

**ENVIRONMENTAL PROTECTION AGENCY****40 CFR Part 414**

[FRL-4088-7]

RIN 2040-AB65

**Organic Chemicals, Plastics and Synthetic Fibers Category Effluent Limitations Guidelines, Pretreatment Standards, and New Source Performance Standards****AGENCY:** Environmental Protection Agency (EPA).**ACTION:** Final rule.

**SUMMARY:** EPA is promulgating several amendments to agency regulations which limit effluent discharges to waters of the United States and the introduction of pollutants into publicly owned treatment works by existing and new sources in the Organic Chemicals, Plastics, and Synthetic Fibers (OCPSF) Point Source Category. These amendments are based on an October 18, 1990 proposal (55 FR 42332).

These amendments allow regulatory authorities to establish alternative cyanide limitations and standards based on best professional judgment for elevated levels of non-amenable cyanide that result from the unavoidable complexing of cyanide at the process source of cyanide-bearing waste streams; allow regulatory authorities to establish alternative metals limitations and standards to accommodate low background levels of metals in non-"metal-bearing waste streams" that result from corrosion of construction materials, intake water, contamination of raw materials or other incidental metal sources deemed appropriate by the regulatory authority; specify the method for determining five-day biochemical oxygen demand (BOD<sub>5</sub>) and total suspended solids (TSS) effluent limitations for direct discharge plants that manufacture products in more than one subcategory; correct listing errors in appendices of the agency regulations; revise the applicability sections of the Other Fibers, Thermoplastic Resins, and Thermosetting Resins Subcategories to correspond to the rulemaking record technical data and analyses; delete one product and two product groups from coverage by this regulation; and move the coverage of two products and one product group from the Bulk Organic Chemicals Subcategory to the Specialty Organic Chemicals Subcategory.

**DATES:** These regulations shall become effective October 26, 1992.

The compliance date for PSES is September 11, 1995. The compliance

dates for NSPS and PSNS is the date the new source begins operation. Deadlines for compliance with BPT and BAT are established in permits. In accordance with 40 CFR part 23 (50 FR 7288, February 21, 1985), this regulation shall be considered issued for purposes of judicial review at 1 p.m. Eastern time (14-days from the date of publication in the FR), 1992.

Under section 509(b)(1) of the Clean Water Act, judicial review of this regulation can be had only by filing a petition for review in the United States Court of Appeals within 120 days after the promulgation date of today's regulation. Under section 509(b)(2) of the Clean Water Act, the requirements in this regulation may not be challenged later in civil or criminal proceedings brought the EPA to enforce these requirements.

**ADDRESSES:** The supporting information and all comments and responses on this amendment to 40 CFR part 414 will be available for inspection and copying at the EPA Public Information Reference Unit, Waterside Mall, 401 M Street, SW., Washington, DC 20460, room 2404 (EPA Library Rear—Mail Code PM-213). The basis for this amendment is detailed in the supplement to the OCPSF record which is also in the PIRU. The PIRU is open between the hours of 9 a.m. to 4:30 p.m. For additional information contact George M. Jett, Project Officer, Chemicals Branch, Engineering and Analysis Division (WH-552), Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460.

**FOR FURTHER INFORMATION CONTACT:** George M. Jett at (202) 260-7151.

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**I. Legal Authority**

The amendments to 40 CFR Part 414 described in this notice are promulgated under authority of sections 301, 304, 306, 307, 308, and 501 of the Clean Water Act (the Federal Water Pollution Control Act Amendments of 1972, as amended (33 U.S.C. 1251 et seq.)), also referred to as "the Act" or "CWA."

**II. Background and Rationale for Amendments**

EPA's explanation of the background and rationale for today's amendments are contained in the October 18, 1990, proposal, 55 FR 42332, as supplemented by the responses to comments in the following section of this preamble.

Briefly, the cyanide amendment is pursuant to a settlement agreement with W.R. Grace & Company (Grace), Koppers Company, Inc. (Koppers), E.I. DuPont de Nemours & Company (DuPont), and the Chemical Manufacturers Association (CMA). The agreement (March 29, 1989, D. Kaplan to R. Taylor) partially settled a dispute between those petitioners and EPA that was the subject of a petition for judicial review of the final OCPSF regulation promulgated by EPA on November 5, 1987 (52 FR 42522).

The additional amendments arise out of an agreement that was reached among EPA, CMA and Dupont during litigation (June 22, 1988, D. Weitman to T. Garrett).

Lastly, based on EPA's review of Category Determination Requests related to the applicability of the OCPSF regulations submitted pursuant to 40 CFR 403.6(a), EPA is revising and correcting errors related to the applicability of part 414.

**III. Public Participation and Responses to Comments**

The Agency received comments from eight (8) separate sources: the Chemical Manufacturers Association (CMA) and seven companies (Beazer East, Inc., Dow Chemical Company, W.R. Grace & Company, Hoechst/Celanese Corporation, Monsanto Company, Sterling Chemicals, Inc., and Union Camp Corporation). Generally, the comments were favorable to the proposal, except that one commenter, Hoechst/Celanese, objected to EPA's promulgation of the production-proportioning formulas and several commenters provided conditional

support for several amendments as described below.

#### A. Non-Amenable Cyanide Limits

Today's amendment adds § 414.11(g), which allows the permit writer or control authority to establish alternative cyanide limitations and standards based on his or her best professional judgment (BPJ) by evaluation of existing process conditions for elevated levels of non-amenable cyanide that result from the unavoidable complexing of cyanide at the process source of cyanide-bearing wastestreams. Comments were received from CMA, W.R. Grace, Monsanto and Sterling on this amendment.

All four comments supported the proposed amendment. CMA and Sterling provided anecdotal information, and Grace and Monsanto provided information and performance data to substantiate their concurrence with the proposed non-amenable cyanide amendment.

#### B. Allowances for Non-Metal-Bearing Waste Streams

Today's amendment adds § 414.11(h), which allows for the establishment by the permit writer or control authority of limitations for chromium, copper, lead, nickel, and zinc and discharge standards for lead and zinc from incidental sources of metals. The amendment applies to wastestreams not listed in appendix A and not otherwise determined to be "metal-bearing waste streams" where the permit writer or control authority determines that wastewater metals contamination is due to background levels that are not reasonably avoidable from such sources as corrosion of construction materials or contamination of raw materials.

