

ENVIRONMENTAL PROTECTION AGENCY**40 CFR Parts 125 and 403**

[EN FRL 1696-4]

General Pretreatment Regulations for Existing and New Sources

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: On June 26, 1978, the Environmental Protection Agency published a rule [43 FR 27736-27773] which established mechanisms and procedures for enforcing national pretreatment standards controlling the introduction of wastes from non-domestic sources into publicly owned treatment works [POTWs]. Following the promulgation of the general pretreatment regulations, several actions were brought in Federal court challenging various aspects of these regulations. These actions were subsequently consolidated in the District of Columbia Circuit Court of Appeals in the action *Natural Resources Defense Council, Inc. et al., v. EPA*, 78-1803.

On May 31, 1979, EPA entered into an agreement with the Chemical Manufacturers Association, the U.S. Brewers Association and others, which sought to settle most of the issues raised by the industry parties in this litigation. Under the terms of this settlement, EPA agreed to propose changes to the June, 1978 regulations to reflect the agreements reached in the settlement. Accordingly, proposed amendments to the general pretreatment regulations were published on October 29, 1979 at 44 FR 62260. The parties to the settlement agreed not to litigate the issues covered by the agreement if the final amended regulations dealt with settlement issues in a manner which did not differ significantly from the language proposed in October. In addition to changes proposed pursuant to the Settlement Agreement, the proposed regulations included changes initiated by EPA and directed at resolving inconsistent and ambiguous provisions of the June, 1978 regulations.

After considering numerous comments submitted on the proposed changes, EPA has developed the amended general pretreatment regulations which are promulgated in final form today.

DATES: The effective date of this regulation is March 13, 1981.

In accordance with 40 CFR 100.01 (45 FR 26048), these regulations shall be issued for the purposes of judicial

review at 1:00 p.m. eastern time on February 10, 1981.

FOR FURTHER INFORMATION CONTACT: Nancy Hutzel, Environmental Protection Agency, Permits Division (EN-336), 401 M St., SW., Washington, DC 20460, (202) 755-0750.

SUPPLEMENTARY INFORMATION:

- I. Background
- II. Effect of Regulations
 - A. General
 - B. Effect on Users Subject to Electroplating Pretreatment Standards
- III. Scope and Purpose of the National Pretreatment Program
 - A. Size of Program
 - B. Effects of Industrial Discharges to POTWs on the Public Health and Environment
 - C. Data Supporting the Need for Pretreatment Standards to Restrict Pass-Through
 - D. Data Supporting the Need for Pretreatment Standards to Restrict Unacceptable Sludge Contamination
- IV. Statutory Considerations
- V. Major Changes in the Final Amended Pretreatment Regulations

I. Background

On February 2, 1977, EPA proposed a rule which would establish mechanisms and procedures for enforcing national pretreatment standards controlling the introduction of wastes from non-domestic sources into publicly owned treatment works (POTWs). On June 26, 1978, after more than a year of consideration during which time 4 public hearings and 16 public meetings were held and more than 400 individual comments received, the Agency promulgated the final general pretreatment regulations, 40 CFR Part 403 (43 FR 27736-27773).

Following the promulgation of the general pretreatment regulations, several actions were brought in Federal court challenging various aspects of these regulations. These actions were subsequently consolidated in the District of Columbia Circuit Court of Appeals in the action *Natural Resources Defense Council, Inc. et al., v. EPA*. On May 31, 1979, EPA entered into an agreement with three of the Petitioners, the Chemical Manufacturer's Association (formerly the Manufacturing Chemists Association), the U.S. Brewers Association and the Pacific Legal Foundation, seeking to settle substantially all of the issues raised by the industry parties in this litigation.

On October 29, 1979, EPA proposed amendments to the regulations which reflected the agreements reached with the aforementioned parties (44 FR 62260). Today's regulations reflect a final Agency determination on the proposed changes after consideration of

numerous comments received on the amendments. Detailed discussion of the final regulatory provisions and the proposed changes and comments which inspired them is found under section V, "Major Changes."

II. Effect of the Regulations**A. General**

The scope of the regulations placed in final form today remains largely unaltered from the original regulations published in 1978. The effect of these regulations is essentially three-fold. First § 403.5 of the regulations sets forth general discharge prohibitions that apply to all non-domestic users of a POTW. The intent of these general limitations is to prevent: (1) interference with the operation of the treatment works, (2) pass-through of pollutants in violation of the POTW's NPDES permit limitations, and (3) municipal sludge contamination.

Second, the regulations, primarily through the operation of §§ 403.8-403.11, establish an administrative mechanism to ensure that these general discharge prohibitions of § 403.5, as well as categorical Pretreatment Standards, are applied and enforced. The regulations envision three levels of administrative control. Most major POTWs will be required to develop a locally-run pretreatment program to ensure that non-domestic users of the municipal system comply with applicable pretreatment requirements. The development of such programs is fundable through construction grants issued pursuant to section 201 of the Act. Where POTWs are not required to develop a local program, NPDES States with approved pretreatment programs and EPA will have first line responsibility for enforcing pretreatment requirements.

Third, these regulations contain provisions relating directly to the determination of and reporting on Pretreatment Standards. Sections 403.6 (request for category determination; adjustment of effluent limitations for combined wastestreams), 403.7 (removal allowances), 403.13 (fundamentally different factors variances) and 403.15 (calculation of effluent limits on a net basis) provide mechanisms for tailoring the effluent limit in a categorical Pretreatment Standard to the unique circumstances of a particular Industrial User. Section 403.12 prescribes reporting requirements for User subject to categorical Pretreatment Standards.

B. Effect on Users Subject to the Electroplating Pretreatment Standards

The promulgation of today's regulations affects the compliance obligations of Industrial Users subject to the Electroplating pretreatment standards.

On September 7, 1979, EPA promulgated final Pretreatment Standards for Existing Sources in the Electroplating Point Source Category (44 FR 52590). These standards were appealed by the National Association of Metal Finishers (NAMF), the Institute for Interconnecting and Packaging Electronic Circuits (IPEEC) and the Ford Motor Company (Ford). The lawsuits are still pending in the Court of Appeals.

NAMF and IPEEC. NAMF and IPEEC negotiated a Settlement Agreement with EPA which required EPA to propose certain amendments to the electroplating standards. The amendments, published July 3, 1980, 45 FR 45322, proposed to change the 30-day average maximum in the final regulation to a 4-day average, and proposed less stringent limitations for cyanide. EPA plans to promulgate final amendments shortly. In addition, in accordance with the Settlement Agreement, EPA expects to extend the compliance date for non-integrated facilities subject to the electroplating standards because of the delay in promulgation of the final amendments.

Ford. Ford and EPA submitted a joint motion to suspend further litigation until the combined wastestream formula, § 403.6(e), was published in final form. On March 25, 1980, at 45 FR 19245, the Agency published a notice which had the effect of removing "integrated facilities" like Ford from regulation by the electroplating standards until the effective date of § 403.6(e). In that notice, the term integrated facility was defined as a facility that performs more than electroplating operations and combines one or more plant electroplating process wastewater lines with non-electroplating process lines prior to or at the point of treatment. The applicability of electroplating standards to integrated facilities was suspended because it was determined that § 403.6(e) would have to be promulgated in final form before integrated facilities would understand their compliance obligations under the electroplating standards. For the same reason, EPA also agreed to extend the compliance date for integrated facilities until three years after the effective date of § 403.6(e).

Applicability of Electroplating Standards to Integrated Facilities. As a result of the March 25, 1980, notice, the

electroplating pretreatment regulations promulgated on September 7, 1979, will apply to Industrial Users meeting the above definition of "integrated facility" commencing on the effective date of today's final amended general pretreatment regulations. Such Users will have three years from the effective date of today's regulations to comply with the effluent limits prescribed in the electroplating standard.

The variance and reporting requirements set forth in the general pretreatment regulations and triggered by the effective date of a categorical Pretreatment Standard, shall, in the case of these integrated facilities, be triggered by the effective date of today's regulations. Thus, integrated facilities must submit the § 403.12(b) baseline report, which is due within 180 days after the effective date of an applicable categorical Pretreatment Standard, within 180 days after the effective date of today's general pretreatment regulations. Similarly, the deadlines for requesting a categorical determination (§ 403.6) or a fundamentally different factors (FDF) variance (§ 403.13) shall also be determined by reference to the effective date of today's regulations.

It should be noted that these requirements are triggered despite the fact that final amendments to the electroplating standards are expected shortly. The electroplating standards published on September 7, 1979, were never the subject of a general stay. The amendments will not materially affect the baseline monitoring requirements of § 403.12, categorical determinations under § 403.6, or FDF variance requests under § 403.13. Because the final electroplating amendments should be promulgated shortly, we do not believe that integrated facilities will be disadvantaged by the deadlines triggered through today's regulation.

Applicability of Electroplating Standards to Non-Integrated Facilities. On June 19, 1980, at 45 FR 41419, the Agency published a notice suspending the deadline for requesting an FDF variance by electroplaters until the promulgation of the final amended general pretreatment regulations. Upon the effective date of today's regulations, the provisions of § 403.13 are once more applicable to Industrial Users in the electroplating category. These Users will be allowed 180 days from the effective date of today's regulation (or, alternatively, 30 days from the Agency's decision on a § 403.6 categorical determination) to request an FDF variance under the provisions of § 403.13.

As discussed above, the amendments to the electroplating standards will not

materially affect FDF variance requests under § 403.13. Non-integrated facilities are already subject to the remaining requirements imposed by 40 CFR 403 including deadlines for baseline monitoring reports and categorical determinations.

III. Scope and Purpose of the National Pretreatment Program

The scope and complexity of the national pretreatment program and the significance of its potential impact on protection of health and the environment make it desirable to provide the public with a detailed statement of EPA pretreatment policy. The National Pretreatment Strategy which was published in Appendix A of the June 1978 regulations is presently being updated. Today's preamble will highlight some of the major objectives and considerations relied on in establishing the program.

A. Size of Program

While all non-domestic users of POTWs are covered by the general prohibitions contained in § 403.5 of this regulation, there are at least 60,000 existing industrial dischargers to POTWs in the 34 categories (see Appendix B, Coverage of Categorical Pretreatment Standards) which will be considered in the initial focus of categorical Pretreatment Standards. Categorical Pretreatment Standards promulgated under section 307 of the Act are based on the best available technology economically achievable (BAT). See section 301(b)(2)(A)(ii). BAT standards are discussed in detail in the preamble section on Pass Through, § 403.3(n). In the future, additional industrial categories may be added to the list of 34 industries. Industrial dischargers who dispose of their wastes through POTWs may also be subject to State or local pretreatment requirements developed to supplement the national program.

Most of the Industrial Users potentially subject to categorical Pretreatment Standards discharge to approximately 2,500 of the Nation's 14,000-plus permitted POTWs. While the majority of these POTWs provide primary treatment, less than half have constructed secondary treatment facilities. Current estimates indicate that about 2,000 of these POTWs will be required to develop local pretreatment programs under the provisions of these general regulations. These programs will vary in size and complexity depending upon the number of Industrial Users in the POTW system.

B. Effects of Industrial Discharges to POTWs on the Public Health and Environment

Industrial discharges to POTWs are known to be the source of significant problems. A number of the pollutants discharged by Industrial Users of POTWs are substances for which there is evidence of carcinogenicity, mutagenicity, and/or teratogenicity. Others are known to have acute toxic effects on human or aquatic organisms at sufficiently high concentrations. Many of the toxic pollutants are persistent in the environment and some bioaccumulate and enter food chains.

When industrial pollutants enter POTWs they can create three types of problems:

1. *Interference.* The most immediate impact of these pollutants can be on the operation of the POTW. Discharges of high volumes or concentrations of certain pollutants can inhibit or interfere with the proper operation of a POTW, thus causing it to do an inadequate job of treating normal domestic wastes as well as industrial wastes. As a result, the POTW can be prevented from meeting its permit requirements.

