CLEANUP AND REMEDIATION

SUPERFUND
(NonPetroleum Sites)

PLEASE NOTE: Due to the complexities of the cleanup process, these programs may not necessarily function in the linear fashion depicted on these flowcharts.
CLEANUP AND REMEDIATION

PETROLEUM REMEDIATION PROGRAM (Petroleum Tank Release Sites)

Start

Release detected.

Tank pulled?

Emergency or high priority? (i.e., free product, potential drinking well contamination, potential vapor problems, release in environmentally sensitive areas).

Does soil excavation policy require additional investigation?

Conduct limited site investigation (LSI).

Contact MPCA and initiate response actions.

Submit LSI report.

Is an aquifer impacted above HRLs (or likely to be)?

Complete full remedial investigation (RI).

Submit excavation report.

MPCA report review.

Submit report or request information.

Action completed?

MPCA requests additional information or work be completed.

MPCA closes the site.
This chapter contains information about the MPCA’s assessment and remediation programs. These programs include: the Superfund Program, the Voluntary Investigation and Cleanup (VIC) Program, the Petroleum Remediation Programs (PRP), and the Petroleum Brownfields Program (PBP). The Superfund and VIC programs oversee the environmental investigation and cleanup of hazardous substances, pollutants or contaminants, while the PRP and PBP program oversee the environmental investigation and cleanup of petroleum releases.

Please refer to the Emergency and Pollution Prevention Planning chapter for spills and release reporting requirements from permitted or licensed operations.

**Important program telephone numbers:**

- **Superfund Program**
  - (651) 297-8609

- **Petroleum Remediation Program (formerly LUST) and Petroleum Brownfields Program (formerly VPIC)**
  - (651) 297-8573

- **Voluntary Investigation and Cleanup Program (VIC) -- hazardous substances releases**
  - (651) 296-7212

- **Property File Reviews**
  - **Superfund and VIC**
    - (651) 296-7805
  - **PRP and PBP**
    - (651) 297-2715

When buying or selling real estate property, or when reviewing your facility operations, you may discover that a release of petroleum or hazardous substance had occurred. State law requires that these historic releases be reported to the **State Duty Officer** at:

(651) 649-5451 if calling within the Twin Cities Metro Area or outside Minnesota;
(800) 422-0798 if calling within Minnesota but outside the Twin Cities Metro Area.

After you’ve reported the petroleum or hazardous waste contamination to the State Duty Officer, MPCA assessment and remediation program staff may contact you if appropriate. In majority of cases the contamination may need to be assessed and, in some cases, remediated to the extent necessary to protect human health and the environment.

MPCA VIC and PBP programs are fee-for-service programs that can help facilitate your real estate property transactions by providing reviews of environmental workplans and reports, offering technical assistance, and the issuance of liability assurance letters. The types of assurance letters we offer are listed following the VIC and PBP sections.

**SUPERFUND**

Hazardous substance cleanups have traditionally fallen under the state Superfund program. Because of the degree of environmental risk and rigorous reporting requirements, Superfund cleanups often take years to complete.
CLEANUP AND REMEDIATION

STEP 1: Preliminary assessment
A preliminary assessment is done to determine if any action is necessary. Sites posing a clear threat to human health and the environment receive immediate action. Others that present little threat may need no further action. If an emergency situations exists, action to remove or stabilize the threat is undertaken (e.g., providing drinking water to affected persons). Some sites may require an initial removal action to address immediate threats. A removal action is performed as quickly as possible and may include hauling away hazardous material or excavating leaking drums. Unless the removal action addresses the pollution problem completely, a remedial process begins.

STEP 2: Remedial process
The Superfund remedial process includes all steps needed to remediate a polluted area to the cleanup goals for the site.

The first step is a remedial investigation, where all aspects of the site are evaluated, with a focus on how the pollution may affect people and ecosystems now and in the future. This phase may involve ground water monitoring, soil sampling and air quality monitoring to determine what the problems are and what needs to be done. The responsible party usually hires consultants to conduct the remedial investigation and submits reports to the MPCA. Where no responsible party is identified or where a responsible party may be unwilling or unable to conduct investigations, the MPCA hires a consultant to conduct the remedial investigation.