Comments were received from CMA, Dow Chemical, W.R. Grace, Hoechst/Celanese, Monsanto, and Sterling on this amendment. Grace and Sterling were completely supportive while CMA, Dow, Hoechst and Monsanto expressed conditional support for the amendments. The comments are discussed below.

##### 1. Intake Water

As proposed, § 414.11(h) would not have provided a basis for an allowance for metals in intake water on the ground that such intake water contamination was covered under the provisions of 40 CFR 122.45(g) for direct dischargers and 40 CFR 403.15 for indirect dischargers, which provide authority for EPA to grant credits for pollutants in a discharger's intake water in certain circumstances.

CMA, Dow Chemical and Monsanto objected to the proposed exclusion of intake water as a source of incidental metals under § 414.11(h). The

commenters pointed out that §§ 122.45(g) and 403.15 are intended to address situations where dischargers are seeking limitations that are higher than applicable guideline limits to account for intake sources of pollutants. These provisions do not provide a substitute for § 414.11(h), as applied to intake water contamination, because § 414.11(h) specifically provides that the incidental metal source allowance cannot exceed the applicable limitations contained in §§ 414.91 and 414.101. In addition, the commenters point out that §§ 122.45(g) and 403.15 generally apply to situations where water is being drawn from and discharged to the same water body and therefore would not normally provide a basis for EPA to factor intake water pollutants into end-of-pipe limitations for discharges into different water bodies.

The Agency agrees with the three commenters that intake water can be a source of incidental metals and that this possibility is not adequately accounted for by the provisions of 40 CFR 122.45(g) for direct discharge or 40 CFR 403.15 for indirect dischargers, because these provisions apply principally to situations where water is discharged into the same body from which it is drawn. Therefore, the Agency modifies the proposal to specify that metals in intake waters may be the basis for a metals allowance under § 414.11(h).

##### 2. Requirements to Document Sources and Quantities of Incidental Metals

The Agency proposed that the determination that incidental metals are unavoidably present must be based upon a review of relevant plant operating conditions, process chemistry, engineering, and sampling and analysis information (55 FR 42338). CMA and Dow Chemical objected to what they considered to be "too rigorous an application of the demonstration requirement," and especially to the requirement that the actual quantities and sources of incidental metals be demonstrated through sampling.

CMA agreed "that allowances for incidental sources of metals should be based on more than mere estimates" but stated "it may be impossible precisely to identify the various metals sources \* \* \* [and] \* \* \* it may be impossible to quantify such metal sources." CMA specifically took issue with the statement in the preamble to the proposal that the presence of such metals must be demonstrated by actual sampling data. Dow Chemical suggested that EPA allow regulatory authorities more freedom to use best professional judgment rather than limiting the allowance to situations where actual

sampling data demonstrates the presence of incidental metals. Dow also challenged the permit writers' technical ability to accurately assess the factors identified in the proposal, arguing that the proposal requires the permit writer to be a metallurgist, chemical engineer, and chemist. Both CMA and Dow suggest that the complexity of many OCPSF plants may make it impossible to identify the sources and quantities of incidental metals. Both commenters suggested that the Agency change the regulation language to read, "the determination *should* be based upon a review of relevant plant operating conditions, process chemistry, engineering or sampling and analysis information", (emphasis added).

The Agency disagrees with these comments. It is clear from the proposal that a permit writer or control authority cannot grant an incidental metals allowance unless a discharger can demonstrate that the presence of incidental metals is not reasonably avoidable and that in no case can the allowance exceed the amount of metals actually present in a wastestream. These requirements are appropriate and consistent with the June 22, 1988 agreement between EPA and CMA and DuPont pursuant to which the incidental metals allowance was proposed. If a wastestream is not "metal-bearing" as defined in the OCPSF regulation, see, e.g., 40 CFR 414.25(b), there should generally be no metals in the wastestream. The allowance provided by today's amendment should be available only for quantities of metals from incidental sources which are not reasonably avoidable in the wastestream, which clearly cannot be higher than the quantities of such metals actually present. If the presence of metals in a wastestream is reasonably avoidable, there is no reason why the discharger should be relieved from complying with the guideline requirement that no metals allowance be assigned to the wastestream. A permit writer cannot accurately and reliably make the determination that metals are not reasonably avoidable in certain quantities without actual sampling data.

A principal flaw in the commenters' objection that the sources of metals may not be ascertainable is that, independent of the inquiry into the *sources* of incidental metals, the permit writer must determine the *quantities* of incidental metals actually present in a non-"metal-bearing" waste-stream in order to determine the upper bound for the allowance. This determination would be

practically impossible to make without sampling and analysis.

Moreover, despite the conceded complexity of many chemical plants, EPA disagrees that the source(s) of metals cannot be identified. Today's amendment and the preamble to the proposal are clear that the metals allowance provided in § 414.11(h) is not an end-of-pipe allowance; it applies at the process source. When actual effluent sampling data reveals the presence of metals at a particular process source, additional sampling (e.g., of raw materials, intake water and effluent), combined with an analysis of plant operating conditions, process chemistry, and engineering should enable the discharger to identify, and the permit writer to confirm, the source(s) of such metals in the wastestream for the specific process in question.

Even if the source(s) cannot be identified with absolute certainty, only a full evaluation of the listed factors will enable the permit writer to arrive at the most informed, best professional judgment as to the source(s) of incidental metals, whether the presence of these metals is not reasonably avoidable and what quantities of these metals at or below the amounts actually present in the discharger's wastestream are achievable. For example, if sampling were to reveal that the source of incidental metals in a discharger's wastestream is raw materials contamination, this situation should lead the discharger and permit writer to inquire whether alternative sources are available, whether a different input could be substituted for the contaminated one, etc. In contrast, a determination that the source of metals is corrosion of piping would raise a different set of issues. Contrary to the commenters' assertions, the complexity of plants in the industry is not a reason to forego actual sampling; in fact, it is one of the principal reasons why such a complete evaluation is necessary to make the finding that certain levels of metals are not reasonably avoidable.