To a large extent, the identification and regulation of interference problems is a local responsibility. Pollutants which interfere with the operation of one POTW may not adversely affect the operation of another. These differences are attributable to several factors including the varying sensitivities of different POTWs and the constituent composition of the wastewater treated by the POTW.

Because the presence of an interference problem is so dependent on local conditions, regulation of interference is largely relegated to the prohibited discharge provisions of § 403.5 of these regulations rather than the categorical pretreatment standards. Under the provisions of § 403.5, a POTW must develop specific limits for Industrial Users to guard against interference with the operation of the municipal treatment works.

2. *Sludge Management.* Some toxic pollutants, removed from the effluent stream by treatment at the POTW, enter the POTW's sludge and can contribute significantly to sludge management problems. Industrial pollutants, particularly metals, can limit the sludge management alternatives available to the POTW and increase the cost to the public of providing adequate sludge management. Sludge contaminated with toxic materials can be rendered unusable as a soil conditioner. Many communities are already faced with serious problems in managing ever-

increasing quantities of sludge. In some cases, improper handling of sludges contaminated with metals and other toxic pollutants can result in uptake of these pollutants by crops in the human food chain or leaching of these pollutants into ground water (currently the source of approximately 50 percent of the Nation's drinking water) as well as surface waters. As the following discussion indicates, the magnitude of the sludge contamination problem posed by certain pollutants is often significant enough to warrant regulation of these pollutants through categorical pretreatment standards.

3. *Pass-through.* Even when the inhibition/interference and sludge management problems mentioned above have been dealt with, there still are many toxic industrial pollutants that do not receive adequate treatment in most POTWs. These toxic pollutants pass through POTWs with removals that would be unacceptable if the POTW were an industrial direct discharger. Toxic industrial pollutants which pass through the POTW can prevent reuse of municipal wastewaters and the productive recycling of organic matter and nutrients in land treatment systems. The pass-through of toxic industrial pollutants can also prevent the attainment of water quality standards and increase the cost to consumers of treating drinking water. Like pollutants which interfere with sludge use or disposal, pollutants which generally pass-through the POTW in unacceptable concentrations or amounts may be subject to regulation through categorical Pretreatment Standards.

Pollutants which cause or have the potential to cause any of the above problems when discharged to a POTW are said to be "incompatible" within the meaning of that term as used in section 307(b) of the Act. Recent data indicate that categorical Pretreatment Standards are necessary to control these pollutants.

C. Data Supporting the Need for Pretreatment Standards To Restrict Pass-Through

Recent data gathered by EPA validate the approach taken by Congress in protecting against the discharge of toxic pollutants to navigable waters by establishing Pretreatment Standards. The data indicate that industries are the major source of toxic pollutants in POTW's and that industrial pretreatment provides much superior removal of pollutants than does treatment at the POTW.

1. Major Contributors of Toxic Pollutants to POTWs.

A typical POTW receives 60% of its influent from residential flow, 20% from commercial and 20% from industrial. Information obtained from a recent EPA study has been used to determine the relative contribution of toxics from these three sources. (See Table 1). Despite the small percentage of flow from industrial sources, industry contributed 67% of the total toxic metals entering the POTW. Moreover, for some individual toxic metals the percentage was even higher (e.g., industry contributed 85% of the cadmium, 83% of the chromium, and 89% of the cyanide entering the POTW).

Table 1.—Contribution to a Typical POTW

	60 pct. res.	20 pct. com.	20 pct. ind.
Metals and cyanide:			
Cadmium.....	12	3	85
Chromium.....	10	7	83
Copper.....	73	8	19
Lead.....	45	7	48
Nickel.....	14	9	77
Silver.....	10	2	88
Zinc.....	48	7	45
Cyanide.....	10	1	89
Ave. (pct.).....	28	5	67
Organics:			
Benzene.....	19	55	26
1,1,1-Trichloroethane.....	7	3	93
Chloroform.....	45	20	35
Ethyl Benzene.....	2	3	95
Tetrachloroethylene.....	27	17	56
Toluene.....	19	14	67
Trichloroethylene.....	9	31	60
Bis (2-Ethylhexyl) Phthalate.....	45	8	47
Di-N-Butyl Phthalate.....	47	8	45
Diethyl Phthalate.....	94	6	0
Phenol.....	26	3	72
Ave. (pct.).....	29	17	54

Source: Vol 6, Environmental Protection Agency, Sources of Toxic Pollutants Found in Influent to Sewage Treatment Plants, p. 75. EPA Contract Number 68-01-3857.

Not only does the POTW receive a large percentage of its pollutants from industry, but the POTW is not as efficient at removing these pollutants as the Industrial User would be if it installed pretreatment technology. There are two principal reasons for this result. First, the POTW is not designed to remove toxic pollutants. Second, even where pollutants are removed by the POTW's technology, the dilution that occurs at the POTW causes less efficient removal of toxic pollutants than would be achieved by the Industrial User with its more concentrated wastestream.

2. Design of POTWs.

POTWs are designed to meet the mandate of section 301(b)(1)(B) of the Act which requires all POTWs to meet effluent limitations based on secondary treatment by July 1, 1977. Pursuant to section 304(d)(1), the Agency has defined secondary treatment as that treatment necessary to arrive at specified effluent levels for biochemical oxygen demand (BOD), suspended solids (SS), and pH (40 CFR Part 133). As a result, POTWs have been designed to

remove these conventional pollutants and not toxic pollutants. In contrast, pretreatment systems operated by Industrial Users are designed to remove the toxic pollutants in that industry. For example, an electroplater discharging to a POTW would be likely to install a physical-chemical treatment system to remove toxic metals common in electroplating wastestreams. The POTW's system, designed to remove BOD and SS, would not remove toxic metals as efficiently as the Industrial Users' system. While the effect of toxic pollutants on a POTW is sometimes considered in the design of the facility to ensure adequate protection of a biological system and consequent ability to meet conventional pollutant limitations, the systems are not designed to enhance removal of toxic pollutants.

Whatever removal is obtained by POTWs for toxic pollutants is incidental to the POTW's main function of treating conventional pollutants. For example, the reduction of suspended solids in both the primary and secondary sedimentation tanks would produce a reduction in the more insoluble heavy metals as the metals would attach to the settled solids. It should be noted, however, that since heavy metals are not biodegraded, a decrease in heavy metals in the liquid phase produces an increase in heavy metals in the waste sludge. Partially because removal of toxic pollutants by the POTW is incidental to its normal operations, it is also variable. For example, some toxics are more soluble than others and, therefore, will not be absorbed by the solids. Removal of toxic pollutants by the POTW will therefore be more variable than removal by treatment technologies designed to remove such toxics.

3. Removal Efficiency of POTWs.

Even though a POTW may realize some incidental removal of toxic pollutants, the POTW will not remove these pollutants as efficiently as an industrial discharger would. Removal efficiency is largely dependent upon the concentration of pollutants in the wastestream to be treated. The higher the concentration of pollutants, the greater the removal efficiency of the treatment system. Because of the great dilution of toxic pollutants by large volumes of domestic sewage in the influent to a POTW, the POTW will be less effective at treating these toxics than the industry would have been had it treated the toxics while in concentrated form before introducing the industrial wastestream into the POTW. Thus, since the POTW's treatment of influent toxics is less efficient, the total mass of industrial pollutants removed at the POTW is less than the mass removal which would have been achieved had the industries pretreated their wastes.

In light of the foregoing discussion, it is not surprising that data from a recent study show that the removal efficiency of a POTW with secondary treatment installed is considerably less than the removal efficiency of a direct discharger applying appropriate treatment. (See Table 2.) The removal efficiency of POTWs operating at primary treatment was found to be significantly lower than that attained by a secondary treatment plant. In 1978, the Agency initiated a study to determine the removal of toxic pollutants in 40 POTWs that were meeting secondary treatment effluent limitations as required by section 304(d)(1) and regulations promulgated pursuant thereto at 40 CFR Part 133. The removals of 20 of the 40 cities are compared to removals obtained by BAT direct dischargers in the following table.

Table 2.—Toxic Pollutant Removal (Percent)

	Cr	Cu	Ni	Zn	Pb	Cd	Phenols
POTW	73	77	39	76	73	46	68
BAT direct:							
Metal finishing	99	97	98	98	95	93	
Iron and steel	82	93	98	80	79		
Inorganic chemicals	87	79	89	87	94	90	
Leather	98						
Coil coating	99	99	96	99	98	98	
Photographic	99	99	99	99	97	93	
Petroleum							99

Sources: Rulemaking data in the listed effluent limitation categories; Fate of Priority Pollutants in Publicly Owned Treatment Works, Interim Report, EPA 440/1-80/301, October 1980.

The table shows that while POTWs with secondary treatment remove some heavy metals and phenols, direct dischargers with BAT treatment systems

are more efficient. As indicated in the prior discussion, this is largely due to the much higher concentration of pollutants at the industry than at the

POTW. Because the industrial User's waste stream is diluted by many other streams before reaching the POTW, the POTW is unable to remove pollutants as efficiently as the User. Indeed, in those cities with extremely heavy industrial contributions, the removal efficiency improves as the concentration of pollutants in the POTW system increases. It should be noted, however, that the increased removal in these heavily industrialized cities does not result in a reduction in the mass of pollutants discharged to receiving waters. Because more toxic pollutants are in the system to begin with (as reflected in the increased concentrations) more of these pollutants continue to be discharged by heavily industrialized cities than would be discharged by less industrialized cities with lower levels of removal.

In summary, the data in Table 2 show that the POTW's removal of key toxic pollutants is less than an Industrial User would be able to achieve applying best available technology.

4. Conclusion.

This additional data on the removal efficiency of POTWs compared to the removal efficiency of direct dischargers at BAT supports EPA's view that toxic pollutants from Industrial Users are passing through POTWs into the navigable waters and, therefore, are appropriate candidates for control under pretreatment regulations.

The preamble discussion of § 403.3(n) describes EPA's basis for finding that pollutants are passing through POTWs inadequately treated. To restate that view, according to the language of § 307(b)(1), pollutants from a particular industrial category are deemed to be passing through the POTW in unacceptable amounts where the POTW effluent violates the limit for that pollutant which a direct discharger in that industrial category would be required to meet. However, rather than compare the mass or the concentration of pollutants discharged by the POTW with the mass or concentration of a BAT direct discharger, EPA has concluded that comparison of the percent of the pollutant removed by the POTW with the percent removed by a BAT direct discharger provides a real-world means of comparison of treatment capabilities. A comparison of mass discharged would be unacceptable because pollutants enter a POTW from non-industrial as well as industrial sources. A comparison of concentrations would also be unacceptable because the industrial streams discharged into the POTW are

diluted by other incoming streams. Accordingly, the Agency has sought to achieve the underlying intent of section 307(b) by focusing on a comparison of the removals provided by direct dischargers and POTWs.

As discussed previously, Table 2 *supra*, compares the removal achieved by PCTWs with the removal achieved by direct dischargers for various toxic metals and phenols. The data demonstrate that POTWs are not as efficient at removing these toxic pollutants as direct dischargers applying BAT. Accordingly, the pollutants are passing through the POTW with treatment at levels less than BAT removal, and therefore pretreatment standards are necessary.

