I. INTRODUCTION

A. Problems of Time and Cost in Site Investigation and Cleanup

One of the main problems with CERCLA and brownfields cleanups is the time which such cleanups take to complete. The process of investigating a site through the CERCLA Remedial Investigation/Feasibility Study (RI/FS) process can take several years. The RI/FS process is long, and in the meantime the contamination is often left lurking at the site, harming the environment and human health.

In the brownfields context, the site investigation process under several states' laws may be just like the CERCLA RI/FS. In other states, the site investigation at brownfields sites is less extensive. To developers who perform the cleanup process, more time to do the investigation means more money to complete the cleanup process. These high investments in time and costs of investigation tend to scare off prospective purchasers. If the RI/FS could be shortened or made more efficient, it would save money, and more money could be spent on the actual cleanup. By shortening some of the preliminary steps, more time and money can be saved, and more developers may be willing to purchase and cleanup brownfields sites.

In addition to the generally high cost of cleanups, there is the uncertainty of the cost. It is difficult to estimate the cost of a cleanup until the remedy is selected. To select a remedy, the investigation and study must be performed. If the investigation and study may be shortened, and the remedy may be chosen more quickly, the cost may be ascertained more quickly. Certainty of the cost will encourage developers to clean sites.

---


The U.S. EPA has developed several initiatives to reduce the time and cost of CERCLA cleanups. One way is the use of presumptive remedies. Presumptive remedies are particular remedies for cleaning up similar types of sites. Minnesota has established a presumptive remedy for landfill sites, and has returned land to productive use. Such remedies have been successful at CERCLA sites and at non-CERCLA sites. Minnesota should expand its use of presumptive remedies into its brownfields program to make voluntary cleanup more attractive to developers.

B. A Way To Reduce Time and Cost of Cleanups

One way to reduce the time and cost of the site investigation at CERCLA sites is to use presumptive remedies. The sites which are ripe for the use of presumptive remedies may have similar types of contaminants, a similar past industrial use, or the same environmental media. The point of a presumptive remedy is to narrow down the possibilities for remedies so that engineers and scientists can focus their sampling and testing. By paring down the tests that need to be performed, money and time are saved. The presumptive remedy is "based on historical patterns of remedy selection" and the success of such remedy. Presumptive remedies can "accelerate the cleanup of similar types of sites," and their use "enables site managers to focus the number of technologies considered, focus data collection efforts, and streamline site assessment." In its semiannual report to Congress, the EPA Office of Inspector General stated that the use of a presumptive remedy, "minimized redundant investigative steps and made more consistent site decisions." Using presumptive remedies should also make the costs of cleanup more certain and easier to estimate by comparison to other sites which used the selected remedy.

Although brownfields do not go through the official CERCLA procedures, the developers of brownfields must clean up the site enough to protect the environment and human health so that they will not be subject to CERCLA liability later. Many states have brownfields programs with assurances of no enforcement by the EPA, but the EPA still holds a re-opener so that it can order a cleanup if a site is dangerous to the

---

53 See Landfill, supra note 1, at 1.
public health.58 Under some state statutes, brownfields cleanups must meet the same standards as a Superfund site would have to meet under CERCLA.59 Therefore, even though brownfields do not have to employ all of the CERCLA procedures, the threat of being held liable in the future almost forces developers into using exhaustive investigative tactics.

If a shortened process can be created and used at both CERCLA and brownfields sites, many more sites may get cleaned. According to the General Accounting Office, there are 150,000 to 500,000 brownfields in the United States; the cost to clean these sites will be around $650 billion.60 If the EPA and states help to shorten the time it takes to perform a cleanup, the whole process becomes less expensive. Since there are so many sites that need some kind of cleaning, the EPA and states should encourage redevelopment by shortening the cleanup and redevelopment time.

