

Metal Products and Machinery Effluent Guidelines Public Meeting

Chicago, IL

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What is the purpose of the public meeting and the pretreatment hearing?

Public Meeting -

- Review of the proposed regulation
- Answer public's questions on various aspects of the proposal

Pretreatment Hearing -

- Allow interested parties to provide oral comment for the MP&M rulemaking record
- There is no Q&A following oral comment

What are Effluent Guidelines?

- National industrial wastewater regulations for both direct and indirect dischargers
- Industry Specific
- Numerical, technology performance-based limitations
- Economically Achievable

"Numerical, Technology Performance-Based Limitations"

- Develop numerical limits based on BAT
→ Specific technology not required
- Mass-based and Concentration-based limitations

"Numerical, Technology Performance-Based Limitations"

- Technology basis developed through:
 - Questionnaires
 - EPA Sampling and Industry-supplied analytical data
 - Develop estimated costs and loads for questionnaire recipients
 - Develop national estimates based on questionnaires

Economic Impact Analysis

- Closure Analysis
- Regulatory Flexibility Analysis
- Community Impact Analysis
- Foreign Trade Impacts
- Firm Level Impacts
- Barrier to Entry Analysis (New Sources)
- Cost-effectiveness Analysis (\$/pound-equivalent removed)

Statistical Analysis

- Characteristics of MP&M industry
 - Number of water users, water dischargers, number of facilities by sector, etc.
- Use of analytical data to develop long-term averages, variability factors, and limits

Statistical Analysis

- Calculate Long-Term Averages

The LTA is estimated for each sampled plant by computing the arithmetic mean of the constituent daily concentrations.

The pollutant-specific LTA is defined as the median of the plant arithmetic means.

Statistical Analysis

Wastewater treatment systems should be designed using the Long-Term Average as the target.

Statistical Analysis

- Determine Variability Factors

The amount of variability allowance is determined based on the analysis of variation observed in actual operation of recommended treatment technologies.

*Variability Factors are designed to account for variability within a facility and NOT between facilities

Statistical Analysis

- Determine Variability Factors

Based on modified delta log-normal distribution of individual measurements.

Daily VF based on the 99th percentile of the distribution.

4 - Day (monthly average) VF based on 95th percentile of the distribution of average values.

Statistical Analysis

- Calculation of Limits

$LTA \times \text{daily VF} = \text{Daily Maximum Limit}$

$LTA \times 4\text{-day VF} = \text{Monthly Average Limit}$

Statistical Analysis

- Measure Daily Max and Monthly Average
- The daily maximum limit is a restriction on the amount of pollutant in any one daily sample
- The monthly average limit is a restriction on the average of daily measurements taken during a month

What is the Metal Products and Machinery (MP&M) Effluent Guideline?

- The proposed MP&M rule covers facilities that manufacture, rebuild and maintain metal parts, products and machines.
- Initially, MP&M rulemaking was divided into two phases.
- Phase I regulation was proposed May 30, 1995.
- Combined rule proposed on January 3, 2001.

Purpose of MP&M Rule

- Cover Sites not Currently Covered and Review those covered by 40 CFR 413 and 40 CFR Part 433
- Reduce Metals in POTW Sludge
- Incorporate Pollution Prevention
- Develop Implementable Rule
- Fulfill Requirements of the Clean Water Act
- Satisfy NRDC Consent Decree

General Applicability

- Includes process wastewater discharges from existing or new industrial sites engaged in manufacturing, rebuilding, or maintenance of metal parts, products or machines for use in the 18 MP&M industrial sectors.

MP&M Sectors

MP&M Phase I	MP&M Phase II
Aerospace	Bus and Truck
Aircraft	Household Equipment
Electronic Equipment	Instruments
Hardware	Motor Vehicles
Mobile Industrial Equipment	Office Machines
Ordnance	Railroad
Stationary Industrial Equipment	Ships and Boats
	Precious Metals and Jewelry
	Job Shops
	Printed Wiring Boards
	Miscellaneous Metal Products

General Applicability

- Includes facilities owned and operated by federal, state, or local governments.
- Includes mixed use facilities (U.S. military or federal installation, or similar municipal or private installation).