The Agency also disagrees with commenters' assertions that permit writers and control authorities are unqualified to assess the necessary scientific information and data to make sound BPJ decisions. The factors identified in today's amendment are the same types of factors which permit writers must evaluate on a regular basis in making BPJ determinations. Permit writers are instructed to consider, among other things, the process employed at a plant, the engineering aspects of various types of control technologies, and process changes. 40

CFR 125.3(d). Permit writers also evaluate effluent data and other technically complex data submissions, such as the results of biological toxicity tests, required to be submitted by permit applicants pursuant to 40 CFR 122.21(g)(7). The same holds true for control authorities, which collect and review information from indirect dischargers which is similar to that collected and reviewed by permit writers for direct dischargers. See 40 CFR 403.12(b) (indirect dischargers must submit to control authorities, among other things, descriptions of operations, including schematic process diagrams, flow measurements, and sampling and analysis data). Permit writers and control authorities are fully qualified to evaluate these factors. Moreover, Dow's comment rests on the false premise that a permit writer works in a vacuum. On the contrary, the permit writer, of course, has full access to the resources and expertise of the Agency, which routinely addresses the factors identified in the new § 414.11(h) during the development of effluent guidelines and in numerous other contexts.

### 3. Plant Operating Conditions

On a related point, CMA and Dow were concerned about the requirement in the proposal that permit writers consider "plant operating conditions" in determining whether to grant an incidental metals allowance. Both felt that the permit writer should address only how the plant is maintained and not consider confidential processing information. CMA encouraged the Agency to specify that plant operating conditions meant "how the plant is run (e.g., maintenance and repair considerations), not \* \* \* confidential process information." Both commenters stated that, if the Agency insists on collecting confidential process information, it must provide safeguards for protection of such information.

EPA disagrees with these comments. EPA understands the "confidential process information" referred to by the commenters to be information relating to how a product or product group is manufactured. This includes such information as the raw materials used in manufacture, the reaction chemistry, and the engineering design including the materials of construction and equipment specifications. This will often be precisely the kind of information which a permit writer needs to determine whether incidental metals are not reasonably avoidable and at what levels. Information regarding raw materials will often be necessary to determine whether they are the source of metals in a discharger's effluent.

Reaction chemistry and information on materials of construction will often be necessary to determine whether the source of incidental metals is the corrosion of piping or other metal equipment.

Maintenance and repair information, in contrast, would rarely if ever provide the basis for a metals allowance. To the extent the presence of metals in wastewater is due to a plant operator's maintenance or repair practices, the presence of such metals should generally be avoidable through good management practices, such as training programs, operator safety programs and proper scheduling of maintenance and repair. Maintenance and repair information alone would not provide sufficient information regarding plant operating conditions to provide the basis for an incidental metals allowance.

With respect to the protection of confidential business information (CBI), EPA regulations presently provide ample safeguards against unauthorized disclosure of CBI collected by EPA (40 CFR part 2 and 40 CFR 122.7), and no additional protection is needed. The treatment of CBI collected by control authorities and states that are implementing their own authorized NPDES programs is principally governed by state and local laws, see §§ 123.25(a)(3) and 403.14(b), (c). If the commenters have concerns about the adequacy of these laws, their recourse is with the states or localities; EPA's longstanding position is that it will not dictate to states and localities how to treat CBI, 45 FR 33381 (May 19, 1980); 46 FR 9436 (January 28, 1981).

In any event, while EPA appreciates the commenters' concerns regarding CBI, these concerns are not a basis to object to today's amendment. The comments submitted go to the adequacy of EPA's CBI regulations generally, not, as they purport, to today's amendment. Today's amendment does not, for the first time, require or authorize permit writers and control authorities to collect CBI. On the contrary, as described in the preceding section, permit writers and control authorities already collect and review confidential process information, see, e.g., 40 CFR 122.21(g)(7), 125.3(d), 403.12(b). In addition to this specific permit-related authority, both EPA and control authorities have general authority to collect a broad range of information, including CBI, CWA Section 308; 40 CFR 403.8(f)(1)(v), 403.10(e) (POTWs and states implementing their own pretreatment programs must have information collection authority at least as extensive

as the CWA 308 authority). Dow and CMA have not alleged or demonstrated that the information to be collected under today's amendment differs from other CBI which permit writers and control authorities collect routinely. Today's amendment is not the forum for a broader challenge against the Agency's ten-year-old CBI regulations.

#### 4. Agency's Consideration of Issuing Guidance or Standards

In the preamble to the amendments (55 FR 42335) the Agency listed a table of long-term average background levels which was being considered as a basis for guidance or standards for accommodating background levels of metals. The Agency requested public comment and data on these values and on the desirability of issuing guidance or standards.

CMA objected to publishing guidance concentrations with the amendments. Furthermore, CMA indicated that if the Agency chose to require minimum or maximum values, a median concentration should also be published.

Because no data was submitted and the only comment received objected to the publishing of guidance concentrations, EPA has decided not to publish numerical guidance or standards. The Agency does not have adequate data at this time to publish guidance concentrations or standards for incidental metal sources and leaves the selection of numerical limits and standard up to the best professional judgment of the permitting or control authority on a case-by-case basis.

#### 5. Establishment of Limitations at "Zero"

CMA and Dow objected to the provision in the proposed amendment that "permit writers may establish limitations \* \* \* between zero (0) and the concentration of metals in the non-metal-bearing streams" (55 FR 42338), and recommended the language be changed to read "between the practical quantitation level (PQL) for the relevant analytical method and the concentration of such metals present in wastestreams." The commenters argued that a level of zero (0) is not measurable and that zero is an undefined term.

Upon review, EPA agrees that it would be inappropriate to set a permit limitation at zero for the reasons stated by the commenters. However, EPA does not agree that the PQL is the appropriate lower bound. Rather, under today's rule, the individual permit writer or control authority will determine on a case-by-case basis what is the lowest level of an incidental metal which can be reliably measured in a wastestream. The permit

writer or control authority will set a limit for the metal between this lowest level and the amount of the metal actually present in the wastestream. EPA recommends that permit writers and control authorities use the "minimum levels" (MLs) for metals, as set forth in draft EPA method 1620, as this lowest measurable level. The draft method contains the following MLs: 10 micrograms per liter ( $\mu\text{g/L}$ ) for chromium, 25  $\mu\text{g/L}$  for copper, 5  $\mu\text{g/L}$  for lead, 40  $\mu\text{g/L}$  for nickel, and 20  $\mu\text{g/L}$  for zinc. Draft method 1620 is available for inspection and copying at the EPA Public Information Reference Unit. EPA recommends use of the ML for guidance purposes only; permit writers have discretion to use whatever method they deem most appropriate for determining the lowest measurable quantity.

