

Determining Options for Material Placement Discussion Summary

Purpose

Options for management of soil and contaminated material are dependent on the levels of contaminants present in the material, the level of control required to provide adequate protectiveness for the material and the long term assurances that the placement of the material will remain protective. This document provides guidance for assessing the nature of the material under evaluation for handling and non-landfill disposal, for determining appropriate placement/use of the material once the material is moved and imposing appropriate protective measures for long term stewardship of the material, if necessary.

Background

Contaminated soil and other waste material can be placed in one of three categories, clean soil/exempt material, restricted use material, and contaminated material requiring landfill disposal. Initial characterization is required to determine appropriate placement options for the material. An assessment of material proposed for management should be completed so the material can be relocated in a manner that is protective of human health and the environment. The assessment should determine if sampling is required for full evaluation of the material, if sampling is warranted, the number and type of samples required to fully delineate the material contaminant characteristics should be recommended by the party completing the waste determination. This document is primarily focused on options for soil management but can also be applied to address other solid waste material, especially if the material is generated at a response action site being addressed under NR 700.

Definitions

- Clean soil
- Other solid waste
- Soil
- Waste determination



Waste Determination

The initial step in evaluation material placement options is to complete a waste determination. A waste determination includes evaluation of known and suspected contamination that may be present in material to be managed. It relies on historical information and past land use practices as well as visual and olfactory assessment. It does not necessarily rely on sample confirmation, however that may be warranted or desired in some cases. It is the responsibility of the generator to complete the waste determination and if the determination is not accurate, the future liability resulting from improper placement/reuse of the material falls on the generator. Recommendations for waste determination methods will be inserted here.

If the initial waste determination indicates that there is no probable cause to suspect the material contains contaminants (at levels of concern?), no sampling confirmation is required and no special handling of the material is necessary. The material can be used as clean soil with no restrictions on how or where the material is used.

Sampling

In some instances following the initial waste determination, sampling will be warranted to confirm that the material is clean and can be used without restriction. In general, sampling should include evaluation of all parameters that are likely to be present as a result of discharges to the environment that may have affected the material. Sampling frequency as specified in NR 718 is recommended, which includes one sample for every 100 cubic yards for the first 600 cubic yards with one sample for each 300 cubic yards of material thereafter. Reduced sampling frequency may be warranted based primarily on the homogeneity of the material. If the material is tested and reported to meet criteria for clean soil, no special handling is required.

Clean soil is defined as: Insert clean soil definition info.