STEP 3: Feasibility study
Data from the remedial investigation are used in a feasibility study, which is a study of cleanup alternatives. The feasibility study is designed to look at workable alternatives. Alternatives are evaluated based on a number of criteria, including:
• protection of human health and the environment
• compliance with applicable rules
• long- and short-term effectiveness
• reduction of toxicity, mobility and volume through treatment, state and community acceptance
• overall cost

STEP 4: Proposed plan and decision document
After cleanup alternatives are evaluated, recommendations are presented at a public meeting, and comments are solicited. The selected cleanup remedy is presented in a document called the Minnesota Decision Document (or Record of Decision at a federal Superfund site).

STEP 5: Site cleanup
After the cleanup remedy is selected, engineering plans and specifications are prepared. The remedial design must be approved before construction, installation or removal of contaminated substances (referred to as the remedial action) can begin.
VOLUNTARY INVESTIGATION AND CLEANUP (VIC) PROGRAM

The impetus behind the Land Recycling Act, which established the VIC Program, came from the requirements of property transactions, including quicker regulatory turnaround and the need to resolve liability issues. The VIC Program encourages cooperative relationships with responsible or voluntary parties. This allows for a streamlined regulatory approach to cleaning up sites to the same level of protection required by Superfund. For VIC cleanups, the same cleanup standards must be met in order to receive final approval from the MPCA, but some tasks and issues associated with Superfund are avoided.

The VIC Program uses a decision framework similar to that of Superfund. A Phase I Investigation is conducted to record current and historical activities and potential environmental impacts at the site. The results of a Phase I Investigation are used to develop a Work Plan for a quantitative Phase II Investigation, during which actual impact is measured.

Sometimes an investigation warrants immediate action, such as removal of waste-filled barrels to minimize risk. Most sites do not require immediate action. However, if there is a risk to human health and the environment, a Response Action Plan is proposed.

Remedies implemented to mitigate contamination or a threatened release may involve cleanup of the contamination, developing and maintaining measures to control human and environmental exposure as well as long-term monitoring. A Contingency Plan and Safety Plan is prepared to ensure proper implementation of the remedies and to provide emergency action protocols to follow. Finally, a Response Action Plan Implementation Report is submitted, documenting that cleanup goals have been met.

Written liability assurances from the VIC Program can be issued at various points in the process and may or may not mark closure of the site file. Typically, when cleanup goals are achieved and an environmental assurance issued, the site file is considered closed. However, assurances may include conditions under which the site may be reopened. For example, sites may be reopened if additional evidence of environmental contamination or threat to the public becomes apparent.

POSSIBLE VIC ASSURANCES AND LETTERS

These assistance letters are provided when a voluntary party asks the MPCA for an opinion about the adequacy of an investigation or cleanup plan. Such opinions are requested when an objective third-party opinion is desired for purposes other than receiving administrative or legal assurances.
No-Action Determination
These determinations provide voluntary parties with assurances that the MPCA will not pursue enforcement against them under state Superfund law. They are offered in two different cases:
1. Contamination has been detected, but at levels not considered significant by the MPCA; therefore, no cleanup is required.
2. Contamination has been found and a cleanup plan is approved by the MPCA and implemented by the voluntary party; therefore, no further cleanup is required.

Limited No-Action Determination
These determinations provide assurances that may only address part of the property, phase of development or specific set of contaminants.
1. At sites where only the soil is investigated and cleaned up, the no-action letter will contain disclaimers about the groundwater. This means that MCPA will take no action for soils, but reserves the right to pursue ground-water cleanup.
2. At sites where only a piece of the property is cleaned up, the no-action letter provides partial liability assurance. However, the MPCA reserves the right to pursue further cleanup for the rest of the property.
3. At sites where some contaminants, but not all, were investigated and cleaned up, the no-action letter will provide assurance with regard to specific chemicals. The MPCA reserves the right to require cleanup of other contamination problems not addressed.

All No Action Determinations allow the MPCA to take future action based on previously unknown information about the property or the contamination.

Certificates of Completion
These are provided when the voluntary party has conducted a thorough investigation of the site and MPCA-approved cleanup actions have been fully implemented. Persons not otherwise legally responsible for contamination can conduct an approved partial or complete cleanup. (Legally, responsible parties must complete a cleanup that addresses all identified contamination on the property.)

