Superfund Program Annual Legislative Report for Fiscal Year 2012

Minnesota Pollution Control Agency

MINNESOTA DEPARTMENT OF AGRICULTURE

Legislative charge

Minn. Stat. § 115B.20, subd. 6

Report to the Legislature

Each year, the Commissioner of Agriculture and the Agency shall submit to the Senate Finance Committee, the House of Representatives Ways and Means Committee, the Environment and Natural Resources Committees of the Senate and House of Representatives, the Finance Division of the Senate Committee on Environment and Natural Resources, and the House of Representatives Committee on Environment and Natural Resources Finance, and the Environmental Quality Board, a report detailing the activities for which money has been spent pursuant to this section during the previous fiscal year.

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Minnesota Pollution Control Agency

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Foreword

This report is submitted to the Minnesota Legislature under requirement of Minn. Stat. § 115B.20, subd. 6.

The Minnesota Environmental Response and Liability Act (MERLA, the state "Superfund" law) of 1983 established the Environmental Response, Compensation, and Compliance Account (Account), and authorized the Minnesota Pollution Control Agency (MPCA) to spend funds from the Account to investigate and clean up releases of hazardous substances or contaminants.

The Minnesota Comprehensive Ground Water Protection Act of 1989 amended MERLA to authorize the Minnesota Department of Agriculture (MDA) to have access to the Account and the authority to investigate and clean up contamination from agricultural chemicals. The Account was established in the Environmental Fund in the state treasury. The Minnesota Department of Finance administered the Account.

During the 2003 legislative session, the Minnesota Legislature altered the Environmental Fund in the state treasury, eliminating the Account. The Legislature created a new Remediation Fund in the state treasury to provide a more reliable source of funding for investigation and cleanup of hazardous waste sites and for management of closed landfills.

The Legislature transferred all amounts remaining in the Account to the Remediation Fund. The MPCA and MDA Commissioners access money appropriated from the Remediation Fund to accomplish the same types of investigation and cleanup work that were completed using the Account. The Remediation Fund also contains two special accounts, the Drycleaner Environmental Response and Reimbursement Account and the Metropolitan Landfill Contingency Action Trust. This report does not apply to expenditures from those special accounts.

The MPCA and MDA use the authorities granted under state and federal Superfund laws to identify, evaluate and clean up (or direct the cleanup of) sites which pose hazards to public health, welfare and the environment. As required by Minn. Stat. 115B.20, subd. 6, this report details activities for which Remediation Fund dollars were spent during Fiscal Year 2012 (FY12) (July 1, 2011 – June 30, 2012) by the MPCA and the MDA for Superfund, emergency response and voluntary cleanup related activities. The table on page 4 details expenditures for FY12.

The MPCA's and MDA's administrative costs represented salaries for 25 full-time equivalent positions (21 MPCA and four MDA) as well as for travel, equipment, non-site-specific legal costs, and supply expenditures associated with responding to emergencies and implementing site cleanups. FY12 Remediation Fund figures are current as of December 13, 2012. All cumulative income and expenditure figures are approximations. Direct staff costs to research, write and review this report totaled approximately $2,100.

MERLA responsibilities

The MPCA/MDA Superfund programs fulfill functions specified in MERLA for the 74 sites currently on the state's Permanent List of Priorities (PLP), as well as for the 45 non-listed sites being addressed by cooperative responsible parties. An additional 355 MPCA projects and 71 MDA projects are currently being addressed under Voluntary Investigation and Cleanup programs authorized by the Land Recycling Act of 1992 and performed according to respective agency protocols.

Responding to emergencies and spills

Emergency Response personnel at the MPCA are on call and available to respond to environmental emergencies 24 hours a day, s days a week, 365 days a year. The MPCA received 3,500 incident reports from the Minnesota Duty Officer in FY12. These incident reports were triaged and some were transferred to other MPCA programs for followup. The Emergency Response team directly handled approximately 2,605 incident reports. The remaining reports were other types of releases, such as air pollutants, wastewater bypasses, and tank petroleum leaks, and were transferred to other MPCA programs. In FY12, the MPCA Emergency Response team declared 42 emergencies and authorized the spending of approximately $490,350 under MERLA authorities. When agricultural chemical spills occur, the MDA is the lead state agency which would respond. During FY12, 130 agricultural chemical incidents were reported, with one agricultural chemical emergency declared.