General Applicability

- MP&M rule does not include:
 - < wastewater covered by other metals related ELGs (except 413, 433);
 - < non-process wastewater (non-contact cooling water, sanitary wastewater, storm water);

General Applicability

- MP&M rule does not include:
 - < wastewater from ancillary maintenance and repair operations at facilities not in the 18 sectors; and
 - < wastewater resulting from the washing of cars, aircraft or other vehicles, when performed only for aesthetic/cosmetic purposes.

Overlap with Other Effluent Guidelines

MP&M does not apply to wastewater discharges already covered by:

40 CFR Parts 420, 421, 424, 461, 463, 464, 465, 466, 467, 468, 469, 471

When Does MP&M Replace Other Effluent Guidelines?

- Replace 40 CFR 413 and 433 with MP&M for Metal Finishing Job Shops and Printed Wiring Board Subcategories.
- Replace 40 CFR 413 and 433 with MP&M for General Metals facilities discharging > 1 MGY process wastewater.
- Replace 40 CFR 420 with MP&M for the Steel Forming & Finishing Subcategory.

Summary of Metals Industry Effluent Guidelines

Coverage Area	Title	CFR Reference
Metal and Metal Alloy Manufacturing	Iron and Steel Manufacturing ¹⁰	40 CFR 420
	Nonferrous Metals Manufacturing	40 CFR 421
	Ferrous Alloy Manufacturing	40 CFR 424
Metal Forming	Iron and Steel Manufacturing ¹⁰	40 CFR 420
	Metal Molding and Casting	40 CFR 464
	Aluminum Forming	40 CFR 467
	Copper Forming	40 CFR 468
	Nonferrous Metals Forming and Metal Powders	40 CFR 471
Component Finishing	Electroplating	40 CFR 413
	Iron and Steel Manufacturing ¹⁰	40 CFR 420
	Metal Finishing	40 CFR 433
	Battery Manufacturing	40 CFR 461
	Coil Coating	40 CFR 465
	Porcelain Enameling	40 CFR 466
	Electrical and Electronic Component Manufacturing	40 CFR 469

Source: Code of Federal Regulations, Part 40

¹⁰The Iron and Steel Manufacturing category includes metal manufacturing, metal forming, and component finishing.

MP&M Schedule

- Proposal Signed by EPA Administrator:
 - October 31, 2000
- Published in FR: January 3, 2001
- 120 Day Comment Period Ends: May 3, 2001
- Promulgation Signature Date: December 2002
- Compliance Deadline for Indirect Dischargers:
 - 3 years from the publication of the final rule

Estimated MP&M Population

Industry Scope

- 89,000 facilities including zero dischargers
- 63,000 wastewater dischargers
- 93 % indirects, 7 % direct
- >80 % small business by SBA definition

Proposed Regulated Scope

- 10,300 wastewater dischargers
- 53 % indirects, 47 % direct
- >85 % of small business excluded from proposed rule

MP&M Industry Population

Primary Sector	Number of Sites
Aerospace	551
Aircraft	1,102
Bus and Truck	3,863
Electronic Equipment	2,171
Hardware	6,243
Household Equipment	1,095
Iron and Steel	153
Instrument	3,043
Job Shop (Metal Finishing, Painting, Machining, etc.)	33,793
Miscellaneous Metal Products	3,310
Mobile Industrial Equipment	990
Motor Vehicle	11,179
Office Machine	147
Ordnance	335
Precious and Non-Precious Metals	1,278
Printed Circuit Board	557
Railroad	823
Ship and Boat	38
Stationary Industrial Equip	4,035
Unknown Sector	9,664

Data Collection Activities

Completed

Screener Surveys (8000 Phase I, 5000 Phase II)

Detailed Questionnaires

- Long Questionnaires (1000 Phase I, 350 Phase II)
- Short Questionnaires (100 Phase II)
- Municipality Questionnaires (150 Phase II)
- POTW Questionnaires (150 Phase II)
- Federal Surveys

Site and Sampling Visits

- Site Visits (89 Phase I, 112 Phase II)
- Sampling Visits (27 Phase I, 45 Phase II)

Site Visits and Sampling

Phase I Sectors	Total Number of Sites Visited	Total Number of Sites Sampled	Phase II Sectors	Total Number of Sites Visited	Total Number of Sites Sampled
Aerospace	13	2	Bus & Truck	8	4
Aircraft	32	9	Household Equipment	4	2
Electronic Equipment	22	4	Instrument	4	2
Hardware	15	4	Motor Vehicle	20	9
Mobile Industrial Equipment	7	2	Office Machines	5	2
Ordnance	15	3	Precious Metals & Jewelry	2	2
Stationary Industrial Equipment	14	4	Railroad	10	4
			Ships and Boats	7	3
			Metal Finishing Job Shops (Anodizers)	20	8
			Printed Wiring Board	(4)	(2)
				9	3

Pollutants of Concern

- Criteria for Selection of Pollutants of Concern (POC):

1) Pollutant is detected in three or more samples collected during MP&M sampling program.