If the costs of investigation of site are made quicker and cheaper, and the remedy selection is narrowed down so that costs can be better estimated, developers may choose to use the presumptive remedy. If the developer of a brownfield site goes through a program in a state with a Memorandum of Agreement with the U.S. EPA.61 and the developer uses the presumptive remedy which meets Superfund standards, the developer has a pretty solid base upon which to stand when it comes to future liability under CERCLA. A developer would be able to get very close to eliminating future liability-- the developer would meet Superfund standards by using the presumptive remedy, would have a covenant not to sue or similar agreement from the U.S. EPA, and would have a lower cost than a typical CERCLA cleanup. The developer may be under the aegis of the covenant not to sue and the presumptive remedy.

II. PRESumptive RemedIES AND HOW THEY WORK

A. Presumptive Remedies at the Federal Level

CERCLA has as some of its purposes (1) cleaning up contaminated sites and (2) assessing liability to potentially responsible parties (PRPs).62 In attaining these goals, CERCLA has a preference for remedial and response actions that permanently reduce the volume of hazardous
material.\textsuperscript{63} Congress and the EPA want to ensure that once a site is cleaned through CERCLA that it will stay clean. However, the CERCLA program historically has not been very efficient in producing clean sites.

EPA needed to find ways to make the cleanup process quicker and still attain safe results. In 1991, EPA began developing presumptive remedy guidance to help "streamline" cleanups.\textsuperscript{64} According to statistics in 1992 (twelve years after CERCLA was passed by Congress), only 61 National Priorities List (NPL) sites were completely remediated before implementation of the "streamlined" cleanup efforts.\textsuperscript{65} The number increased to 149 after the implementation.\textsuperscript{66} According to more recent statistics, cleanup has now been completed at 427 NPL sites.\textsuperscript{67} The use of presumptive remedies contributes to the increased pace of cleanups.\textsuperscript{68}

1. Administrative Policies and Guidances; Background

EPA found patterns in the site remedy chosen for particular sites in its Records of Decision (RODs).\textsuperscript{69} EPA discovered that similar sites tended to produce similar RI/FS results. In order to help eliminate duplication of efforts, EPA began using presumptive remedies.\textsuperscript{70} EPA wants to use presumptive remedies so that site engineers can "focus the number of technologies considered, focus data collection efforts, and streamline site assessment."\textsuperscript{71}

EPA has issued guidance on the use of presumptive remedies at four kinds of sites and plans to issue guidance on three more types. Presumptive remedies are used at municipal landfills, sites with volatile organic compounds (VOCs) in soil, wood treater sites, and Superfund sites which need groundwater treatment.\textsuperscript{72} The EPA will soon be issuing

\begin{flushright}
\textsuperscript{63} See 42 U.S.C. § 9621(b) (1986).
\textsuperscript{66} Id.
\textsuperscript{67} See Hearings Before the Subcomm. on Water Resources and Env't of the House Comm. on Transp. and Infrastructure, 105\textsuperscript{th} Cong., 1\textsuperscript{st} Sess. (1997) [hereinafter Hearings, Herman] (Statement of Steven A. Herman, Assistant Adm'rl, Office of Enforcement and Compliance Assurance, and Timothy Fields, Jr., Acting Assistant Adm'r, Office of Solid Waste and Emergency Response).
\textsuperscript{68} See Innovative, \textit{supra} note 6, at 1.
\textsuperscript{70} See Hearings, Herman, \textit{supra} note 18.
\textsuperscript{71} Innovative, \textit{supra} note 6, at 1.
\end{flushright}
guidance on presumptive remedies for manufactured gas plants (plants that burn coal to make tar), polychlorinated biphenyl compounds (PCB) sites, and grain storage facilities.\(^7\) These more simple sites tend to be good candidates for presumptive remedies. The presumptive remedies and their effectiveness also depend upon the type of geography at the site, the permeability of the soil, and the amount of contamination.\(^4\)

The presumptive remedy for landfills is containment.\(^5\) The remedy for VOCs in soil and water is extraction.\(^6\) At wood treater sites, the remedy for organics in soils is bioremediation, thermal desorption and incineration; the remedy for inorganics in soils is immobilization.\(^7\)

These presumptive remedies have been published as guidance, rather than regulation, and may be changed when the EPA sees fit.\(^8\) This allows EPA to make changes to the guidance without going through all of the rulemaking procedures. By using guidance rather than regulation, EPA can keep up with quickly changing technology by being able to change the presumptive remedies as more effective, cheaper, and quicker technologies become available.