EPA believes that the ML, rather than the PQL, is the appropriate guidance level to recommend to permit writers. The PQL is typically set as a multiple of the method detection limit (MDL). The MDL is defined as "the minimum concentration of a substance that can be measured and reported with 99% confidence that the analyte concentration is greater than zero \* \* \* 40 CFR 136, App. B. The MDL is an appropriate lower bound where the question to be answered is whether an analyte is present, but is less suitable for determining at what quantity the analyte is present. Because exceeding the permit level may trigger an enforcement action, the level should be measurable with a reasonable degree of confidence.

The PQL is defined as "the lowest level that can be reliably achieved within specified limits of precision and accuracy during routine laboratory operation conditions." 52 FR 25699. It generally ranges from three to ten times the MDL. The ML is related to the PQL but is generally lower than the PQL for a given analyte. The ML is defined as "the level at which the entire analytical system shall give recognizable signal and acceptable calibration points." The ML is the level at which EPA has determined, based on actual reports and data from a number of laboratories, that the amount of a substance or compound can be measured reliably in industrial wastewater matrices, and is an appropriate guidance level for permit writers. As explained in the promulgation of the OCPSF guideline, the PQL has been used by the Office of Drinking Water and Office of Solid Waste for drinking water and ground water matrices. In contrast, the Office of Water has used the ML for measuring constituents in industrial wastewater matrices. 52 FR 42562-42563. Moreover,

the Office of Water recommended the use of the ML concept as the basis for permit action levels in its May 21, 1990 memorandum titled "Strategy for the Regulation of Discharges of PHDDs and PHDFs from Pulp and Paper Mills to Waters of the United States" and stated its intention to continue to use the ML in establishing numerical limitations for the discharge of pollutants in wastewater, p. 19. Thus, EPA recommends that permit writers use the ML as the lower bound in determining the appropriate permit level for an incidental metal.

#### 6. Appropriateness of Construction Materials

Hoechst/Celanese was concerned about the preamble statement that "inappropriate materials of construction \* \* \* are not the basis for metals allowances. (55 FR 42335) The commenter states that its plant was constructed 50 years ago using copper and copper alloy pipe, which is generally more subject to corrosion than stainless steel pipe, which the commenter states would be used if the plant were being built today. The commenter requests that EPA clarify that the appropriateness of construction material should be determined as of the time the plant was built.

EPA declines to provide the "clarification" requested by the commenter. A permit writer must determine, based on BPJ, whether the presence of background levels of metals is not reasonably avoidable in a wastestream. The permit writer will consider all relevant factors in exercising this BPJ, including, where appropriate, the age of a plant (40 CFR 125.3(d)). It is within the permit writer's discretion to determine—on a case-by-case basis and in view of all relevant factors—whether construction materials are "appropriate." In some cases, the permit writer may conclude that it is appropriate to grant an allowance for incidental metals which result from corrosion from pipes made from a now-obsolete construction material which was state-of-the-art at the time the plant was built; in other cases, the permit writer may, for example, determine that it is reasonable for the plant to replace some piping and set limits accordingly. Thus, EPA clarifies that the preamble statement in question was not intended to circumscribe the permit writer's general BPJ authority to consider the age of a plant, but EPA cannot set forth a general rule that the appropriateness of construction materials is to be determined as of the date of construction.

In reviewing this comment and the other comments received on the proposed incidental metals allowance, EPA is concerned that the proposal may appear to have created an inflexible scheme in which permit writers would be deprived of their normal discretion in making BPJ determinations. That was not the intent of the proposal, and EPA has slightly modified the final rule from the proposed version by clarifying that, in order to qualify for the allowance, a facility must demonstrate that the presence of metals is "not reasonably avoidable." The proposed version provided that the presence of metals had to be "unavoidable" for the facility to qualify for the allowance. Strictly speaking, the incidental presence of metals will always be theoretically avoidable at some level of expense. EPA did not intend to require that the presence of the metals be literally unavoidable in order for a facility to qualify for the allowance, but rather that the permit writer or control authority will use BPJ in determining whether the presence of incidental metals is not reasonably avoidable. This means that the permit writer or control authority will consider, to the extent relevant, the age of equipment and facilities involved (as described in the preceding paragraph), the process employed (for example, whether the wastestream generated by a manufacturing process creates incidental metals in the effluent because it corrodes piping, and whether that problem could be alleviated through a process change), the engineering aspects of the application of various types of control techniques, process changes (for example, the substitution of a raw material contaminated with a metal for an unadulterated raw material), the cost of achieving effluent reduction (for example, an evaluation of whether the presence of metals can be avoided at a cost that is reasonable in light of the quantity of metals present in the wastestream and the quantity that would be removed through the contemplated control measures), and non-water quality environmental impacts. 40 CFR 125.3(d)(3).

#### 7. Allowance for Increased Concentration

Monsanto suggested that the Agency expand the incidental metals amendment to include allowances for mass discharges for process operations that involve evaporation, which could result in greater metals concentrations. No supporting data was provided.

The Agency declines to expand the proposed amendment. The suggested expansion is completely distinct from EPA's proposal, pursuant to the

settlement agreement with Grace, Koppers, DuPont and CMA, to amend the OCPSF guidelines to provide an allowance for incidental sources of metals. Moreover, the logic of Monsanto's suggestion to allow for increased concentration due to evaporation would appear in theory to apply to all pollutants, not just to metals. EPA lacks data to provide the technical basis for such a significant amendment to the OCPSF guidelines, and, in any event, could not promulgate such an amendment without providing notice and an opportunity for comment.

#### C. Revisions to Appendices A and B

Appendix A of part 414 contains a list of product/processes with cyanide-bearing wastestreams. These wastestreams are subject to the cyanide limitations established in part 414. Appendix B of part 414 is a list of product/processes with complexed metal-bearing wastestreams. These wastestreams are not subject to the part 414 metals limitations, but are regulated on a BPJ basis (40 CFR 414.11(f)). EPA proposed several changes to the lists of product/processes in these Appendices to more accurately reflect the nature of the metals associated with the product/process.

