



EPA's Proposed Water Standards For Metal Products and Machinery (MP&M) Industries Raise Concerns for Surface Finishers

The highly controversial Metal Products and Machinery (MP&M) effluent proposals, published in the March 1995 *Federal Register*, are the result of a lawsuit filed by the National Reserve Defense Council (NRDC) against the U.S. Environmental Protection Agency (EPA), because of the agency's "violation" of the Clean Water Act (CWA). The CWA states that the industry effluent guidelines must be reviewed and updated every four years, which EPA neglected to accomplish. Incidentally, the U.S. House of Representatives recently passed the re-authorized CWA House Bill (HR 961), and a similar bill (SB 343) is being introduced in the U.S. Senate.

The proposed MP&M guidelines revealed in 275 pages of executive summary, and 60 file drawers of supporting documents, are intended to replace the patchwork of existing 40 CFR Part 433 regulations. The MP&M proposals are a high-priority item in the EPA's Common Sense Initiative (CSI) program. A preliminary review of the proposed guidelines, however, raises serious questions. The MP&M appears to be an unfunded mandate that will do little but increase administrative workloads for local POTWs, as well as significantly alter compliance requirements for metal finishers.

Under the proposed guidelines, the EPA would impose limits for seven metals, including aluminum (Al) and iron (Fe), as well as cyanide, oil and grease, total suspended solids (TSS), and pH for process water discharges from sites performing manufacturing,

rebuilding or maintenance of metal parts, products or machines, to be used in seven industrial sectors (Phase 1).

Phase 1 of the MP&M includes aerospace/aircraft, electronic equipment, hardware, mobile and stationary industrial equipment captive operations that discharge more than one million gal/yr (3,700 gal/day). The MP&M proposals are scheduled to be finalized by September 1996, for 1999 implementation. Metal finishing jobshops will not be effected by the standards until Phase 1 implementation. Their guidelines, however, will most likely be based on Phase 1 numbers, and the feedback of concerns from industry to EPA.

According to EPA, these proposals reflect the best practicable technology (BPT) performance based on end-of-pipe treatment using chemical precipitation; clarification, in conjunction with water flow/drag-out reduction; and pollution prevention strategies. The accompanying table summarizes the MP&M proposals, and the new pollution limits are compared with the existing Metal Finishing Pretreatment Standards category of 40 CFR Part 433 (1984).

When the new limits are finalized, the BPT waste treatment option will require significant changes and investment. Control of treatment pH is essential for precipitation of many metals.

Some of the serious drawbacks to the MP&M are:

1. Metal finishers are being penalized in the MP&M category, when CFR Part 433 regulations have been very effective in monitoring pollutant discharges.

2. Jobshop electroplaters and metal finishers, who have been steadily upgrading their process areas and waste treatment equipment, are again being punished instead of being rewarded for their diligent efforts.

Why Include Iron & Aluminum?

The inclusion of Fe and Al discharge concentration guidelines in MP&M presents an especially serious concern to all metal finishers, given the use of these metals as wastewater treatment chemicals. The EPA's reasoning for regulating Fe and Al is based on the metals' value as indicators for removal of other metals, rather than specific concerns about Fe or Al. What is the basis for the low concentration that even a well-operated clarifier cannot reliably achieve? Are not the metals about which there is real concern the best performance indicators? Why should a shop be charged with NPDES permit violations for metals that are commonly added to flocculants by the downstream POTW?

Should the EPA have a convincing reason from representative industry, and process-specific data, to indicate that there is a problem with a pollutant, only then should it establish limits for that hazardous pollutant. Harmless Fe and Al should not be included in the MP&M.

Mass-Based vs. Concentration-Based Permits

In addition, the EPA is proposing to require POTW permit writers to convert the concentration-based limits (except for TSS and pH) into mass-based limitations, based on historical

water-flow, production throughput and concentration of total dissolved solids in rinsewaters. Such thinking will encourage good water use practices and installation of pollution prevention technologies. Implementation of water reduction/re-use and metal recovery make sound business sense, however, and the regulatory requirement is a needless burden.

