 1982, and a possible Phase I hydrogeologic study.
- Phase I study submitted January 1983.
- MPCA-approved of plan for ground-water investigation February 1983.
- Monitoring wells installed July 1983.
- Samples from monitoring wells indicate contamination by several chlorinated solvents, benzene, cadmium, and chromium.
- Sources of contamination removed April 1985.
- Request for Response Action issued April 23, 1985.
- Ground-water pump-out installed.
- EPA lead Fall 1992.
- EPA completed Five-Year Review.
- Pumpout system discontinued on July 11, 1994. Sampled ground water in September and December 1994.
- Meeting on December 28, 1995, with counsel for Whittaker Corporation and MPCA staff to try to resolve issues in dispute.

#### Whittaker Corporation (continued)

#### Actions Needed:

- Decision on whether to continue operation and maintenance of ground-water monitoring system.



Site Name: **Willmar City Dump**

Location: Willmar, Kandiyohi County  
SE of the intersection of US Hwy 71 and CSAH 23

Priority: Minnesota List of Priorities Classification  
C: Response Action Design and Implementation  
D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 14.92

**Site Description:**

The Willmar City Dump (Site) is located in Willmar, Minnesota, in Kandiyohi County. The Site is municipally owned and was operated as a City dump from 1949 to 1971. During the years that the Site was operated as a dump, an unknown amount of household, commercial, industrial, agricultural, and institutional wastes were disposed of in trenches on a total of 25 acres. During a 1991 EPA investigation, several surface soil samples were found to be contaminated with a number of semi-volatile organic compounds as well as elevated metals concentrations. Additionally, a subsurface soil sample taken from a boring that penetrated dump materials, was collected and analyzed. Elevated levels of semi-volatile organic and metals contaminants were detected. The Site is situated within a mixed commercial, residential, and rural setting. All 12 of Willmar's municipal wells are located approximately 1.5 miles from the Site. According to 1990 census data, 18,755 residents live within a four mile radius of the Site.

Assigned Staff:

Project Manager	<u>MPCA</u> Doug Robohm
Technical Analyst	Jim MacArthur
On Site Inspector	
Attorney General	
Public Information	Galynn Nordstrom

Actions Taken To Date:

- May 4, 1983, Site placed on EPA Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) inventory of potential hazardous waste sites.
- April 11, 1986, Preliminary Assessment of the Site prepared by MPCA staff.
- November 11, 1987, Site Inspection Report prepared and submitted by EPA contractor Ecology and Environment, Inc.
- October 31, 1991, Expanded Site Inspection/Ground Water Pathway Assessment Report prepared and submitted by EPA contractor, Ecology and Environment, Inc.
- The site was added to the PLP in May 1995.
- MPCA staff conducted additional ground water and soil sampling in August 1995.
- MPCA staff met with City Administrator and Director of Public Works to discuss need for a LRI/FFS and cleanup in June 1996.

**Willmar City Dump (continued)**

- City signed Voluntary Approach Agreement in October 1996.
- The Work Plan for the LRI was submitted and approved in October 1996. Field work started in October 1996.
- The Work Plan for Soil Sampling Soil Stockpile Disposal was submitted in April 1997, and approved in May 1997.

Actions Needed:

- Complete Limited Remedial Investigation and Focused Feasibility Study.
- Conduct additional ground-water monitoring.
- Design and implement Response Action.
- Prepare MDD and delist site.



Site Name: **Windom Dump**

Location: Windom, Cottonwood County  
South of County Hwy. 13, 1 mile east of T.H. 60

Priority: Minnesota List of Priorities Classification  
B: Long Term Monitoring; Response Actions  
completed and operation and maintenance.

National Priority List: Yes      Score: 38

#### Site Description:

Disposal of more than 3,000 drums containing paint sludges, probably also solvents, cleaners, etc. occurred from 1957 to 1974. Many drums and wastes were burned at the site before burial. On-site monitoring wells are contaminated with volatile organic compounds. One municipal well downgradient from the site is contaminated with VOCs.