2. How a Presumptive Remedy Works and Protects the Environment and Human Health

When a developer decides to remediate, for example, a wood treater site, it is most likely that an RI/FS will detect some of the contaminants typically found at this type of site. The type of contamination is narrowed down by the type of site, so the engineers just have to focus their investigation and testing upon the most likely pathway(s) of contamination. If contamination is found in the pathway, then the presumptive remedy for that media is triggered. This is called the "phased approach." This approach follows a "sequence of steps, such that information obtained from earlier steps is used to refine the subsequent investigations, objectives, or actions."\(^9\) The presumptive remedy helps to concentrate the work in the RI/FS.

---

\(^8\) See Supplemental, supra note 5, at 5.
\(^9\) See Landfill, supra note 1, at 1.
The landfill containment remedy is another good example of how presumptive remedies work. Twenty percent of the sites on the NPL are municipal landfills. EPA has found that "in almost all cases containment was selected as a component of the final cleanup plan." So, engineers know that containment will most likely work at a landfill. To streamline the site characterization process, the engineers look at the specific site characteristics and any other information available to decide what medium to test first. The engineers should first sample the medium which has the greatest risk of contamination. At most landfills, groundwater is the most likely to be contaminated. Once the engineers establish that there is a risk of groundwater contamination that exceeds allowable levels, a response action is needed and containment will be the remedy used. At that point, the engineering team does not need to test other media to characterize the site because a response action is already needed.

The presumptive remedy prompted by the groundwater contamination addresses known risks and will deal with the other media. The risk assessment portion of the RI/FS is streamlined through this use of the presumptive remedy. Containment will address all of the other possible pathways of contamination. According to the guidance, the presumptive remedy at landfills includes the following remedies as appropriate for the site: landfill cap; groundwater control to contain any plume; leachate collection and treatment; landfill gas collection and treatment; and institutional controls to supplement the engineering controls. These types of treatment or control prevent direct contact with the soil (through the cap and institutional controls), exposure to the groundwater (by groundwater control), exposure to leachate (by collection and control), and exposure to landfill gas (by collection and control). No further testing is needed to characterize the site or determine the risk, and the cleanup can be started immediately.

In addition to the containment, if there is any evidence or information of possible hot spots (areas of high contamination), the engineering group can perform a geophysical test or some other test to see if there are any drums of contaminants or any areas where pollutants were dumped. If

---

82 See supra note 1, at 2.
83 See id.
84 See id. at 3.
there are drums or contaminants present, they or the soil can be removed and disposed of off-site or through another appropriate remedy.\(^8^6\)

In any case, the presumptive remedy provides a starting point for the cleanup process, and then it further focuses the testing and sampling. It also allows for flexibility for possible variations such as hot spots. The VOCs remedy provides several different options because each option works on sites with different characteristics, such as geography.\(^8^7\) The remedy helps to save time in the testing and risk assessment phases, saves money by preventing exhaustive testing (and by saving time), and protects the environment and human health by preventing exposure through all of the possible pathways.

3. The Success of Presumptive Remedies
   a. Success in Saving Time with Presumptive Remedies at Superfund Sites

The EPA issued the guidance on the general policies for using presumptive remedies to accelerate the pace of cleanups in September 1993.\(^8^8\) Along with the policy document, EPA published the first presumptive remedy guidance for landfills.\(^8^9\) So far, presumptive remedies are speeding up the cleanup process. In the landfill realm, the RI/FS with the use of a presumptive remedy takes from 23 to 32 months to complete.\(^9^0\) Without the use of the presumptive remedy, the RI/FS takes 44 to 72 months.\(^9^1\) The EPA has found that presumptive remedies provide anywhere from 36 to 56\% in time savings.\(^9^2\) In the risk assessment stage, EPA has determined that presumptive remedies reduce the time needed to complete the assessment. At sites that use presumptive remedies, risk assessment takes 7 to 10 months.\(^9^3\) Sites that do not use presumptive remedies take 9 to 22 months to complete risk assessment.\(^9^4\)