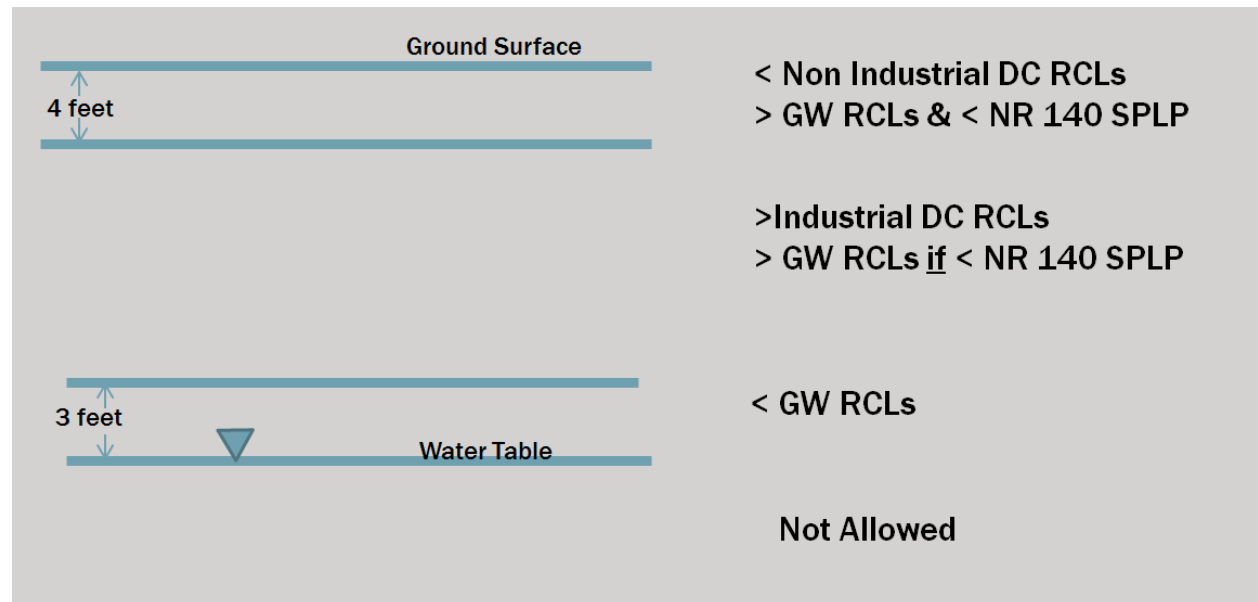


Options for Soil that is Not Clean

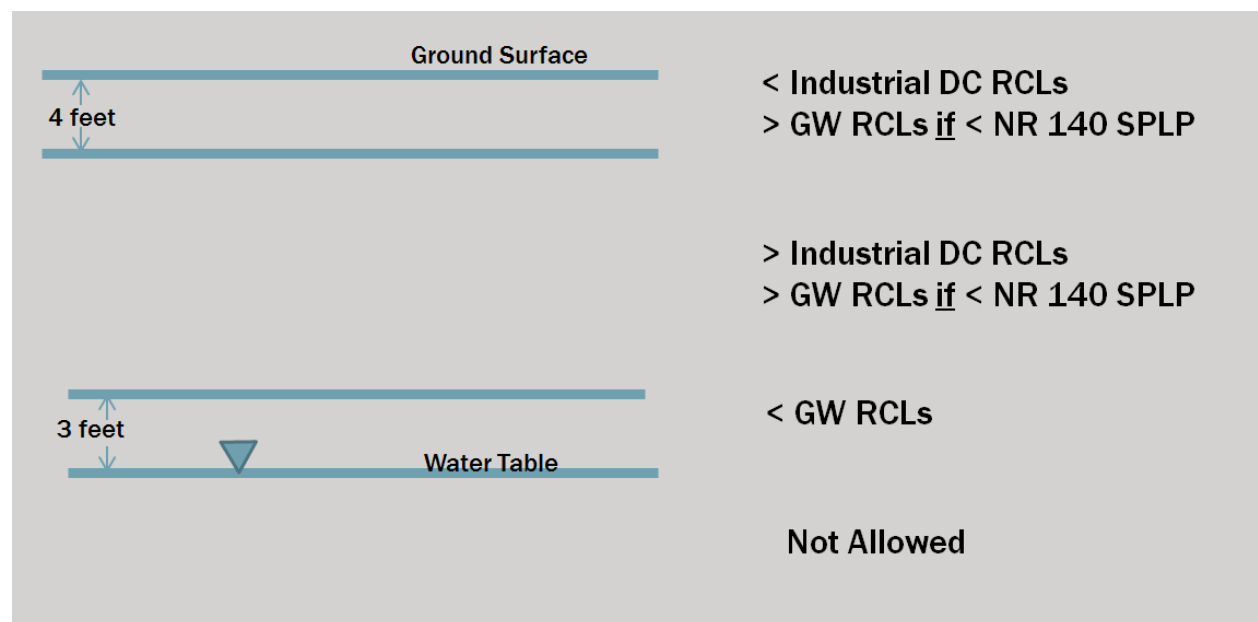
If testing confirms that contaminants are present at concentrations exceeding clean soil levels, there may be options for material handling at a location other than a landfill. While handling clean material does not require coordination with and approval from the DNR, handling of material that is not clean for relocation anywhere other than a landfill requires an NR 718 exemption or a Low Hazard Exemption from the DNR. Acceptable placement options for material that does not meet the definition of clean will provide adequate protection of human health and the environment from the contaminants present in the material. Several options for placement and levels of acceptable contaminants are indicated in the scenarios below and summarized on the attached matrix. Options are presented in order from most restrictive to least restrictive. In all cases, the following assumptions apply:

- If VOCs are present in the material, the nature and extent of the VOCs will pose no vapor migration risk.
- Co-solvency effects will be considered for VOCs and select PAHs.
- The potential for contaminant loading will be considered for sites accepting large quantities of material.

