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New guidance for soil management in Mass.: The DEP Similar Soils Provision Guidance

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Environmental and construction professionals have been dealing with the issue of soil management during construction for decades. For urban construction, space to stockpile soil is non-existent and for rural areas, on-site soil management is problematic due to runoff and erosion concerns. Disposal of soil from these sites often costs property owners a hefty premium - even for soil that is not contaminated! The presence of urban fill, which contains chemical constituents related to coal/wood ash, slag, and asphalt, makes the reuse of soil in other areas difficult due to a guiding principal in the environmental regulations of the Massachusetts Contingency Plan (MCP) at 310 CMR 40.0032(3) known as the "Anti-degradation Provision." This provision, while technically only applicable to soil generated from Massachusetts Ch. 21E disposal sites (e.g. those sites that have had a reportable release of oil and/or hazardous materials) states that soil may only be reused at locations that do not contain significantly lower contaminant concentrations than the soil being reused. Significantly is not defined.

Most Licensed Site Professionals (LSPs), professionals responsible for cleaning up Massachusetts disposal sites, see this provision as unequivocal. For example, if soil contains 100 mg/kg of lead it cannot be reused at locations that contain 15 mg/kg of lead. In October 2013, the Massachusetts Department of Environmental Protection (DEP) published a guidance document that provides much needed soil management direction in the Commonwealth. This guidance, "Similar Soils Provision Guidance" - WSC#-13-500 dated October 2, 2013 and revised on April 25, establishes guidelines for determining "significantly" lower contaminant concentrations. Environmental professionals can use this document to demonstrate that soil is appropriate for reuse at a proposed location.

The guidance provides the following tenets for its use:

- * The soil must not be a hazardous waste - this seems obvious, but for certain listed hazardous wastes, the concentration criteria are very low (e.g., chlorinated solvents).
- * The concentrations in the soil must be less than the applicable Reportable Concentrations (RCs) and cannot create a DEP-Notifiable Condition at the receiving location. Essentially, you cannot create a disposal site at the reuse facility.
- * The soil must not be significantly more contaminated than soil at the receiving location. This is tricky, but the guidance provides well-defined procedures to determine if this is the case.

Since publication of the Similar Soils Provision Guidance, management of soil from construction and redevelopment sites has been definitive. Receiving locations that need soil fill can develop Soil Management Plans (usually prepared by LSPs) that establish acceptance criteria for soil proposed for reuse at the location. These plans can be developed with or without soil samples being collected from the proposed receiving facility. If a property owner wants to reuse soil at their facility without testing to establish local background conditions, they can use the "limiting soil concentrations" found

in Table 2 of the guidance as acceptance criteria for soil reuse at their property. The limiting soil concentrations were developed using DEP-published, natural background concentrations. This is very helpful for property owners who want to reuse clean soil, yet are hesitant to sample their own property.

Higher acceptance concentrations than those presented in the Table 2 can also be developed by sampling soil at the receiving location and establishing site-specific background concentrations. The maximum concentration of each constituent detected would be multiplied by the factors provided on Table 1 in the guidance to establish soil acceptance criteria for the receiving location. The soil management plan will account for the receiving location's setting and other risk factors to ensure that soil reuse is safe and does not pose significant risk.

The Similar Soils Provision Guidance is intended to facilitate soil reuse from Massachusetts disposal sites. However, the guidance also works for management of any surplus construction site soil. Prior to this guidance, contractors would justifiably claim that there were no facilities available to reuse clean soil (less than RCs) with the only available options being Massachusetts landfills or soil recycling facilities. Transportation and disposal of soil at these facilities is much more expensive than bringing soil to a reuse facility. Since the guidance document has been published, several reputable reuse facilities have been established (some with DEP review of the Soil Management Plan) that provide environmental consultants confidence when they approve soil reuse.

In some instances, the receiving locations may be located nearby wetlands, residential areas, or proximal to other sensitive receptors such as drinking water supplies that cause concern for reuse of soil in these locations. Owners, environmental consultants and LSPs must use their professional judgment and establish clear evidence that the soil is appropriate for reuse at these facilities.

The Similar Soils Provision Guidance provides for a sustainable, common-sense approach for the safe reuse of soil in Massachusetts. This guidance has greatly improved the management of soil in Massachusetts and reduced costs associated with sustainable soil reuse.

The DEP Similar Soils Provision Guidance can be found on DEP's website at: www.mass.gov/eea/docs/dep/cleanup/laws/13-500.pdf.

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