

Segregation of wastewater streams; (2) preliminary treatment steps as necessary (including oils removal using chemical emulsion breaking and oil-water separation, alkaline chlorination for cyanide destruction, reduction of hexavalent chromium, and chelation breaking); (3) chemical precipitation using sodium hydroxide; (4) sedimentation using a clarifier; and (5) sludge removal (*i.e.*, gravity thickening and filter press). See section 9 of the TDD for today's final rule for additional technical details on the part 433 technology basis.

Approximately 99% of the existing direct dischargers in the General Metals subcategory are currently covered by existing Metal Finishing effluent guidelines. The remaining 1% (an estimated three facilities nationwide based on the survey weight associated with one surveyed facility) are currently permitted to discharge metal-bearing wastewaters but are not covered by existing Metal Finishing effluent guidelines. EPA's review of discharge monitoring data and unit operations for this surveyed non-433 General Metals facility (with a survey weight of approximately three) indicates that this facility is subject to permit limitations established on a BPJ basis that are equivalent or more stringent than part 433 limitations. Transferring limitations from existing Metal Finishing effluent guidelines would likely result in no additional pollutant load reductions. Therefore, based on the lack of additional pollutant removals that are estimated, EPA is not promulgating BPT limitations transferred from existing Metal Finishing effluent limitations guidelines for the General Metals subcategory.

EPA is not revising or establishing BPT limitations for any facilities in this subcategory. Direct dischargers in the General Metals subcategory will remain regulated by permit limits and part 433, as applicable.

## 2. Best Conventional Pollutant Control Technology (BCT)

In deciding whether to adopt more stringent limitations for BCT than BPT, EPA considers whether there are technologies that achieve greater removals of conventional pollutants than adopted for BPT, and whether those technologies are cost-reasonable under the standards established by the CWA. EPA generally refers to the decision criteria as the "BCT cost test." For a more detailed description of the BCT cost test and details of EPA's analysis, see Chapter 4 of the EEBA.

As EPA is not establishing any BPT limitations for the General Metals

subcategory, EPA did not evaluate any technologies for the final rule that can achieve greater removals of conventional pollutants. Consequently, EPA is not establishing BCT limitations for the General Metals subcategory.

## 3. Best Available Technology Economically Achievable (BAT)

EPA proposed to establish BAT limitations for existing direct dischargers in the General Metals subcategory based on the Option 2 technology. As previously noted, EPA has decided not to establish BPT limitations based on Option 2 technology. The same reasons support not establishing BAT limitations based on the same technology. EPA evaluated the cost of effluent reductions, pollutant reductions, and the economic achievability of compliance with BAT limitations based on the Option 2 technology.

Based on the revisions and corrections to the EPA Cost & Loadings Model discussed in the NODA and in section IV.B.1 of today's final rule, EPA determined that the costs of Option 2 are disproportionate to the toxic pollutant reductions (measured in pound-equivalents (PE)). The cost of achieving the effluent reduction (in 1981\$) for Option 2 for direct dischargers in the General Metals subcategory is over \$1,000/PE removed (see the EEBA and DCN 37900, section 26.0, for a discussion of the cost-effectiveness analysis). The costs associated with this technology are, as previously noted, substantially greater than the level EPA has traditionally determined are associated with available toxic pollutant control technology. EPA has determined that Option 2 technology is not the best available technology economically achievable for existing direct dischargers in the General Metals subcategory. EPA is not revising or establishing BAT limitations for this subcategory based Option 2 technology.

EPA also considered transferring BAT limitations from existing Metal Finishing effluent guidelines (40 CFR 433.14) to the General Metals subcategory. EPA's reviewed existing General Metals facilities and found that all are currently achieving part 433 BAT limitations. Transferring BAT limitations from existing Metal Finishing effluent guidelines would likely result in no additional pollutant load reductions and minimal incremental compliance costs (see section VI.A.1). Therefore, based on the lack of additional pollutant removals that are estimated, EPA is not promulgating BAT limitations

transferred from existing Metal Finishing effluent limitations guidelines for the General Metals subcategory.

EPA is not revising or establishing BAT limitations for any facilities in this subcategory. Direct dischargers in the General Metals subcategory will remain regulated by permit limits and part 433, as applicable.

## 4. New Source Performance Standards (NSPS)

EPA proposed NSPS for the General Metals subcategory based on Option 4 technology. Option 4 technology is similar to Option 2 (including Option 2 flow control and pollution prevention) but includes oils removal using ultrafiltration and solids separation by a microfilter (instead of a clarifier). Commentors stated that EPA had undercosted the Option 4 technology and that the compliance costs would be a barrier to entry for new facilities. In addition, commentors questioned the completeness of EPA's database on microfiltration, noting that EPA transferred standards for several pollutants from the Option 2 technology, based on lack of data. EPA reviewed its database for the Option 4 technology and agrees that its microfiltration database is insufficient to support a determination that the Option 4 limitations are technically achievable.

EPA also evaluated setting General Metals NSPS based on the Option 2 technology and assessed the financial burden to new General Metals direct dischargers. Specifically, EPA's "barrier to entry" analysis identified whether General Metals NSPS based on the Option 2 technology would pose sufficient financial burden as to constitute a material barrier to entry of new General Metals establishments into the MP&M point source category. Additionally, EPA reviewed its database for establishing General Metals NSPS based on the Option 2 technology as commentors indicated the proposed standards were not technically achievable.

In response to these comments, EPA reviewed all the information currently available on General Metals facilities employing the Option 2 technology basis. This review demonstrated that process wastewaters at General Metals facilities contain a wide variety of metals in significant concentrations. Commentors stated that single stage precipitation and solids separation step may not achieve sufficient removals for wastewaters that contain significant concentrations of a wide variety of metals—especially if the metals preferentially precipitate at disparate