Two favorable comments were received on the proposed revisions to Appendices A & B. CMA provided anecdotal information to support its concurrence with the proposal. Dow Chemical supported the proposed language, which, it stated, would better represent the waste characteristics of the product/processes. EPA is promulgating these amendments as proposed.

#### D. Multi-Subcategory Calculations of BOD<sub>5</sub> and TSS Limitations

EPA today effects a technical amendment by adding § 414.11(i), which incorporates into the body of the regulations the formula for proportioning BOD<sub>5</sub> and TSS concentration limitations for different subcategories to a plant which manufactures products in more than one subcategory covered by part 414.

Favorable comments were received from CMA, Dow Chemical, and Monsanto. CMA stated, and Dow and Monsanto agreed, that "the volume of production within each subcategory is the correct basis for calculating end-of-pipe limits for multi-subcategory plants." As CMA correctly observed, "[b]ecause the derivation of the BPT guideline limits was based on the percentage of production within the various BPT categories, so too must the application of the limits be based on the

production volumes within each subcategory."

One negative comment was received. Hoechst/Celanese took issue with what it characterized as the Agency's proposal to "mandate [ ] use of the production-proportioning formula" and argued that multi-subcategory limitations should be based on the proportion of a plant's wastewater flow in each subcategory, not the proportion of the plant's production in each subcategory.

EPA disagrees with Hoechst/Celanese. Contrary to the commenter's assertion, today's promulgation does not, for the first time, mandate the use of the production-proportioning formula, which was already the required method for calculating limits for multi-subcategory plants. Rather, today's amendment merely responds to concerns raised-by-CMA, DuPont, and other petitioners in the litigation that permit writers might fail to use the formula set forth in the preamble to the November 5, 1987 final OCPSF rule promulgation and the accompanying Development Document.

The Development Document sets out the formulas contained in today's amendment and explains that, "for plants with production activities classified by two or more subcategories, the permit writer would use a building-block approach based on production proportioning to use the promulgated subcategorical limitations as a basis for establishing plant-specific permit requirements." (OCPSF Development Document, EPA 440/1-87/009, October 1987 at IX-10 (emphasis added)). Similarly, the preamble to the final OCPSF rule states that, "[i]n applying the limitations set forth in the regulation, the permit writer will use what is essentially a building-block approach that takes into consideration applicable subcategory characteristics and the proportion of production quantities within each subcategory at the plant." (52 FR 42533 (emphasis added).) These statements reflect EPA's intention and understanding that the production-proportioning formula would be the basis for setting limits at multi-subcategory plants.

This method of deriving permit limits for multi-subcategory plants is a necessary corollary of EPA's methodology in developing the OCPSF BPT limitations. The regression equation used by EPA in establishing the BPT limitations "model[ed] long-term average effluent BOD as a function of the proportion of the production of each subcategory at each [multi-subcategory] facility." (52 FR 42533 (emphasis

added)). Similarly, the Development Document states that EPA established limitations for the various subcategories based on a "regulatory approach that proportions the various subcategory long-term averages for each plant based on the reported *proportion of production* by product group \* \* \* ." (OCPSF Development Document, page IV-6, October 1987) EPA specifically found that flow proportioning was "not appropriate" as a basis for establishing limitations and that "there was no technical basis in the record to conclude that achievable long-term mean effluent concentrations were significantly affected by water use practice in the industry." 52 FR 42533. Given the fact that EPA established the OCPSF BPT limitations—and determined that they were technically and economically achievable as required by the CWA—by proportioning the data from multi-subcategory plants on a production basis, rather than flow basis, the Agency could not implement the guideline by setting actual permit limits on a flow-proportioned basis.

Today's amendment simply clarifies an approach which was already inherent in the guideline itself. Hoechst/Celanese could have challenged the production-proportioning approach within 120 days of promulgation of the OCPSF guideline pursuant to section 509(b) of the Clean Water Act. EPA did not intend to re-open this fundamental, underlying aspect of the guideline by proposing to publish the production-proportioning formula in the body of the regulations.

Even if this were the appropriate forum to challenge the production-proportioning approach, EPA believes, for the reasons set forth above, that the approach is correct; Hoechst/Celanese has provided no data or information in its comments which undercut the validity of the findings which EPA made for the OCPSF industry during the rulemaking. To the extent the commenter believes that its facility presents factors which differ from those considered for the industry during the rulemaking, the proper remedy would have been a request for a fundamentally different factors variance from the guideline under section 301(n) of the Act.

*E. Applicability of §§ 414.30, 414.40 and 414.50*

The Agency proposed to amend the applicability of subpart C, Other Fibers (§ 414.30), subpart D, Thermoplastic Resins (§ 414.40), and Subpart E, Thermosetting Resins (§ 414.50), to include all products defined in terms of the four- and five-digit Standard

Industrial Classification (SIC) codes which the Subparts were intended to cover. EPA intended that the regulation would cover all production within the SIC codes which define the OCPSF industry. For subparts F through H, covering commodity, bulk, and specialty organic chemicals respectively, the OCPSF regulation accomplishes this intent by capturing the production of all organic chemicals not specifically listed in subparts F and G under subpart H as specialty products. Subparts C, D, and E, however, incorrectly limit the coverage of the guidelines to production of the products and product groups specifically listed in §§ 414.30, 414.40, and 414.50 respectively, thus creating the potential for production of fibers and resins to escape coverage. EPA intended the products listed in these sections to be illustrative rather than exclusive, and today's amendment accomplishes that intention.

CMA, Dow Chemical, Monsanto and Union Camp submitted comments on this proposal. CMA and Dow stated the Agency must demonstrate that it actually intended the coverage of these Subparts to be comprehensive, and that the OCPSF record supports the proposed amendment. Both also were concerned that plants be given sufficient time to comply with the limitations for the added product/processes in the affected subparts.

The OCPSF record demonstrates that EPA intended the coverage of these Subparts to be comprehensive and fully supports today's amendment. EPA developed and promulgated the OCPSF guideline in part pursuant to a settlement agreement entered by the Agency in settlement of a 1976 law suit brought by several environmental groups to compel EPA to promulgate guidelines (Development Document at I-2). The agreement required EPA to promulgate the OCPSF guideline and defined the OCPSF industry to include all production within SIC codes 2865, 2869, 2821, 2823 and 2824 (id. at III-4). Accordingly, the original October 1983 OCPSF Clean Water Act section 308 Survey collected production and related technical and economic information based on SIC codes.

