methods for a number of these wastes (including high TOC ignitable wastes and characteristic mercury wastes) include or require resource recovery, another reason to ensure that this type of treatment continues to occur. *Steel Manufacturers Association* v. *EPA*, 27 F. 3d 642, 647 (D.C. Cir. 1994). EPA solicits comment as to whether any alteration of the point at which LDRs attach to these wastes should be reconsidered.

8. Implications Beyond LDR Rules

The Agency believes that narrowly redefining the point at which wastes are subject to RCRA regulation should be considered because of industry's concerns with the impact this approach is having on the program currently and what potential impact it may have in the future. Strict interpretation of the current point of generation has already raised questions with respect to the status of a variety of similar wastes that sometimes exhibit the hazardous waste characteristic and are routinely mixed (e.g., spent antifreeze from automobiles, boiler cleanout wastes, emission control residues). This issue may become even more important in the future as EPA adopts exit levels which may be established by the Hazardous Waste Identification Rule.

While absolute clarity of the applicability of RCRA may result from the current point of generation requirement, industry commenters feel that it could be magnified in the future by this and other rulemakings. In considering these concerns, EPA does not wish to undermine the effort to segregate the most concentrated wastes for source reduction or treatment. EPA solicits comment on whether any of the approaches described achieves the proper balance among these goals.

V. Discussion of the Potential Prohibition of Nonamenable Wastes From Land-Based Biological Treatment Systems

This section solicits comment on two regulatory frameworks received from industry and from treaters of hazardous wastes concerning refractory underlying hazardous constituents in land-based biological treatment systems. First, the Environmental Technology Council (ETC) submitted comments to the Agency on EPA's March, 1993 Supplemental Information Report on potential responses to CWM v. EPA. The ETC raised concern as to whether the constituents from these decharacterized wastes when placed into biological impoundments are merely being diluted and discharged; volatilized from the surface of the impoundment; or simply

end up concentrating in the sludge at the bottom of the impoundment. The ETC labeled these constituents whose primary fate is air or sludge (or discharge without treatment) via one of these paths as "nonamenable to biotreatment." The comment suggested several criteria for determining whether process streams with "nonamenable" constituents should be kept out of surface impoundments.

Secondly, CMA provided EPA with similar recommendations in August 1993. This section also considers CMA's suggestions for managing refractory chemicals in land-based biological treatment units.

A. Technical Overview

Many "decharacterized" wastes (i.e., wastes that were formerly hazardous wastes due to their ignitable, corrosive or reactive properties as generated but which no longer exhibit a characteristic by the time they are land disposed) are placed in Subtitle D surface impoundments for the purpose of biological treatment. In theory, microorganisms in the impoundment can degrade organic constituents in these wastes (under aerobic and/or anaerobic conditions) to carbon dioxide and water.

The ETC comment suggested that EPA identify and prohibit wastes containing these "nonamenable" constituents from biological treatment impoundments. The issue facing EPA is whether there are wastes for which biological treatment is not BDAT either because biological treatment cannot adequately reduce hazardous constituents or because biological treatment simply transfers hazardous constituents to other media, and, if so, whether an alternative regulatory scheme is appropriate. While the LDR Phase IV rule will specifically address the concerns with respect to sludges, leaks and air emissions, EPA has committed to raising certain technical issues concerning ''nonamenability'' in the LDR Phase III proposed rule and has also committed to discuss the suggested regulatory resolutions submitted by both the ETC and the CMA, who also submitted comments pertaining to this issue.

What follows is EPA's interpretation of the fundamental concerns which fostered this option, a discussion of the technical issues inherent to this approach and an identification of alternative approaches to address these underlying concerns. The issue of whether RCRA can require segregation of refractory hazardous wastes streams entering land-based surface impoundments is closely connected to the Agency's approach to sludges, leaks

and air emissions in the LDR Phase IV rule. The Agency is therefore delaying any final action on the components of the ETC comments, or on the CMA suggestions, until LDR Phase IV when more comprehensive decisions can be made on each issue.

B. Summary of the ETC's Position

The full text of the ETC's comments can be found in the administrative record for today's rule. This section summarizes that document.

The ETC asserts that "Hazardous constituents in ICR wastes that are not amenable to the biological or sedimentation systems used in CWA lagoons are not receiving RCRA-equivalent treatment." They then propose a definition of "nonamenable waste streams" and suggest a regulatory scheme for keeping these streams out of surface impoundments.

In particular, the ETC recommends that EPA should establish treatment standards for ICR wastes that require destruction and removal of hazardous constituents in the waste as generated, and allow only those ICR wastes that contain hazardous constituents for which biological treatment is the best method to be managed in nonhazardous waste surface impoundments. They provide lists of individual constituents and constituent categories that should be segregated and restricted from biological units. These include the following individual chemicals: mercury, vanadium, chromium, cadmium, lead, and/or nickel, or the following groups of chemicals: aromatic compounds; acrylates, phenolics, and highly oxidized constituents such as phthalates, aldehydes, and ketones; nitrosamines, amines, nitrophenolics, and aniline compounds and most chlorinated and brominated organic constituents. ETC also recommends segregating the following categories of waste: Highly volatile and non-watersoluble constituents, because of the likelihood of air emissions during biological treatment; and the acutely toxic P-listed wastes, because they are poisonous to the biological treatment system. The ETC explicitly recommends the following criterion for designating a waste stream "amenable to biological treatment": the waste must contain less than 1% solids, must be free of oil and grease, and must contain less than 10 ppm total heavy metals.

ETC then defines "ICR waste streams not amenable to biological treatment" as: ICR wastes with constituents (from the groups listed above) at individual concentrations greater than 100 x F039 wastewater treatment standards; and ICR wastes with "water insoluble and