D. Data Supporting the Need for Pretreatment Standards to Restrict Unacceptable Sludge Contamination

In addition to requiring EPA to regulate pollutants that pass through the POTW, the Clean Water Act also requires EPA to control pollutants that interfere with the operation of the POTW. As indicated earlier, § 403.5 of the general pretreatment regulations covers the grossest forms of "interference" with the POTW, such as dumping flammables into the works, dumping acids or other solutions that will corrode the works, and so on. Another form of interference occurs when the POTW's sludge disposal alternatives are limited as the result of contamination of the sludge with toxic pollutants from industrial dischargers. Section 307(b) of the Act requires Pretreatment Standards for pollutants introduced into POTWs, as defined in section 212 of the Act, which would interfere with the operation of such works. Section 212(2) defines treatment works to include land used for the ultimate disposal of residues, such as sludge, resulting from treatment. Thus, contamination of the residues or sludge that would interfere with its disposal constitutes interference with the POTW.

In addition, the 1977 amendments to the Act link removal allowances for Industrial Users to sludge use and disposal. If the POTW is removing the pollutant, the POTW may give credit for that removal to the Industrial User by modifying the User's Pretreatment Standard, but only if the discharge from the User does not prevent the POTW's sludge use or disposal from being in accordance with section 405 of the Act. By so providing, Congress indicated its intention that EPA prevent interference with POTW's sludge disposal alternatives by establishing Pretreatment Standards that would prevent toxic pollutants from entering

the sludge in amounts that would interfere with the POTW's selected method of sludge use or disposal. Indeed, the Conference Report on the 1977 amendments states that "[i]n addition to the express criteria of section 307(b), the Administrator in establishing pretreatment standards shall consider the guidelines for sludge disposal or use established under section 405." (Conf. Report 95-830 at 88; *Reprinted in Comm. on Environmental and Public Works, 95th Cong. 2d Sess., A Legislative History of the Clean Water Act of 1977* (hereafter referred to as "Legis. Hist."), vol. 3, at 272.)

As Congress recognized when it linked sludge disposal alternatives to Pretreatment Standards, there are sound scientific reasons for cleaning up the sludge. Toxic heavy metals and some toxic organic chemicals are commonly found in the sludge of POTWs that serve industry. (See *Fate of Priority Pollutants in Publicly Owned Treatment Works, supra.*) Some of these sludges are subject to regulatory requirements under section 405 of the Clean Water Act, the Resource Conservation and Recovery Act, and other statutes and regulations.

Heavy metals are commonly regulated in sludge disposal provisions due to the toxic effects of these pollutants on plant, animal life, and human health. For example, exposure to cadmium can result in kidney damage and chronic respiratory problems. Moreover, cadmium is readily taken up by many crops which are subsequently eaten by humans. Exposure to lead, especially in children, can damage the heme synthesis system, the nervous system, and the renal system. Anemia occurs in children at blood levels of 40 µg/100 ml of whole blood. Exposure to mercury can cause lesions on the mucous membranes of the respiratory tract which lead to bronchitis. Ingestion of mercury over long periods of time can cause brain damage and loss of hearing and vision. Mercury is also readily absorbed by food crops. Exposure to arsenic can cause fatigue in mild cases, and damage to internal organs such as the kidneys, liver, and intestines in severe cases. It is also highly toxic to plants. Inhaled hexavalent chromium can cause lung tumors. Copper, nickel, and zinc can be toxic to plants, particularly on acid soils. In short, these metals are of national (as well as international) concern.

1. "Removal" of Toxic Metals to the Sludge.

As the discussion in part "C" indicated, POTWs may realize incidental removal of toxic pollutants. In the case of heavy metals, this "removal" simply means shifting the toxics from

the POTW's liquid wastestream to the POTW's solid waste (sludge).

In a recent study, sludges at POTWs treating at secondary levels were tested for metal content (See Table 3.).

BILLING CODE 6560-33-M

Table 3

Concentration of Selected Metals in Secondary POTW Sludge (mg/kg)

	Range	Average	Median
Cadmium	1 - 1622	157	14
Chromium	125 - 1762	730	422
Copper	150 - 3160	894	553
Nickel	13 - 803	240	121
Zinc	420 - 8468	2874	2167
Lead	40 - 1169	361	256

Metal mg/kg

CITY

Metal	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cadmium	31	12	1	14	17	1,622	12	6	15	48	14	665	6	8	9	39
Chromium	927	317	125	563	422	1,499	1,762	1,199	254	415	841	1,956	360	865	178	302
Copper	1,256	418	540	334	150	934	1,111	1,427	436	833	1,346	3,160	553	848	531	426
Nickel	165	121	13	67	67	355	663	710	123	137	110	252	90	803	65	103
Zinc	2,480	1,045	420	3,740	1,313	7,413	3,111	8,468	677	2,491	1,148	5,044	1,735	3,936	2,167	801
Lead	571	289	40	1,074	498	196	1,070	1,169	244	398	236	36	413	190	256	103

Source: Fate of Priority Pollutants in Public Owned Treatment Works, Interim Report, EPA 440/1-80/301 October 1980 at 29. (Derived by dividing by total solids.)

BILLING CODE 6560-33-C

Another study showed the following concentrations of toxic metals in POTW sludges where not all the POTWs tested had secondary treatment.

Table 4.—Concentration of Selected Metals in POTW Sludge

Metal	Mg/kg-dry basis	
	Range	Median
As.....	6-230	*10
Cd.....	0-1,320	13
Cr.....	10-99,000	*890
Cu.....	1-23,124	646
Hg.....	0.5-10,600	*5
Ni.....	0-9,450	53
Pb.....	0-10,800	360
Zn.....	0-49,000	1,350

*Sommers, Chemical Composition of Sewage Sludges and Analysis of Their Potential Use as Fertilizers, 6 J. Environ. Qual. 225 (1977).

Source: Office of Solid Waste, EPA, Draft Preliminary Impact Assessment on Sludge Distribution and Marketing Regulations, 1980.

Improper disposal or utilization of sewage sludge containing excessive levels of these toxic pollutants could lead to serious adverse environmental and human health effects. Land application of contaminated sludges could result in the introduction of toxic metals into the food chain through uptake by plants or contamination of water supplies through runoff to surface waters or percolation into groundwaters. In addition, ready public access to disposal sites could significantly increase the possibility of direct exposure of the general population, particularly children, to these toxic pollutants. Incineration of contaminated POTW sludges could lead to the further introduction of these toxic elements into the air. It is, therefore, desirable to isolate these toxic pollutants in small, but concentrated, industrial sludges, rather than sending them on to the larger POTW sludge. This approach facilitates proper handling and disposal of highly toxic sludges.

Comparisons of municipal sludges before and after pretreatment programs indicate that pretreatment programs have been effective in reducing metals concentrations in POTW sludges. For example, in Muncie, Indiana, the sludge concentration (mg/kg-dry basis) of chromium went from 2,000 before pretreatment to 9.5 after pretreatment. Copper went from 1,750 to 700; nickel from 8,500 to 150, and zinc from 5,800 to 2,700. Large reductions were also achieved in Buffalo, New York, and Grand Rapids, Michigan. (Source: Effluent Guidelines and Standards; Electroplating Point Source Category; Pretreatment Standards for Existing Sources, 44 FR 52598 (September 7, 1979).)

2. Section 405 Regulations.

As stated previously, in establishing pretreatment standards, the Administrator must consider guidelines for sludge disposal or use established under section 405 of the Act (See section 307(b) of the Act; Conf. Report 95-830 at 88; Legis. Hist. Vol. 2 at 272.). EPA has promulgated regulations entitled Criteria for Classification of Solid Waste Disposal Facilities and Practices (40 CFR Part 257) which provide limits on cadmium and polychlorinated biphenyls (PCBs) in solid waste applied to land used for production of food-chain crops. The annual application of cadmium from solid waste is limited to 0.5 kg/hectare (ha) for land used for the production of certain crops shown to be cadmium accumulators. An initial limit of 2.0 kg/ha with a gradual phasing to 0.5 kg/ha of cadmium is specified for other food-chain crops. Furthermore, cumulative cadmium application ceilings are provided on the basis of soil pH and cation exchange capacity (CEC).

The restrictions imposed on PCBs provide that solid waste containing concentrations of PCBs equal to or greater than 10 mg/kg must be "incorporated into the soil," i.e., injected beneath the surface of the soil or mixed with the surface soil, when applied to land used for producing animal feed. Incorporation into the soil is not required if it is assured that the PCB content is less than 0.2 mg/kg in animal feed or less than 1.5 mg/kg in milk.

Regulations addressing the distribution and marketing of sewage sludge products under § 405 are presently in the proposal stage and scheduled for formal proposal in the Federal Register early in 1981. These regulations are expected to provide additional limitations on cadmium and PCBs, and restrictions on other metals, including boron, lead, copper, nickel and zinc in sludge products.

3. Other Federal Regulations

Other Federal regulations and guidelines, which are not promulgated pursuant to section 405, bear mentioning here. Although these regulations are not relied upon in setting categorical Pretreatment Standards, they nevertheless are indicative of the national concern regarding sludge handling and disposal. To the extent that individual POTWs must consider these regulations in making their sludge disposal choices, the regulations take on even more significance. The National Interim Primary Drinking Water Regulations (40 CFR 141) establish maximum contaminant levels for many substances in drinking water, including arsenic, cadmium, chromium, lead, and mercury, on the basis of their human health implications. These standards

were also adopted for the protection of groundwater from contamination by solid waste disposal (40 CFR 257). The National Secondary Drinking Water Regulations (40 CFR 143) provide guidelines for contaminants that may adversely affect the aesthetic quality of drinking water such as taste, odor, color and appearance. In addition to setting recommended levels for other water quality parameters, these guidelines limit copper and zinc to 1.0 mg/l and 5.0 mg/l, respectively. The Ocean Dumping regulations (40 CFR 220-229) restrict the introduction of toxic pollutants into the marine environment. These regulations specifically prohibit the ocean dumping of any material containing either mercury or cadmium as other than trace contaminants.

EPA has recently published water quality criteria for 64 of the 65 pollutants designated as toxic under the Clean Water Act, including arsenic, cadmium, copper, mercury, nickel, lead and zinc. (45 FR 79318, November 28, 1980.) These criteria specify ambient concentrations of pollutants which are generally adequate to ensure the protection of human health and the protection and propagation of fish and other aquatic life.

In order to prevent significant adverse effects on plants and soils, the National Academy of Sciences and the National Academy of Engineering recommended maximum concentrations of trace elements in irrigation waters in the NAS/NAE 1972 *Water Quality Criteria*.

Concern over the potential exposure to mercury and lead through inhalation has led to control of airborne mercury and lead by two additional national standards. The National Ambient Air Quality Standards for Hazardous Air Pollutants (40 CFR 61.50) restrict the emission of mercury to the atmosphere from sludge incineration plants, sludge drying plants, or a combination of these that process sewage sludges, to 3200 grams over a 24 hour period. They also restrict the emission of lead to 1.5 µg/cubic meter as a monthly average.

The Food and Drug Administration (FDA) stated that any new practices which would significantly increase the cadmium levels in foods should not be instituted. In order to protect the public health, FDA has recommended that sludges containing more than 25 mg/kg cadmium, 1000 mg/kg lead, or 10 mg/kg PCB's, on a dry basis, should not be applied to lands used to grow food-chain crops. FDA also proposed that the total amount of lead in sewage sludge added per hectare (ha) should not exceed 500 kg for soils with a cation exchange capacity (CEC) of less than 5,

1000 kg for a CEC between 5-15 and 2000 kg for a CEC over 120.

The U.S. Department of Agriculture (USDA) has issued guidelines for the land application of sludge. Five metals were addressed: cadmium, lead, copper, nickel and zinc. Based on an evaluation of the effects of municipal sludge application on plant life, soil productivity and human health, USDA recommended that on privately owned and controlled land, the maximum lifetime amount of sludge-borne metals which may be applied to any given site should not exceed certain limits, including 5 to 20 kg/ha for cadmium, and 125 to 500 kg/ha for copper. In the absence of regulatory requirements, the foregoing USDA guidelines have been adopted by EPA and are presented in its technical bulletin, *Municipal Sludge Management: Environmental Factors*.