2) Average pollutant concentration is greater than 5 X ML.

- POC list is 132 pollutants
(see Table 7-5 of the Technical Development Document)

Regulated Pollutants

Factors considered in eliminating POCs from list of regulated pollutants:

- 1) POC is controlled through the regulation of another pollutant
- 2) POC is present in only trace amounts and/or not toxic
- 3) Pollutant may serve as a treatment chemical
- 4) POC is not controlled by BPT/BAT technology

Subcategorization

Factors considered:

- Unit operations
- Activity
- Raw materials
- Products
- Size
- Wastewater characteristics
- Economics
- Others (e.g. age, location, energy requirements, POTW burden)

Proposed Subcategories

- General Metals
- Metal Finishing Job Shops
- Non-Chromium Anodizing
- Printed Wiring Board
- Steel Forming and Finishing
- Oily Wastes
- Railroad Line Maintenance
- Shipbuilding Dry Dock

Technology Options

- The following subcategories require treatment for metal and organic pollutants:
 - General Metals
 - Metal Finishing Job Shops
 - Non-chromium Anodizing
 - Printed Wiring Board
 - Steel Forming and Finishing

Technology Options

- The following subcategories require treatment for organic pollutants:
 - Oily Wastes
 - Railroad Line Maintenance
 - Shipbuilding Dry Docks

Selected Technologies for Metal-Bearing Subcategories

Option 2 (Proposed for Existing Sources)

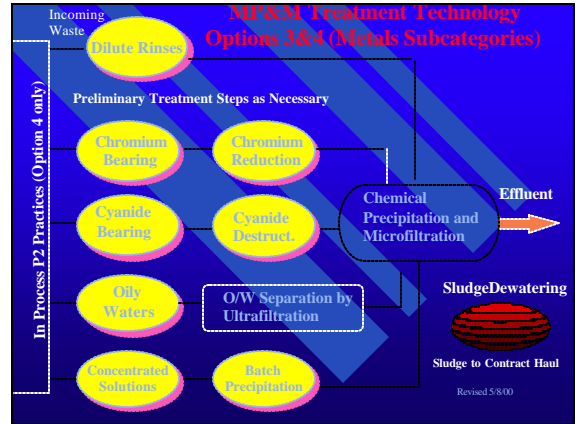
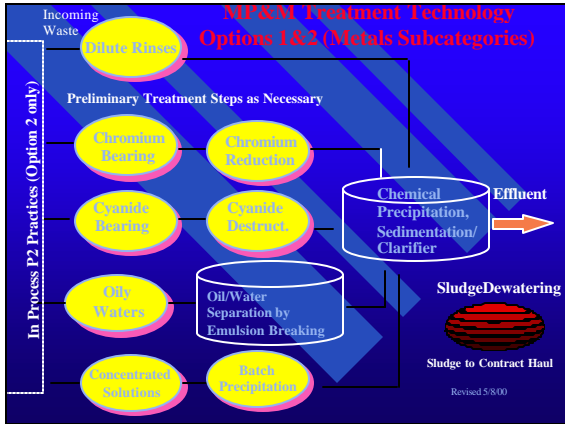
- Segregation of streams, Preliminary treatment steps (O/W separation by emulsion breaking), Chemical Precipitation and Sedimentation (+ in-process P2)

Option 4 (Proposed for New Sources)

- Segregation of streams, Preliminary treatment steps (O/W separation by UF), Chemical Precipitation and Microfiltration (+ in-process P2)

Pollution Prevention Technology Add-on Option

- Added to treatment options 2, 4, 6, 8, 10
- Types of In-process pollution prevention (P2)
 - Flow rinse reduction for rinses and baths
 - Recycling of coolants/lubricants
 - Recycling of paint water curtains