   * **Success in Saving Money with Presumptive Remedies at Superfund Sites**

In publishing the guidances for presumptive remedies, EPA has stated that one of the goals for presumptive remedies is to reduce the costs of

\(^{86}\) See Landfill, *supra* note 1, at 5.
\(^{90}\) See Landfill, *supra* note 1, at 3.
\(^{91}\) See id.
\(^{92}\) See id.
\(^{93}\) See id.
\(^{94}\) See id.
remedies. The cost of Superfund cleanups is decreasing. The average cost of a Superfund cleanup has been reduced from $1.6 million in 1995 to $1.2 million in 1997.

According to the EPA, its regions are reporting reduced costs. The Office of the Inspector General predicts that by using presumptive remedies, "[t]ime and cost savings" will "increase over time." At a landfill in Michigan, the presumptive remedy saved 10% of the cost of the national average $1 million for the RI/FS. The cost saving was not quite as significant at a landfill in South Carolina, but $100,000 is a fairly large amount. The greatest cost saving was at a landfill in Vermont, where there was a 60% savings. The amount of savings do differ, but typically presumptive remedies are helping to save money at Superfund sites.

4. Making Cleanup Costs More Certain

The Office of the Inspector General also notes that presumptive remedies, "create greater consistency, certainty and quality of remedy decisions in the near term." If a remedy can be made more certain, the costs can be made more certain. The cost of cleanup tends to depend on the type of remedy. Costs can be better estimated because presumptive remedies are used at similar sites with the same types of contamination. If presumptive remedies can help to estimate costs better, potentially responsible parties (PRPs) at CERCLA sites will be able to settle reimbursement actions with other PRPs more easily. In the brownfields context, if presumptive remedies can estimate costs better, then developers may be more apt to clean up with the presumptive remedy because of the certainty involved.

Criticism of Presumptive Remedies at Superfund Sites

Some scholars criticize the "archive" method which EPA employs in developing presumptive remedies. The "archive" method is where "particular remedies have a sufficiently strong correlation with a pattern of underlying contamination characteristics [such] that it is no longer necessary to expend resources to conduct a full RI/FS." The archive method is limited, however, in that the EPA has not established "the

---

96 See Mugdan, supra note 31, at 681.
98 See Landfill, supra note 1, at 1.
100 See id.
101 Superfund, Section 8, supra note 39.
102 Abrams, supra note 36, at 589.
needed strength of correlation," and the number of sites in the archive
needed to constitute a pattern of remedy use.\textsuperscript{103} Another problem is that
not all of the ROD's describe the remedy that was selected for the site. In
addition, one may argue that the archive system "underselects new
technologies and makes provision for innovation only as an add-on."\textsuperscript{104}

EPA has not established by guidance or regulation the needed strength
of correlation or number of sites necessary to compose a pattern. However, the correlation seems to be about 80\% or greater.\textsuperscript{105} The number
of sites needed to formulate a pattern has not yet been established.\textsuperscript{106} EPA
is also tracking the sites which use presumptive remedies.\textsuperscript{107}

The objection concerning the inconsistency of RODs in stating the
levels and amounts of contamination is not very strong. RODs may not
state exactly how much of a contaminant is found at the site, but they do
state the kinds of contamination. A presumptive remedy does not
completely replace any investigation that a PRP may do. The PRP just
focuses its investigation through the guidance of the presumptive remedy,
and may use the presumptive remedy if it chooses.

As to the objection that presumptive remedies do not allow for the use
of new technologies, the EPA has already addressed that situation. The
presumptive remedies are guidance, the EPA can change the remedy
according to new technology.\textsuperscript{108} In addition, EPA has published updates to
its original guidance documents\textsuperscript{109} and EPA continues to develop and
improve the presumptive remedies.