4. State Regulations.

Most States have either enacted legislation or promulgated guidelines governing the application of sewage sludge to food-chain lands. One of the primary considerations in drafting State guidelines has been the potential for heavy metals, particularly cadmium and lead, and PCBs to enter the human food chain in dangerous concentrations. Some States have, accordingly, adopted guidelines and standards similar to those promulgated in 40 CFR Part 257. Again, to the extent that POTWs must comply with these requirements, they have significance beyond the demonstration of concern over toxic pollutants in municipal sludge. See *Sludge Management: A Comparison Between State and Proposed Federal Guidelines*, Contract No. 09075-068-003, EPA, October 16, 1979.

5. Regulation of Sludge by Other Countries.

There is international concern over control of these toxic metals in the environment. For example, the following organizations and countries have established guidelines and standards on the toxic metal content of sludges or on the use of contaminated sludges: World Health Organization/Food and Agriculture Organization of the United Nations, Canada, Great Britain, Federal Republic of Germany, Holland, Denmark, Finland, Norway and Sweden. France and Scotland are in the process of studying the problem. While these international regulations do not form the basis of EPA pretreatment Standards or section 405 regulations, they are indicative of the growing concern over contaminated sludges and may predict the future regulatory activity of the federal government and States in this area.

Based on the foregoing discussion, EPA concludes that the categorical Pretreatment Standard approach to the elimination of discharges of toxic pollutants is supported by evidence of toxic pollutants passing through POTWs and interfering with POTWs by contaminating municipal sludge.

IV. Statutory Considerations

The EPA pretreatment policy and the general pretreatment regulation are based upon the Federal Water Pollution Control Act Amendments of 1972 as amended by the Clean Water Act of 1977, (Pub. L. 95-217) 33 U.S.C. 1251 et seq.

The Clean Water Act was meant to "restore and maintain the chemical, physical, and biological integrity of the Nation's waters" by establishing as a national goal the elimination of the discharge of pollutants into the navigable waters by 1985. A major emphasis for attainment of this goal was placed upon technology-based regulations. Industries which discharge into waters of the U.S. are required to achieve limitations based on Best Practicable Control Technology Currently Available (BPT) by July 1, 1977, and Best Available Technology Economically Achievable (BAT) by July 1, 1984, in accordance with sections 301 and 304. New sources are required to comply with New Source Performance Standards (NSPS) based on Best Available Demonstrated Control Technology (BDT) under section 306. POTWs are obliged to meet "secondary treatment" by 1977, and Best Practicable Waste Treatment Technology (BPWTT) by 1983, in accordance with sections 301(b), 304(d), and 201(g)(2)(A). Users of a POTW are required to comply with Pretreatment Standards and any other requirements promulgated pursuant to section 307 (see section 301(b)(2)(A)(ii)).

Sections 307(b)-(d) are the key sections of the 1972 Act in terms of pretreatment. Section 307(b) requires the EPA Administrator to promulgate regulations establishing Pretreatment Standards for the introduction of pollutants by existing sources into POTWs. Pretreatment Standards promulgated under section 307(b) must be established to prevent the discharge of any pollutant which interferes with the POTW (or contaminates its sludge), passes through, or otherwise is "incompatible" with the POTW.

Section 307(c) requires that the Administrator promulgate Pretreatment Standards for a source which would be a new source subject to section 306 if it were to discharge pollutants to waters of the U.S. These regulations must be promulgated simultaneously with the

promulgation of standards of performance under section 306. New source Pretreatment Standards must be designed to prevent the discharge of any pollutant into the POTW which may interfere with, pass through, or otherwise be incompatible with the operation of the works, including sludge use or disposal.

Under section 307(d), it is unlawful to operate a new or existing source in violation of a Pretreatment Standard promulgated under sections 307(b) and (c). Violations of section 307(d) are subject to enforcement actions brought by the EPA (under section 309) against both the POTW and the Industrial User who is in violation.

The Clean Water Act amendments of 1977 reflect a Congressional consensus that the approach discussed above is sound and, with modifications to ensure a special emphasis on control of toxic pollutants, should be continued. The Clean Water Act has added several new provisions relevant to pretreatment. Section 307(b)(1) was amended to allow for local modification of national categorical Pretreatment Standards to take into account the actual pollutant removal capabilities of particular POTWs. Section 402(b)(8) was amended to provide that any NPDES permit issued to a POTW should include, as permit conditions, requirements for identifying pollutants from significant Industrial Users and for instituting an adequate local program to ensure compliance by users with national Pretreatment Standards. Finally, section 405 was amended to expand the guideline provisions relating to the disposal and utilization of sludge and to provide that any permit for the discharge of sewage sludge shall be subject to the requirements of section 402 of the Clean Water Act.

V. Major Changes in the Final Amended General Pretreatment Regulations (By Section)

Note on Deletion of "Comments"

The proposed amendments published in October 1979 contained several "comments" intended to clarify certain provisions of the regulation. A "comment" does not have binding regulatory effect. Rather, it is equivalent to a preamble discussion and like a preamble, its purpose is to give the public and regulated parties more information on the regulatory provisions.

It is the policy of the Office of the Federal Register not to include "comments" within the regulatory text. Accordingly, the Agency has deleted from the regulation most of the

"comments" found in the October proposal. These comments are reproduced below with reference to the section of the final regulation in which they would have appeared.

§ 403.5(c)(2)

[Comment: This provision is not intended to require pretreatment for compatible waste as a substitute for adequate municipal treatment. When the POTW's acceptance of compatible wastes results in difficulties in meeting NPDES permit conditions, the POTW should consider a solution that is cost-effective and equitable, and consistent with the goal of joint treatment.]

§ 403.5(e)

[Comment: The POTW's enforcement action will generally be deemed appropriate if: 1) the action is promptly commenced and seriously and vigorously pursued; 2) the violators are placed on a legally enforceable, written schedule which achieves permanent pretreatment compliance as expeditiously as possible; 3) the POTW and the violators take all practicable temporary measures to eliminate or substantially abate the pretreatment problem until permanent compliance is achieved; and 4) the violators are penalized sufficiently to remove any economic benefit derived from the violations and to deter further violations. While this standard does not require the POTW to file a lawsuit against the Industrial User, the standard does establish that the mere initiation of negotiations with the User or the issuance of warning letters which do not result in immediate steps towards expeditious and permanent compliance are insufficient.]

§ 403.7(b)(4)

[Comment: This provision is not intended to require pretreatment for compatible waste as a substitute for adequate municipal treatment. When the POTW's acceptance of compatible wastes results in difficulties in meeting NPDES permit conditions, the POTW should consider a solution that is cost-effective and equitable, and consistent with the goal of joint treatment.]

§ 403.7(c)(3)

[Comment: The Approval Authority is encouraged to review applications promptly upon receipt where failure to do so might result in substantial economic hardship to affected Industrial User(s) if such User(s) were required subsequently to install significantly different or more expensive pretreatment equipment in the event the POTW's revision of categorical

Pretreatment Standards is denied or reduced. Prompt review will enable Industrial Users to make plans with greater confidence and will protect the environment from pollution which might result from inappropriate conditionally or provisionally revised discharge limits.]

§ 403.7(f)(5)(ii)

[Comment: This provision is not intended to require pretreatment for compatible waste as a substitute for adequate municipal treatment. When the POTW's acceptance of compatible wastes results in difficulties in meeting NPDES permit conditions, the POTW should consider a solution that is cost-effective and equitable, and consistent with the goal of joint treatment.]

§ 403.8(f)(1)(i)

[Comment: This provision is not intended to require pretreatment for compatible waste as a substitute for adequate municipal treatment. When the POTW's acceptance of compatible wastes results in difficulties in meeting NPDES permit conditions, the POTW should consider a solution that is cost-effective and equitable, and consistent with the goal of joint treatment.]

§ 403.9(c)(1)

[Comment: For example, where a compliance monitoring program for a certain industrial category is not yet required because the Pretreatment Standard for that industrial category has not been promulgated and no other pretreatment requirements apply to that source.]

§ 403.10(d)(1)

[Comment: This clause allows the State six months from the date on which it is required to have an approvable State Pretreatment Program (see paragraph (b) of this section) in which to modify or reissue municipal permits to include pretreatment requirements.]

§ 403.10(f)(1)(iv)

[Comment: However, in most cases the Director's authority to seek judicial relief will be exercised where there is no POTW Pretreatment Program or where the POTW has failed to act.]

§ 403.11(b)(3)

[Comment: The Approval Authority may decide after the comment period provided in this public notice to review the Submission at once.]

§ 403.12(a)

[Comment: In cases where there is an unapproved POTW pretreatment program, the Approval Authority may

request that Industrial Users submit to the POTW copies of reports required under § 403.12.]

§ 403.12(e)(1)

[Comment: Authority to require more detailed reporting of flows should in most cases, be preserved for those instances where the Industrial User is a major source of flow to the POTW or is a significant contributor of pollutants.]

§ 403.13(d)(1)

[Comment: Wastestream(s) associated with a User's process wastewater which were not considered in the development of the Standard will not ordinarily be treated as fundamentally different under paragraph (c). Where an Industrial User elects to combine, prior to treatment, a regulated wastestream with a wastestream not considered in setting categorical Pretreatment Standards, § 403.6(e) provides the proper procedures for determining an adjusted Pretreatment Standard. Where an adjusted Pretreatment Standard has been calculated in accordance with § 403.6(e), the Industrial User may apply for a fundamentally different factors variance from this adjusted Standard in accordance with this section.]

§ 403.13(d)(6)

[Comment: In determining whether factors concerning the Industrial User are fundamentally different, EPA will consider, where relevant, the applicable development document for the Standards; associated technical and economic data collected for use in developing each respective Standard; records of legal proceedings; and written and printed documentation, including records of communication and any pertinent information submitted by Requester, etc., relevant to the development of respective Standards which are kept on public file by EPA.]

§ 403.13(e)(1)

[Comment: Under this section a variance request may be approved if it is based on factors which relate to the User's ability ultimately to achieve the Standards but not if based on factors which merely affect the User's ability to meet the statutory deadlines of section 301 and 307 of the Act such as labor difficulties; construction schedules, or unavailability of equipment;]

§ 403.1 Applicability of Regulation.

§ 403.1(b) Coverage of the Pretreatment Regulations.

This section has been modified to clarify which pollutants and sources are subject to the General Pretreatment regulation. All pollutants contributed to

POTWs by non-domestic sources are subject to the regulation, even those pollutants traditionally considered to be domestic in nature.

One commenter stated that pollutants traditionally considered to be domestic in nature should not be regulated by Pretreatment Standards when they are discharged from non-domestic sources. The Agency disagrees with the commenter. Section 307(b) of the Clean Water Act makes it clear that EPA must regulate any pollutant introduced into POTWs which interferes with, passes through or otherwise is incompatible with such works. The Act makes no distinction between domestic or non-domestic pollutants.

Several commenters sought clarification of a perceived conflict between § 403.1 and § 403.5(c). Section 403.1 states that this regulation applies to "pollutants from non-domestic sources". Section 403.5(c) states that where pollutants from users contribute to a violation of a POTW's NPDES permit, the POTW is required to take action to correct that violation including, possibly, the imposition of effluent limits on several classes of users. The commenters were concerned that the language in § 403.1 limiting application of this regulation to non-domestic sources might be interpreted to restrict the POTW's options in remedying permit violations. EPA sees no conflict between the two sections. Section 403.1 correctly states which pollutants and sources are subject to nationally developed regulations. As discussed in the preamble to the proposed amendments, § 403.5(c) recognizes the POTW's authority to set additional limits or take other measures as necessary to cure permit violations. Although a POTW must remedy its permit violation, EPA does not by regulation mandate what form of action the POTW must take. The municipal authority may elect to commence appropriate enforcement actions; impose specific effluent limits or prohibitions on all or certain classes of users; modify the treatment plant or operation; or undertake some combination of these actions.