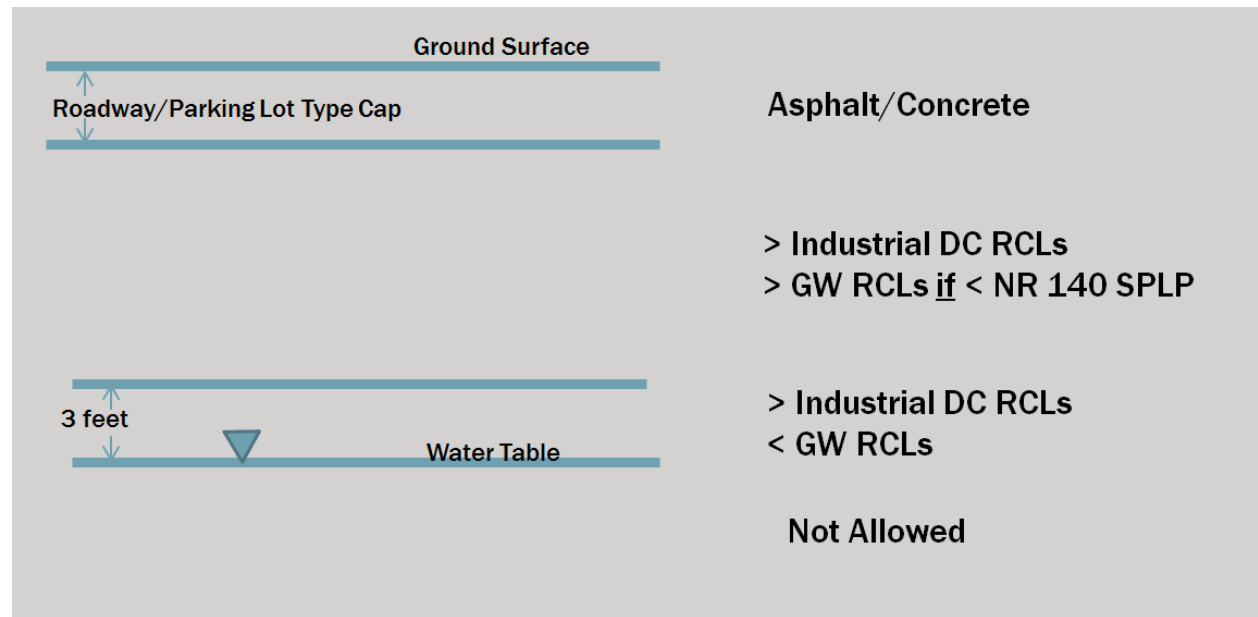
Non Industrial Land Use with No Cap Requirement



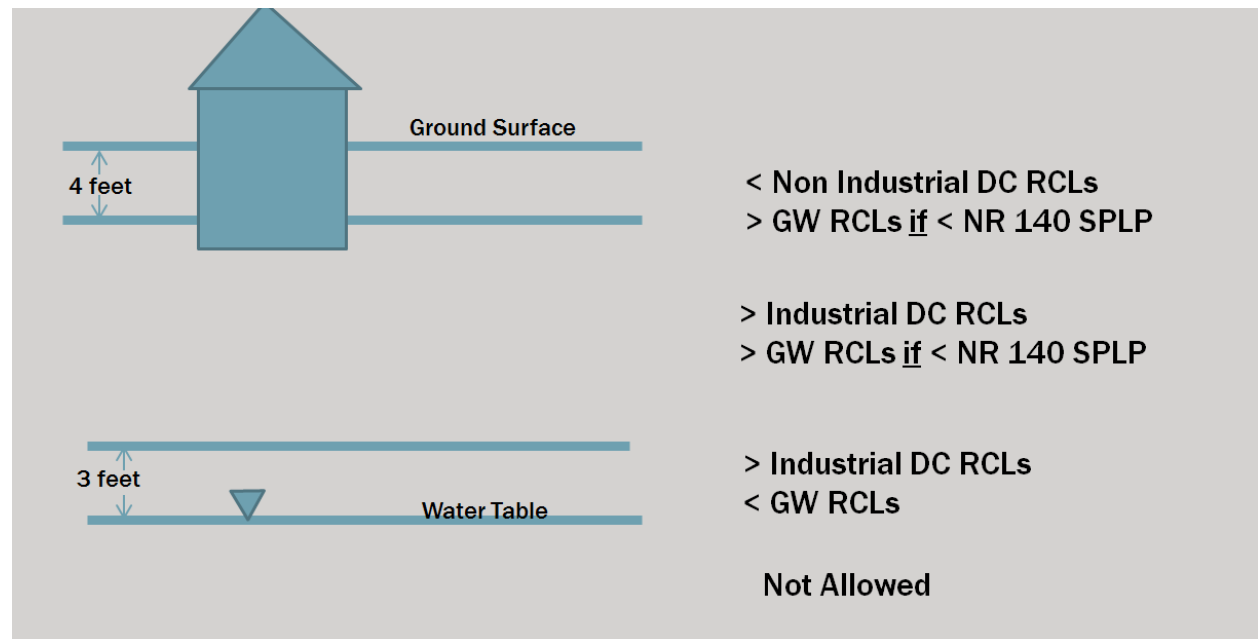
Industrial Land Use with No Cap Requirement



