

feasible; pollution that cannot be prevented or recycled should be treated in an environmentally safe manner whenever feasible; and disposal or release into the environment should be employed only as a last resort * * * (Sec. 6602; 42 U.S.C. 13101 (b)). In short, preventing pollution before it is created is preferable to trying to manage, treat or dispose of it after it is created. The PPA directs the Agency to, among other things, "review regulations of the Agency prior and subsequent to their proposal to determine their effect on source reduction" (Sec. 6604; 42 U.S.C. 13103(b)(2)). EPA reviewed this effluent guideline for its incorporation of pollution prevention.

According to the PPA, source reduction reduces the generation and release of hazardous substances, pollutants, wastes, contaminants, or residuals at the source, usually within a process. The term source reduction "include[s] equipment or technology modifications, process or procedure modifications, reformulation or redesign of products, substitution of raw materials, and improvements in housekeeping, maintenance, training or inventory control. The term 'source reduction' does not include any practice which alters the physical, chemical, or biological characteristics or the volume of a hazardous substance, pollutant, or contaminant through a process or activity which itself is not integral to or necessary for the production of a product or the providing of a service." 42 U.S.C. 13102(5). In effect, source reduction means reducing the amount of a pollutant that enters a waste stream or that is otherwise released into the environment prior to out-of-process recycling, treatment, or disposal.

In these final regulations, EPA supports pollution prevention technology by including pollution prevention in its technology basis for today's limitations and new source performance standards. This includes water conservation and re-use of lubricants and solvents.

C. Section 304(m) Requirements

Section 304(m) of the CWA, added by the Water Quality Act of 1987, requires EPA to establish schedules for: (1) Reviewing and revising existing effluent limitations guidelines and standards; and (2) promulgating new effluent guidelines. On January 2, 1990, EPA published an Effluent Guidelines Plan (see 55 FR 80), in which schedules were established for developing new and revised effluent guidelines for several industry categories, including the metal products and machinery industry. Natural Resources Defense Council, Inc.,

and Public Citizen, Inc., challenged the Effluent Guidelines Plan in a suit filed in the U.S. District Court for the District of Columbia, (*NRDC et al., v. Browner*, Civ. No. 89-2980). On January 31, 1992, the Court entered a consent decree (the "304(m) Decree"), which establishes schedules for, among other things, EPA's proposal and promulgation of effluent guidelines for a number of point source categories. The consent decree, as amended, requires EPA to take final action on the Metal Products and Machinery effluent guidelines by February 14, 2003.

III. Metal Products & Machinery Effluent Guidelines Rulemaking History

A. 1995 and 2001 Proposed Regulations

On May 30, 1995, EPA published a proposal entitled, "Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards: Metal Products and Machinery" (see 60 FR 28210). Throughout today's preamble, EPA refers to this 1995 proposal as the "Phase I" or the "1995" proposal for the Metal Products and Machinery industry. To make the regulation more manageable, EPA initially divided the industry into two phases based on industrial sectors. The Phase I proposal included the following industry sectors: Aerospace; Aircraft; Electronic Equipment; Hardware; Mobile Industrial Equipment; Ordnance; and Stationary Industrial Equipment. At that time, EPA planned to propose a rule for the Phase II sectors approximately three years after the MP&M Phase I proposal. Phase II sectors included: Bus & Truck, Household Equipment, Instruments, Job Shops, Motor Vehicles, Office Machines, Precious Metals and Jewelry, Printed Wiring Boards, Railroad, Ships and Boats, and Miscellaneous Metal Products.

EPA received over 350 public comments on the Phase I proposal. One area where commentators from all stakeholder groups (*i.e.*, industry, environmental groups, regulators) were in agreement was that EPA should not divide the industry into two separate regulations. Commentators raised concerns regarding the regulation of similar facilities with different compliance schedules and potentially different limitations solely based on whether they were in a Phase I or Phase II MP&M industrial sector. Furthermore, many facilities performed work in multiple sectors. In such cases, permit writers and control authorities (*e.g.*, POTWs) would need to decide which MP&M rule (Phase I or II) applied to a facility. EPA's responses to comments

can be found in section 20.3 of the docket for the rule.

Based on these comments, EPA published a new proposal on January 3, 2001 (see 66 FR 424) which completely replaced the 1995 proposal. Throughout this preamble, EPA refers to this proposal as the "2001" proposal for the Metal Products and Machinery industry. In that notice, EPA proposed to establish new limitations and standards for approximately 10,000 facilities in the 18 industrial sectors (without any designation of "Phase I" or "Phase II"). EPA also divided the industry into eight regulatory subcategories: General Metals, Metal Finishing Job Shops, Printed Wiring Board, Non-Chromium Anodizing, Steel Forming & Finishing, Oily Wastes, Railroad Line Maintenance, and Shipbuilding Dry Docks (see 66 FR 439 for a discussion on the development of EPA's proposed subcategorization scheme).

EPA found two basic types of waste streams in the industry: (1) Wastewater with high metals content (metal-bearing); and (2) wastewater with low concentration of metals, and high oil and grease content (oil-bearing). When looking at facilities generating metal-bearing wastewater (with or without oil-bearing wastewater), EPA identified five groups of facilities that could potentially be subcategorized by dominant product, raw materials used, and/or nature of the waste generated (*i.e.*, General Metals, Metal Finishing Job Shops, Printed Wiring Board, Non-Chromium Anodizing, and Steel Forming & Finishing). When evaluating facilities with only oil-bearing wastewater for potential further subcategorization, EPA identified two types of facilities (*i.e.*, Railroad Line Maintenance and Shipbuilding Dry Docks) that were different from the other facilities in the Oily Wastes subcategory based on size, location, and dominant product or activity. This subcategorization scheme allowed EPA to more accurately assess various technology options in terms of compliance costs, pollutant reductions, benefits, and economic impacts.

EPA proposed new limitations and standards for direct dischargers in all eight MP&M subcategories and proposed pretreatment standards for all indirect dischargers in three subcategories (*i.e.*, Metal Finishing Job Shops, Printed Wiring Board, and Steel Forming & Finishing); pretreatment standards for facilities above a certain wastewater flow volume in two subcategories (*i.e.*, General Metals and Oily Wastes); and no national pretreatment standards for facilities in three subcategories (*i.e.*, Non-Chromium