

Managing petroleum-contaminated soil at public works projects

Petroleum Remediation Program

This document provides guidance for managing petroleum-contaminated soil encountered during public works projects caused by petroleum tank releases. Potential risks associated with encountering petroleum-contaminated soil at public works projects include human exposure to contaminants, impacts to the environment, and in severe situations, fire and explosions.

Definitions:

Public works project – For Petrofund purposes, a public works project involves new construction or maintenance of an existing public utility infrastructure that is staged within a utility easement, or in right-of-way owned and/or managed by the State, an agency of the State, or a local unit of government. Some common examples of public works projects are public water, sewer, telephone, electric, natural gas, and stormwater pipe upgrades or replacements, and stormwater drainage system projects.

Development projects are not covered or considered eligible for public works projects. Common examples of development projects would be trenching for building construction, site reworking, street re-paving, public facility construction, installation and/or upgrading of service connections from the main utility infrastructure to private homes or businesses, and other utility work by private entities as part of a development project. Road work independent of other public utility infrastructure is also not covered under this policy.

Project sponsor – A project sponsor can be a public works owner, the State, an agency of the State, or a local unit of government that holds the access permit for a utility or other public works project, or has a principal stake in scoping and completing such a project.

It is the responsibility of the project sponsor to complete the project safely through the areas of contamination, and to properly manage petroleum-contaminated soil that is excavated during the project. In most cases, a project sponsor will not be required to remove the contamination outside planned project excavation limits, or to define the extent of the contamination.

1. Pre-project startup and planning ahead

Plan ahead to avoid project delays in the event that petroleum contamination is encountered.

a. Identify potential sources of contamination. Prior to construction, try to determine if and where petroleum contamination may exist along the planned route. For instance:

- Take an inventory of active petroleum retail businesses located along the route. Interview people who are knowledgeable about the project area, and may have information on locations of former fueling stations or usage of petroleum storage tanks. Talk with property owners along the corridor who may have knowledge or have previously used petroleum storage tanks on their property as a part of a business or for heating.
- Complete a visual reconnaissance of properties adjacent to the project area. Check for evidence of petroleum storage tanks such as patched concrete, former pump islands, fill pipes, or vent pipes.
- Review Minnesota Pollution Control Agency's (MPCA) [What's in My Neighborhood](#) database, and MPCA's [Petroleum Remediation Program Maps Online](#) to identify potential petroleum tank release sites along the project route.

- b. **Hire an environmental consultant.** If petroleum contamination will likely be encountered during the project, hire an environmental consultant experienced in contaminated site work and arrange for them to be present or on-call during construction through the areas of suspected contamination. Consultants who perform Petrofund reimbursable work must be registered with the Petrofund. A list of Petrofund registered consultants is available at <https://mn.gov/commerce/industries/fuel/petrofund/>.
- c. **Work with the MPCA.** Prior to project startup, if petroleum contamination will likely be encountered during the project, contact the MPCA's public works coordinator at 651-296-6300 or 800-657-3864. Request that the MPCA's public works coordinator issue you a *Request to Take Corrective Action* letter. **An MPCA *Request to Take Corrective Action* letter is required in order to be eligible for Petrofund reimbursement.**

For a *Request to Take Corrective Action* letter to be issued, the following information must be submitted to the MPCA's public works coordinator:

- Project sponsor's contact information.
 - Project location plan sheets and description of public works project work.
 - Identification of the potential contamination sources on the project plan sheets. Include the MPCA Site ID if source is a known release site.
 - Estimated volume of petroleum-contaminated soil that may be excavated to complete the public works project. This may include trench dimensions, or some other estimate of excavation dimensions.
 - Estimated volume of petroleum-contaminated soil that cannot be reused on site and will require offsite disposal.
 - Water line material type.
- d. **Plan ahead.** Certain water line materials such as polyethylene, polybutylene, polyvinyl chloride, asbestos cement, and gasket materials such as non-metallic gaskets, are susceptible to physical degradation and/or permeation when exposed to petroleum contamination. Refer to state and local governance, such as the [10 States Standard](#), regarding piping material requirements at sites with petroleum contamination concerns.

Some projects may encounter petroleum-contaminated soil that could not have been foreseen. In those cases, to ensure Petrofund reimbursement, the project sponsor must be prepared to temporarily stop work in the contaminated areas. Contact the MPCA's public works coordinator to discuss the project, and provide the information necessary for the MPCA to issue the *Request to Take Corrective Action* letter. Be aware that the MPCA's public works coordinator will not be available at all times, and that the MPCA will not issue a *Request to Take Corrective Action* letter after the contaminated soil has been excavated.