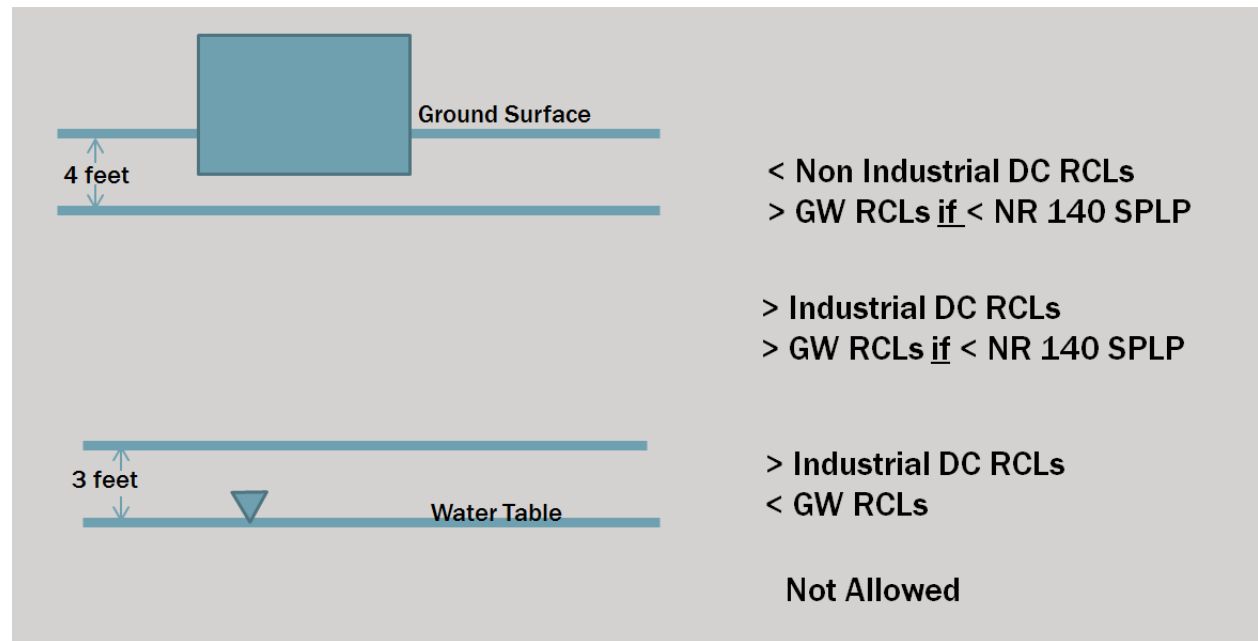
Roadway/Parking Lot as Cap



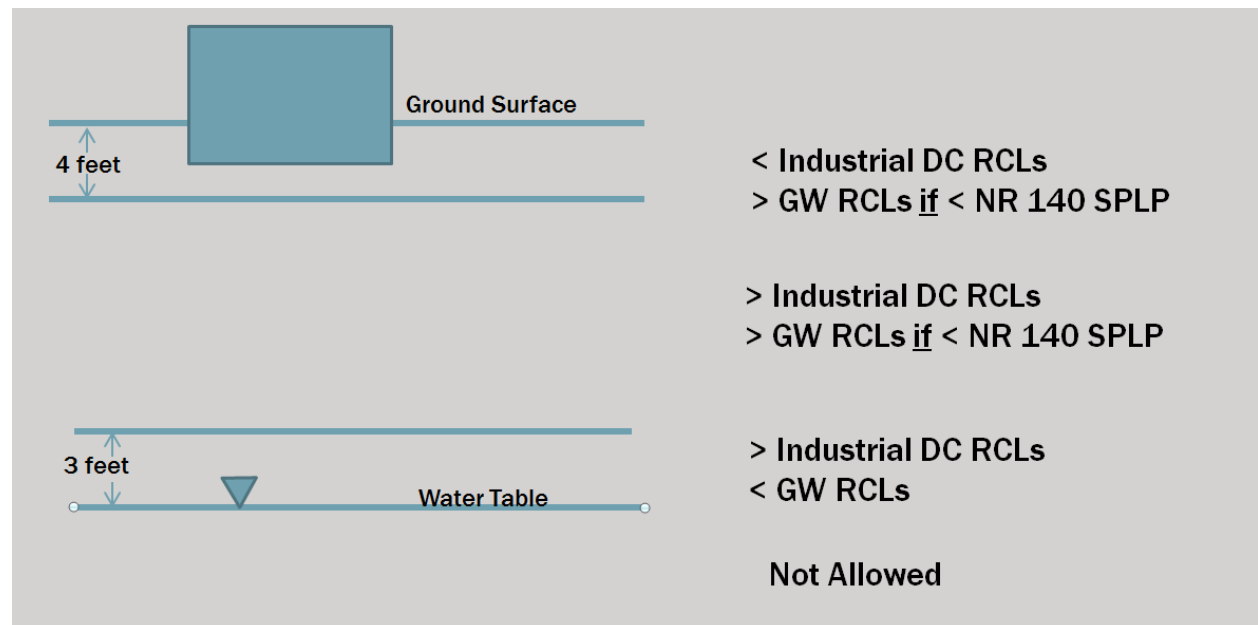
Residential Land Use with Material Placement under Structure