B. Presumptive Remedies at the State Level

Minnesota is the one state that explicitly authorizes the environmental
agency to develop presumptive remedies. The Minnesota statute
concerning landfill cleanup says in pertinent part that, "[t]he
commissioner may develop general work plans for environmental studies,
presumptive remedies, and generic remedial designs for facilities with
similar characteristics."\textsuperscript{110} Minnesota has regulations on the presumptive
remedy in its Landfill Cleanup Program (sometimes called the Closed
Landfill Cleanup Program\textsuperscript{111}), which is an alternative to the federal
Superfund or the state Superfund-like statute, but works with sites that

\textsuperscript{103} See id. at 592.
\textsuperscript{104} Id. at 599.
\textsuperscript{105} See Wood Treater, supra note 23; Tulalip Landfill, supra note 32.
\textsuperscript{106} See Abrams, supra note 36, at 598-599.
\textsuperscript{107} Cf. Superfund, Section 8, supra note 39.
\textsuperscript{109} See Supplemental, supra note 5.
\textsuperscript{111} Minn. R. 7035 (1988).
could fall under the authority of Superfund. The Landfill Cleanup Program is analogous to CERCLA.

The Minnesota presumptive remedy for landfills is a regulation, so it must be changed through rulemaking procedures. In contrast, the EPA's presumptive remedies are issued as guidance, as a way to administratively reform and accelerate Superfund cleanups. EPA can quickly change its guidance without following the administrative rulemaking procedures and can be responsive to improvements in technology.

Minnesota has a separate Voluntary Investigation and Cleanup (VIC) Program. This program works with brownfields sites. The Minnesota program does provide a limitation on the liability of a developer, and the standards of cleanup under Minnesota's VIC take future land use into consideration. CERCLA also takes future land use into consideration; "currently, EPA's RODs include a land use scenario other than residential land use." CERCLA uses presumptive remedies successfully as does Minnesota's Landfill Cleanup Program. Minnesota should expand its use of presumptive remedies into its VIC (brownfields) program to make voluntary cleanup more attractive to developers.

The Minnesota Landfill Cleanup Program has produced results, so Minnesota knows that the presumptive remedy has worked and is efficient at landfills. However, Minnesota may want to establish a presumptive remedy program more like that under the federal CERCLA statute (as described in Part II.A. above) because it is more comprehensive and flexible. Minnesota would probably want to establish the presumptive remedies through guidance so that they could be changed quickly and also establish presumptive remedies for more than just landfills.

- *Minnesota's Experience with Presumptive Remedies - The Landfill Cleanup Program*

The Landfill Cleanup Program uses presumptive remedies to quickly contain old landfills. The state then takes over the responsibility from the owner/operator for each site, and sometimes actually reimburses any owner/operator or potentially responsible parties (PRPs) for any past cleanup costs. In effect, the state limits the liability of any owner and transfers the liability or responsibility to the state. Once the state issues the

---


114 See Minn. Stat. Ann. § 115B.175 (West 1997) (considering specifically whether reuse or further development of the property is proposed).

115 See Hearings, Herman, supra note 18.

Notice of Compliance, the state becomes liable. The state then obtains the money by taxing industry, using general bonds, and negotiating for compensation from insurers.

Minnesota signed an agreement with the EPA concerning the state liability for NPL sites or other sites in which EPA is interested. On August 29, 1995, EPA and Minnesota Pollution Control Agency (MPCA) agreed that MPCA would take over any federal obligations. Under the agreement, MPCA will pay for any unreimbursed cleanup costs and the EPA will not be reimbursed as a PRP would be reimbursed. The Landfill Cleanup Program aims to end the complex cost recovery actions. The statute allows three types of lawsuits: (1) cost recovery by Minnesota against an owner/operator who does not cooperate, (2) pursuit of insurance claims only if necessary, and (3) cost recovery by Minnesota if a PRP illegally disposes of waste at a landfill facility.

The Landfill Cleanup Program is cleaning up old sites, and preventing any further environmental or health damage. The state is moving to disposal sites that have liners and are more protective of the environment. There are now only 25 landfills in Minnesota that accept the municipal solid waste. Minnesota expects that by 1997 all landfills will have liners and that leachate will be reduced from 56 million gallons per year to 15 million gallons per year.