#### Assigned Staff:

Project Manager	<u>MPCA</u> Doug Robohm
Technical Analyst	Mike Trojan
On-Site Inspector	
Public Public Information	Kathy Carlson

#### Actions Taken To Date:

- Consultant hired by the City to investigate possible ground-water contamination and to plan for proper dump closure.
- City's consultant, MPCA staff, and Minnesota Department of Health sampled City's municipal wells, monitoring wells, and several nearby residential wells.
- Request for Response Action issued to the City of Windom and the Toro Company on June 24, 1986.
- Remedial Investigation Report submitted in October 1987.
- Feasibility Study submitted in September 1988.
- Remedial Action Plan submitted in March 1989.
- Record of Decision executed in April 1989.
- Clay cap placed over disposal area in July 1989.
- U.S. EPA concurs with Record of Decision in August 1989.
- Report on the Aquifer and Pilot Treatment Tests submitted to the MPCA in November 1989.
- MPCA gives interim approval to operating the spray treatment system while additional data is gathered on pump out wells, ground water flow paths and spray treatment efficiency March 1990.
- Pump-out/spray irrigation system began operations in May 1990.
- Interim System Evaluation and Final Design Report submitted to the MPCA in August 1990.
- MPCA approves Spray Treatment System in December 1990.
- EPA prepares Interim Close-out Report for the site.

#### Windom Dump (continued)

- Since 1992, Annual System Evaluation Report is submitted.
- MPCA/EPA Five-Year Review Report completed January 1995.
- MPCA approved changes to the 1996-1997 Project Year Sampling Plan in July 1996.
- Windom submitted a proposal for wellfield expansion in August 1996. Following receipt of major concerns raised by the MPCA, DNR, and MDH, an addendum was submitted in January 1997, which specified the installation of an additional municipal well.

#### Actions Needed:

- Continue on-site monitoring of ground water and spray treatment area.
- Continue monitoring of municipal water supply.



Site Name: **Winona County Sanitary Landfill**

Location: Wilson Township, Winona County  
Between Hwy 43 & County Road 21

Priority: Minnesota List of Priorities Classification  
B: Response Actions Completed and Operation and  
Maintenance/Long-Term Monitoring Ongoing

National Priority List: No      Score: 34

**Site Description:**

This site is an active sanitary landfill which accepted industrial hazardous waste which was placed in an MPCA-approved disposal pit as well as in unapproved trenches. Winona County purchased the landfill from original permittee and has been working with MPCA staff in upgrading the site operations and ground-water monitoring system.

Assigned Staff:

Project Manager

Engineer

Technical Analyst

On-Site Inspector

Attorney General

Public Information

MPCA

Sherri Nachtigal

Neal Wilson

Julie Swiler

Actions Taken To Date:

- MPCA issued a permit for the construction and operation of the landfill on March 22, 1971.
- MPCA notified permittee that he must cease accepting hazardous waste for disposal on January 29, 1984.
- Winona County purchased the landfill from the original permittee, and an amended permit was issued by the MPCA to the county in August 1983.
- The MPCA staff have issued 29 Requests for Information to potentially responsible parties since July 20, 1984.
- The MPCA issued Requests for Response Action to Mr. James Murphy, Sr., Winona County and the Fiberite Corporation on March 26, 1985.
- Consent Order negotiations commenced on May 31, 1985, between the MPCA, Winona County and Fiberite Corporation.
- Pilot excavation of hazardous waste pit was conducted by the Responsible Parties during July 1986.
- Excavation of the drums and contaminated soil in the pit was conducted by Responsible Parties from May through July 1987.

**Winona County Sanitary Landfill (continued)**

- MPCA letter sent out to Responsible Parties on January 22, 1988, which stated that the intent of the Request for Response Action had been fulfilled.

Actions Needed:

- On-going monitoring as required under solid waste permit SW-25.



Site Name: **Winona Ground-Water Contamination (Clarks Lane/Gilmore Avenue)**

Location: City of Winona, Winona County

Priority: Minnesota List of Priorities Classification

- A: Declared Emergency
- B: Response Actions Completed and Operation and Maintenance/Long-Term Monitoring Ongoing
- C: Response Action Design and Implementation
- D: Remedial Investigation Feasibility Study

National Priority List: No      Score: 25

**Site Description:**

Shallow sandpoint wells in the southern portion of Winona were found to contain 1,1,2,2-tetrachloroethene. The MPCA Tanks and Spills Unit initially discovered the contamination in July 1989, while investigating a complaint regarding petroleum contamination in a private well. As of August 1991, 30 private wells and two businesses have shown levels of tetrachloroethene which exceed the Minnesota Department of Health Recommended Allowable Limit (RAL) of 6.6 ug/l (ppb). Five of the 32 wells contaminated above RALs have been sealed.