The MPCA and MDA Emergency Response teams' roles are to provide advice and oversee cleanups performed by responsible parties. In some situations, a responsible party is not identifiable or is unable or unwilling to perform the cleanup, and Superfund monies are used to respond to the situation. Examples include fuel spills from unknown sources, mercury spills affecting sensitive populations, mystery chemicals infiltrating a sump in a home, abandoned containers of chemicals or oil, or other situations in which the Commissioner of the MPCA or the MDA (or his delegates) has declared emergencies.

Fuel spills from trucks and unknown responsible parties are ongoing problems for the MPCA. Abandoned drums and containers of waste chemicals were not significant in FY12. The uncontrolled discharge of contaminated groundwater was a specific problem at the Superior Plating site this past year.

Anhydrous ammonia continues to be the most commonly reported agricultural chemical released in Minnesota. Roughly one-quarter to one-third of all agricultural chemical release reports are related to anhydrous ammonia.

Natural disaster and terror preparedness is an important part of the state Emergency Response programs. Contingency planning and preparing are done to prepare for assisting local officials with abandoned chemicals, oils and wastes, and managing contaminated or infected debris. When a disaster occurs, the MPCA and MDA may assist the local units of government and may utilize MERLA funds to recover scattered chemicals, materials and containers.

Voluntary investigation and cleanup

Minnesota has built and maintains programs that enable properties with known or suspected environmental problems to be returned to productive use. The voluntary cleanup programs of the MPCA and the MDA, to varying degrees, are involved in most of Minnesota's redevelopment projects on

"brownfield" properties. Under the Land Recycling Act these two programs offer a menu of assurances regarding potential liabilities that voluntary parties may obtain after their investigation of, and, if necessary, cleanup of contaminated sites.

Since 1988, the MPCA's Voluntary Investigation and Cleanup (VIC) Program has overseen 3,856 projects. Of those, 3,501 have been cleaned up; found acceptable for purchase, refinancing or redevelopment; have been transferred to other regulatory programs for appropriate action; or have become inactive. Over 34,000 acres of land have been returned to productive use as a result of assurances provided by the MPCA's VIC Program. About 180 new sites enter the VIC Program each year.

During FY12, 21 new sites entered the MDA's Agriculture Voluntary Investigation and Cleanup (AgVIC) Program. Currently, 71 sites are "open" cases. The AgVIC Program has closed 334 sites to date, of which 31 were closed in FY12. The combination of liability assurances available under MERLA, and eligibility for partial reimbursement of corrective-action costs from the Agricultural Chemical Response and Reimbursement Account (ACRRA) offer a unique, incentive-driven program. This opportunity has been positively received by MDA clientele.

Superfund investigation and cleanup

Potential Superfund sites are identified by or reported to the MPCA or the MDA, and when responsible parties do not volunteer to investigate or clean up, the sites then enter a formal assessment process for possible addition to the MPCA's Permanent List of Priorities (PLP), and/or the U.S. Environmental Protection Agency's (EPA's) National Priorities List (NPL, or federal Superfund list).

Listing of a site on the state PLP does not qualify it for listing on the NPL. The EPA has developed NPL listing and delisting procedures. However, prior to listing, responsible parties, land owners, or facility operators are provided an opportunity to conduct an investigation and cleanup under the oversight of the MPCA or the MDA. Should the responsible party be unwilling or unable to conduct the necessary investigations and/or cleanup, the MPCA or MDA would conduct the cleanup action with MERLA funding and seek cost recovery from responsible parties.