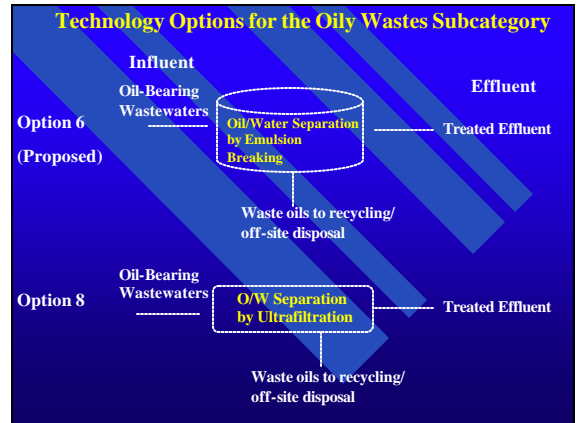


Technology Options

Oily Wastes Subcategory Options

Oil/Water Separation by:

- Chemical Emulsion Breaking
- Ultrafiltration

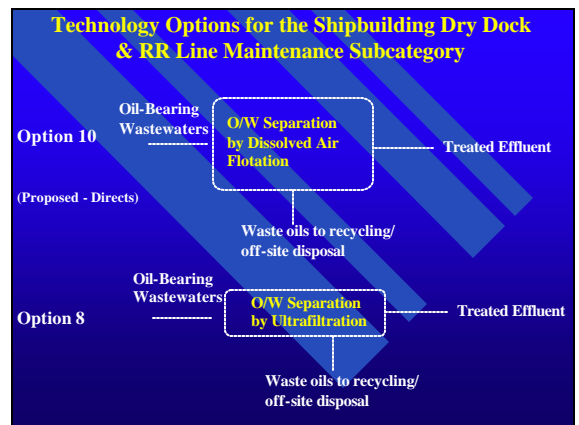


Technology Options

Railroad line Maintenance and Shipbuilding Dry Dock Subcategory Options

Oil/Water Separation by:

- DAF
- Ultrafiltration



Subcategories

General Metals

- All facilities that do not fall under one of the other subcategories.
- Includes captive MF shops, heavy rebuilding and most manufacturing facilities.
- Facilities with metal-bearing wastewater only, or facilities with a combination of metal-bearing and oily wastewater.

Subcategories

General Metals

- Existing source limits based on Option 2
- Proposed limits for: 10 metals
 - Cyanide/Amenable Cyanide Sulfide
 - Organics Control Option
 - TSS and O&G (directs only)
- 1 MGY Flow cutoff exclusion for indirects
 - based on POTW burden reduction

Subcategories

Metal Finishing Job Shops

- Only includes facilities that discharge wastewater from one or more of the 6 Metal Finishing identifying operations AND operate as a job shop.
- Proposal includes printed wiring board job shops in this subcategory based on economics of job shops.
- MP&M will replace 413 and 433 for all facilities in this subcategory.

Subcategories

Metal Finishing Job Shops

- Existing source limits based on Option 2
- Proposed limits for: 10 metals
 - Cyanide/Amenable Cyanide Sulfide
 - Organics Control Option
 - TSS and O&G (directs only)
- No Flow cutoff exclusion for indirects
- Higher variability factors than General Metals limits

Subcategories

Non-Chromium Anodizing

- Aluminum is only major pollutant
- Large volume of water - large treatment systems needed to remove other metals at low concentrations
- Low organic constituents
- No chromic acid or dichromate sealants

Subcategories

Non-Chromium Anodizing

- Based direct discharge limits on Option 2
- Proposed limits for: Al, Mn, Ni, Zn
 - O&G and TSS
- No pretreatment standards (indirects remain subject to 40 CFR 413 or 433)

Subcategories

Printed Wiring Boards

- ❑ Some unique processes
- ❑ Lead-bearing operations
- ❑ More consistent metals mix processed
- ❑ Typically target copper in treatment
- ❑ Ion Exchange and Sulfide precipitation frequently performed

Subcategories

Printed Wiring Boards

- ❑ Existing source limits based on Option 2
- ❑ Proposed limits for: 8 metals
 - Cyanide/Amenable Cyanide
 - Sulfide
 - Organics Control Option
 - TSS and O&G (directs only)
- ❑ No flow cutoff exclusion for indirects

Subcategories

Steel Forming and Finishing

- ❑ Surface finishing or cold forming operations on steel wire, rod, bar, pipe or tubing are subject to MP&M.
- ❑ Iron and Steel (40 CFR Part 420) applies to:
 - any hot forming;
 - cold forming, continuous electroplating, or continuous hot dip coating of sheets, strips, or plates.