The second sentence of § 403.1(b) elicited comments on the applicability of the general pretreatment regulations to POTWs not required to obtain an NPDES permit, and on the applicability of categorical Pretreatment Standards and § 403.5 general prohibitive discharge limits to industries introducing wastes into such POTWs.

Section 307(b) of the Clean Water Act governs the applicability of categorical Pretreatment Standards and prohibitive discharge limitations. That section specifies that such standards and

prohibitions are applicable to any "source" contributing incompatible pollutants into "treatment works (as defined in section 212 of this Act)." The referenced definition includes POTWs which are not point sources of pollutants and which, consequently, do not require an NPDES permit. Thus, industries can be subject to § 307 (b) or (c) standards where they contribute pollutants to a POTW not required to have an NPDES permit.

Section 402(b)(8) of the Clean Water Act identifies the POTWs which are required to comply with the general pretreatment regulations. That section requires only POTWs with NPDES permits to develop a pretreatment program. Thus, section 402(b)(8) does not require that POTWs without NPDES permits develop pretreatment programs. Examples of these non-NPDES POTWs include municipal facilities which treat their entire effluent through evaporation lagoons, land treatment systems or water reuse or recycling systems.

However, as indicated previously, non-domestic users contributing to these systems will be subject to applicable Pretreatment Standards. Thus, while the Agency will not require a non-NPDES POTW to develop and submit a pretreatment program, such a POTW may elect to do so and assume primary responsibility for ensuring compliance by its Users with applicable requirements. Where non-NPDES POTWs so elect, EPA or the State, as appropriate, will assume a supplementary role in ensuring compliance. Where the non-NPDES POTW does not develop and obtain approval for a pretreatment program, EPA and the State will assume primary responsibility for ensuring compliance with Pretreatment Standards by regulated Users.

§ 403. Definitions.

§ 403.3(f) Definition of "Enforcement Division Director."

Because reference to EPA's ten Enforcement Division Directors is made in several sections of the regulation, a definition of this term has been included in the central definition section.

§ 403.3(g) Definition of "Discharge" or "Indirect Discharge."

EPA agrees with the commenters who suggested that it is inappropriate to use the word "discharge" in defining the term "discharge." Thus, § 403(g) has been amended accordingly. Another commenter felt that confusion might arise from defining "discharge" and "indirect discharge" to mean the same thing. The Agency recognizes that the

term "discharge" as defined in the CWA and the Consolidated Permit regulations conveys a very distinct meaning which differs from the use of the term "indirect discharge" in the general pretreatment regulations. However, for the purposes of simplifying the language of this regulation whenever possible, the term "discharge" is used interchangeably with the term "indirect discharge." The Agency believes that the advantages to be gained by avoiding awkward regulatory provisions outweigh any confusion which might arise over the interchangeable use of these terms.

§ 403.3(i) Definition of "Interference."

The proposed amendments to § 403.3(i) provide that contributions by Industrial Users will be deemed to result in Interference where such contributions cause or significantly contribute to a violation of the POTW's NPDES permit. Prior to the proposed revision, the regulation provided that any industrial user contributing to a violation of the permit would be deemed to be causing Interference. The proposed revision obviously establishes a more stringent standard of proof to be met before an industrial contribution can be held to cause Interference. A majority of the commenters addressing this proposed provision objected to this more stringent standard of proof. Many of these commenters, as well as other commenters who generally supported the proposed amendment, suggested that the definition of Interference would be more workable if the Agency defined those discharges which would constitute a significant contribution to a violation.

EPA agrees that further definition of a significant contribution is advantageous both to give industry better notice of that standard of conduct to which it is expected to conform and to provide clear guidelines for establishing violations of the Interference prohibition. Therefore, § 403.3(i) has been amended to specify that an Industrial User significantly contributes to the relevant permit violation or sludge problem if it either exceeds its authorized daily pollutant loading, discharges wastewater which differs substantially from the User's average discharge, or if it knows or has reason to know that its discharge would result in such violation or sludge problem. The first category (exceeding a daily pollutant loading) establishes a clear threshold, rendering the Industrial User liable if its discharge violates any contract, law or ordinance, and there is an NPDES permit violation or sludge problem. The second category establishes another strict and objective test: if the discharge, albeit not in

violation of local limits, is in substantial variance with the User's average discharge (taking into account the historically normal variations in production or process of the User) and there is a permit violation or sludge problem, then the User is deemed to have significantly contributed to such situation.

The third category approaches "significant contribution" from the standpoint of the User's actual or imputed knowledge of the foreseeable effects of its discharge. This separate category is less stringent but relies upon the judicially familiar concepts of knowledge, foreseeability and reasonableness. It should also be noted that the definition of Interference provides that Interference exists if the User is a cause of or significantly contributes to the magnitude or duration of an existing permit violation. The definition of Interference further provides that a User may be held liable for Interference where his discharge, in conjunction with discharges from other sources, results in a violation of the POTW's permit or non-compliance with the cited statutory, regulatory and permit requirements.

It should be noted that an Interference violation based on interference with sludge disposal or use only exists where the Industrial User causes or contributes to the POTW's inability to comply with one of the cited statutes (or regulations and permits) as it applies to the POTW's selected manner of sludge use or disposal. An Interference violation will not lie where the Industrial User's discharge would prevent the POTW's sludge from complying with requirements applicable to a method of sludge disposal which is not used by the POTW.

Limit on Liability by Complying with Effluent Standards. The proposed amendment to the definition of "Interference" does not consider pollutants to be interfering with the POTW when the discharge of such pollutants into the POTW is in compliance with Federal, State and local limits. One half of the commenters addressing this proposed change supported the amendment. The balance of the commenters felt that the amendment should be deleted. The latter group found the proposed amendment to be confusing, in conflict with the provisions of § 403.5, and inappropriately placed in the definition section. One commenter stated that it is "ridiculous" to exempt a discharge from the interference prohibition because that discharge is in compliance with an effluent limitation if the discharge is

indeed meeting all the criteria for causing Interference set forth in § 403.3(i).

The Agency agrees with those commenters who found it confusing and logically inconsistent to define Interference in § 403.3(i) and then, in the same provision, exclude some sources meeting that definition. In order to avoid the confusion which apparently resulted from including the proposed limit on liability in § 403.3(i), the Agency is deleting the last two sentences of that paragraph. EPA continues to support the intent behind the proposed amendment and believes that this intent is preserved by the language of § 403.5(e) which provides that, where an Industrial User is causing Interference, yet complying with Federal, State and local standards, the POTW has an opportunity to adjust the relevant standard. However, if the POTW fails to commence corrective action within the 30-day period provided in § 403.5(e), EPA or the State may take appropriate action.

Reference to Other Statutes. Several commenters challenged the Agency's authority to define Interference by reference to the Toxic Substances Control Act, the Solid Waste Disposal Act (including the Resource Conservation and Recovery Act), and the Clean Air Act. These comments indicate a misunderstanding of the effect and purpose of EPA's reference to these statutes and regulations.

Effect

Reference to these statutes does not in any way impose upon the Industrial User the obligations and penalties of these laws. The POTW's ability to comply with relevant requirements under these laws simply is used as one of the standards by which to determine the existence of an Interference violation under the Clean Water Act. The primary effect of this reference is to permit the POTW to impose specific limitations on the Industrial User to prevent future Interference with sludge disposal alternatives. By so doing the regulation ensures a sensible coordination of the Acts and regulations affecting POTW sludge use and disposal by enabling the POTW to control discharges from Industrial Users which inhibit any of the POTW's selected methods of sludge disposal.

Purpose. The purpose of these references is to recognize the obligation of POTWs to meet sludge requirements under these referenced statutes, regulations and permits and to provide a means for the POTW to control discharges from Industrial Users that would cause the POTW to violate these sludge standards. For example, land

disposal regulations promulgated under RCRA and the CWA limit the amount of cadmium that can be disposed on land used to grow food-chain crops. (40 CFR Part 257, 44 FR 53438). If a POTW has elected to dispose of its sludge by applying it to food-chain cropland, it must comply with the cadmium limits prescribed by the foregoing regulations. Since POTWs will be held responsible if their sludge is not in compliance, they should have some means of controlling discharges of cadmium from one of its major sources, Industrial Users. In the absence of such authority, the sludge disposal alternatives of the POTW would be limited—a result that is contrary to the intent of Congress in establishing sludge disposal requirements under section 405 of the Act. Accordingly, it is the Agency's position that it is essential to enable POTWs to prevent Interference with any of their sludge disposal alternatives by permitting them to set specific limits for their Industrial Users if the discharges by such Users would prevent their desired method of sludge use or disposal. In addition, where the POTW is not able to take appropriate action to ensure that industrial contributions do not interfere with its sludge-disposal practices, it is important that the State or EPA be able to seek appropriate relief.

Moreover, in an effort to promulgate consistent regulations, EPA and other agencies routinely refer to related statutes. For example, the Consolidated Permit regulations require that "[p]ermits shall be issued in a manner and shall contain conditions consistent with requirements of applicable Federal laws . . ." including the Wild and Scenic Rivers Act, the National Historic Preservation Act of 1966, the Endangered Species Act, the Coastal Zone Management Act, the Fish and Wildlife Coordination Act, the National Environmental Policy Act, and Executive Orders. (40 CFR § 122.12, 45 FR 33428 (May 19, 1980)). The preamble discussion of that section explained that "[t]his does not impose any legal requirements beyond those imposed by the terms of the laws themselves. The purpose of the section is to inform the public and permit-issuers of the requirements applicable to the permit programs regulated under this Part." (45 FR 33311 (May 19, 1980)) See also 33 CFR § 323.4-2(b)(1) where the Army Corps of Engineers refers to the Endangered Species Act in a regulation promulgated under the Clean Water Act.

Legal Authority to Refer to Other Statutes. In addition to the practical reasons for referencing these other

statutes, section 501(a) of the Act gives the administrator broad authority to "prescribe such regulations as are necessary to carry out his functions under this Act." Consistent promulgation of regulations is an important Agency function under the Act. Authorities much broader than the authority to preserve consistency and reasonableness of regulations have been held to stem from expansive rulemaking clauses similar to section 501(a). *See, e.g., National Petroleum Refiners Ass'n v. FTC*, 482 F.2d 672 (D.C. Cir. 1973), *cert. denied*, 415 U.S. 951 (1974). *Cf.* Senate Debate on Conference Report, Dec. 15, 1977, *reprinted in Legis. Hist.*, Vol. 3, at 461 (1978) (credit approvals to be conditioned initially on compliance with the Resource Conservation & Recovery Act, subtitles C & D, and later on section 405 of the Clean Water Act.) Moreover, two of the referenced statutes contain provisions specifically requiring the Administrator to integrate and avoid duplication of other Acts which grant regulatory authority to the Administrator. (Section 2006(b) of the Resource Conservation and Recovery Act, 42 U.S.C. § 6905(b); section 9(b), Toxic Substances Control Act, 15 U.S.C. § 2603(b).)

A related issue that has been raised by commenters is whether reference to other statutes and regulations deprives Industrial Users of adequate notice of their requirements under the general pretreatment regulations. The response is twofold. First, in most instances, POTW's will provide Users with notice of the Users' obligations by setting specific limits for those pollutants that cause the POTW to violate the requirements of the referenced statutes. (See § 403.5(c).) Second, § 403.5(e) ensures that the Industrial User will have adequate notice before an enforcement action will be taken for causing or contributing to the POTW's inability to comply with sludge requirements under any of the referenced authorities.

