

Iyus Rusmana  
irusmana@mailcity.com

Re: Hazardous Characteristic Scoping Study

Dear Mr. Rusmana:

Thank you for your E Mail of May 18 2002, to the U. S. Environmental Protection Agency (EPA) Administrator, regarding the Agency's follow-up activities to the 1996 "Hazardous Waste Characteristics Scoping Study". Your letter has been referred to me for reply, because the Scoping Study was done by the Office of Solid Waste.

The Scoping Study was released in November of 1996 as a broad and comprehensive review of the EPA hazardous characteristics regulatory program under the Resource Conservation and Recovery Act (RCRA). Hazardous characteristics of waste represent one of two ways we identify waste as hazardous and bring it under RCRA regulatory control (the other approach involves listing of specific wastes that the Agency identifies as hazardous). The current hazardous characteristics regulations address the following properties of waste: ignitability, corrosivity, reactivity and toxicity. The Scoping Study reviewed the effectiveness of these regulations in identifying waste that warrants regulation, and tried to identify whether other waste properties should also be used to classify waste as hazardous, or whether the current hazardous characteristics should be expanded in any way. The Agency also collected data on toxic chemical releases from landfills around the country to try to identify any additional waste constituents warranting regulation.

In conducting the Scoping Study, we sought to identify information on environmental releases of chemicals from waste management units to supplement other information in assessing program adequacy. Fewer than one percent of operating non-hazardous waste management units (from the 12 states examined) experienced chemical releases that exceeded a state or federal regulatory or guidance value (including drinking water and soil remediation targets). Thus, our current regulatory scheme ensures that most hazardous wastes are being addressed under our Subtitle C hazardous waste regulations. The Scoping Study did, however, identify a number of areas that deserve additional investigation, and the Agency has conducted follow-up studies in a number of topic areas. These include examining hazards due to waste

constituent releases to the air; assessing the appropriateness of retaining silver in the TC regulation; considering possible updates to the ignitability, corrosivity, and reactivity characteristics and implementation guidance; and identifying possible supplements to the TCLP leach test for evaluating the groundwater leaching potential of non-hazardous wastes (see Attachment). The projects we have undertaken require substantial time and resources to complete, and some require the Agency to fund basic scientific research in order to fully understand the problem and come up with effective solutions. This means that they cannot all be done at once; thus, the Agency has set priorities for their completion.

Regarding toxic chemicals in waste, the Agency regulates 39 such chemicals in the Toxicity Characteristic regulation (see 40 CFR 261.24). Any decision to revise the TC regulation would have to take into account a number of considerations, including updated groundwater models developed since the 1990 promulgation of the TC rule. We would also need to consider current management practices for non-hazardous wastes under state programs, and the additional protection that might be provided under RCRA Subtitle C. We might find that non-regulatory approaches would be more effective in ensuring that any potential environmental problems are dealt with in the earliest possible time frame.

If you have further questions concerning this matter, please contact Mr. Gregory Helms of my staff at 703-308-8845, or [helms.greg@epa.gov](mailto:helms.greg@epa.gov). Thank you for your interest in the hazardous waste program.

Sincerely yours,

Elizabeth A. Cotsworth, Director  
Office of Solid Waste

## Attachment

### EPA Projects Addressing the Scoping Study Findings

#### Issue: Potential Release of Waste Constituents to the Air

**Air Characteristic Study:** The Agency conducted a follow-on study to assess the risks of more than 100 potential waste constituent to the air, when managed in particular types of common waste management units. A draft report was released in May of 1998, and the final report in October 1999. The final report is available on the EPA internet website at: <http://www.epa.gov/epaoswer/hazwaste/id/air-risk.htm>

#### Issue: Potential Inadequacies in TCLP Test

**TCLP Review:** The Agency is conducting a review of the TCLP waste leaching test and its use in implementing regulatory programs under RCRA. This was initiated in response to concerns identified in the Scoping Study regarding leaching of highly alkaline waste. The Agency has also continued to study oily waste leach testing, another area of possible concern identified in the Scoping Study. A public meeting was held in July 1999 on this topic. A report of the meeting results is available on the EPA internet website at: <http://www.epa.gov/epaoswer/hazwaste/test/leaching.htm>

Additional work on this topic is ongoing.

#### Issue: Potential Update and Expansion of the Current Toxicity Characteristic Regulation

The Scoping Study suggested that the toxicity characteristic (TC) regulation could be updated to: 1) incorporate updated toxicity data and drinking water regulations; 2) rely on improved groundwater fate and transport models; and 3) include more waste constituents that have the potential to be leached from waste and into groundwater.

The drinking water regulatory standards (Maximum Contaminant Levels, or MCLs) on which many current Toxicity Characteristic regulatory values are based, have been revised for some of the TC chemicals, including lead, pentachlorophenol, silver, and barium. The TC regulatory values for these and other chemicals could be revised to rely on more current drinking water MCLs and risk assessment information, although the Agency would need to determine whether any real benefit would result, given improvements in state non-hazardous waste management programs.

The Agency has updated its groundwater fate and transport model used to estimate the likely movement of waste constituent chemicals through groundwater, to drinking water wells that may be near-by. Updating the modeling supporting the TC regulatory levels to reflect these improvements could make the regulation more accurate in identifying hazardous wastes, although it is unclear whether values would increase or decrease.

The Agency recently conducted a study to address concerns raised by the photo-processing industry about the appropriate regulatory status of silver-bearing wastes under RCRA. They believed that silver-bearing wastes are over-regulated under RCRA, since the drinking water MCL for silver that was the basis for the TC regulatory value was revised. At the completion of the study, the Agency concluded that no change in the TC regulatory value for silver was warranted.

Adding chemicals to the list of TC-regulated constituents could identify more waste that may be hazardous. However, this would require the Agency to develop data indicating which constituents occur in waste and pose risk to human health or the environment when present. This work would require substantial resources that are not currently available. Also, no unregulated constituents with significant releases were identified in our examination of release incidents.

#### Issue: Potential Need to Update Ignitable/Corrosive/Reactive Characteristics

In April of 1998 the Agency withdrew its flawed sulfide/cyanide reactivity test guidance. Work on replacement guidance has been initiated, but proceeding at a low level of activity due to competing priorities.