

Off-site use of regulated fill

This document describes the Minnesota Pollution Control Agency (MPCA) policy and framework for allowing brownfield redevelopment sites that are enrolled in the MPCA Brownfield Program (Voluntary Investigation and Cleanup (VIC) and/or Petroleum Brownfields (PB) programs) to move regulated fill, as defined below, from one Brownfield site to another Brownfield site, subject to the terms and conditions outlined below.

I. Background

A developer may need to excavate large quantities of soil for geotechnical soil correction, changes in grade, or for the construction of basements, underground parking, utility corridors, and road construction projects. This soil may consist of historical urban fill that has concentrations of contaminants greater than the MPCA's Residential Soil Reference Values (SRVs) but less than or equal to Industrial SRVs and other risk-based criteria (see full definitions below). In the past, the MPCA has required such soil, if excess, to be hauled to a permitted landfill for disposal or use as daily cover.

Other Brownfield sites being redeveloped for industrial or restricted commercial use may require the import of large quantities of soil to backfill an excavation or to achieve the necessary design grade.

Typically, these sites import clean fill to meet site redevelopment needs. In cases where low-impact soil can be reused in a way that is protective of human health and the environment, the controlled off-site reuse of such soil is consistent with a green and sustainable remediation philosophy and can be a significant cost-saving measure for developers of Brownfield sites and for state and local units of government who provide contamination cleanup grants.

II. Definitions

The MPCA's framework for the off-site use of excess soil generated during site redevelopment is based upon three categories of potential fill soils, as defined below:

- **Clean Fill** – Soil that is free of contaminants, unaffected by a spill or release, and suitable for use in construction without posing a risk to human health or the environment.
- **Unregulated Fill** - Soil with no field indications of contamination, but which has been affected by a release of contaminants at concentrations less than the MPCA's most conservative screening values for human health or the environment.
 - For best management practices for parties seeking to reuse Unregulated Fill, see [Best Management Practices for the Off- Site Reuse of Unregulated Fill](#).
- **Regulated Fill** - soil which has any of the contaminant characteristics described below that make it subject to regulatory oversight during off-site use:
 - Diesel range organics (DRO)/gasoline range organics (GRO) at concentrations of 100 milligrams per kilogram (mg/kg) or greater from a known or likely petroleum source.
 - Metals or semi-volatile organic compounds (SVOCs) between the MPCA's residential and industrial SRVs.
 - Volatile organic compounds (VOCs) between the MPCA's default Tier 1 Soil Leaching Values (SLVs) and the site-specific Tier 2 SLVs for the importing site.

III. Characterization of Regulated Fill

A sampling plan to characterize excess soil for potential off-site use as regulated fill should be reviewed and approved by MPCA Brownfield staff. The approved sampling approach can be implemented during Phase II Environmental Site Assessment (ESA) field work or as a separate effort during implementation of the MPCA-approved Response Action Plan (RAP). The following bulleted items address some frequently asked questions regarding characterization of fill for potential off-site use:

- Naturally occurring concentrations of some metals, such as arsenic, selenium, or copper, sometimes exceed the SRV or SLV. Such soils are not considered impacted in the absence of a contaminant source or other field or laboratory indications of contamination.
- Some detections of DRO in soil may stem from the presence of natural organic material or non-petroleum contaminants in the soil, such as coal tars or other material containing polynuclear aromatic hydrocarbons (PAHs). Evaluation of DRO data should take into consideration the history of the property, including the known or likely presence of a petroleum source, the presence (or lack thereof) of other contaminants in the soil samples, and the type of soil. If DRO results are related to non-petroleum contaminants, risk-based criteria for the non-petroleum contaminants should be applied. If desired, laboratory analytical methods (such as silica gel cleanup) are available to help determine if the DRO is from natural organic material in the soil.
- Provided that enough samples of the fill material have been collected to allow a statistical evaluation of the data, averaging of the data is acceptable. For example, some exporting sites that have successfully applied an averaging approach (excluding hot spots) have implemented a three-dimensional grid-based sampling strategy during the site investigation phase to characterize the fill material for potential reuse. See Table 1 for typical stockpile sampling rates.
- The goal is for Regulated Fill to be as free of debris as practicable, Regulated Fill may contain a *de minimis* amount of inert debris such as fragments of brick, concrete, glass, metal, etc. Because Regulated Fill will typically be comprised of historical urban fill, Regulated Fill may be discolored relative to native soil. If VOCs or elevated organic vapors (10 ppm or greater) as measured by a photoionization detector (PID) are present in the Regulated Fill, special placement criteria at the receiving site may apply. The presence of VOCs in the Regulated Fill may also trigger the need for MPCA-approved site-specific Tier 2 SLVs for the receiving site.