For sites under the oversight of the MDA, both responsible and voluntary parties will usually be eligible for partial reimbursement of their cleanup costs from the ACRRA. At the present time, the MDA is the lead state agency for site responses being performed at the South Minneapolis Residential Soil Contamination NPL/PLP site and four PLP only sites: the Cedar Service site in North Minneapolis, the Kettle River Co - Creosote Plant site in Sandstone, the CMC Heartland Lite Yard site in South Minneapolis, and the Page and Hill Forest Products site in Koochiching County.

There are currently 74 sites on the PLP for both the MPCA and MDA. During FY12, three sites were removed. A cumulative total of 244 sites have been listed on the PLP, with 170 sites delisted. A detailed summary of past delisted sites is available from the MPCA. Of the 74 currently PLP-listed sites, 25 are also on the NPL. It should be noted that the primary purpose of the PLP (and NPL) is to identify which sites are eligible for state (or federal) funding for the purpose of the MPCA/MDA (or EPA) to conduct fund-financed response actions. The MPCA does have the authority under 115B to provide oversight of investigations and response actions taken by responsible parties. As such and in addition to sites listed on the PLP, the MPCA provides oversight of Superfund actions by responsible parties at 45 other sites. Twenty of these 45 sites were referred from the MPCA's VIC Program to Superfund in FY12, as these were sites in which responsible parties were undertaking response actions. The MPCA Superfund Program has developed a formal agreement that both the responsible party and the MPCA sign, which outlines roles and responsibilities for each party and provides a timeline for completion of appropriate actions to be taken.

After the listing of a site on the PLP or the NPL, and if a responsible party either cannot be identified or is unable or unwilling to take requested action, the MPCA or MDA may use the Remediation Fund to conduct response actions. The agencies then will follow an established process in their site responses.

A remedial investigation/feasibility study is conducted to determine the extent of contamination and evaluate cleanup alternatives. Following a decision on the needed activities, a plan for remedial design/remedial action is developed and implemented. If financially viable responsible parties are identified at any point during investigation or cleanup, the state may attempt to secure their cooperation and recover costs from them. Such cooperation or cost recovery leverages private funds for cleanups, conserving state funds for truly "orphan" sites, for which no viable responsible party can be identified.

After response actions are complete or when a site no longer poses risks to public health or the environment, the site may be "delisted" from the PLP or the NPL. Sites can also be delisted from either the PLP or NPL if responsible parties have completed all necessary response actions and/or if no additional MERLA funding is needed to conduct response actions. Conditions at some responsible party lead sites may require continued monitoring or maintenance for years following delisting, to ensure that risks have been eliminated or controlled.

Minnesota's 25 NPL sites are eligible for federal funding for response actions based on national priority. But, in return for access to these funds, the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, the federal Superfund law) requires states to match either 10 percent of the cost of site-specific remedial actions (when no state or local government has been identified as a responsible party) or contribute 50 percent (if the site was owned or operated by a state or local governmental entity). During FY12, $100,000 was spent on state-match requirements for site cleanup related to the MacGillis and Gibbs NPL Site.

Due to the successful efforts of the Superfund Site Assessment Program, most potential Superfund sites in Minnesota have been discovered. Most of the worst Superfund sites in the state have already been listed on the PLP, and many have been cleaned up or are currently undergoing response actions. The Superfund Program remains responsible for identifying and addressing contamination that continues to pose health and environmental threats to Minnesotans.

The MPCA and the MDA continue to manage site cleanups and move them to a monitoring or maintenance level, as appropriate. As development in Minnesota continues, new sites with contamination will be discovered and old ones redeveloped. Lower detection limits and changing health-based standards sometimes may trigger investigation or cleanup at sites where action was not previously required. Sites that involve issues such as perfluorochemicals (PFCs) and intrusion of chemical vapors into buildings may require similar actions. Vapor-intrusion issues have become a growing area of concern at Superfund sites to such an extent that the EPA is considering revising its Hazard Ranking System to account for potential vapor issues relative to listing vapor sites on the NPL.

