and time of seeking a delisting petition, or the cost disadvantage of disposal of all residuals as hazardous waste.

Because of the similarities in risks, EPA is soliciting comment on whether there are ways to subject all of these technologies to the same, or nearly the same, regulatory requirements, while assuring that the ultimate goals of protecting human health and the environment are not compromised. The Agency has discussed with aluminum industry representatives the possibility of achieving this objective by designating spent aluminum potliners as inherently waste-like materials pursuant to 261.2(d),11 and using this designation as a triggering event for a determination of "substantial confusion" pursuant to 270.10(e)(2), which could establish a date for eligibility for interim status after August 21, 1991. See generally 56 FR at 7142 making this type of designation and finding of "substantial confusion" for halogen acid furnaces. The Agency solicits comment on this possibility. The benefit of this approach would be to guarantee that these technologies all would be subject to a minimum level of RCRA oversight, especially with respect to design of storage equipment, control of air emissions from the process, minimum treatment standards for residuals, and mandatory corrective action in response to releases of hazardous constituents to the environment.

In order to mitigate some of the potential delay and costs in complying with RCRA, EPA also requests comment on the feasibility of establishing uniform delisting levels for residues from processing spent potliners, much as it did for residues from processing K061 wastes in high temperature metal recovery furnaces. Under this approach,

we believe, levels would need to be established for organics, metals, cyanide and fluoride.

Another possibility for assuring safe processing of the potliners would be to develop air emission standards for the processing units pursuant to section 112(d) of the Clean Air Act. This alternative would have to be implemented in such a way as to assure proper management of the potliners before processing, and satisfactory treatment and management of residues from the processing. EPA solicits comment on all of these issues.

EPA wishes to add that its Region 10 office and the Washington State Department of Ecology have already evaluated the spent potliner recovery process used by one vender (Enviroscience). Washington State determined that it is an excluded recycling process, and EPA Region 10 determined that the process is not required to meet emission standards for BIFs, provided the process is conducted pursuant to certain conditions. 12 In light of the existing industry reliance on this determination, any decision made regarding designation of spent potliners in this rulemaking would not change the specific decisions concerning the Enviroscience process that have been completed to date.

## 2. Overview of Today's Proposal

EPA is proposing treatment standards for K088 expressed as the maximum concentration of specific constituents that would be allowed for land disposal. The tables at the end of this section summarize the constituents proposed for regulation and the maximum allowable concentrations. These maximum concentrations are the UTS for metals, cyanides, and other organics that were developed in the LDR Phase II final rule. These standards are based on a variety of technologies as follows: (1) Alkaline chlorination was the basis for the cyanide wastewater standards; (2) alkaline chlorination of the wastewater to destroy the cyanide prior to the generation of the nonwastewater residual was the basis for the cyanide nonwastewater standard; (3) incineration was the primary basis for other organic constituents in nonwastewaters; (4) biological treatment or carbon absorption was the basis for organics in wastewaters; (5) high temperature metal recovery and stabilization were the basis for metals in nonwastewaters; (6) chemical precipitation was the basis for fluorides and metals in wastewaters; and (7)

immobilization through either vitrification or the addition of calcium as a stabilization reagent was the basis for fluorides in nonwastewaters.

These treatment standards were developed by examining essentially all the BDAT treatment data the Agency had at the time. The Agency is also proposing new nonwastewater treatment standards based on leachate tests for fluoride. The leach tests must be conducted using the TCLP (SW-846 Method 1311 as described in 40 CFR Part 261, Appendix II). These leach standards were developed by the Agency when granting a delisting for certain K088 wastes. The treatment standard for fluoride wastewaters is taken from the UTS promulgated in the LDR Phase II final rule. More information on the development of these treatment standards can be found in the docket to today's rule.

Treatment and recycling technologies such as mineral wool cupolas, metallurgical processes, iron and steel industrial furnaces, and other recovery and recycling technologies should be able to meet the proposed standards. K088 treatment data from Reynolds Metals, Comalco Aluminum Ltd., Ormet Corporation and the EPA Combustion Research Facility (CRF) show that K088 can be treated to meet the UTS. Because EPA is proposing numerical treatment standards, any recycling or treatment technologies can be used as long as the treatment standards are met by actual treatment, rather than impermissible dilution. More discussion on these various technologies is presented later in this preamble.

a. Proposed Regulated Constituents. EPA is proposing to regulate the following constituents: acenapthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, chrysene, dibenz(a,h)-anthracene, fluoranthene,

indeno(1,2,3-cd)pyrene, phenanthrene, pyrene, antimony, arsenic, barium, beryllium, cadmium, chromium, lead, mercury, nickel, selenium, silver, cyanide and fluoride. Based on the available waste characterization data (see Best Demonstrated Available **Technology Background Document** (BDAT) for Newly Listed or Identified Wastes for K088, Spent Aluminum Potliners found in the docket to this rule for details), these constituents were found to be present in either the untreated K088 wastes or in the K088 treatment residuals at levels exceeding the UTS. See the proposed delisting of K088 for Reynolds Metals at 56 FR 33004 and 33005, July 19, 1991, and the corresponding docket for that

<sup>&</sup>lt;sup>11</sup> The basis for such a designation would be that spent potliners contain cyanides and polyaromatic hydrocarbons which are destroyed rather than recycled, even by recovery technologies. These hazardous constituents are present in concentrations not ordinarily found in raw materials or products for which the spent potliners would be substituting, and the spent potliners could pose a substantial hazard to human health and the environment when recycled. The combustion process itself, for example, would seem to pose all of the risks the BIF rule is intended to address. Past storage practices for spent potliners also have led to significant environmental damage (although much of this storage utilized open piles).

A designation of inherently waste-like, incidentally, would only apply to the potliners and not to legitimate products obtained by processing the potliner (so long as those products were not burned as fuels or used directly on the land). 56 FR at 7141. Another option, therefore, would be to designate the use of K088 in certain types of recycling (e.g., all processes involving thermal destruction of cyanide, processes that incorporate cyanide/PAHs into product unchanged) as inherently waste-like.

<sup>&</sup>lt;sup>12</sup> These evaluations were conducted at the express, voluntary request of Enviroscience.