Assigned Staff:

Project Manager  
Technical Analyst  
On-Site Inspector  
Attorney General  
Public Information

MPCA

Frank Wallner  
  
Alan Mitchell  
Galynn Nordstrom

Actions Taken To Date:

- MPCA Determination of Emergency on July 25, 1989.
- Ongoing (July-September 1989) well sampling to identify all private wells affected.
- Request for Information sent to Leaf's Cleaners and Launderers, Winona, on August 22, 1989.
- Request for Information sent to Dison's Cleaners and Launderers, Rochester, on August 22, 1989.
- Submitted a Work assignment to Barr Engineering Company on August 8, 1989, for a Limited Remedial Investigation and Focused Feasibility Study primarily to confirm the source of the contamination.

**Winona Ground-Water Contamination (Clark's Lane/Gilmore Avenue)**  
(continued)

- Request Leaf's Services, Inc. to remove the two known source areas on-site on July 9, 1990.
- Final LRI/FFS received from Barr Engineering Company August 1990.
- Leaf's Services, Inc. contracted with USPCI to remove the two known source areas on-site in November 1990.
- A total of 25 residences have been hooked up to City water as of November 1990.
- Request for Response Action (RFRA) issued by the MPCA Citizens Board on February 26, 1991.
- On May 21, 1991, the Board issued a Determination of Inadequate Response, Authorization to use state Superfund money for Response Actions, and Authorization to place a lien on the property.
- On May 24, 1991, the MPCA retained Bay West to design detailed Work Plan for contaminant containment.
- On July 11, 1991, the MPCA authorized Bay West, Inc. to proceed with the source control system plan by further Remedial Investigation of the vertical extent of contamination.
- On October 28, 1992, the MPCA issued a Work Order to Bay West, Inc. for the installation and operation of the Ground Water Treatment System.
- Treatment system installed.
- Entered into a contract with Westinghouse Remediation Services, Inc. for the operation and maintenance of the treatment system on March 15, 1994.
- Westinghouse closed Minnesota office in 1994.
- Settlement reached with RPs in spring of 1997.

Actions Needed:

- Complete a Minnesota Decisions Document (MDD).
- Routine operation and maintenance of the treatment system.
- Additional RI work to determine need for additional pumpout wells.



Site Name: **Woodlake Sanitary Landfill**

Location: Medina, Hennepin County

Address: 4000 Hamel Road

Priority: Minnesota List of Priorities Classification

C: Response Action Design and Implementation

D: Remedial Investigation, Feasibility Study

National Priority List: No      Score: 16

**Site Description:**

The Site is an MPCA-permitted sanitary landfill which currently disposes only of mixed municipal solid waste. On-site monitoring wells and the leachate draining into an adjacent wetland are contaminated with low concentrations of volatile organic hydrocarbons. No known hazardous waste disposal has occurred at this landfill, although the landfill was operated as an open dump prior to permitting in 1971.

Assigned Staff:

MPCA

Project Manager

Ron Schwartz

Technical Analyst

Ingrid Verhagen

Engineer

Peter Tiffany

On-Site Inspector

Pat Hanson

Attorney General

Alan Williams

Public Information

Julie Swiler

Actions Taken To Date:

- Initial MPCA permit issued November 18, 1971. Prior to that, site was operated as an open dump.
- Compliance permit issued December 4, 1981, which authorized a 40-acre expansion, upgraded monitoring requirements, and required special construction of the landfill to enable future leachate monitoring and collection.
- Ground-water sampling, conducted at on-site monitoring wells on July 27, 1984, and May 7, 1985, identified low level concentrations of volatile organic hydrocarbons.
- Conduct Supplemental Hydrogeological Investigation in March 1986.
- Area 1 closed; covered with clay and revegetated, 1986.
- Leachate sampling conducted on July 13, 1984, and June 29, 1984, showed volatile organic hydrocarbon contamination.
- Approved construction of leachate collection system and treatment proposal for Phase I on October 1, 1985.
- Leachate pump-out system began operations June 25, 1986. The collected leachate is being disposed of at the Metropolitan Waste Control Commission.
- An upgrade of the Phase I monitoring system was completed January 1987.

**Woodlake Sanitary Landfill (continued)**

- Areas 2 and 3 were constructed with clay liners and leachate collection system and have been filled to final grade, 1987.
- Area 4 has been constructed with a clay liner and leachate collection systems in January, 1989.
- Upgraded Environmental Monitoring System in September 1989.
- Owner notified of eligibility for Closed Landfill Program September 1994.
- Environmental Monitoring System to be upgraded, March 1993.
- Installed gas barrier on east and west property line, adjacent to residential development.
- Facility closed September 1993.
- Installed Active Gas Extraction System.

Actions Needed:

- Long-term monitoring.
- Long-term O/M on cover and other response actions.