Institutional controls will also help to ensure that exposure to residual contaminants does not occur as a result of inappropriate land use at former Superfund and Voluntary Cleanup and Investigation sites. The MPCA is developing institutional control tracking mechanisms for former sites to ensure that citizens and local units of government are aware of, and honor, any such controls already in place.

Superfund Annual Report
Closing Numbers
FY 12

Allotment Name	TOTAL
Arrowhead	104,468
Baytown	407,214
Brainerd Foundry	36,773
Capri	17,668
Centerville Rd	26,029
Chemart	6,648
Duluth Dump	33,642
EMERGENCIES	288,235
EMERGENCIES (MDA)	13,663
Esko GW Plume	68,560
Farmington GW Plume	25,681
Fish Hatchery	41,347
Fridley Area GW(Kurt/FMC)	50,661
HARMFUL SUBSTANCE	9,753
Hmong Center	67,342
Isanti Solvent	62,112
Kettle River (MDA)	1,159,874
LeHillier	4,400
Littlefork	200,259
Long Prairie	239,801
Mankato Plating	7,266
MacGillis & Gibbs	100,000
MN Valley Dump	1,099
NON-EMERGENCY REMOVALS	169,094
NRDA	26,428
PA / SI	556,131
PA / SI (MDA)	82,989
Perham	136,795

Allotment Name	TOTAL
Peter Pan Cleaners	35,755
PFC Technical Assistance	177,398
Pigs Eye	22,000
Pilgrim Cleaners	58,682
Reserve Mining	130,866
Ritari	25,947
Rochester GW Plume	95,835
Schloff	57,391
Southview Blvd	377,180
Technical Assistance	210,914
US Steel / ST Louis River	10,106
Valentine Clark	31,752
Well Abandonment	16,245
West Broadway GW	11,153
West Duluth	50,603
Whiteway Cleaners	42,898
Winona	125,199
Subtotal (site specific)	**5,423,856**
Site-specific legal expenses (MPCA)	207,239
Site-specific legal expenses (MDA)	2,399
Site-specific lab analytical services(MPCA)	178,031
Site-specific lab analytical services(MDA)	1,329
Subtotal (site-specific support)	**388,998**
TOTAL FY12 site-specific expenditures	**5,812,854**
TOTAL FY12 administrative costs (MDA = $498,572)	**3,102,117**
TOTAL FY12 expenditures	**8,914,971**

Harmful substance compensation program

In 1996, the Minnesota Legislature abolished the Harmful Substance Compensation Board and transferred responsibility to manage the program to the MPCA and pay eligible claims out of the Remediation Fund. (Minn. Stat. 115B.25 – 115B.37) Since taking over responsibility for review and payment of approved claims, the MPCA receives one or two claim requests per fiscal year. Most of those claims found to be eligible have been for reimbursement of expenses to replace private drinking water wells or to install carbon filter systems. No claims were submitted to the MPCA in FY 2012. The MPCA will utilize funding under this program to provide bottled water or carbon filter systems when there is no responsible party identified. The MPCA is also authorized under Minn. Stat. 115B to reimburse local units of government for expenses incurred when responding to emergencies caused by the release of hazardous substances. During FY12, the MPCA did reimburse the City of St. Paul for eligible expenses incurred by the city's Fire Department response to a release of nitric acid.

Perfluorochemicals at Superfund sites

Perfluorochemicals (PFCs) are a family of chemicals made by the 3M Company (3M), and others that have been used for decades to make products that resist heat, oil, stains, grease and water. They were not known to cause environmental problems until 2004, when the MPCA found PFCs in drinking water supplies in parts of the eastern Twin Cities metropolitan area.

Since then, PFCs have been a high priority for the MPCA as it has sought to identify source areas and secure safe drinking water. The Minnesota Department of Health (MDH) developed health-based criteria for four of the chemicals.