Table 1. Soil stockpile sampling rates

Volume of stockpile	Stockpile sampling rate
0 to 500 cubic yards	1 sample per 100 cubic yards
501 to 1,000 cubic yards	1 sample per 250 cubic yards
1,001 or more cubic yards	1 sample per 500 cubic yards

IV. Exclusions

Reuse of the following soil and other materials are not covered by the MPCA's fill reuse framework and will not be approved under this policy:

- Soil contaminated with agricultural chemicals. Such soil is under the regulatory oversight of the Minnesota Department of Agriculture Incident Response Program.
- Soil containing asbestos-containing material.
- Soil containing more than a *de minimis* amount of inert building material (demolition) debris, industrial waste, or other solid waste. Such soil continues to be regulated by the MPCA as a solid waste.
- Soil that is characteristically hazardous or contaminated due to a release of a listed hazardous waste. Such soil must be managed in accordance with the requirements of the MPCA's Resource Conservation and Recovery Act (RCRA) program.
- Soil exhibiting chemical odors, due to the potential for nuisance conditions at the receiving site.

- Non-soil materials such as crushed concrete, bricks, etc., that are proposed to be beneficially used as fill. Such material must be managed in accordance with the requirements of the [MPCASolid Waste Program](#).
- Dredge materials. Such material may be regulated by permit or be subject to other MPCA [Dredged Materials Management](#) regulations.

V. Requirements for Off-Site Use of Regulated Fill

1. Both the exporting and importing sites must be enrolled in the Brownfield program, as appropriate for the type of contaminants present at the site.
2. Both the exporting and importing sites must have completed a Phase I ESA and Phase II ESA that is acceptable to the MPCA.
3. Both the exporting and importing sites must have an MPCA-approved RAP that includes a plan for the management and reuse of the Regulated Fill. Regulated Fill can only be used at restricted commercial or industrial sites which have existing contamination similar in type and concentration to that of the Regulated Fill to be imported. Placement of Regulated Fill at uncontaminated sites, or where only minor contamination is present (e.g. < Residential SRVs), or where the land use is not restricted commercial or industrial will not be approved.
4. The off-site use of Regulated Fill must be protective of human health and the environment, and there must be no increase in risk posed by the contamination because of its placement at the importing site. The evaluation of risk at the importing site must include (a) the potential human health risk through direct exposure to the soil contaminants, (b) the potential for groundwater impacts due to leaching, (c) the potential for soil vapor migration and vapor intrusion, and (d) the potential for surface water impacts.
5. The importing site must be a locally permitted and approved construction/redevelopment project with a legitimate need for backfill or grading material, as indicated in site documents submitted to the MPCA.
6. A **Regulated Fill application (Appendix A)** which describes the proposal for the export/import of Regulated Fill must be submitted to the MPCA for review and approval. The Regulated Fill application identifies the exporting and importing sites and provides the necessary supporting information by which to evaluate the proposal. The application must be signed by the property owners of the exporting and importing sites.
7. The property owner of the importing site shall furnish a copy of the Regulated Fill application to the local unit(s) of government (LUG) listed below, as appropriate for the site. The LUG must sign a **local Government Notification (Appendix B)** form to confirm receipt of the information. A copy of the signed local government notification form must be attached to the Regulated Fill application when submitted to MPCA. Compliance with this policy does not release either party (exporter or importer) from any obligation to comply with local government ordinances, including ordinances that may require a solid waste permit prior to placement of the Regulated Fill material.
 - County auditor or other person designated by the county board to receive notifications.
 - City clerk or other person designated by the city council to receive notifications.
 - Town clerk or town chair as determined by resolution of the town board.
 - For land within a reservation, the appropriate official of the tribal authority.
8. Final placement of Regulated Fill at the importing site must be in accordance with the timeframe described in the Regulated Fill application, as approved by the MPCA. Temporary staging of Regulated Fill at a site other than the originating or importing sites will not be approved.
9. The origin, final disposition, and placement of the Regulated Fill must be described in the RAP Implementation Reports for the exporting and importing sites, with appropriate documentation

including the reporting of geospatial coordinates of fill placement boundaries at the import site whenever feasible. The RAP Implementation Reports must be submitted to the MPCA for review and approval.