The introduction of the questionnaire, page 1, explains that, "[f]or the purpose of this survey, the OCPSF industry is defined as all establishments that manufacture: (1) Organic chemical products included within the U.S. Department of Commerce Bureau of the Census Standard Industrial Classification (SIC) major groups 2865 and 2869 and/or (2) plastics and synthetic fibers products included in SIC

major groups 2821, 2823, and 2824." The questionnaire collected OCPSF production information from all production within these SIC codes. Indeed, much of the information was reported in aggregate form based on SIC codes; only respondents that were primary manufacturers of OCPSF products (generally, where at least one half of a manufacturer's production was of OCPSF products or where OCPSF process wastewaters are treated in a system with 25 percent or less dilution by non-OCPSF process wastewater) reported the specific products they produced, and only for products which constituted at least one percent of total production. The remaining production information was reported by SIC code only. The questionnaire was plainly intended to provide the basis for a comprehensive regulation of the industry covering all relevant SIC codes. This intent is further evidenced by the *Selected Summary of Information in Support of the OCPSF Point Source Category*, which was the support document for the July 17, 1985 Notice of Availability, 50 FR 29068. The document explains that "[t]he Agency has defined the Plastic/Synthetic Fibers industry (subparts C, D, and E) to include all facilities within SIC codes 2821, 2823 and 2824" (p. 2, emphasis added).

EPA used the data it collected to develop limitations and standards that could be applied across subcategories that covered all production within the relevant SIC codes. The aggregated SIC code data which EPA received, along with the product-specific data, were assigned to the appropriate subcategories, and formed part of the basis for the existing OCPSF limitations and standards. (Assignment of Part A and Part B Production to OCPSF Subcategories, A. Shattuck to the Record, July 8, 1992.) Thus, the regulation is based, in part, on generic SIC code data; EPA's data based contains no information on the specific products represented by this aggregated data. Today's correcting amendment merely conforms the regulations to EPA's intention in establishing the limitations, and, in any event, as explained below, is fully supported by the methodology employed in developing the limitations.

The OCPSF subcategorization scheme was challenged in the litigation over the guideline on the grounds that SIC codes did not provide a rational basis to subcategorize, and that the BPT limitations established were therefore arbitrary and capricious (as explained below, the BAT limitations are independent of the rule's product-based

subcategorization). The Fifth Circuit upheld the scheme, concluding, based on its review of the rulemaking record, that "SIC codes tend to be organized around the products produced by various segments of the industry, and that the type of product in turn influences the wastestream characteristics of those plants" (870 F.2d at 216).

Where EPA found that wastewater treatability varied within a SIC code to such an extent that all production within the SIC code could not be grouped within a single subcategory, the Agency further subcategorized to accommodate this variety. For example, production within SIC codes 2823 and 2824 is covered by subpart C, except for production of rayon fibers, a SIC code 2823 product, which EPA determined was sufficiently distinct to merit a separate subcategory (Dev. Doc. p. IV-20). EPA also divided production within SIC code 2821 between thermoplastic resins (SIC code 28213, subpart D) and thermosetting resins (SIC code 28214, subpart E). The Agency concluded that "process chemistry and engineering are broadly consistent within these groupings" (id.). Similarly, production within SIC codes 2865 and 2869 is divided among three subcategories—F (commodity organic chemicals), G (bulk organic chemicals), and H (specialty organic chemicals)—based on the quantity of a chemical produced nationally, because EPA concluded that the rate of biodegradation, and therefore the treatability, of organic pollutants varied with parameters related to the volume of national production (id. at IV-21). Overall, EPA concluded that, "[b]ased on the distribution of raw waste and effluent BOD5 concentrations, the relative consistency of percent removal data across the final seven subcategories, and BOD5 effluent within subcategories and within product groups within those subcategories, \* \* \* the adopted BPT subcategorization accounts sufficiently for wastewater characteristics and treatability" (id. at IV-37).

Production that falls within the SIC codes which define subcategories C through E should be similar in nature and should therefore have similar wastewater and treatability characteristics regardless of whether EPA collected and assessed data with respect to the specific product in question. EPA concludes that the BPT limitations for these subparts are achievable for all such production. To the extent a specific plant has wastewater characteristics that differ fundamentally from the other plants within the subcategory, that plant may

of course seek alternative limits through a fundamentally different factors (FDF) variance under CWA section 301(n). However, the fact that individual plants may present plant-specific concerns does not invalidate the subcategorization.

With respect to the BAT limitations, EPA concluded in the OCPSF rulemaking that "OCPSF plants can economically achieve compliance with the BAT limitations \* \* \* through some combination of in-plant or end-of-pipe demonstrated technology irrespective of products produced," and therefore did not subcategorize based on production. (52 FR 42532). EPA concludes, therefore, that OCPSF production that falls within the SIC codes which define subparts C through E will, like production of the specifically listed products, have similar wastewater characteristics and will similarly be able to achieve compliance with the BAT limitations.<sup>1</sup> Again, plant-specific concerns, if any exist, can be addressed through the FDF mechanism.

Finally, EPA notes that it would have been virtually impossible to collect and analyze data for each individual product in the OCPSF industry. The industry manufactures over 25,000 products. EPA collected product or product group-specific data for about 1000 of these, and aggregated data for the remainder. Even with the data so aggregated, EPA required four years from the time it distributed the original questionnaire to promulgate the final OCPSF regulation. The Agency had no choice but to develop a methodology to group plants into categories based on similar characteristics and to make reasonable conclusions about the discharge levels that those plants can achieve. As explained above, the subcategorization scheme adopted by EPA accomplishes that result.

The compliance dates for today's amendment will follow the same statutory requirements as any new rule. In accordance with 40 CFR 23.2, this regulation shall be considered issued for purposes of judicial review at 1 p.m., Eastern time (14-days from the date of publication in the FR), 1992. These regulations shall become effective (45-days from the date of publication in the FR), 1992.

