

Perspective on Cost-saving HSRA Rule Changes
September 29, 2003

HSRA rule change for lead in soil (1999)

The Type 1 generic residential soil standards for metals (Table 2 of the HSRA Rules) are not risk-based numbers but are instead set by EPD at concentrations believed to reflect concentrations toward the upper end of the range of naturally-occurring background concentrations in soils statewide. The HSRA Type 1 standard for lead in soils was set at 75 ppm.

The original HSRA notification concentration for lead in soil was set at 300 ppm which is a risk-based concentration for land application of municipal sewage sludge under USEPA regulations pursuant to the Clean Water Act.

Because of a change in the way USEPA calculated risks associated with lead exposure, it was no longer possible to apply the USEPA RAGS equations for lead as the HSRA rules otherwise specified. As a result of this change, the cleanup levels for lead at nonresidential properties under the HSRA rules could not be calculated and were defaulting to the Type 1 concentration of only 75 ppm.

When EPD did not move quickly to correct this glitch in the HSRA rules pertaining to lead, a GIEC member company prepared to petition the Board of Natural Resources for relief. EPD subsequently amended the HSRA rules such that the notification concentration and the default cleanup level for lead at nonresidential properties would be 400 ppm and provided for use of risk models specific to lead for calculating Type 2 and Type 4 soil standards.

Additional lead-rule amendments were to be discussed later but were tabled in deference to the 2002 HSRA Facilitated Dialogue on cost-effectiveness improvements.

HSRA Rule Changes Resulting from Facilitated Stakeholder Dialogues (2003)

Source Material Definition Added

The original HSRA rule had no definition for the term "source material" but requires that "...all source material must be removed or decontaminated..." to comply with Type 1 through 4 environmental media criteria. In some instances the lack of a definition had led to requirements for removal of materials that "...contained hazardous substances and were distinguishable from native materials". Now the definition for source material under HSRA is essentially the same as the "act-as-a-reservoir" definition used under RCRA and CERCLA. This definition should help to limit the volume of materials subject to the remove-or-decontaminate source-material requirement under HSRA. Another potential benefit of this definition is the possibility of using insitu stabilization and solidification (ISS) as an alternative to removal and decontamination by converting what would otherwise be a source material into a solidified material that no longer meets the definition of source material.

Type 4 Direct Exposure Assumption Changed

The original HSRA rule specified a direct-exposure (human contact) depth of soil from ground surface down to the underlying ground water for Type 4 (site-specific) nonresidential properties. In contrast, the Type 3 (generic) nonresidential direct exposure depth was limited to only the top two feet of soil. With the rule change, the Type 4 depth-of-exposure assumption may now be

determined on a site-by-site basis with a default value of two feet as is already the case for Type 3. This Type 4 depth-of-exposure relief means that soil below a depth of two feet need not meet standards for direct human contact and that deeper soils need only meet standards for soil-leaching protection of the underlying ground water. In certain situations, particularly involving low mobility substances such as metals, PCBs and PAHs, this Type 4 rule change has the potential to reduce the volume of soils otherwise subject to removal or decontamination and may also make ISS feasible as a Type 4 remedy rather than a Type 5 application.

Type 5 for Ground Water Added

The original HSRA rules only had provisions for Type 5 soil. Any ground water outside the direct footprint of a Type 5 soil area was still subject to meeting the Type 1- 4 HSRA ground-water standards based on the presumed use as drinking water. The new Type 5 ground water standard provides for a limited zone of ground-water control that may extend beyond a Type 5 soil footprint and may also be used independently of a Type 5 standard for soil in certain situations. This new provision should be particularly helpful for municipal landfills closed in place and where ground water has migrated down gradient at concentrations exceeding Type 1 – 4 standards.

Type 5 Soil Exposure-Area-Averaging Considered

Rather than requiring compliance with Type 5 soil standards on a point-by-point basis, the rule change now allows consideration of exposure-area-average concentrations for Type 5 soils as is done by USEPA.