Subcategories

Steel Forming and Finishing

- ❑ Existing source limits based on Option 2 General Metals
- ❑ Limits are mass-based (lb/1,000 lb)
- ❑ Proposed limits for: 10 metals
 - Cyanide/Amenable Cyanide
 - Sulfide
 - Organics Control Option
 - TSS and O&G (directs only)
- ❑ No flow cutoff exclusion for indirects

Subcategories

Oily Wastes

- ❑ Machine shops, maintenance and repair facilities
- ❑ High O&G concentrations, low metals

Subcategories

Oily Wastes

- ❑ Must only discharge wastewater from the following types of unit operations:
 - alkaline cleaning, degreasing, corrosion preventive coating, floor cleaning, grinding, heat treating, impact/pressure deformation, machining, painting, steam cleaning, laundering and testing.

Subcategories

Oily Wastes

- Based limits on Chemical Emulsion Breaking
- Proposed limits for:
 - Sulfide
 - Organics Control Option
 - TSS and O&G (directs only)
- 2 MGY Flow cutoff exclusion for indirects
 - based on POTW burden reduction

Subcategories

Railroad Line Maintenance

- Low metals concentrations
- Exterior cleaning and storm water issues
- Differs from railroad overhaul and railroad manufacturing facilities

Subcategories

Railroad Line Maintenance

- Based direct discharge limits on DAF
- Proposed limits for directs for:
 - BOD₅, O&G, and TSS
- No pretreatment standards

Subcategories

Shipbuilding Dry Dock

- Dry docks and similar structures (graving docks, building ways, lift barges, marine railways) at shipbuilding facilities
- Mostly dry unit operations (painting, abrasive blasting)
- Mainly oil-bearing wastewater
- Does not include “shore side” operations

Subcategories

Shipbuilding Dry Dock

- Based direct discharge limits on DAF
- Proposed limits for directs for:
 - O&G and TSS
- No pretreatment standards
- Does not include: flooding water, dry dock ballast water, or storm water
- Includes barnacle removal in preparation for maintenance, rebuilding, or repair

Direct Dischargers

- Direct Discharge facilities → discharge wastewaters to the surface waters of the U.S. (under a NPDES permit).
- EPA has proposed limitations for all direct dischargers within the scope of the MP&M rule.
- Regulated pollutants and numerical limits vary by subcategory.

Indirect Dischargers

- Indirect Discharge facilities → discharge to Publicly-Owned Treatment Works (POTWs).
- There are NO MP&M proposed pretreatment standards for:
 - Shipbuilding Dry Docks,
 - Railroad Line Maintenance,
 - Non-Chromium Anodizing (still have 413/433),
 - General Metals < = 1 MGY,
 - Oily Wastes < = 2 MGY.

Indirect Dischargers (continued)

- Limits for indirect dischargers do not include Iron, Aluminum, TSS, or O&G.
- Regulated pollutants and numerical limits vary by subcategory.

Number of Facilities by Subcategory

Subcategory	Number of Dischargers at Baseline		Number Proposed	
	D	I	D	I
General Metals	3,794	26,000	3,794	3,055
MF Job Shops	15	1,514	15	1,514
Non-Cr Anodizing	0	190	0	0
PWB	11	621	11	621
Steel F & F	43	110	43	110
Oily Wastes	911	28,500	911	226
RR Line Maint.	34	799	34	0
Ship Dry Dock	6	6	6	0

Pollutant Loadings Removed

Conventional Pollutants	115 Million lbs.
Priority Pollutants	12 Million lbs.
Nonconventional Metal & Organic Pollutants	43 Million lbs.
Toxic-Weighted lb.-Equiv.	11 Million lb-eq.

