Construction Advisory

From Brenda O’Brien, Engineer of Construction and Technology

Cost Over Runs From Off Site Disposal of Soil

This construction advisory serves to inform construction project engineers of the potential for cost over runs due to unanticipated soil disposal costs, along with options available to avoid or reduce those costs. Projects with large quantities of soil that must be disposed of off-site are of particular concern, even if contamination is not suspected. This is because soil disposal locations are increasingly requesting laboratory analysis of the apparently clean soil to confirm that material they are accepting is truly “clean fill”. The soil samples collected for this laboratory analysis will potentially determine how the project soils will be disposed. Several things can cause misleading laboratory results. These include:

- Improper sampling and handling may result in sample contamination during collection or transport to a laboratory.
- Construction activity, such as diesel equipment movement on site, may cause incidental contamination that gets picked up in the sample.
- Naturally occurring heavy metals, such as arsenic and lead, may exceed documented regulatory background concentrations, creating the appearance of contaminated soil.

If soil is determined to be non-hazardous contaminated, it may still be possible to avoid landfilling. Depending on the type and concentration of the contaminant, the soil may be returned to an excavation as suitable fill material or used as embankment in areas of similar contamination.

In projects where large volumes of clean soil will need disposal, it is important to find out the requirements of the disposal location as early as practical. If laboratory testing is required, make arrangements for proper sample collection. This material is not covered by the Special Provision for Non Hazardous Contaminated Materials Handling and Disposal; therefore, the construction contractor should not collect the samples.

Disposal locations may reject soil if the sample analysis of the material exceeds a background concentration, even if it does not exceed Michigan Department of Environmental Quality cleanup criteria.

If the soil is rejected by the contractor’s disposal location, other disposal options may be available. Contact the Construction and Technology Division’s Geotechnical Services Section for assistance with these situations. Local agencies may also contact this office for assistance with projects with State of Michigan funding.

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