The Landfill Cleanup Program is an authority separate from state and federal Superfund laws. Minnesota decided prior to 1994 that Superfund cleanup of landfills was too slow and expensive. Interestingly, the state passed the Landfill Cleanup Program statute shortly after the federal Superfund program issued the guidance for presumptive remedies for landfills. Minnesota decided to clean up landfills by using its own presumptive remedies, and to start using more technologically advanced and more environmentally safe landfills.

120 See id.
123 See Minnesota Pollution Control Agency, MPCA Cleanup Efforts (visited Nov. 6, 1997) <http://www.pca.state.mn.us/cleanup/general_cleanup.html> [hereinafter MPCA, Cleanup].
125 See MPCA, Closed, supra note 63.
There are 106 sites in Minnesota's Landfill Cleanup Program. To become part of the program, a site must apply to the MPCA. A site must meet certain criteria to qualify for the program. A site must be one that is permitted by the state, accepts mixed-municipal solid waste, stopped accepting solid waste by April 9, 1994, and stopped accepting demolition debris by May 1, 1995. However, sites that are not permitted, are currently operating, or only accepted industrial and demolition debris do not fall within the category of sites qualified for the Landfill Cleanup Program.

After acceptance, a site must enter an agreement with the state to complete the requirements of the closure. The owner/operator of the landfill site will receive a Notice of Compliance after completion of the requirements in the agreement. At this point, the MPCA takes over any further cleanup. This includes any more construction needed to close the landfill (such as the cover over the landfill), and any other post closure requirements. The state may also reimburse the owners or operators for the past cleanup expenses. The state gets money for the program from an increased solid waste fee to industrial disposers and from general obligation bonds. In addition, the Minnesota legislature passed the Insurance Recovery Act of 1996. That statute authorizes the state to negotiate monetary compensation with insurance companies who had policies with insured sites in Minnesota for environmental coverage.

In determining the contribution of insurance companies, the Minnesota Pollution Control Agency and the Minnesota Attorney General's Office must do the following: estimate the past, present, and future costs for the state for the 106 landfills; develop criteria for determining how much an insurer owes; negotiate the settlements; and take legal action if necessary. Since the state is to take control over the old landfills and assure that they are cleaned up, the state wants to recover the past, present, and future costs of doing so from the insurance companies. The state does

\[\text{References}\]

126 MPCA, Cleanup, supra note 74.
130 See Hansen, supra note 66, at 32.
135 See Minn. Pollution Control Agency, Minnesota Landfill Cleanup Program (visited Nov. 6, 1997) <http://www.pca.state.mn.us/program/landfill_p.html> [hereinafter MPCA, Program].
137 See id.
this under the philosophy that the "long-term care of these landfills is the responsibility of society at large (including insurance carriers) as well as landfill owners/operators and others associated with solid waste disposal."138

2. Presumptive Remedy Used in the Landfill Program

The MPCA is closing old landfills. The presumptive remedy is to cover and contain the landfill.139 According to the regulations, the operator of the landfill must close the facility, "in a manner that eliminates, minimizes, or controls the escape of pollutants to ground water or surface waters, to soils, or to the atmosphere."140 Like the CERCLA presumptive remedy for landfills, the containment remedy deals with all of the possible pathways and media.

3. Success of the Program in Cleanups

The Landfill Cleanup Program has been successful in returning land to productive use fairly rapidly. The Closed Landfill Program has 106 sites in the program.141 In 1996, the Program was continuing construction on the closure of 13 high priority landfills142 which posed the greatest risk to the environment and human health. Also in 1996, the Program began design and construction on 12 new landfills.143 From 1993 to 1996, the gallons of leachate per year from landfills was reduced by approximately 40 million gallons.144 In 1995 (the end of the first year of the program), the Program returned about 100 acres of land back into productive use.145 The Program restored about 200 acres of land to productive use in 1996.146

In using a presumptive remedy of containing the landfill, the state expects to save some money on investigation costs. The state estimates that the total cost to clean up 106 landfill sites will be $284,506,773.147 Thirty sites cost more than $2 million, while the other 76 sites are either close to $1 million or less than $1 million.148 Basically, only 1/3 of the sites cost more than the average Superfund site. With these statistics, it is also important to keep in mind that Minnesota wants to recover this cost from insurance companies, so it may have overestimated some of the costs.

