constituents in eligible listed wastes, waste mixtures, or derived-from wastes. If the waste satisfies the exemption criteria proposed today, the waste would not be considered listed hazardous waste. However, the generator must still determine whether the waste exhibits any characteristics of a hazardous waste as specified in 40 CFR 261.21 through 261.24 and continue to meet hazardous waste requirements if the waste does exhibit a characteristic.

C. Toxicity Characteristic Level for Lead

Toxicity characteristic constituents are among those evaluated for exit values in this proposal. In developing the risk assessment for all constituents, including the TC constituents, the Agency examined risks via groundwater and other pathways to humans, and also environmental receptors. In evaluating risks resulting from the groundwater pathway, the Agency used its newly developed CMTP model, and the MINTEQ metals speciation component. The CMTP model estimates groundwater transport using finite source assumptions, and accounting for hydrolysis and adsorption of chemicals to soils. The MINTEQ component estimates dissolution and speciation of metals in groundwater. Using these models, the Agency has developed and is proposing estimates of transport through groundwater specific to each constituent. These estimates are analogous to constituent-specific dilution and attenuation factors (DAFs). These constituent-specific DAFs were contemplated for several constituents proposed for regulation in the TC rulemaking, but not finalized, because the modeling work was not complete. TC levels were set using generic DAFs of 100.

In developing the constituent-specific DAFs, the Agency estimated that lead moves through groundwater much more slowly than predicted by the generic DAF of 100. While the modeling analyses supporting the TC rule and today's proposed rule are somewhat different from one another, the constituent-specific DAF for lead leaching from a landfill was estimated as 5000 rather than the 100 used in the TC rule. Higher leaching rates (giving lower DAF values) were estimated for some other disposal options evaluated in the updated modeling, such as land application and management in surface impoundments. This analysis raised the question of how the TC and today's proposed rules would relate to one another, and whether these results warranted consideration of a change to the TC level of 5 mg/l for lead (updated groundwater modeling of other TC constituents did not show the large disparity between the TC and exit level proposed in today's notice for lead).

In considering these issues, the Agency reviewed several factors. First, the human health risk evaluation for lead has changed since the TC rule was promulgated, resulting in the MCL (on which the TC is based) for lead being reduced from 50 ppb to 15 ppb. Using the new DAF from the landfill scenario plus the new drinking water standard could raise the TC level to 75 mg/l from the current 5 mg/l. However, when lead movement from a land treatment scenario was modeled, a DAF of approximately 770 resulted, and a TC level based on this and the new drinking water standard could be approximately 10 mg/l. Another relevant reference point for lead in the environment includes the current OSWER soil direct ingestion level for lead of 400 ppm (as a total concentration, not leachate).

The Agency considered several approaches to potentially proposing revisions to the TC level, including basing a new TC level on groundwater modeling only, basing it on the soil ingestion estimate, or basing it on the driving pathway value and exit level, which considers adverse ecologic effects.

After carefully considering the issue, the Agency concluded that the issue of lead toxicity and movement through the environment is very complex and changes to existing rules could have significant impacts on management of lead-bearing waste and public health. The agency believes regulation of lead-bearing wastes warrants careful consideration and full evaluation of and review of the policy issues associated with considering all potential exposure pathways and risk to human health and the environment. Questions include whether the TC level would be a leachate or totals value, and whether it would be based on groundwater only or other exposure routes and whether it would be human health based or based on ecological risk considerations. Such a comprehensive evaluation is not feasible in the context of the rulemaking proposed today, and so the agency has determined to defer any action on the lead TC level. The Agency recognizes that this is an issue of considerable interest to the public, and will consider review of management of lead-bearing waste at the soonest practical time. In the interim, the lead TC regulation and the exemption regulation proposed today (when finalized) would co-exist as independent regulations.

As described in Section IV.E.3, the Agency has developed groundwater modeling based on both 10,000 year and 1000 year time frames. Today's proposal is based on the 10,000 year modeling time horizon, and the Agency is soliciting public comment on the alternative of using 1000 years. One aspect of the 1000 year modeling results is that the groundwater-based exit levels for more constituents would be above current TC levels for those constituents. These constituents include, in addition to lead, chromium, cadmium, selenium, and mercury. The Agency seeks public comment on this aspect of using the 1000 year time horizon modeling for risk assessment in the HWIR rule.

D. Hazardous Waste Listings

The Agency evaluated the likelihood that untreated hazardous wastes would be able to meet the exemption criteria in an ''pure'' state (e.g., untreated and unmixed) and determined that it is unlikely that the constituent concentrations in many untreated hazardous wastes would be below today's proposed exemption levels or the applicable BDAT standards, particularly for nonwastewaters. Specifically, the Agency's hazardous waste characterization data indicate that the concentrations of toxicants of concern in untreated listed wastes are typically present at levels many times higher than health-based levels or BDAT values. Therefore, it is unlikely that the Agency's current criteria for listing wastes as hazardous will change as a result of the introduction of today's exit criteria into the RCRA regulations. However, EPA has been utilizing a more comprehensive risk analysis in the listing program, looking at multiple pathways for the movement of constituents through the environment, similar to the approach taken in today's proposal. Today's proposed approach may also provide the Agency with a means of assessing whether or not future listings might inadvertently bring into the RCRA system the types of low-concentration wastestreams that would subsequently be eligible for exit under today's proposal.

E. Delisting

The evaluation criteria used for delisting may vary from today's exemption criteria for various reasons. First, delisting is an interactive process that considerable oversight by EPA or authorized State agencies. In delisting, the overseeing agency evaluates the processes generating a specific wastestream in order to determine the constituents likely to be present, as well as the potential variability in the waste.