The compliance date for PSES is (three years from the date of publication in the FR), 1995. The compliance dates for NSPS and PSNS is the date the new source begins operation. Deadlines for

compliance with BPT and BAT are established in permits.

#### F. Amendments to §§ 414.40 and 414.70

The Agency proposed to amend § 414.70 by removing Citric Acid and Fatty Acids from § 414.70(a) and removing Aspirin from § 414.70(c) and regulating them as specialty organics. Dow and Union Camp supported these proposed amendments.

The Agency proposed to amend part 414.40 by removing "cellulose sponge". The Agency also proposed to amend part 414.70(e) by removing "dithiophosphates, sodium salt" and "waxes, emulsions—dispersions". No comments were received on these three amendments.

#### G. Timing of Promulgation and Effective Dates of Amendments

Monsanto objected to the timing of the promulgation of these amendments, arguing that the Agency was not proceeding "as expeditiously as possible" as it agreed to do in the settlement agreement on which these amendments are based. Monsanto characterized the issues involved as "relatively straightforward."

EPA disagrees with Monsanto. Today's amendment raises a number of complex issues and have required thorough evaluation by EPA. In particular, EPA has devoted a substantial amount of time to considering and responding to the comments submitted by Monsanto and others. EPA believes it is in both the Agency's and the commenters' best interest that EPA carefully evaluate all comments and other issues raised by a regulatory change. The Agency has proceeded on this amendment as expeditiously as possible.

#### H. Summary

Having thoroughly reviewed all of the comments, the Agency has decided to amend part 414 as proposed in the October 10, 1990 FR notice except as changed to add intake water as a possible source of incidental metals, to provide that an incidental metals allowance may be granted where the presence of metals is "not reasonably avoidable," and to provide that incidental metals limitations must be established between the lowest level which the permit writer or control authority determines can be reliably measured and the concentration of such metals present in the wastestreams not to exceed the applicable limitations contained in §§ 414.91 and 414.101. The remainder of 40 CFR part 414 is unchanged.

<sup>1</sup> Note that NSPS, PSES and PSNS under the OCPSF guideline are based on BAT and BPT. The conclusions reached above for BAT and BPT therefore apply to all of the limitations and standards established in the guideline.

#### IV. Cost Impact Analysis

EPA does not anticipate additional incremental costs or impacts to the OCPSF industry as a result of these amendments. While these amendments expand the applicability of three subparts, this expansion simply conforms the regulation to the original rulemaking methodology, including the original costing methodology, which was done on a SIC-code basis. There has been no change to the costing procedure used in the 1987 promulgation.

#### V. Executive Order 12291

Executive Order 12291 requires EPA and other agencies to perform regulatory analyses of major regulations. Major rules are those which impose a cost on the economy of \$100 million or more annually or have certain other economic impacts. This regulation is not a major rule because it merely clarifies the applicability of the regulation, corrects listing errors and establishes flexibility in implementing an existing regulation by allowing regulatory authorities to accommodate site specific factors relating to complexed-cyanide and background levels of metals in non-metal-bearing waste streams that are not reasonably avoidable. Today's amendments do not impose significant new requirements; thus, they meet none of the criteria of a major rule as set forth in section 1(b) of the Executive Order. This rule was submitted to the Office of Management and Budget for review.

#### VI. Regulatory Flexibility Analysis

The Regulatory Flexibility Act, 5 U.S.C. 601 et seq., requires EPA and other agencies to prepare an initial regulatory flexibility analysis for all regulations that have a significant impact on a substantial number of small entities. No regulatory flexibility analysis is required, however, where the head of the Agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Based on the reasons discussed in the preceding paragraph, I hereby certify, pursuant to 5 U.S.C. 605(b), that this regulation will not have a significant impact on a substantial number of small entities.

#### VII. Paperwork Reduction Act

In accordance with the Paperwork Reduction Act of 1980, 44 U.S.C. 3500 et seq., EPA must submit a copy of any rule that contains a collection-of-information requirement to the Director of the Office of Management and Budget for review and approval. This notice contains no additional information-collection requirements beyond those

already required by 40 CFR 403 and 40 CFR 122, and therefore the Paperwork Reduction Act is not applicable.

#### List of Subjects in 40 CFR Part 414

Chemicals, Plastics materials and synthetics, Water pollution control, Water treatment and disposal.

Dated: September 1, 1992.

F. Henry Habicht II,  
Acting Administrator.

For the reasons set out in the preamble, 40 CFR part 414 is amended as set forth below.

#### PART 414—ORGANIC CHEMICALS, PLASTICS, AND SYNTHETIC FIBERS

1. The authority citation for part 414 continues to read as follows:

Authority: Secs. 301, 304, 306, 307, and 501, Pub. L. 92-500, 86 Stat. 816, Pub. L. 95-217, 91 Stat. 156, Pub. L. 100-4, 101 Stat. 7 (33 U.S.C. 1311, 1314, 1316, 1317, and 1361).

2. Section 414.11 is amended by adding paragraphs (g), (h), and (i) to read as follows:

#### § 414.11 Applicability.

(g) *Non-amenable cyanide.* Discharges of cyanide in "cyanide-bearing waste streams" (listed in Appendix A to this part) are not subject to the cyanide limitations and standards of this part if the permit writer or control authority determines that the cyanide limitations and standards are not achievable due to elevated levels of non-amenable cyanide (i.e., cyanide that is not oxidized by chlorine treatment) that result from the unavoidable complexing of cyanide at the process source of the cyanide-bearing waste stream and establishes an alternative total cyanide or amenable cyanide limitation that reflects the best available technology economically achievable. The determination must be based upon a review of relevant engineering, production, and sampling and analysis information, including measurements of both total and amenable cyanide in the waste stream. An analysis of the extent of complexing in the waste stream, based on the foregoing information, and its impact on cyanide treatability shall be set forth in writing and, for direct dischargers, be contained in the fact sheet required by 40 CFR 124.8.

