
GUIDELINE: CRITERIA FOR ACCEPTANCE OF CONTAMINATED SOIL AT LICENSED WASTE DISPOSAL GROUNDS

Background:

Contaminated soil, typically generated from site remediation projects and environmental accident sites, must be managed in a manner which will ensure that further environmental impacts will not occur. In most cases, treatment of this soil is required, as specified in Manitoba Conservation Guideline 96-05 (April 2002). There may be circumstances, however, in which this soil can be shipped directly to a licensed waste disposal ground, either as waste or as cover material.

The purpose of this document is to provide guidance for the management of impacted soil at a waste disposal ground and the application of appropriate acceptance criteria.

NOTE: The numeric criteria specified in this document may be varied by a Director of Manitoba Conservation based on the Canadian Council of Ministers of the Environment (CCME) protocols or a prohibition on acceptance can be imposed by the facility operator or by Manitoba Conservation based on site specific concerns.

Acceptance Criteria:

The acceptance criteria outlined below are based on the latest version of the CCME Canadian Environmental Quality Guidelines for soil and the Canada Wide Standard for Petroleum Hydrocarbons. Any contaminated soil found to contain one or more of the listed parameters at concentration exceeding the criteria shown should not be approved for disposal at a licensed or permitted landfill site¹.

<u>PARAMETER²</u>	<u>CRITERIA (mg/Kg)</u>
Benzene	5.0
Toluene	14
Ethylbenzene	20
Xylene	21
PHC Fraction 1	660
PHC Fraction 2	1500
PHC Fraction 3	2500
PHC Fraction 4	6600

<u>PARAMETER²</u>	<u>CRITERIA (mg/Kg)</u>
Arsenic	26
Benzo-a-pyrene	1.4
Ethylene glycol	1800
Pentachlorophenol	28
Phenol	128
Tetrachloroethylene	34
Thallium	3.6

All other parameters under the CCME Canadian Environmental Quality Guidelines shall not exceed the limits provided for the Industrial land use category.

Footnotes:

1. Compliance with the criteria for the "BTEX" components may be waived for licensed Class 1 waste disposal grounds equipped with leachate collection systems if analysis of the BTEX components in the leachate is included as a provision of the licence.
2. A description of the derivation of these criteria and explanation of the PHC Fractions is included as Appendix A.

Comments:

- Any contaminated soil which is not authorized for deposition at a waste disposal ground must be directed to an approved treatment facility as per Guideline 96-05.
- Authorization should not be given to dispose of soil at a waste disposal ground that is not in compliance with all regulatory requirements or at a site that is slated for closure due to improper siting or identified environmental concerns, *particularly if the potential for groundwater contamination has been identified.*
- Any request for authorization to dispose of contaminated soil must be accompanied by sufficient lab results to characterize the volume of soil involved. Where applicable, a Remedial Action Plan should also be submitted for departmental review.



□ Contaminants present in the soil must not exceed the provincial leachate criteria. Even if the soil is not classified as hazardous waste, the leachate result should be considered as means of assessing the possible impact on the disposal site. If the results are questionable, deposition at the waste disposal ground should not be authorized.

□ For waste disposal grounds which operate under a licence containing a numerical limit for total petroleum hydrocarbons in soil (typically 800 ppm), the criteria outlined in this document can be used by the Director to determine when a variance to the licence provisions can be considered.

APPENDIX A

The criteria are derived from the CCME 1999 Environmental Quality Guidelines and the proposed 2001 Petroleum Hydrocarbon Canada Wide Standards with the following assumptions:

1. Soils must meet the CCME 1999 Soil Quality Guidelines and the 2001 Petroleum Hydrocarbon Canada Wide Standard for the Industrial land use category or as specified in this document.
2. The default pathway is the Soil Contact Pathway. Where appropriate, Manitoba

Conservation will consider the application of CCME "Off-site migration" values.

3. The soil texture is considered to be Fine Grain.
4. The Surface Depth standard will be applied.

Petroleum Hydrocarbon Fractions are designated by carbon number ranges as follows:

- Fraction 1 - C6 to C10
- Fraction 2 - >C10 to C16
- Fraction 3 - >C16 to C32
- Fraction 4 - >C32

FOR ADDITIONAL INFORMATION, PLEASE CONTACT ONE OF THE FOLLOWING REGIONAL OFFICES

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EASTERN REGION

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