Estimating Pollutant Loads

- 1) Collect Wastewater Samples (unit operations, treatment influent and effluent)
- 2) For each survey, determine pollutant load for each unit operation (flow x concentration)
- 3) Estimate baseline pollutant load based on treatment in place (TIP) for each survey.
- 4) Estimate option-specific pollutant loads for each survey
- 5) Calculate national estimates of pollutant reductions

Annualized Compliance Costs of Proposal

National Estimate of MP&M Compliance Costs
[After tax, million 1999 \$]

Subcategory	Direct Dischargers	Indirect Dischargers
General Metals	132.3	969.9
Metal Finishing Job Shops	08	80.1
Non-Chromium Anodizing	NA	Not Proposed
Printed Wiring Board	1.7	93.4
Steel Forming & Finishing	20.9	14.0
Oily Wastes	93	4.3
Railroad Line Maintenance	08	Not Proposed
Shipbuilding Dry Docks	1.4	Not Proposed
Total*	167.2	1,161.7

Pre-tax annualized compliance costs = \$1.98 billion (1999 \$)

Summary of Facility Costs

- Annualized cost of compliance estimated for 10,000 facilities:
 - \$0-\$50,000 for approximately 5,000 facilities
 - \$50,000 - \$200,000 for approx. 3,000 facilities
 - \$200,000 - \$500,000 for approx. 1,500 facilities
 - \$500,000 or more for approx. 500 facilities

Estimating Facility Costs

- 1) Develop computerized Cost and Design Model based on cost equations for capital and operation and maintenance costs.
- 2) Assessment of baseline conditions for each survey (P2, TIP, unit operation flows)
- 3) For each survey, cost model develops total capital and total annualized costs for each option.
- 4) Develop national cost estimates using survey weights.

Economic Impacts - Closures by Subcategory

<u>Subcategory</u>	<u>Facility Closures</u>
General Metals	44
MF Job Shops	128
Non-Cr Anodizing	0
PWB	7
Steel F & F	6
Oily Wastes	14
RR Line Maintenance	0
Ship Dry Docks	<u>0</u>
ALL SUBCATEGORIES	199

Cost Effectiveness by Subcategory \$ (1981 dollars)/pound-equivalent

<u>Subcategory</u>	<u>Direct Dischargers</u>	<u>Indirect Dischargers</u>
General Metals	127	136
MF Job Shops	49	39
Non-Cr Anodizing	--	Not Proposed
PWB	22	68
Steel F & F	54	68
Oily Wastes	399	178
RR Line Maintenance	NA*	Not Proposed
Ship Dry Docks	<u>NA*</u>	<u>Not Proposed</u>
ALL SUBCATEGORIES	107	108

* Only Conventional Pollutants are proposed for regulation in these two subcategories.

Total Estimated Benefits

EPA estimates that total benefits of rule range from: \$347 million to \$1.14 billion (\$1999)

EPA monetized benefits for:

- 1) Reduced cancer risk (fish & water consumption)
- 2) Reduced exposure to lead
- 3) Avoided sewage sludge disposal costs
- 4) Enhanced fishing
- 5) Nonuse benefits

Estimated Human Health Benefits

- Total human health benefits: \$ 41.3 million (1999\$)
- Benefits from reduction in cancer: \$13.3 million (1999\$)
- Benefits from reduced incidence of neonatal mortality (lead-related): \$9.33 million (\$1999)
- Benefits from reduced exposure to lead (adults): \$13.6 million (1999\$)

POTW Benefits

- ❑ Eliminates inhibition problems at 306 POTWs
- ❑ Reduction in metals in biosolids results in \$61.3 million savings in disposal costs
- ❑ Reduction in pollutant concentrations will allow beneficial use of additional 440 million pounds of biosolids each year.

Recreational Benefits

- ❑ Total Recreational Benefits (recreational fishing and nonuse benefits) range from: \$294 million to \$941 million
- ❑ Enhanced fishing benefits: \$365 million

Aquatic Life Benefits

- ❑ Eliminates pollutant concentrations in excess of acute AWQC in 775 reaches (at baseline 878 reaches exceed acute AWQC)
- ❑ Eliminates pollutant concentrations in excess of chronic AWQC in 1,029 reaches (at baseline 2,466 reaches exceed chronic AWQC)

General Implementation

- ❑ Mass vs Concentration-Based Limits
 - Concentration-based limits for all subcategories except Steel Forming and Finishing.
 - No requirement to convert to mass-based limits.
 - Control Authority may convert to mass-based under present authority given in 40 CFR 122 and 403.