Staff from the MPCA's Superfund and Closed Landfill programs investigated source areas and remediation activities. Four sites where 3M had disposed of PFC manufacturing wastes in the past were quickly identified. They included the 3M Oakdale site, the 3M Woodbury site, the 3M Cottage Grove site, and the closed Washington County Landfill. Eventually, all the PFC contamination in east-metro drinking-water supplies was traced to these sites. Remediation of the three 3M sites is managed by the Superfund Program; remediation of the Washington County Landfill is handled by the Closed Landfill Program.

In May 2007, the MPCA Citizens' Board approved a Settlement Agreement and Consent Order (CO) negotiated between MPCA staff and 3M. The CO is a legally binding document that lays out timetables, deliverables and other requirements, including funding for investigating and cleaning up PFCs at the three 3M sites. Since the Washington County site is in the Closed Landfill Program, 3M has no legal liability for the site, but did agree under the CO to provide up to $8 million to help fund the state's cleanup of the site. 3M also funded the construction of a lined cell at SKB Industrial Waste Landfill in Rosemount, Minnesota, to contain only the excavated PFC waste material from the 3M sites.

Cleanup plans for the 3M PFC sites share basic similarities of (1) institutional controls; (2) excavation of remaining source areas; (3) continued and/or enhanced groundwater extraction and treatment; and (4) long-term monitoring. 3M provides quarterly progress reports to the MPCA regarding activities required under the CO. These progress reports, along with all of the site-specific reports for the 3M sites, can be found at www.pca.state.mn.us/cleanup/pfc/pfcsites.html.

Site-specific information for the three 3M sites are:

3M Oakdale – The groundwater treatment system (carbon) was installed and began operation in March 2010. Pump-out wells pump approximately 86,000 gallons per day of groundwater, which is discharged to the sanitary sewer after treatment. Approximately 27,000 cubic yards of PFC-contaminated soil were excavated and disposed off site at SKB. 3M is now conducting quarterly ground water and surface water monitoring under an MPCA -approved sampling plan to evaluate trends in PFC concentrations.

3M Woodbury – Soil excavations for both the Main Disposal Area and Northeast Disposal area have been completed (November 2009 and January 2011, respectively). Approximately 30,000 cubic yards of soil was excavated and disposed off site at SKB or out of state because of non-PFC issues. The ground water pump-out system continues to operate at approximately 4 million gallons per day, and is piped to the Cottage Grove facility. After rates of pumping were reduced in March 2011, some increases in PFC concentrations in sentinel wells resulted in an enhanced monitoring program throughout fall of 2011 and all of 2012. 3M brought pumping rates back up to pre-March 2011 levels and has been evaluating possible reasons for increases in PFC levels in sentinel wells. MPCA and MDH continue to sample nearby residential wells for PFC impacts, including more frequent sampling at residences near the site. No new drinking water well advisories have been issued by MDH as a result of this enhanced monitoring.

3M Cottage Grove – Soil excavation for each of the on-site disposal areas (D1, D2 and D9) has been completed (nearly 60,000 cubic yards of soil removed in total from the three disposal areas). The sediment-removal project at the East Cove was also completed in January 2012. Approximately 12,000 cubic yards of sediment (one and one-half acres) was dredged out of east cove and taken to SKB. Wetland restoration of the East Cove is currently underway.

3M has completed construction of a carbon treatment system which will treat all of the groundwater pump-out wells at Cottage Grove and Woodbury prior to use in the plant. This also required a "re-piping" of the entire water supply/distribution system at the plant.

3M also installed two additional groundwater extraction wells in 2010 and has begun an extended pump test to determine whether capture of PFC-contaminated groundwater is complete, or whether additional extraction wells will be needed. These two new wells can each pump up to 1.15 million gallons of water per day. This extended pump test will also be used to determine the overall balance of water being pumped from each of the production/pump-out wells at Cottage Grove and the pump-out wells at Woodbury, which will both maintain capture of PFC-contaminated ground water and provide for the water supply needs at the Cottage Grove plant.