10. An institutional control may be required for the receiving site based on activity restrictions or affirmative obligations related to the site's final conditions, as per standard Remediation Division policy. In the vast majority of cases, the need for an institutional control at the importing site will be driven by the site's own residual contamination, as opposed to the import of Regulated Fill. In rare cases where the placement of Regulated Fill was contingent upon the presence of a paved surface or building to reduce infiltration, the import of Regulated Fill may trigger the need for an institutional control.

VI. Approvals/Assurances

Regulated Fill is considered by the MPCA to be solid waste. However, the MPCA has adopted a Program Management Decision on Regulated Fill which allows the Brownfield Program to provide oversight for the off-site reuse of Regulated Fill, as defined above, rather than have such sites subject to permitting under the solid waste management program. The MPCA will not require permits or approvals to be obtained from the solid waste program for the off-site use of Regulated Fill, when managed in accordance with the terms and conditions of this guidance document including MPCA Brownfield approval. The MPCA will take no action against persons who move Regulated Fill, as defined above, from one Brownfield site to another Brownfield site so long as the persons comply with the terms and conditions of this guidance document.

The Brownfield Program will use the following approvals and assurances to provide regulatory oversight and environmental closure for Brownfield redevelopment sites exporting or importing Regulated Fill. As with any approval or assurance, standard disclaimers will apply.

- Approval of Response Action Plan.
- Approval of Regulated Fill application.
- For a site which exports or imports Regulated Fill impacted by petroleum, the PB program may issue an Implementation Report approval and a Petroleum No Action Determination for the site, provided that the site meets all appropriate PB program requirements for these letters.
- For a site which exports or imports Regulated Fill impacted by hazardous substances, the VIC program may issue an Implementation Report approval and a No Action/No Further Action Determination for the site, provided that the site meets all appropriate VIC requirements for these letters.



520 Lafayette Road North
St. Paul, MN 55155-4194

Regulated Fill Application

Brownfield Program

Doc Type: Brownfield Application

Instructions: This form should be used by property owners of brownfield redevelopment sites when seeking Minnesota Pollution Control Agency (MPCA) approval for the off-site use of Regulated Fill. Please forward the completed application to the MPCA project manager for the site.

Part I – Export Site

1. Identification of export site

MPCA project name: _____ Project number: _____

Site address: _____

City: _____ County: _____ Township: _____

PIN: _____

2. Owner of export site

Name: _____ Title: _____

Company: _____

Address: _____

City: _____ State: _____ Zip code: _____

Telephone: _____ Email address: _____

3. Attachment A

Include a copy of the MPCA approval letter for the export site's Response Action Plan (RAP).

4. Attachment B

Describe the origin, types, and concentrations of contaminants in the Regulated Fill. Include a summary table of the Regulated Fill analytical data, with references to the environmental report(s) on file at MPCA which contain documentation for that data.

Part II – Import Site

1. Identification of import site

MPCA project name: _____ Project number: _____

Site address: _____

City: _____ County: _____ Township: _____

PIN: _____

2. Owner of import site

Name: _____ Title: _____

Company: _____

Address: _____

City: _____ State: _____ Zip code: _____

Telephone: _____ Email address: _____

3. Attachment C

Include a copy of the MPCA approval letter for the Import site's RAP.

4. Regulated Fill can only be used at restricted commercial or industrial sites which have existing contamination similar in type and concentration to that of the Regulated Fill to be imported.

- a. Current zoning of import site: _____
- b. What is the planned property use at the import site: _____
- c. Provide a brief summary of the redevelopment project at the import site:

5. Attachment D

Describe the type and concentrations of soil contaminants at the import site that will remain *after any response actions are completed*. Include a summary table of soil analytical data for the import site and a figure showing the location of sampling points.

6. The import site must be a locally permitted and approved construction/redevelopment project with a legitimate need for backfill or grading material, as described in the MPCA-approved RAP.

- a. Does the proposed redevelopment project have all of the necessary local government permits/approvals in place to proceed with construction? Yes No
- b. Describe why the import of fill is needed at the site (e.g., backfill an excavation, increase elevation to achieve design grade, etc.):

- c. What is the total volume of fill soils needed at the import site, based on the engineering plans for the redevelopment project: _____
- d. What is the total volume of Regulated Fill to be imported from the Export site: _____

Part III – Placement of Regulated Fill

1. Temporary staging of Regulated Fill at a site other than the export or import site is not allowed. Is temporary staging of the Regulated Fill necessary for this redevelopment project? Yes No

2. If yes, describe where the staging will occur, what precautions will be taken to prevent stormwater runoff, and how long the Regulated Fill will be stockpiled prior to final placement at the import site:

3. What is the schedule for final placement of the Regulated Fill at the import site:

4. Attachment E

Describe where the imported fill will be placed at the import site. Include a site figure which shows the area(s) where Regulated Fill will be stockpiled and/or placed at the import site.