Parties not legally responsible for the site, including lenders, owners and developers, receive full protection from future state Superfund liability, even if some contamination is not discovered until later or if the cleanup later turns out to be inadequate and additional cleanup is necessary.

No Association Determination
These assurances help eligible voluntary parties who want to take some action, including operating a business on a contaminated site, but don't want to be associated with known contamination for Superfund liability purposes. These assurances may also apply to past actions taken on the property.
PETROLEUM REMEDIATION PROGRAM

The Petroleum Remediation Program (PRP) takes a risk-based approach to corrective action at petroleum tank release sites. The risks targeted are those posed by petroleum contamination that had:

- contaminated or may contaminate a drinking water well
- led to or may lead to unsafe levels of petroleum vapor in structures or utilities
- contaminated or may contaminate surface waterbodies

**STEP 1: Immediate actions necessary**

Quick action is often warranted at recent releases in order to avoid a more difficult or costly assessment and remediation. Emergency sites and some high-priority sites generally require immediate action. Petroleum release sites with a contaminated drinking water well, or high vapor levels in basements or utilities are often managed initially by the MPCA’s Emergency Response Unit. The objective of initial actions is to stabilize the high risk conditions.

If additional environmental work is necessary at your site after the high risk conditions are stabilized, the Petroleum Remediation Program will assume the lead role to assist and oversee additional compliance needs. You may hire a qualified environmental consultant to assist you.

At some sites where underground storage tanks are being excavated for maintenance, removal, or replacement, the removal of petroleum contaminated soil may be appropriate as an immediate form of corrective action at the time of the excavation. The removal of a reasonable volume of petroleum contaminated soils is routinely approved if soil excavation alone will address the environmental compliance needs at a site, or if partial removal of contaminated soil would greatly reduce the environmental risks at a site where completing a standard assessment would be challenging from an environmental investigative standpoint. An example of an environmentally challenging investigation is the assessment of contamination in carbonate or crystalline bedrock aquifers.

**STEP 2: Remedial investigation**

A Limited Site Investigation (LSI) or a full remedial investigation (RI) is required at all petroleum tank release sites except at those sites where excavation alone addressed the contamination. The purpose of a limited site investigation is to provide a “snapshot” of site contamination conditions. A limited site investigation does not involve the installation of groundwater monitoring wells, and for the majority of petroleum tank releases a complete limited site investigation is sufficient to address the site’s environmental compliance needs. The purpose on a full remedial investigation is to assess the trend of groundwater contamination over time. This involves the installation of monitoring wells and multiple rounds of groundwater sampling.
Objectives of an limited site investigation:

- Evaluate the drinking water, surface water, and vapor risks posed by the release.
- Determine the extent of soil contamination.
- Evaluate whether there is a sufficient distance between contaminated soil and ground water.
- Determine whether ground water has been impacted.
- Determine whether free product is present (free product poses a potential high risk condition).
- Assess vapor risk potential.
- Assess surface water risk potential.

Begin by doing a limited site investigation. If during the course of completing a limited site investigation it becomes apparent that a full remedial investigation is needed, do a full remedial investigation. A qualified environmental consultant will know when a limited site investigation only will suffice and when a full remedial investigation is needed. Submit a limited site investigation report if a full remedial investigation is not needed. The Petroleum Remediation Program project manager will make every effort to respond to your limited site investigation report within 120 days after receiving it. At this point, your site would be eligible for closure if you submit a complete limited site investigation and the risks posed by the petroleum release is low. But if your limited site investigation report is missing some critical information or is incomplete, the Petroleum Remediation Program staff would likely request that you provide the missing information or do the additional work to complete the a limited site investigation. It is also possible that the Petroleum Remediation Program staff will request that a full remedial investigation be completed.

The primary difference between a full remedial investigation and a limited site investigation is that a full remedial investigation requires additional hydrogeologic information, including groundwater monitoring data. If information gathered during a full remedial investigation suggests that an active remediation is needed, the remedial investigation report should recommend it and include a conceptual plan for a remediation method or technology. Sites requiring active remediation are given a higher priority.