General Implementation

- ❑ Monitoring Waiver for Indirects
 - Certify to waive monitoring for a pollutant when:
 - 1) not used or generated on-site, and
 - 2) discharge is not above background levels.
 - Certification based on sampling (BMR and 90-day report) and other technical factors.
 - Monitoring waivers for direct pollutants outlined in NPDES Streamlining (May 15, 2000).

General Implementation

- ❑ Monitoring for Organic Pollutants
 - Provide flexibility for organic pollutant monitoring by offering 3 choices:
 - 1) Total Organics Parameter (TOP)
 - 2) TOC as an indicator
 - 3) Certify Implementation of a Management Plan for Organic Chemicals

General Implementation

- TOTAL ORGANICS PARAMETER (TOP)
 - Similar to TTO of 40 CFR 433 but shorter list.
 - Priority Pollutants that were POCs and 14 non-conventional organics that were POCs and were removed in appreciable amounts (lb-equivalents) in at least two subcategories.
 - Only monitor for those reasonably present.

General Implementation

- Total Organic Carbon (TOC)
 - EPA identified TOC as most appropriate organic indicator parameter
 - Monitor and meet numerical limit for TOC
 - EPA also taking comment on other possible indicators

General Implementation

- Certify Implementation of a Management Plan for Organic Chemicals
 - Similar to Solvent Management Plan of 40 CFR 433.
 - Includes BMPs for: disposal, leak and spill management, minimizing/reducing use, managing ORP of cyanide destruction to control formation of chlorinated organic by-products, and prevention of over dosage of dithiocarbamates when treating wastewater containing chelated metals.

General Implementation

- Monitoring for Cyanide
 - If not present, use monitoring waiver.
 - Amenable cyanide as alternative limit.
 - End-of-pipe monitoring for Cyanide(T) when accounting for dilution.
 - End-of-pipe monitoring for Cyanide(A) when treatment is performed prior to commingling and when accounting for dilution.

General Implementation

- EPA is considering a Total Sulfide monitoring waiver for indirect dischargers
 - To be used when total sulfide is present.
 - POTW approval.
 - Facility demonstrates that sulfides will not generate acidic or corrosive conditions or conditions that enhance the opportunities for release of hydrogen sulfide gas in the system.

What can you do if you disagree with EPA's proposed limits?

Provide EPA with Data

- Paired influent and effluent data from 4-days, minimum.
- Provide the appropriate operational information: list targeted pollutants, pH, temperature, duration, flow diagram, flow rates, sampling point locations, treatment chemical addition rates, describe where controls (ORP) are used, describe production that generated the wastewater being treated.
- Use EPA approved analytical methods.
- Use QA/QC procedures (see Section XXIV of preamble).

What can you do if you disagree with EPA's proposed limits? (continued)

- ❑ Volunteer to have EPA site visit & possibly sample your wastewater treatment system.

Did EPA propose the P2 Alternative in lieu of limits?

- ❑ NO
- ❑ EPA is considering it and soliciting comments & data.
- ❑ EPA Cost Model includes the following P2 practices (directly or indirectly):
 - rinse flow controls (timed rinses, flow restrictors, conductivity controls), counter-current cascade rinses
 - centrifugation & recycle of paint water curtains
 - pasteurization & recycle of coolants/lubricants

Did EPA propose the P2 Alternative in lieu of limits? (continued)

- ❑ EPA needs data on wastewater flow reductions, pollutant load reductions, and cost of implementation related to:
 - Various Drag-out reduction practices
 - Various Drag-out recovery technologies
 - Environmental Management Systems and Recordkeeping Systems
 - Advanced Training for treatment system operators

Other Issues for Comment

- ❑ EPA has solicited comment on 43 different topics!
- ❑ Many are subcategory-specific.
- ❑ You can find these proposed FR notice on pages 530 - 537 (66 FR 424; January 3, 2001).

More MP&M Information

- ❑ MP&M Web Site:
www.epa.gov/ost/guide/mpm/
- ❑ Hard copies of documents can be ordered from NSCEP:
(800) 490-9198 or
www.epa.gov/nccepihom/
- ❑ E-Mail for MP&M Comments:
mpm.comments@epa.gov

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