The mass-based criteria present a problem in the real world, because these limits would be determined from average daily flows, literally setting the industry up for non-compliance during peak production. The production rates and dumping schedules of a process vary significantly during the day, and from day to day.

AESF/NAMF/MFSA Response to MP&M Proposals

The AESF/NAMF/MFSA Joint Government Advisory Committee (GAC) is seeking response to the proposed MP&M rules to address major and minor claims:

- What decision-making process did the EPA use to include Fe and Al?
- Why are metal finishers lumped in the MP&M when the existing pretreatment standards (40 CFR Part 433) are working well to monitor and achieve compliance?
- Is the MP&M consistent with EPA's Common Sense Initiative?

As an electroplater/metal finisher, you are encouraged to contact the EPA Office of Water (202/260-9817) to express your concerns and suggestions. Any changes considered or made to the existing pretreatment standards must make sense in achieving environmental compliance objectives. Send your comments on the MP&M, Phase 1 Point Source Category, to: Ed Terry, U.S. EPA, Engineering and Analysis Division (mail code 4303), Office of Science and Technology, 401 M Street, SW, Washington, DC 20460 (Phone: 202/260-7126).

Support your comments or specific information with any data that your company has that dispute the data EPA has used. If your facility could not achieve the proposed discharge

Proposed MP&M Effluent Limits Compared With Metal Finishing Category 40 CFR Part 433^a

Pollutant	Daily Maximum (mg/L)			Maximum Monthly Avg. (mg/L)		
	Proposed PSES ^a	PSNS ^a		Proposed PSES ^a	PSNS ^a	
Aluminum (new)	1.4	(NR)		1.0	(NR)	
Cadmium	0.7	(0.69), 0.7 [†] , 1.2*	0.11	0.3	(0.26), 2.7*	0.07
Chromium	0.3	(2.77), 4.0 [†]	2.77	0.2	(1.71)	1.71
Copper	1.3	(3.38), 2.7 [†]	3.38	0.6	(2.7)	2.07
Gold	1.2	(NR), 0.7 [†]		0.7	(NR)	
Iron (new)	2.4	(NR)		1.3	(NR)	
Lead	NA	(0.69), 0.4 [†] , 0.6*	0.69	NA	(0.43), 0.4 [‡]	0.43
Nickel	1.1	(3.98), 2.6 [†]	3.98	0.5	(2.38)	2.38
Zinc	0.8	(2.61), 2.6 [†]	2.61	0.4	(1.48)	1.48
Total Metals						
[Cu, Ni, Zn, CN(T)]	NA	(10.5), 6.8 [†]		NA	(6.8)	
Silver	NA	(0.43), 0.7 [†]	0.43	NA	(0.24)	0.24
Cyanide (T)	0.03	(1.2), 1.0 [†]	1.20	0.02	(0.61)	0.65
Cyanide (Amenable)	NA	(0.86), 5.0*	0.86	NA	(0.32), 2.7 [‡]	0.32
Total Suspended						
Solids (TSS)	73	(60)		36	(31)	
Total Toxic Organics	NA	(2.13)		NA	(NA)	
Oil and Grease	35	(52)		17	(26)	
pH	6-9			6-9		

Code: NA—Not Available; NR—Not Regulated; PSES—Pretreatment Standards for Existing Sources; PSNS—Pretreatment Standards for New Sources; [‡]4-day consecutive monitoring average; ^aGuidance Manual for Electroplating and Metal Finishing Pretreatment Standards, EPA Effluent Guidelines and Permit Division; *Platers discharging less than 10,000 gal/day; [†]Platers discharging more than 10,000 gal/day; ()—Values represent 40 CFR, Part 433 (PSES).

guidelines, explain why, and point out the economic impact that will be caused by complying. Also, send your comments to the GAC, in care of AESF Headquarters.

Review "Q&A on MP&M Regs" in "Advice & Counsel," by Frank Altmayer, in the September issue of *P&SF*, which explains how we can make our voices heard.

Note: EPA has extended the comment period on the proposed MP&M rules to October 27, 1995. Thanks to the CSI and the AESF/NAMF/MFSA Government Relations Office, we are being heard. Take advantage of this opportunity to send your comments. o