Part IV – Risk Evaluation

Placement of Regulated Fill must be protective of human health and the environment, and there must be no increase in risk posed by the contamination as a result of its placement at the importing site. Evaluate the risk posed by placement of the Regulated Fill at the receiving site relative to the following factors:

1. **The potential for increased human health risk at the import site through direct exposure to soil contaminants:**

2. **The potential for groundwater impacts at the import site due to leaching:**

3. **The potential for soil vapor migration and vapor intrusion at the import site:**

4. **The potential for surface water impacts at or near the import site:**

Part V – Local Government Notification

Attachment F

The property owner of the importing site shall furnish a copy of this Regulated Fill application to the local units of government (LUG) listed below, as appropriate for the site. The LUGs must sign the **Local Government Notification** form to confirm receipt of the information. A copy of the signed notification form must be attached to this Regulated Fill application when submitted to MPCA.

- County auditor or other person designated by the county board to receive notifications.
- City clerk or other person designated by the city council to receive notifications.
- Town clerk or town chair as determined by resolution of the town board.
- For land within a reservation, the appropriate official of the tribal authority.

Part VI – Applicant Signatures

By signing below, the applicants take responsibility for complying with the terms and conditions for the off-site use of Regulated Fill, as laid out in this application and subject to any site-specific conditions imposed by the MPCA. The MPCA reserves the right to enforce through available means if it has been determined that the fill material does not meet the MPCA's Regulated Fill criteria or if the management/placement of the Regulated Fill is not in accordance with this application or any site-specific conditions imposed by the MPCA.

Property owner of export site:

"I certify that the information provided herein regarding the nature and origin of the Regulated Fill is complete and accurate to the best of my knowledge."

Print name: _____ Title: _____

Signature: _____ Date: _____

Property owner of import site:

"I certify that the information provided herein regarding the nature and origin of the Regulated Fill is complete and accurate to the best of my knowledge."

Print name: _____ Title: _____

Signature: _____ Date: _____



520 Lafayette Road North
St. Paul, MN 55155-4194

Local Government Notification

Attachment F for Regulated Fill Application

Brownfield Program

Doc Type: Brownfield Application

Instructions: This form should be used by the property owner of the brownfield redevelopment site seeking to import Regulated Fill, to fulfill the requirement for local government notification. Please include completed Attachment F with your Regulated Fill Application.

Purpose

A developer may need to excavate large quantities of soil for geotechnical soil correction, changes in grade, or for the construction of basements, underground parking, or utility corridors. This soil may consist of historical urban fill that has concentrations of contaminants greater than the Minnesota Pollution Control Agency's (MPCA) most conservative screening values. Other brownfield sites being redeveloped for industrial or restricted commercial use may require the import of large quantities of soil to backfill an excavation or to achieve the necessary design grade. In cases where low-impact soil can be reused in a way that is protective of human health and the environment, the MPCA allows the movement of such soil, termed "Regulated Fill", between redevelopment sites, provided that both sites are enrolled in an MPCA Brownfield Program and subject to terms and conditions of the MPCA's Regulated Fill policy.

Notification

I, <name of property owner/developer> propose to import Regulated Fill to the <MPCA project name/number>, located at <address, city, county> as part of a brownfield redevelopment project that is enrolled in the MPCA <enter appropriate Brownfield Program(s) name>. The MPCA requires that the property owner of the import site notify the appropriate local unit(s) of government (LUG) about the proposed import of Regulated Fill. Notification is conducted by providing the local unit of government (LUG) a copy of the completed *Regulated Fill Application* and obtaining the signature of an official representing the LUG to acknowledge receipt of the information.

Local government notification is intended to provide local officials with the opportunity to notify the applicant, within thirty (30) days of receipt of the *Regulated Fill Application*, of any local ordinances which may apply to the proposed import of Regulated Fill. Signature of the LUG is not intended nor should it be interpreted as LUG approval of the Regulated Fill proposal.

Official signature(s) of notification:

Print name: _____ Title: _____
 Signature: _____ Date: _____ Phone: _____
 Name of LUG: _____
 Address: _____
 City: _____ State: _____ Zip code: _____