Non Industrial/Not Residential Land Use with Material Placement Under Structure

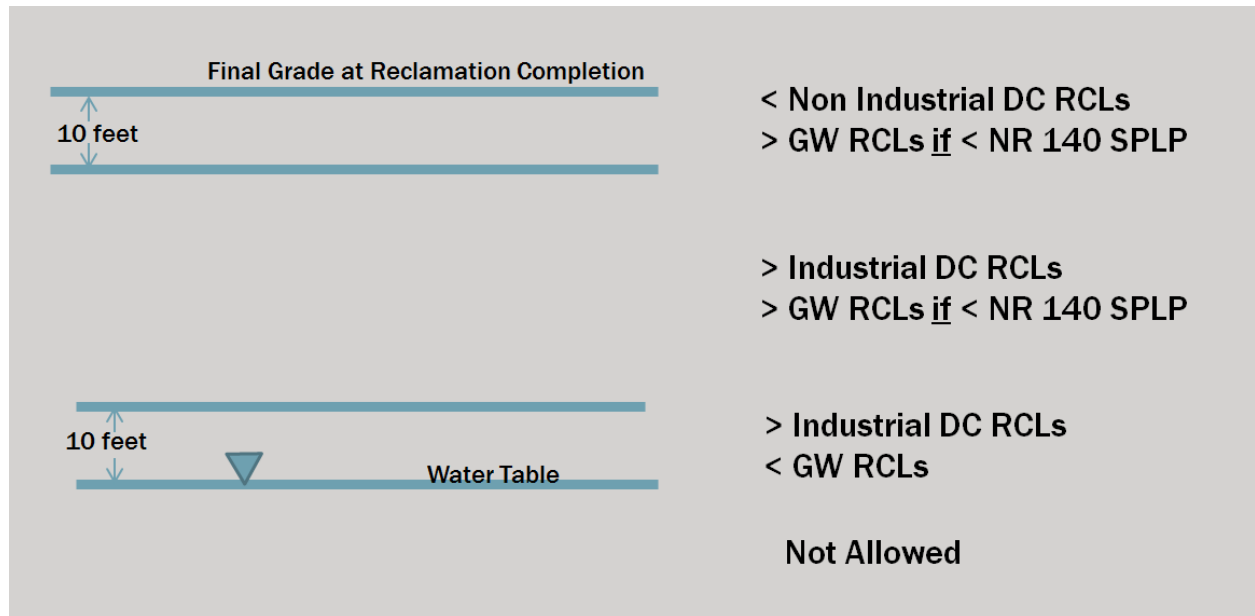


Industrial Land Use with Material Placement Under Structure



Large Receiving Site/Quarry

Any material placed at a large receiving site that has a reclamation plan or other similar requirements for operation must be placed in a manner that is consistent with the requirements of the reclamation plan or other requirements. The diagram below can be used as a supplement to the other plan(s) but does not take precedence over the other plan(s)



Insert Summary matrix – Will be provided at the work group meeting

Long term stewardship requirements

Placement of material with contamination often requires actions to ensure long term stewardship. Common long term stewardship actions include the following – Proposed content will be discussed at the work group meeting.

Landfilling Required

If concentrations exceed levels acceptable for restricted use, the material should be placed in a licensed landfill.