thickness, as appropriate, to demonstrate continuous compliance.

3. Selection of MACT

Several commenters remarked that the standard for existing hard chromium electroplaters is inappropriate. Nine commenters stated that the standard was too stringent for large, hard chromium electroplaters; small, hard chromium electroplaters; or both. The arguments against regulating existing hard chromium electroplaters as stringently as that proposed were primarily that the costs associated with the standard were unduly burdensome and did not justify the resulting environmental benefit, and the emission concentration limits specified in the proposed rule were not consistently achievable using the control devices upon which the standards are based.

Five commenters, on the other hand, indicated that the standard for small, hard chromium electroplaters was too lenient. The arguments presented by the commenters who supported a more stringent standard for small, hard chromium electroplaters were that the residual risk associated with emissions from these sources warranted more stringent controls, the Agency's interpretation of the MACT floor was flawed (i.e.; should be based on a straight average, not a median); and the control efficiency for packed-bed scrubbers is overstated, as are the cost impacts for a standard based on the use of composite mesh-pad systems.

In setting an emission standard, the Act directs the Administrator to take into account costs, nonair quality health and environmental impacts, and energy requirements. To fulfill this requirement for existing hard chromium electroplating sources, the EPA evaluated the cost, impact, and benefit of a standard based on the use of a packed-bed scrubber as well as a standard based on the use of a composite mesh-pad system. The Agency's estimate of the incremental cost effectiveness of requiring all sources to meet a standard based on composite mesh-pad systems compared to one based on packed-bed scrubbers is approximately \$3.7 million per Megagram of chromium controlled (\$/ Mg) for large sources and \$10.7 million/ Mg for small sources.

Based on the EPA's economic analysis, a standard based on the use of composite mesh-pad systems by all sources would not cause adverse economic effects on large sources that currently use packed-bed scrubbers. Due to economies of scale, the economic impacts on larger facilities are consistently less than those on small

facilities. As a result, larger facilities will have a greater ability to pass on control costs. Although these costs may seem high, the EPA believes the toxicity of chromium justifies these costs. In consideration of the potential adverse impacts to small sources, the final rule requires a less stringent standard for small sources than large sources, which is based on the use of packed-bed scrubbers rather than composite meshpad systems. [See Chapter 5 of the New Technology Document ("Technical Assessment of New Emission Control Technologies Used in the Hard Chromium Electroplating Industry;" EPA-453/R-93-031) for a detailed discussion of EPA's economic analysis for these systems.]

The EPÅ considers the emission limitation based on the use of composite mesh-pad systems to be representative of and consistently achievable with well-maintained units. No data were submitted to support an alternate emission limitation. (For further discussion of the emission limitations, see section V.F.)

Regarding the comments that the proposed standard for small, hard electroplaters was too lenient, the Agency believes that the MACT floor is properly based on the use of packed-bed scrubbers for this source category. The EPA promulgated a final rule on June 6, 1994 (57 FR 29196) that presents the Agency's interpretation of section 112(d)(A) of the Act regarding the basis for the MACT floor. Under this interpretation, the Agency considers the emission limitations achieved by the best performing 12 percent of existing sources and arrives at the MACT floor by selecting the median of the values, rather than a straight average. This interpretation was followed in establishing the MACT floor for small, hard chromium electroplaters. The Agency considers any discussion of the risk remaining from small, hard chromium electroplaters to be premature at this time.

In accordance with section 112(f) of the Act, if a significant residual risk from small, hard chromium electroplating operations regulated by MACT is found, the Agency is required to promulgate standards to mitigate that risk. The EPA recognizes the potential hazards of chromium emissions from small sources and has chosen to regulate area sources with MACT rather than GACT. The EPA also considers its cost and impact analysis for small, hard chromium electroplaters to be sound. The EPA estimated retrofit costs based on information from vendors who supply the equipment to the industry, and therefore estimates are

representative of the control costs incurred by affected sources. The EPA considers the efficiency assigned to packed-bed scrubbers for purposes of calculating impacts to be representative of that achieved by well-maintained and well-operated units controlling emissions from hard chromium electroplating tanks. As with comments on the emission limit based on composite mesh-pad systems, no data supporting alternate emission limits for a standard based on packed-bed scrubbers were submitted.

D. Selection of MACT for Decorative Chromium Electroplating and Chromium Anodizing Tanks

1. Regulation of the Trivalent Chromium Plating Process

Eleven commenters disagreed that decorative chromium electroplating tanks that use a trivalent chromium process should be regulated by the proposed rule. Many of the commenters felt that the EPA had insufficient data to conclude that the risk associated with this process warranted regulation of those sources. Four commenters found fault with the EPA's supporting data and noted that the level of hexavalent chromium in a trivalent chromium bath that corresponds to the EPA's estimate of hexavalent emissions from that bath would far exceed that level of hexavalent chromium that would destroy the trivalent bath. Three other commenters stated that use of the trivalent chromium process should be encouraged by the EPA, because trivalent processes result in less total chromium in process wastewater and less sludge generation. One of the commenters suggested regulating trivalent chromium electroplating processes under GACT to eliminate some of the burden associated with the reporting, recordkeeping, and monitoring requirements specified in the proposed rule.

Twelve commenters responded to the EPA's request for comment on whether the trivalent chromium electroplating process should be required for new sources. The majority of these commenters did not think that this should be a requirement because the process was not technically feasible for the full range of decorative chromium electroplating operations. Two commenters pointed out inconsistencies in the EPA's reasoning; the EPA can only require trivalent chromium baths if it recognizes the difference in toxicity between hexavalent and trivalent chromium.

The EPA has reconsidered the technical basis for regulating tanks