(h) *Allowances for non-metal-bearing waste streams.* Discharge limitations for chromium, copper, lead, nickel, and zinc or discharge standards for lead and zinc may be established for waste streams not listed in Appendix A of this part and not otherwise determined to be "metal-bearing waste streams" if the permit

writer or control authority determines that the wastewater metals contamination is due to background levels that are not reasonably avoidable from sources such as intake water, corrosion of construction materials or contamination of raw materials. The determination must be based upon a review of relevant plant operating conditions, process chemistry, engineering, and sampling and analysis information. An analysis of the sources and levels of the metals, based on the foregoing information, shall be set forth in writing; for direct dischargers, the analysis shall be contained in the fact sheet required by 40 CFR 124.8. For direct dischargers, the permit writer may establish limitations for chromium, copper, lead, nickel, and zinc for non-"metal-bearing waste streams" between the lowest level which the permit writer determines based on best professional judgment can be reliably measured and the concentrations of such metals present in the wastestreams, but not to exceed the applicable limitations contained in §§ 414.91 and 414.101. (For zinc, the applicable limitations which may not be exceeded are those appearing in the tables in §§ 414.91 and 414.101, not the alternative limitations for rayon fiber manufacture by the viscose process and the acrylic fiber manufacture by the zinc chloride/solvent process set forth in footnote 2 to each of these tables.) For indirect dischargers, the control authority may establish standards for lead and zinc for non-"metal-bearing waste streams" between the lowest level which the control authority determines based on best professional judgment can be reliably measured and the concentration of such metals present in the wastestreams, but not to exceed the applicable standards contained in §§ 414.25, 414.35, 414.45, 414.55, 414.65, 414.75, and 414.85. (For zinc, the applicable standards which may not be exceeded are those appearing in the tables in the above referenced sections, not the alternative standards for rayon fiber manufacture by the viscose process set forth in footnote 2 to the table in § 414.25, or the alternative standards for acrylic fiber manufacture by the zinc chloride/solvent process set forth in footnote 2 to the table in § 414.35.) The limitations and standards for individual dischargers shall be set on a mass basis by multiplying the concentration allowance established by the permit writer or control authority by the process wastewater flow from the individual wastestreams for which incidental metals have been found to be present.



(i) *BOD<sub>5</sub> and TSS limitations for plants with production in two or more subcategories.* Any existing or new source direct discharge point source subject to two or more of subparts B through H must achieve BOD<sub>5</sub> and TSS discharges not exceeding the quantity (mass) determined by multiplying the total OCPSF process wastewater flow subject to subparts B through H times the following "OCPSF production-proportioned concentration": For a specific plant, let w<sub>j</sub> be the proportion of the plant's total OCPSF production in subcategory j. Then the plant-specific production-proportioned concentration limitations are given by:

$$\text{Plant BOD}_5 \text{ Limit} = \frac{H}{\sum_{j=B} (w_j) (\text{BOD}_5 \text{ Limit}_j) \text{ and}}$$

$$\text{Plant TSS Limit} = \frac{H}{\sum_{j=B} (w_j) (\text{TSS Limit}_j)}$$

The "BOD<sub>5</sub> Limit<sub>j</sub>" and "TSS Limit<sub>j</sub>" are the respective subcategorical BOD<sub>5</sub> and TSS Maximum for Any One Day or Maximum for Monthly Average limitations.

**§§ 414.21, 414.31, 414.41, 414.51, 414.61, 414.71 and 414.81 [Amended]**

3. In each of §§ 414.21, 414.31, 414.41, 414.51, 414.61, 414.71 and 414.81, the first sentence which reads "Except as provided in 40 CFR 125.30 through 125.32, any existing point source subject to this subpart must achieve discharges not exceeding the quantity (mass) determined by multiplying the process wastewater flow subject to this subpart times the concentration listed in the following table." is revised to read "Except as provided in 40 CFR 125.30 through 125.32, and in 40 CFR 414.11(i) for point sources with production in two or more subcategories, any existing point source subject to this subpart must achieve discharges not exceeding the quantity (mass) determined by multiplying the process wastewater flow

subject to this subpart times the concentration listed in the following table."

4. Section 414.30 is amended by revising the first sentence to read as follows:

**§ 414.30 Applicability; description of the other fibers subcategory.**

The provisions of this subpart are applicable to the process wastewater discharges resulting from the manufacture of products classified under SIC 2823 cellulosic man-made fibers, except Rayon, and SIC 2824 synthetic organic fibers including those fibers and fiber groups listed below.\* \* \*

5. Section 414.40 is amended by revising the first sentence of the text and by removing from the list the entry, "Cellulose Sponge" to read as follows:

**§ 414.40 Applicability; description of the thermoplastic resins subcategory.**

The provisions of this subpart are applicable to the process wastewater discharges resulting from the manufacture of the products classified under SIC 28213 thermoplastic resins including those resins and resin groups listed below.\* \* \*

6. Section 414.50 is amended by revising the first sentence of the text to read as follows:

**§ 414.50 Applicability; description of the thermosetting resins subcategory.**

The provisions of this subpart are applicable to the process wastewater discharges resulting from the manufacture of the products classified under SIC 28214 thermosetting resins

including those resins and resin groups listed below.\* \* \*

**§ 414.70 [Amended]**

7. Section 414.70 is amended by removing from the listing in paragraph (a) the entries, "Citric Acid" and "'Fatty Acids"; by removing from the listing in paragraph (c) the entry, "Aspirin"; and by removing from the listing in paragraph (e) the entries, "Dithiophosphates, Sodium Salt" and "'Waxes, Emulsions—Dispersions".

**Appendix A [Amended]**

8. Part 414, Appendix A is amended by removing from the Cyanide listing the entries, "Hexamethylene diisocyanate/Hexamethylene diamine (1,6-Diaminohexane) + phosgene", "Methylene Diphenylisocyanate (MDI)/Phosgenation of methylene dianiline from Aniline + Formaldehyde", "Polyurethane resins/Diisocyanate + Polyoxyalkylene glycol", "Polyurethane fibers (Spandex)/Polyoxyalkylene glycol + Tolylene diisocyanate + dialkylamine" and "Tolylene diisocyanate (isomeric mixture)/Tolylene diamines + Phosgene".

9. Appendix B to Part 414 is amended by adding two entries to the end of the listing for Lead to read as follows:

**Appendix B to Part 414—Complexed Metal-Bearing Waste Streams**

- \* \* \* \* \*
- Lead
- \* \* \* \* \*
- Tetraethyl lead/Alkyl halide + sodium-lead alloy
- Tetramethyl lead/Alkyl halide + sodium-lead alloy
- \* \* \* \* \*