2. Excavating petroleum-contaminated soil and request to take corrective action

- a. **Report contamination and assess vapor risks.** A project sponsor must immediately report contamination to the Minnesota duty officer at 651-649-5451 or 800-422-0798. Inform the duty officer of emergency situations such as free product or high or explosive levels of petroleum vapors. The duty officer notifies the appropriate units of government. During the call, indicate to the duty officer the release discovery is near a public works project. After reporting the discovery of petroleum contamination, call the MPCA's public works coordinator at 651-296-6300 or 800-657-3864.
- b. **Have an environmental consultant oversee the work performed in the areas of contamination.** Determine if the contamination encountered presents a potentially dangerous situation, such as high or explosive levels of vapors, or free product, and complete the work requested by the MPCA in accordance with applicable MPCA guidance documents. If a potentially dangerous situation is found, the project may be delayed because the MPCA may require an emergency response. Work must not be performed in areas of contamination without an environmental consultant present to ensure completion of the MPCA's requested work.

- c. **Separate soil during excavation.** Field screen soil during excavation using soil headspace screening with a photoionization detector (PID) and the petroleum sheen test. Field screening procedures are described in [Soil sample collection and analysis procedures](#). Separate contaminated soil with headspace screening results at or above 10 parts per million by volume (ppmv) from soil below 10 ppmv and maintain separate stockpiles. Separate and stockpile petroleum-saturated soil from all other soil regardless of PID reading. Soil is considered petroleum-saturated when the sheen test result is positive. Excavate only the minimum volume of contaminated soil necessary to safely complete the public works project through contaminated areas. In order to minimize human-health risk and secondary environmental impacts, contaminated soil must be stockpiled on an impervious surface or on minimum 40-mil plastic and covered at the end of each day with minimum 6-mil reinforced plastic or 10-mil unreinforced plastic. Securely anchor the stockpile cover with clean soil or other suitable material. The stockpile should be surrounded by fencing if the project sponsor determines that additional security measures are necessary. The stockpile cover must be maintained until the soil can be re-used on the project or disposed of offsite, as described below.
- d. **Re-use soil on the project.** Soil with PID readings below 10 ppmv can be re-used as backfill or otherwise re-used on the project with minimal vapor impact. Soil with PID readings at or above 10 ppmv and less than 200 ppmv can be re-used on the project as road base or in embankments, but must be at a minimum 200 feet away from surface waters. Soil re-used in embankments must be covered with two feet of clean cover soil. Soil can also be re-used as backfill if it can be effectively mixed to less than 10 ppmv. Soil with readings at or above 200 ppmv, or is petroleum saturated must be properly managed at an MPCA approved offsite disposal facility. Soil with readings at or above 10 ppmv and less than 200 ppmv that is not re-used on site as road base or in embankments also must be properly managed at an MPCA approved offsite disposal facility. Soil with readings at or above 10 ppmv can be used only in the specific ways stated within this paragraph.
- e. **Sample and dispose of soil that cannot be re-used on the project.** Collect representative soil samples from the soil stockpile(s) and analyze for the required laboratory parameters based on the recommended disposal option. Offsite disposal options include: land treatment, composting, or landfilling. There are specific documents detailing the requirements for [land treatment](#) and [composting](#). Soil disposal at a landfill is regulated by the MPCA's [Solid Waste Program](#). Contact the landfill directly to obtain soil disposal requirements.
- f. **Obtain all necessary permits and comply with permit conditions if dewatering is required.**
- g. **Identify potential source(s) of petroleum contamination.**
- h. **Submit a report to the MPCA's public works coordinator.** The report must include the following:
- Plan sheets of the public works project showing the areas where contamination was encountered, all soil headspace screening locations, and sources of the contamination.
 - Soil headspace screening data, including PID results, depth, and PID ID correlated to the screening locations on the plan sheets or figures.
 - Volume of soil excavated from each individual source area identified by MPCA Site ID and total volume of petroleum-contaminated soil excavated for the public works project.
 - Documentation of soil reuse on the project.
 - Stockpile analytical data, volume of soil disposed of offsite, and treatment method and location.
 - Documentation of pipe materials used in areas with petroleum contamination/permeation concerns.

3. Petrofund reimbursement

The project sponsor may apply for Petrofund reimbursement of reasonable costs incurred for the purpose of meeting the MPCA's Request to Take Corrective Action. The costs for performing work beyond the scope of the MPCA's Request to Take Corrective Action are not eligible for Petrofund reimbursement unless the MPCA provides written approval to exceed the original scope of work. Any costs for work that is performed without a written *Request to Take Corrective Action* letter are ineligible for reimbursement.

For questions about Petrofund reimbursement requirements, including getting competitive bids, contact the [Petrofund](#) at 651-539-1515 or 800-638-0418.