138 MPCA, Closed, supra note 63.
139 See Minn. R. 7035.2625 (1995).
140 Id.
141 See MPCA, Closed, supra note 63.
142 See MPCA, Program, supra note 86.
143 See id.
144 See MPCA, Progress, supra note 145
145 See id.
146 See id.
147 See MPCA, Closed, supra note 63.
148 See id.
In creating the Landfill Cleanup Program, the state legislature had the purpose of reducing the time and cost of Superfund cleanups of landfills.\textsuperscript{149} As described in Part II.B.1., the program has eliminated some of the problems such as exhaustive investigations, high costs (in money and time), and complex litigation. Minnesota should use this as a model, along with the federal Superfund model of presumptive remedies, to speed up its VIC brownfields program.

- Minnesota’s Voluntary Investigation and Cleanup Program – the Minnesota Brownfields Program

The Minnesota legislature passed the state Superfund-like law in 1983.\textsuperscript{150} The Minnesota Environmental Response and Liability Act (MERLA) was enacted, and it was amended in 1992 to add the Voluntary Investigation and Cleanup (VIC) Program.\textsuperscript{151} Although the VIC is separate from the Landfill Cleanup Program discussed above, both have the same goals. Both programs want to provide a cleaner environment by essentially giving liability protections to various parties.\textsuperscript{152}

Under the VIC Program, PRPs are still responsible, and can be held liable later.\textsuperscript{153} The state does not take over responsibility in the VIC program--individual sites must initiate and complete the program. In some cases, the MPCA initiates the contact. The MPCA may "offer [a party] the option of joining the VIC Program, rather than subjecting them to enforcement under MERLA."\textsuperscript{154} Under the VIC, a PRP’s responsibilities, as far as the cleanup standards are concerned, is to clean up the site to a level that matches its future use.\textsuperscript{155} The difference between MERLA (CERCLA-like) and VIC (brownfields) is that the PRP can acquire some liability protection under the VIC.\textsuperscript{156}

5. How the Minnesota VIC Program Operates

The Minnesota VIC program is similar to CERCLA in its procedures. The developer must first investigate the site. The investigation must include "the methods and results of an investigation of the releases and threatened releases at the identified area of real property."\textsuperscript{157} In short, it must basically describe what contamination exists and its extent. Such an investigation is like the CERCLA RI/FS process. The cleanup under the

\textsuperscript{149} See id.
\textsuperscript{150} See MPCA, Ground Water, \textit{supra} note 85.
\textsuperscript{151} See id.
\textsuperscript{152} See id.
\textsuperscript{156} See MPCA, Ground Water, \textit{supra} note 85.
\textsuperscript{157} Minn. Stat. Ann. § 115B.175 (West 1997).
VIC program must also be able to meet the standard under MERLA § 115B.17 where enforcement action may be taken by the state if there is, "a release or substantial threat of release from a facility of any pollutant or contaminant which presents an imminent and substantial danger to the public health or welfare or the environmental or whenever a hazardous substance is released or there is a threatened release of a hazardous substance from a facility." After the investigation, the developer must submit its application in the form of a voluntary response action plan to the MPCA for approval.

However, under the VIC program a developer can obtain some form of liability protection. Minnesota has four types of liability protection. Under the authority of the statute the administrator of the MPCA is not prohibited from issuing an administrative "no action letter" to a developer. The MPCA may issue a certificate of completion of the response action plan. Also, the MPCA may issue a "no association letter" to a developer if it did not contribute to the pollution. The final option is for the MPCA to write an off-site determination letter if the site did not produce the pollution, but was contaminated by a nearby site. These various forms of liability protection help to make brownfields redevelopment more attractive, but there is still a big investment of time and money involved.