**STEP 3: Site Closure**

Before a site can be considered for closure, free product (if present) must be recovered to the extent practicable, and a high risk condition must be reduced to an acceptable low risk. When low risk condition is met, the site is eligible for closure. This may occur after each phase of investigation or corrective action. Because risk-based decisions are largely based on current land-use conditions, sites may have petroleum contamination remaining at time of closure. Therefore, when considering or planning a redevelopment project at a closed petroleum release site, you should expect to encounter some soil and possibly groundwater contamination. The PBP will be able to assist most of your environmental needs associated with redevelopment at a closed petroleum release site.
PETROLEUM BROWNFIELDS PROGRAM (PBP)

The Petroleum Brownfields Program (PBP) provides technical assistance and liability assurances. Participation in the program is voluntary, but volunteers are expected to meet the same level of investigation and, when necessary, remediation requirements of the Petroleum Remediation Program. Services available through PBP are listed below.

TECHNICAL ASSISTANCE

Expedited review of petroleum contamination investigations and cleanups

Transfer or financing property with petroleum contamination originating from an on-site storage tank often hinges on MPCA approval of corrective actions required under the Petroleum Tank Release Cleanup Act (Minn. Stat. 115C). Because time is often of the essence, the PBP Program offers an expedited review of the reports required. PBP staff will make every effort to respond within 30 days from the receipt of a report. For many properties, quicker review can lead to quicker corrective-action approval and/or file closure.

PBP staff can review investigation and corrective actions for petroleum contamination that did not originate from an on-site storage tank. PBP staff will close the site file when they conclude that investigation and/or cleanup has adequately addressed the contamination. Obtaining file closure can be vital to the sale of these petroleum nontank release sites.

Review of development response action plans

Even after cleanup or MPCA file closure, most properties still have some contamination remaining. State law requires that persons properly manage contaminated soil and water they uncover or disturb, even if they are not the party responsible for contamination.

Owners of property where contaminated soil or water might be encountered must include provisions called “response actions” in development plans, for management of contaminated soil or water. For some properties, actions may be needed to prevent further spreading of the contamination or to prevent vapors from entering buildings or utility access shafts. MPCA can approve proposed response actions. By obtaining MPCA approval, property owners, purchasers, developers and lenders can be reasonably confident of what is required if contamination is uncovered. In addition, cost-saving measures can be approved, such as using contaminated soil on-site as “controlled fill.”

Liability Assurance Letters

Lenders, mortgagors or purchasers often require assurance to demonstrate they are not responsible for contamination at a property. PBP staff can issue several types of letter that confirm this. These letters also cover successive purchasers of the property, as long as they were not in some way responsible or involved with the original release.
Leak Site Tank Removal Verification Letter
This letter verifies removal of the storage tank(s) that caused the petroleum contamination. It states that the property was the site of a petroleum tank release and that the prospective buyer or lender (and, in some cases, the current owner) is not a responsible party because that tank(s) was removed.

Leak Site File Closure Confirmation Letter
This letter confirms the status of a closed leak site and can serve to add information to the site file after the file is closed. The letter confirms that a petroleum tank release occurred at the property and the file closure status is still valid.

Off-Site Tank Release Determination Letter
This letter identifies the source of petroleum contamination and states that the owner of the affected property is not a responsible party for the contamination. To obtain this letter, information is required to show there is no on-site source of contamination and that the contamination migrated to the property from an off-site tank.

General Liability Letter
This letter states the definition of a “responsible party” in accordance with Minn. Stat. 115C and special provisions of the statute as it relates to mortgagors. In short, it states that, if a person comes into possession of property after tanks are removed, that person is not a responsible party and cannot be ordered to take corrective action under this statute.

For more information about the VPIC Program or questions regarding transfer or development of petroleum-contaminated property call (651) 297-8573 or visit our website at www.pca.state.mn.us/programs/vpic_p.html.

OTHER SERVICES
The MPCA has a web page that titled "What's in my Neighborhood?" that contains a searchable inventory of properties that the MPCA has identified and assisted to clean up. The inventory also currently enrolled in MPCA cleanup programs. The web page is located at www.pca.state.mn.us/backyard/neighborhood.html.