Soil, Sediment and Waste Management

Type of Proposal: Administrative

BACKGROUND

The management of soil from cleanup sites, road projects and other construction projects is an important issue and regulatory clarity is needed.

Currently, the DNR Waste and Materials Management (WMM) Program, operating under ch. NR 500, Wis. Admin. Code, has authority over the off-site movement of waste materials. Under ch. NR 700, Wis. Admin. Code, the DNR Remediation and Redevelopment (RR) Program has authority over the movement of contaminated soil and other waste materials on-site when part of a Chapter NR 700 response action. Further, the RR program has jurisdiction over the management of contaminated soil that is proposed to be managed off-site at a location other than a licensed solid waste site or facility (e.g., quarry, other cleanup site, etc.).

As an example, approval to manage crushed concrete coated with lead-based paint at an off-site location (not the RR program site from which it was generated), other than a licensed landfill, comes from the WMM program through a low-hazard exemption, while approval for re-use or replacement of contaminated soil on- or off-site must be sought from the RR program. The RR program would have jurisdiction over the placement of the waste materials back onto the original property if it is an NR 700 project.

Uncertainty exists in the regulated community if the material proposed for re-use contains historic fill or historic fill co-mingled with contaminated soil. Can the owner of a historic fill site or a contaminated site accept similar historic fill material or contaminated material as part of planned redevelopment for their site? What is the process for applying for DNR approval? Clarity is needed. The Michigan Department of Environmental Quality provides a comprehensive listing of "low-hazard industrial wastes," materials considered "solid waste," "inert construction debris and wastes," and "mildly contaminated soil and fill."

A streamlined regulatory process or pathway is needed for the management of fill materials and contaminated soil under chs. NR 700 and 500, Wis. Admin. Code. This is needed to let landowners and developers know if they can manage materials at a location other than a licensed landfill.

PROPOSAL

RR and WMM collaborative efforts on this issue should continue. DNR should work with the Brownfields Study Group to provide guidance that more clearly defines the management of contaminated soil and other waste materials under ch. NR 718, Wis. Admin. Code, and the low-hazard exemption processes in ch. NR 500, Wis. Admin. Code, for fill materials and contaminated soils. Financial assurance requirements, including documentation and tracking at receiving sites, should be further explored.

DNR should clarify whether or not contaminated sediment is considered "certain other solid waste" and can be managed on-site under ch. NR 718, Wis. Admin. Code. If not, DNR should amend ch. NR 718, Wis. Admin. Code, to include contaminated sediment in the definition and implementation of the requirements.

COMMENTS

DNR: *The DNR understands that this is a priority issue, and is working to further clarify the issues identified by the Brownfields Study Group.*

Background Concentrations of Common Soil Contaminants

Type of Proposal: Legislative and Administrative

BACKGROUND

Many chemicals in soil are ubiquitous in the environment. Examples include lead and polycyclic aromatic hydrocarbons (PAHs) from historic ignitions of leaded gasoline and fossil fuels. Chemicals present naturally in the environment that are not clearly attributable to a specific source are generally associated with undetermined anthropogenic sources and can be considered "anthropogenic background."

When defining the boundaries of contamination attributable to a discharge, anthropogenic background concentrations become important. Background conditions are often used to delineate the area where liability for cleanup begins and ends – that is, where the chemical concentrations from the discharge becomes indistinguishable from concentrations present from other, non-specific sources. In practice, anthropogenic background is similar to natural background levels in that cleanup below anthropogenic background is not required and often impractical.

The DNR provides responsible parties with a process to consider background levels for both anthropogenic and naturally occurring contaminants. However, calculating background levels for individual sites can be onerous and inefficient during the cleanup process.

The DNR has taken steps to address this situation for sites involving arsenic in soil. DNR and DHS, in partnership with the US Geological Survey and the US Department of Agriculture, undertook a study of arsenic levels in Wisconsin to develop a "statewide standard for background." This study took 7 years, and the DNR and DHS provided several hundred thousand dollars in funding for the project. The USGS and USDA provided in-kind services as well. The resulting guidance for staff and responsible parties on establishing background cleanup levels for arsenic can be found at: http://dnr.wi.gov/files/PDF/pubs/rr/RR940.pdf

Further, regulatory agencies in neighboring States, such as the Illinois Environmental Protection Agency, have established default state-wide background soil concentrations for PAH compounds. In Illinois, background PAH soil concentrations are grouped into three classifications based on location: "City of Chicago"; "Metropolitan Statistical Areas" (outside of the City of Chicago associated with at least one urbanized area that has a population of at least 50,000); and "Non-Metropolitan Areas."

Clearly identifying state-wide background soil concentrations for constituents commonly associated with historic anthropogenic sources and/or associated with geologic source materials will allow for additional clarity in determining target remediation goals as well as scientifically valid data as a basis for possible amendments to current remedial objectives.

PROPOSAL

DNR should establish statewide (including urban area) background concentrations for constituents commonly associated with historic, anthropogenic, ubiquitous sources and/or associated with regional geology. The background concentrations should continue to be protective of human health and the environment and can be used to establish risk-based remediation objectives. DNR should develop clearly defined protocols for the uniform sampling and evaluation of site-specific background soil concentrations that are representative of reasonable background conditions, while maintaining protection of human health and the environment.

COMMENTS

DNR: *The DNR is considering a research project with the University of Wisconsin and others to look at statewide PAH levels. In addition, DNR is working with DHS to evaluate public health concerns of differing concentrations of PAHs. Any study will require staffing resources, IT resources, laboratory work, and funding for researchers to conduct such a study, based on DHS and DNR involvement the arsenic study. Further, this effort will take time to design, collect, validate and roll out such a study. In the interim, the DNR and DHS will continue to work with the Brownfields Study Group on addressing ways to deal with this issue.*