In some circumstances, the State or EPA may enforce the general prohibition of Interference in § 403.5(a) against the Industrial User. However, in these cases the Industrial User will still have sufficient notice because the definition of Interference requires that in order to be held liable under this provision, the User must either: (1) discharge in excess of prescribed effluent limits; (2) discharge wastewater which substantially differs in nature or constituents from the User's average discharge or (3) know or have reason to know that its discharge would result in a permit violation or prevent authorized

sewage sludge use or disposal. The first two requirements create a clear standard of conduct and the last addresses a situation where the User has actual or constructive knowledge that a permit violation or sludge disposal problem would result.

§ 403.3(n) *Definition of "Pass Through."*

Section 307(b) of the Clean Water Act provides that EPA shall establish national Pretreatment Standards to "prevent the discharge of any pollutant . . . [which] interferes with, passes through, or otherwise is incompatible with [the POTW]." Thus, the Act establishes two main criteria to be considered in setting Standards: the prevention of interference and the elimination of pass through. The selection of appropriate POTW protection standards to guard against interference is predominately a local determination and it is, accordingly, left largely to the discretion of the POTW. Section 403.5 of the general pretreatment regulation establishes minimum criteria to be incorporated in local prohibited discharge limits.

A concern of greater national scope is directed at the amount of industrial pollutants passing through POTW's across the nation and ending up in our navigable waters. In calling for the establishment of Pretreatment Standards under § 307(b) of the Clean Water Act, Congress recognized that pollutants from industrial sources reaching navigable waters *indirectly*, after passing through a POTW, can have the same detrimental effect on national waters as pollutants from their direct discharger counterparts.

Thus, in the Federal Water Pollution Control Act and amendments thereto, Congress established a parity between the requirements imposed on direct and indirect dischargers. Both direct and indirect dischargers of toxic pollutants are to be subject to technology-based effluent limitations which will reduce their discharges of toxic pollutants to acceptable levels.

Section 301(b)(2)(A) of the Clean Water Act specifies that direct dischargers shall be required to meet Standards based on "best available technology economically achievable for [each industrial] category or class" and that indirect dischargers shall be subject to these same requirements. The Conference Report on the Clean Water Act amendments also emphasizes that Standards for indirect dischargers and their direct discharger counterparts shall be similarly determined: "Under the amendment to section 307(b), the Administrator would establish national

pretreatment standards for toxic pollutants based on the best available technology economically achievable, or any more stringent effluent standards under section 307(a)." (Conference Report 95-830, p. 87, *reprinted in Legis. Hist.*, Vol. 3, at 271.)

While recognizing the essential parity between direct and indirect dischargers and electing to regulate them similarly through the imposition of technology-based Standards, Congress also appreciated that the POTW may provide some treatment of the discharge from indirect industries. Thus, the Administrator was directed to establish Pretreatment Standards only for those pollutants that pass through, interfere with, or are otherwise incompatible with the treatment works. In addition, in order to avoid redundant treatment, Congress provided for a case-by-case relaxation of nationally-established Pretreatment Standards for indirect dischargers where the POTW can show that it treats any or all of the regulated pollutants. See discussions of removal allowance policy below. In order to preserve the parity between direct and indirect dischargers initially established with the National Standards, Congress required that the treatment provided by the POTW and indirect discharger working in concert shall result in the effluent quality required of a direct discharger. (Section 307(b)(1)).

By so specifying, Congress also established an appropriate standard for assessing unacceptable pass through. According to the language of section 307(b)(1), pollutants from a particular industrial category would be deemed to be passing through the POTW in unacceptable amounts where the POTW effluent violates the limit for that pollutant which a direct discharger in that industrial category would be required to meet.

In recognition of real-world differences between the effluents of POTWs and industries, the Agency has interpreted this provision to require a comparison of the percent removal of pollutants at an industry applying Best Available Technology with the percent removal of pollutants at the POTW. While it might be argued that comparison of effluent quality would be more appropriate than comparison of percent removals, the Agency disagrees with this position. If one were to compare the mass loadings of regulated pollutants at the end of a POTW and at the end of a regulated industry, the POTW's discharge, because its effluent is a composite of the effluents from various contributing industries and other sources, would likely exceed the amount

of pollutants allowed for a single direct discharger. A similar problem however attends the use of concentration-based limits. Because of the great amount of non-industrial wastewater flowing into and from a POTW, the concentration of a particular toxic parameter at the end of the POTW would, as the result of dilution, most often be less than the concentration required of a direct discharger. Thus, it appears that the proper parity between direct and indirect dischargers cannot be determined by looking at the effluent quality from the POTW in comparison with effluent quality from a direct discharger. Instead, the Agency has sought to achieve the underlying intent of this provision by focusing on a comparison of the removals provided by direct dischargers and POTWs.

In determining whether a particular pollutant is Passing Through the POTW and is, therefore, appropriately subject to regulation through categorical Pretreatment Standards, the Agency compares POTW removal with removal obtained by a direct discharger. A pollutant will be deemed to Pass Through the POTW, and will thus be characterized as incompatible, where the average treatment provided by POTWs nationwide does not realize the same percentage of removal of the regulated parameter as would be required of direct dischargers with national effluent standards for that pollutant. Thus, if, in order to comply with their direct discharge BAT standard, direct dischargers in category Y were required to remove 85 percent of pollutant X, then POTWs must achieve an average of at least 85 percent removal of pollutant X in order to avoid reaching the conclusion that pollutant X presents a Pass-Through problem.

Where pollutants are regulated in categorical Pretreatment Standards through application of this pass-through justification, there should be no need to bring case-by-case enforcement actions based on a similar theory. Thus, EPA does not intend to assess case-by-case Pass-Through liability against an Industrial User where the removal provided by the User's particular POTW is not as great as the removal obtained by a direct discharger in that User's industrial category. Instead today's regulation limits its Pass-Through action to cases in which pollutants introduced into the POTW Pass Through is in quantities which result in a violation of the POTW's NPDES permit limits. Under this definition of Pass-Through, liability is predicated on demonstrations similar to those enumerated in the Interference definition. The User is liable for a Pass-

Through violation where he discharges in excess of Federal, State or local limits or discharges wastewater which substantially differs in nature and constituents from the User's average discharge. Subparagraphs (3) and (4) of § 403.3(n) recognize that, in addition to the liability imposed by subparagraphs (1) and (2), a User may be held liable for a Pass Through violation where the User knows, or reasonably should have known, that his Discharge could result in a permit violation or increase the duration or magnitude of such a violation.

The Agency is publishing the definition of Pass Through in final form today. The cause of action and standard of liability for Pass Through and Interference violations are almost identical. EPA received considerable comment on the proposed Interference standard, and the final definitions of Pass Through and Interference reflect these comments. Because the language and conceptual underpinnings of these two provisions are so similar, the Agency believes that it is unnecessary to propose the definition of Pass Through.

§ 403.3(a) Definition of "Publicly Owned Treatment Works" or "POTWs."

The definition of "POTWs" in the general pretreatment regulations conforms to the definition of this term found in § 122.3 of the Consolidated Permit regulations. Both regulations do not include within the definition of POTWs, sewers, pipes or other conveyances that do not convey wastewater to a treatment facility. Industries that routinely discharge their wastes into such sewers, pipes or other conveyances are direct dischargers and are subject to NPDES permit requirements.

§ 403.3(q) Definition of "Pretreatment"—Use of Equalization Tanks.

The proposed amendments to this section elaborate on the definition of "pretreatment" by indicating that, in appropriate circumstances, the use of equalization tanks constitutes an acceptable pretreatment technology. The proposed comment to this section provides further that where equalization tanks are resulting in dilution, the Control Authority should impose mass limits on the facility. Several commenters expressed concern with this proposed comment explaining that one of the functions of equalization tanks is to dilute high concentrations of pollutants to lower, more acceptable levels. These commenters concluded that the proposed amendment would

frequently result in the imposition of mass limitations since dilution almost invariably accompanies the use of equalization tanks.

EPA agrees that the language of this proposed amendment awkwardly expresses the intention of the provision. The object of the provision is to recognize that the use of equalization facilities is an appropriate means of achieving the concentration limit imposed by an applicable categorical Pretreatment Standard on a given regulated process. However, when the regulated process waste is mixed in an equalization tank with wastewater from an unregulated process or wastewater from another regulated process, the result is unacceptable dilution of the regulated wastestream. In such circumstances, EPA believes that the appropriate recourse is to apply the combined wastestream formula set forth in § 403.6(e) to the effluent from the equalization tank rather than imposing mass limitations on the flow from the tank as previously proposed.

Thus, EPA has amended § 403.3(q) by making it clear that equalization tanks are an appropriate means of pretreating the wastes within a regulated process. However, the amended regulation provides that where the wastewaters from an unregulated process or process regulated by another Standard are mixed in an equalization facility with the regulated process water in question, the limits applied to the effluent should be calculated in accordance with the combined wastestream formula set forth in § 403.6(e).

§ 403.5(a) Prohibited Discharges—General.

The first sentence of this section has been modified for clarification. "Non-domestic source" has been substituted for "source of a non-domestic discharge" to be consistent with the change to § 403.1(b) concerning regulated sources. In addition, the Agency has included a prohibition on allowing pollutants to "Pass-Through" the POTW. Unacceptable "Pass-Through" is defined in § 403.3(n). As indicated in the preamble discussion on § 403.3(n), the Agency believes that the institution of Pass-Through prohibitions is necessary to meet the mandate of Section 307(b) of the Clean Water Act.

§ 403.5(b)(4) Prohibited Discharge—Slug Loans.

Section 403.5(b)(4) as promulgated in the June 26, 1978 regulations established a strict liability standard for Industrial Users. That provision prohibited the contribution of "any pollutant—released in a discharge of such volume or

strength as to cause Interference in the POTW." Following negotiations with industry groups, EPA agreed to propose changes to this provision. Industry groups were concerned that the language appearing in the 1978 regulation did not present a clear standard to which the industry could conform. The proposed language amended the prohibitions by introducing a foreseeable-consequences standard. Under the amended language proposed in October, the Industrial User would be held liable under § 403.5(b)(4) if he "knows or has reason to know" that his discharge would cause Interference.

EPA agrees that a clearer standard should be established. However, because the definition of "Interference" found in § 403.3(i) has now been amended to include a similar knowledge standard for certain situations (as well as a much more specific standard in other situations), the inclusion of the knowledge requirement in § 403.5(b)(4) is unnecessary. Therefore, the final regulation published today has deleted the knowledge requirement from the provisions of § 403.5(b)(4).

Several commenters expressed concern that the knowledge standard standing alone falls short of describing an acceptable standard of performance. We believe that the more explicit language set forth in § 403.3(i) gives Industrial Users better notice of the standard to which they are to conform.

§ 403.5(b)(5) Prohibited Discharge—Heat.

The June 1978 regulations placed a maximum temperature limit of 40°C (104°F) on the influent to the POTW, but did not specify a maximum temperature to be met at the Industrial Users' effluent. The proposed amendment to this section added the requirement that an Industrial User limit the temperature of its discharge to the POTW to 65°C (150°F). This requirement was designed to provide the Industrial User with clearer notice of the maximum temperature that can be discharged safely into a POTW.

Only two commenters supported this proposed change. A number of commenters objected to the new provision as unnecessary and overly restrictive. The chief objection to the proposal was that the 65°C limitation on discharges to the sewer is not logically related to the temperature necessary to protect the POTW plant. Commenters argued that the maximum allowable temperature for the Industrial User would vary depending on changing factors, such as the quantity of the discharge and the distance the water must travel, which have a great effect upon the

resultant POTW plant temperature. Those objecting to the 65°C limit uniformly asserted that the original provision was superior and that the imposition of stricter limits, if necessary, should be left to the discretion of the POTWs.