6. Success of the Minnesota VIC Program

Currently, there are 864 sites in the Minnesota VIC Program. These sites include car repair shops, dry cleaners and food manufacturers like General Mills, Incorporated. Under the VIC Program, much land has been recycled or reused. In 1990 two years before the VIC Program was started, the state programs helped to restore only 500 acres of land to productive use. In the year that VIC was implemented, 1000 acres of land were restored. In 1994, the VIC Program helped return 2000 acres of land to use. In four years, the VIC program increased recycling of land by 300%.

164 Minn. Pollution Control Agency, Minn. Env. Rec., Voluntary Investigation and Cleanup Program VIC, available in Westlaw, EDR-MN database.
165 Id. (stating that "Kirk's VW Repair Shop EDR-ID S102277139", "Waldorf Cleaners, EDR-ID 10000191360", and "General Mills, Inc. EDR-ID 10000213386" are in the Minnesota VIC program).
166 See MPCA, Cleanup, supra note 74.
167 See id.
168 See id.
Minnesota Should Expand Its Use of Presumptive Remedies to Its Voluntary Investigation and Cleanup Program

To improve its brownfields VIC program, Minnesota should employ presumptive remedies. Minnesota has had a successful experience with the presumptive remedy in its Landfill Cleanup Program. The VIC program is similar to CERCLA, with intense investigation procedures and high cleanup standards. Since CERCLA uses presumptive remedies effectively, the VIC program could benefit from their use.

III. CONCLUSION: PRESumptive Remedies Have Been Used Successfully at the State and Federal Levels, So State Agencies and the EPA Should Develop More Remedies and Expand the Application to Brownfield Sites

The Minnesota Landfill Cleanup program is not exactly like Superfund, but it addresses CERCLA-like sites. The program uses the presumptive remedy of containment, which is also the Superfund presumptive remedy. In its operation, the program has helped restore land to productive use and sites are being cleaned quickly with reasonable costs.

The Minnesota Voluntary Investigation and Cleanup Program is not exactly like Superfund, but sites in the VIC program must meet the requirement of protecting the environment and human health as sites in Superfund must do. Both the VIC program and CERCLA allow for the consideration of future use in the development of remedies. Under the VIC program, developers still have to do a rather extensive investigation and the process is not streamlined. If the VIC program would begin using presumptive remedies, it could speed up the investigation process.

The primary incentive for developers to remediate sites under the VIC program is liability protection. Another incentive under VIC is for current owners to stave off the threat of MERLA or CERCLA enforcement by doing a voluntary cleanup. A way for Minnesota to encourage more remediation and redevelopment of brownfields sites is to speed up the remediation process and to reduce the costs of cleanup.

Minnesota and other states could benefit by using presumptive remedies. The federal Superfund Accelerated Cleanup Model (SACM) which uses presumptive remedies seems to be working in reducing time and costs of remediation.169 Presumptive remedies as used at the Superfund level could do much good at the state level in the brownfields statutes.

169 See Lawrence, supra note 1.
The U.S. EPA is currently negotiating Memoranda of Agreement with several states. The MOAs may provide that if a site goes through a state brownfields program, it may get a no further action letter or a covenant not to sue from the U.S. EPA.\(^{170}\) If a state obtains a MOA, it can help reduce the possibility of future liability for developers who voluntarily remediate sites.\(^{171}\)

If states were to combine the MOA or other liability protections available under brownfields statutes with presumptive remedies, developers would get a form of liability protection that is quite stable. Under the presumptive remedy, developers would remediate sites to standards that would meet CERCLA requirements. Developers may choose to use a higher standard to have a greater certainty of future liability. When developers have a choice in standards, they may not necessarily opt for the standard that is least protective of the environment. Pennsylvania has found that most site developers will choose the higher standards of cleanup.\(^{172}\)

If states used presumptive remedies in brownfields programs, more sites may get cleaned. Developers may choose to use the presumptive remedy so that their site will be clean enough to prevent state CERCLA-like action or federal action under CERCLA. The goal of brownfields programs is to cleanup sites so that the health and environment can be protected. Brownfields statutes deal with voluntary behavior, so there must be incentives to make developers want to clean sites. Presumptive remedies help to do that by saving time, saving money, and making costs more certain for developers.

\(^{170}\) See Andrew, supra note 11, at 30.

\(^{171}\) See id.


37