In summary, all excavation activities regarding PFC-contaminated soils/sediments at the 3M PFC sites have been completed. A majority of the excavated material from the 3M sites was disposed and managed at the SKB Industrial Landfill in Rosemount. This cell at SKB has now been closed. Material that was excavated and contained non-PFC hazardous material was disposed out of state in a permitted hazardous waste landfill. Groundwater control and treatment systems are also in place at each of the 3M sites, with only the final number of groundwater control wells at the 3M Cottage Grove site yet to be determined.

The MPCA continues to provide either point-of-use carbon treatment systems or bottled water to approximately 75 residences in Lake Elmo and Cottage Grove that have private wells impacted with PFCs, and have been issued a drinking water advisory by the MDH. Costs to provide the carbon treatment or bottled water are reimbursed by 3M. All MPCA staff costs and costs incurred by MPCA contractors providing technical assistance to the MPCA for oversight of 3M activities are also reimbursed by 3M.

MPCA and MDH continue to monitor private drinking water wells in south Washington County for PFCs, and approximately 200 residential wells are sampled each year. The MDH also continues to monitor municipal wells in south Washington County for PFC concentrations. While PFC levels remain at low levels in municipal wells, such as those for Cottage Grove, the concentrations remain below drinking water criteria. Oakdale remains the only city that has a municipal well that requires carbon treatment.

Public participation in the Superfund process

Providing information to the public and public participation is an important component of the Superfund process. There is a public notice component defined in state statute for selection of final remedial actions at listed sites, along with a public notice component when sites are listed/delisted to/from the PLP. Superfund staff often meet with local government officials and community groups and hold public meetings to provide updates of site-specific activities.

Depending on how information is presented in articles, inquiries from reporters regarding Superfund sites or program information can lead to a significant expenditure of staff resources. One such article was published in USA *Today* in April 2012. This article, titled "Ghost Factories," dealt with a survey of old, abandoned lead-smelting facilities on a national level. The article covered a review of old lead-smelting facilities for potential risks conducted by the EPA and the states in the early 2000s. MPCA staff at that time evaluated the limited information that was available regarding these old smelters in Minnesota and determined that the additional expenditure of state resources could not be justified given higher priorities of other threatened releases. MPCA staff provided this information to *USA Today* and did follow-up on additional information about the Minnesota smelters that was provided by the *USA Today* reporter. Again, MPCA staff determined that additional evaluation under Superfund of these old lead smelters could not be justified. After publication of the two-day *USA Today* article, which included surficial soil sample results for lead, the MPCA consulted with the MDH regarding levels of lead cited in the article. The conclusions of that consultation confirmed earlier MPCA recommendations that the current lead sample results cited were more likely from other sources, such as lead paint or vehicle emissions. Also, given the significant redevelopment that has occurred in these urban areas, attribution of the current lead levels to the old smelters would also be very difficult. This does not mean that lead in the urban environment is not of concern, but that state and local public health officials should continue to inform the public on how to minimize exposure to lead in urban soils.

Social media and on-line news groups, such as the *Patch News*, provide more current and up to date information to the public, such as on-going Superfund site activity. *Patch* reporters are likely to attend city council or public meetings when site updates are provided. The MPCA has begun its own Facebook and Twitter pages to provide updates on agency activities. Facebook and Twitter have also provided the opportunity for citizens to become engaged in environmental issues. One such group that was established is the Fridley Cancer Cluster Facebook Group. Fridley area residents began the on-line discussion over their concerns of a potential cancer cluster in Fridley related to contamination associated with the Superfund sites in Fridley. This Facebook group grew to more than 2,000 members and included environmental activist Erin Brockovich, who held a public meeting in Fridley to discuss the group's concerns. Because of concerns raised by this group, the MPCA, EPA and MDH held an open house in Fridley to answer questions about the Superfund sites in the city and address citizens' concerns. One major outcome of these meetings was the formation of a Citizens Advisory Group that will give Fridley residents a mechanism to discuss environmental issues related to the Superfund projects and provide updates on site activities.

For additional information regarding the MPCA's Superfund Program please visit www.pca.state.mn.us

For additional information regarding the MDA's Incident Response Program please visit www.mda.state.mn.us