EPA agrees with the majority of the commenters and has returned to language similar to that originally promulgated in June of 1978. We believe that the concern for sufficient notice which inspired the proposed change is adequately addressed by the changes made to the definition of "Interference" in § 403.3(i). As indicated previously, the new definition of Interference includes a clear standard of liability. Municipal authorities are encouraged to exercise the authority provided in § 403.5(b)(5) and (c) and set specific temperature limits on Industrial Users posing potential problems in order to erase all uncertainty as to acceptable effluent temperatures.

§ 403.5(c) Prohibited Discharges—POTW-Specific Limits.

Several commenters sought clarification of the provisions in amended § 403.5(c) prescribing those instances in which a POTW will be required to translate the general prohibitions in § 403.5(a) and (b) into source-specific effluent limits. Section § 403.5(c) provides for the development of specific limits in two situations. First, paragraph (c)(1) requires that POTW's developing pretreatment programs pursuant to these regulations translate the general prohibitions of § 403.5(a) and (b) into industry-specific limits. These limits are developed initially as a prerequisite to POTW pretreatment program approval and are updated thereafter as necessary to reflect changing conditions at the POTW. The limits may be developed on a pollutant or industry basis and may be included in a municipal ordinance which is applied to the affected classes. In addition, or alternatively, the POTW may develop specific limits for each individual facility and incorporate these limits in the facility's municipally-issued permit or contract. By translating the regulations' general prohibitions into specific limits for Industrial Users, the POTW will ensure that the users are given a clear standard to which they are to conform.

The second paragraph of § 403.5(c) provides that all POTWs not required to develop a pretreatment program only have to develop specific prohibitive discharge limits where an Interference or Pass-Through problem has occurred and is likely to recur. This paragraph further provides that in developing these

prohibitive discharge limits to "ensure renewed and continued compliance," the POTW may, at its discretion, seek to regulate not only Industrial Users, as defined by this regulation, but, in addition, any other source which might be contributing to the Interference or Pass-Through problem. Under the provisions of the paragraph, the POTW may supplement source control with any changes in the POTW's treatment plant facility or operation needed to resolve the Interference or Pass-Through problem.

To the extent that the POTW elects to control the recurrence of a Pass-Through or Interference problem through modifications in its facilities or operations or through imposition of controls on sources other than Industrial Users, the limits placed on Industrial Users would be correspondingly less stringent. The comment following this paragraph indicates that in some instances, where the Pass-Through or Interference problem results from compatible pollutants which the POTW was designed to treat, the burden of correcting the problem may more appropriately lie with the POTW itself through adjustment of its facilities or operation.

Changes have been made in the phrasing of this comment as it appeared in the proposed regulations. The wording of the proposed comment implied that liability for non-compliance with NPDES permit provisions rests ultimately and entirely with the POTW. This is obviously not true where an Industrial User's contribution is found to be a cause of the violation. In such a case, the provisions of § 403.5 clearly place liability directly on the User. The comment is intended to reflect an Agency policy that responsibility for avoiding Interference and Pass-Through problems may be shared, where appropriate, by the Industrial User and its users. The revised wording places emphasis more appropriately on the cooperative nature of this effort.

Paragraph (3) of § 403.5(c) adopts the proposed language requiring the POTW to provide notice and comment prior to developing and enforcing specific effluent limits for Industrial Users.

§ 403.5(d) Prohibited Discharges—Incorporation in Permits.

This section has been amended to adopt the language of the proposal and eliminate the resource-demanding need to modify an NPDES permit each time a POTW changes a specific discharge prohibition. The requirement that such prohibitions be incorporated in the permit has been deleted. Instead, as the proposed modification indicated, these

POTW-developed limits will be deemed "prohibitions" for the purposes of section 307(d) of the Act. As such, a violation of these prohibitions is enforceable both against the applicable Industrial User and against the POTW under section 309 of the Act.

One commenter suggested that this section should allow enforcement of POTW-developed limits only after public notice and opportunity for comment regarding imposition of such limitations. In light of the public notice requirement added to § 403.5(c), the Agency believes additional language to that effect in this section is unnecessary.

§ 403.5(e) EPA/State Enforcement of Prohibitive Discharge Limits.

The next to last sentence of § 403.5(c) as proposed in October has been reorganized to form new paragraph (e) in the final regulation. This paragraph provides that, upon identifying a Pass-Through or Interference violation, the State or EPA will give the POTW an opportunity to take prompt and effective remedial action. State or federal action is available where the POTW fails to commence appropriate enforcement action within the 30-day period provided by the regulation.

§ 403.5(f) Compliance Deadlines.

Compliance with the provisions of § 403.5, except for paragraph (b)(5) is required beginning on March 13, 1981. No additional time has been given to meet the prohibited discharge standards set forth in this section because these standards have been in effect in substantially similar form since August 25, 1978, and no additional time is necessary to comply with them.

§ 403.6(a) Category Determinations.

§ 403.6(a)(1) Category Determination Request.

This provision has been modified to allow more time for filing of requests for category determinations. It has also been expanded from the proposal to include notice for the affected Industrial User in the case where a POTW requests a category certification.

The proposed amendment shortened the period for making categorical determination requests from thirty days after the effective date of a Pretreatment Standard to thirty days after the promulgation date of a Standard. Many commenters objected that this was an unrealistically brief period based on the normal time requirements associated with receiving, reviewing and responding to complex Federal Register regulations. Other commenters noted that before requesting a determination,

the Industrial User needed the opportunity to review the details and rationale of its industry's subcategorization. This material is found in the technical development document published in conjunction with each categorical Standard. Although the development document is to be made available to the public at the time the Standard is promulgated, this has not always been the case. To address these concerns, EPA has extended the period for requesting categorical certifications to 60 days after the effective date of a Pretreatment Standard or after the date the development document becomes available, whichever is later. This expanded period should allow adequate time to review Standards, especially since many of the Standards and associated development information will have been made available to the public before final promulgation in the form of proposed standards and pre-proposal drafts.

In response to a comment, a sentence has been added to this section specifying that if a new source wishes to request a categorical certification, it must do so prior to commencing discharge.

One reader interpreted the proposed wording of the section as requiring an implicit admission of subcategory classification since an Industrial User would apparently need to "believe itself to be included" in a subcategory prior to submitting a request for administrative determination of applicability. This commenter also noted that the provision could be read to suggest that an Industrial User which, although possibly covered by a Standard, believed itself not included could rely on that belief and take no action to come into compliance. These suggested interpretations do not fall within the intent of the section. This section is intended as a mechanism to resolve legitimate questions of applicability and notify Industrial Users of applicable Standards when there is some doubt. A certification will provide an Industrial User with certainty regarding its specific categorical limits. The language has therefore been clarified to provide that an Industrial User may request a category determination if it believes that it "may be included" under a categorical Standard. If an Industrial User is in doubt as to the applicability of a Standard and it cannot be resolved by his preliminary inquiries, he should request a determination so the confusion can be eliminated as soon as possible.

Finally, the Agency agrees with those commenters who suggested that if POTWs are to be authorized to request

categorical certification for Industrial Users, the Users should be notified of the request and provided with an opportunity to comment on it. Language to this effect has been added to this section.

§ 403.6(a)(4)(iii) Category Determination—Final Decision.

The amendments to this section identify those parties who may submit requests to the Enforcement Division Director by adding the phrase, "by the Industrial User or POTW". This addition distinguishes those direct submissions from decisions by the Director that are forwarded to EPA for review.

§ 403.6(a)(4)(iv) Category Determination—Notice of Decision.

The language of this section has been altered to require that the decision on the categorical determination be sent to both the affected Industrial User and the POTW in conformance with the change in § 403.6(a)(1).

§ 403.6(a)(5) Category Determination—Requests for Reconsideration.

The amendment to this section deletes the provision allowing for a hearing on the determination of an industry's subcategory classification. The section provides instead that those wishing to challenge a categorical determination may submit a petition to reconsider the decision to the Regional Administrator who will respond expeditiously in writing. Another change clarifies that not only may the original requestor file a reconsideration petition, but also the affected Industrial User where the original request was made by a POTW.

Comments were divided on the deletion of the opportunity for a hearing. Certain commenters contended the opportunity to request a hearing should be retained as a means of avoiding litigation and assuring procedural guarantees. Other commenters felt the deletion was acceptable in light of the deletion of § 403.6(a)(6). The Agency agrees with those supporting the hearing deletion. The amended section still provides a mechanism for reconsideration of an EPA decision. The Regional Administrator's decision on petitions for reconsideration will constitute final Agency action and is thereby subject to judicial review. Further, the deletion of § 403.6(a)(6) means an Industrial User may raise as a defense in an enforcement action the fact that it is not in the industrial subcategory alleged by the Agency. Industrial Users are therefore assured the opportunity to raise the issue in a proceeding with adequate procedural protections.

Two commenters protested that the thirty-day period for requesting reconsideration was too brief. This provision remains unchanged from the original regulation and EPA believes it allows adequate time for appeal.

§ 403.6(a)(6) Category Determination—Failure To Request.

This paragraph, which provided that Industrial Users failing to seek a determination as to the appropriate subcategory within the prescribed time would be bound by EPA's subsequent determination as to the subcategory, was deleted in the proposed amendments. After reviewing the comments EPA continues to believe that it can not legally bar an Industrial User from raising as a defense to an enforcement action the allegation that the facility is not in the industry category claimed. Therefore, today's final regulation also deletes former paragraph (a)(6).

§ 403.6(d) Prohibition on Dilution.

The provision allowing Control Authorities to impose mass limits on Industrial Users using dilution to meet Pretreatment Standards has been moved from § 403.12(e)(2) to § 403.6(d). This provision is more appropriately placed in § 403.6(d), which deals generically with the question of dilution, than in the reporting requirements section under § 403.12.

Prohibition on Dilution—Generally. The imposition of Pretreatment Standards and requirements is meant to achieve three major objectives, one of which is the prevention of surges in either volume or concentration of pollutants which might interfere with the operation of the POTW. While the use of equalization tanks is an appropriate technology for protection against such surges and slug loadings, EPA does not feel that the reduction of concentration by dilution is an appropriate means of addressing the two remaining objectives of the program: reduction of the total amount of pollutants passing through the POTW untreated, and reduction of pollutants migrating to the municipal sludge in unacceptable quantities. This proscription on dilution finds its basis in the legislative history of the Act, consistent Agency policy, and judicial decisions.

It has been the consistent policy of the Agency that dilution is no substitute for treatment of pollutants. The General Pretreatment regulations promulgated in 1978 clearly stated this policy. The underlying policy of the Clean Water Act is to reduce the amount of pollutants entering the Nation's waters. (Section 101.) This policy will not be met if

Industrial Users discharge the same mass of pollutants at a lower concentration rate. While dilution may in the short term minimize some water quality problems, it does not reduce the mass of pollutants entering the POTW.

It has been argued that a prohibition of dilution should only apply to direct dischargers because POTWs provide sufficient treatment of pollutants. This argument would only have merit if POTWs were able to eliminate the pollutants. However, the recent data discussed earlier demonstrates that this does not occur. Pollutants regulated under categorical Pretreatment Standards pass through the POTWs, contaminate the POTWs sludge, or interfere with operation of the treatment works. Dilution does not solve these problems. In fact, dilution worsens the removal efficiency of the POTWs because the treatment technology operates less efficiently on dilute streams.

Congress considered the question of dilution as a substitute for treatment in the context of reservoir planning in section 102(b)(1) of the Act. As enacted, section 102(b)(1) provides for consideration of water storage as a means of regulating stream flow, "except that any such storage and water releases shall not be provided as a substitute for adequate treatment or other methods of controlling waste at the source." This provision was described in the Conference Report as specifically banning pollution dilution as an alternative to waste treatment. (Conference Report 92-1236, at 101; reprinted in Legis. Hist., Vol 1 at 284.)

Furthermore, this legislative history was held by the U.S. Court Of Appeals for District of Columbia Circuit to be "a general view not limited to the [the reservoir storage issue]." *Hercules, Inc. v. EPA*, 598 F.2d 91, 108 n. 30 (D.C. Cir. 1978). In *Hercules*, the court upheld EPA's use of mass limitations as an alternative to concentration limitations for toxic pollutants, stating that the use of mass limits was supported by the 1972 Act "in order that [EPA's] effluent discharge standard would not be subverted" by dilution. (598 F.2d at 108.)

One commenter cited *Ford Motor Co. v. EPA*, 567 F.2d 661 (6th Cir. 1977) for the proposition that prohibition of dilution is impermissible. This was not the holding of that case. In the *Ford* case, a Ford plant was meeting EPA-imposed best practicable technology effluent limits and wanted to dilute its waste stream to meet the more stringent Michigan water quality standards. EPA vetoed Ford's NPDES permit modification which would have allowed this dilution. The Agency, however, had

not officially stated its policy that dilution to meet State water quality standards was impermissible. On appeal, the court held that EPA's veto was invalid because the underlying policy had not been publicly declared prior to the veto. The court did not hold that dilution was permissible under the Clean Water Act, but rather that if EPA was going to prohibit dilution, it would have to announce its policy in regulations or guidelines. By including a statement of the Agency's position on dilution in the June 1978 regulations and again in today's regulations, EPA remedied the principal concerns raised by the Sixth Circuit in the *Ford* case.

§ 403.6(e) Combined Wastestream Formula.

Introduction. The proposed addition of this section generated substantial comment. At issue was the method for calculating alternative pollutant limits at industrial facilities where regulated process effluent is mixed with other wastewaters (either regulated or unregulated) prior to treatment. The formula proposed in October was not new. It was originally included as part of the National Pretreatment Strategy which appeared as Appendix A to the June 26, 1978 general pretreatment regulations. Since that time, increasing evidence has indicated the widespread importance of such a procedure to a large segment of industries to be regulated by national categorical Pretreatment Standards. In the October 1979 proposal, the Agency revealed its decision to formalize this procedure as part of the regulations to eliminate uncertainty among Control Authorities and affected industries, and to ensure consistent application nationwide.

The importance of a formula to explain how effluent limitations will be adjusted when several streams are combined is of primary importance to large, diversified Industrial Users with multiple processes. These Industrial Users of POTWs frequently have a number of individual processes producing different wastestreams that are not regulated by the same categorical Pretreatment Standard or are not regulated at all. Many of these integrated facilities have combined process sewers and a number have already constructed combined waste treatment plants. In these situations, the Industrial User often prefers to install a pretreatment system on the combined stream rather than installing separate parallel systems on each individual stream. A combined wastestream formula permits a facility to mix wastestreams prior to treatment by

providing it with an alternative effluent limit for this combined discharge.

EPA wishes to minimize the need for separation of wastestreams and for treatment by parallel systems when comparable levels of treatment can be attained in combined treatment plants. Separate treatment of wastes at an integrated plant can be costly, wasteful of energy, inefficient and environmentally counterproductive. In addition, such an approach reduces the environmental gains resulting from the voluntary treatment of unregulated streams prior to the imposition of regulatory requirements. However, the agency also recognizes that the countervailing concerns of avoiding the attainment of limits through dilution and ensuring that adequate treatment is provided may sometimes lead to the conclusion that segregation of streams is the only appropriate way to meet applicable pretreatment limits. The final formula attempts to strike a proper balance between these considerations.

The combined wastestream formula proposed in the October 1979 package was criticized by most commenters. EPA agrees that the proposed formula for calculating an alternative effluent limit would have made combined treatment of wastestreams impractical in most cases. The proposed formula assumed that there was only one regulated process contributing to the mixed discharge. It also established a *de facto* zero discharge limit for the unregulated wastestreams being combined by taking no account of the presence of pollutants in those streams. While the formula was intended to permit combined treatment where process effluent was mixed with other wastewaters, in practice this objective was frustrated by creating combined stream limits that were technically unattainable in most instances.

The combined wastestream formula promulgated in these amendments rectifies the problems with the original proposal. It will permit combined treatment of wastewater in many cases. Some restrictions are imposed on the combination of certain streams to protect against abuse of the process. Formulas for calculating both concentration and mass-based alternative effluent limits have been promulgated.

Alternative Discharge Limit. Where the combined wastestream formula is utilized it will result in fixed alternative categorical limits for the Industrial User. The calculation of the alternative limits may be performed by the Control

Authority or by the Industrial User with the written concurrence of the Control Authority. These alternative discharge limits must be complied with by the Industrial User in lieu of the promulgated national categorical Pretreatment Standards and are enforceable as such.

In most cases, several calculations will be necessary to establish the alternative limits. An alternative categorical limit must be established for each regulated pollutant in each regulated process stream that is treated in the combined treatment facility. For each regulated pollutant both an alternative daily maximum limit and an alternative long-term average limit shall be calculated. These calculations will use the values set forth in the appropriate categorical Standard.

Once established, an Industrial User's alternative categorical Pretreatment Standards shall remain fixed until modified by the Control Authority. The Control Authority may recalculate the alternative limits at any time at its discretion or in response to a request by the Industrial User because of material or significant changes in any of the values used in the calculation to establish the alternative limits. To insure that the Control Authority has notice of any changes which justify a modification, the Industrial User must report any such material and significant changes immediately. Where these changes justify new alternative limits they shall be calculated and effective within 30 days.

The Control Authority may, of course, elect to impose limits which are more stringent than those established by the formulas in this section. However, a Control Authority may not allow alternative limits at a level less stringent than those established by this section.

Formula. The adopted concentration formula sets the alternative concentration limit for each pollutant by multiplying the categorical limit for a regulated stream by the flow of that stream and then adding the resultant products for all regulated wastestreams that are combined. This amount is then divided by the sum of the flow for each regulated stream. In statistical terms, a flow-weighted average of the categorical Standards is taken over the regulated streams. If only regulated streams are being combined, this is all one would have to do to compute the alternate limit. However, if the User combines regulated with unregulated streams, to prevent inappropriate dilution, the resulting number is multiplied by a

fraction, the numerator of which is the total flow through the treatment system minus certain dilute streams. The denominator for this fraction is the total flow through the treatment facility. If the unregulated streams are not dilute streams as defined by F_D , the fraction becomes 1 and no further adjustment is made on the alternative limit. If an unregulated stream is a dilute stream, this fraction will adjust the alternative limit to account for the dilution that is taking place.

Mass-based limits are established by adding the categorical mass limits for a pollutant in each regulated stream. The sum is multiplied by a fraction to account for dilution. The numerator is the total flow through the treatment facility minus the flow of certain dilute streams. The denominator for the fraction is the sum of the flow of the regulated streams. These formulas are as follows:

(1) Alternative Concentration Limit

$$C_T = \left(\frac{\sum_{i=1}^N C_i F_i}{\sum_{i=1}^N F_i} \right) \left(\frac{F_T - F_D}{F_T} \right)$$

Where

C_T = the alternative concentration limit for the combined wastestream

C_i = the categorical Pretreatment Standard concentration limit for a pollutant in the regulated stream i

F_i = the average daily flow (at least a 30-day average) of stream i to the extent that it is regulated for such pollutant.

F_D = the average daily flow (at least a 30-day average) from boiler blowdown streams, non-contact cooling streams, sanitary wastestreams (where such streams are not regulated by a categorical Pretreatment Standard) and from any process wastestreams which were or could have been entirely exempted from categorical Pretreatment Standards pursuant to paragraph 8 of the *NRDC v. Costle* Consent Decree (12 ERC 1833) for one or more of the following reasons:

(1) the pollutants of concern are not detectable in the effluent from the Industrial User (paragraph (8)(a)(iii));

(2) the pollutants of concern are present only in trace amounts and are neither causing nor likely to cause toxic effects (paragraph (8)(a)(iii));

(3) the pollutants of concern are present in amounts too small to be effectively reduced by technologies known to the Administrator (paragraph (8)(a)(iii)); or

(4) the wastestream contains only pollutants which are compatible with the POTW (paragraph (8)(b)(i)).

F_T = the average daily flow (at least a 30-day average) through the combined treatment facility (includes F_i , F_D and unregulated streams)

N = the total number of regulated streams

(2) Alternative Mass Limit

$$M_T = \left(\sum_{i=1}^N M_i \right) \left(\frac{F_T - F_D}{\sum_{i=1}^N F_i} \right)$$

where

M_T = the alternative mass limit for a pollutant in the combined wastestream.

M_i = the categorical Pretreatment Standard mass limit for a pollutant in the regulated stream i (the categorical pretreatment mass limit multiplied by the appropriate measure of production).

F_i = the average daily flow (at least a 30-day average) of stream i to the extent that it is regulated for such pollutant.

F_D = the average daily flow (at least a 30-day average) from boiler blowdown streams, non-contact cooling streams, sanitary wastestreams (where such streams are not regulated by a categorical Pretreatment Standard) and from any process wastestreams which were or could have been entirely exempted from categorical Pretreatment Standards pursuant to paragraph 8 of the *NRDC v. Costle* Consent Decree (12 ERC 1833) for one or more of the following reasons:

- (1) the pollutants of concern are not detectable in the effluent from the Industrial User (paragraph (8)(a)(iii));
- (2) the pollutants of concern are present only in trace amounts and are neither causing nor likely to cause toxic effects (paragraph (8)(a)(iii));
- (3) the pollutants of concern are present in amounts too small to be effectively reduced by technologies known to the Administrator (paragraph (8)(a)(iii)); or
- (4) the wastestream contains only pollutants which are compatible with the POTW (paragraph (8)(b)(i)).

F_T = the average daily flow (at least a 30-day average) through the combined treatment facility (includes F_i , F_D and unregulated streams)

N = the total number of regulated streams

The streams represented in the formula by the symbol F_D are those which have been found to contain no

toxic pollutants or low levels of toxics. If such streams were to be combined with regulated streams without factoring in their dilution impact, it is possible that the effluent limit would be met by dilution and, consequently, no treatment would be required on the combined wastestream. Such a result would mean no pollutant reduction from the Industrial User and be contrary to the mandate of the Clean Water Act (see preamble discussion on dilution under § 403.6(d)).

The definition of F_D has carefully specified which of those streams exempted from regulation pursuant to paragraph 8 of the Consent Decree are dilute streams. The dilute streams include those exempted from coverage under paragraph 8 because they contain trace or non-detectable amounts of the 129 priority pollutants. Those process wastestreams exempted from regulation under the provisions of paragraph 8 because they are found in only a small number of sources nationwide are not treated as dilute streams.

The regulation states that the "average daily flow" means a reasonable measure of the average daily flow for a 30-day period. The Control Authority should ensure that the flow values used to calculate this 30-day average are representative of the Industrial User's normal flow during periods of production. An Industrial User may demonstrate the accuracy of his figures using any historical data or data from actual flow monitoring conducted for purposes of this calculation.

Section 403.6(e)(2) provides that an alternative pretreatment limit calculated by the formula may not be used if the alternative limit is below the analytical detection limit for that pollutant. This prohibition is necessary to provide the Control Authority with a means of checking compliance. If the alternative limit is below the detection limit there is no way to demonstrate that the appropriate level of treatment has been achieved. Where the alternative limit is below the detection limit, the Industrial User has the option of not combining the dilute streams represented by F_D prior to his combined treatment facility or segregating his wastestreams entirely. It should be noted that where the cost of segregating already-combined wastestreams is wholly disproportional to the cost of compliance considered by EPA in setting the Pretreatment Standard, the Industrial User may be eligible for a variance under the provisions of § 403.13.

Monitoring Requirements. A certain amount of monitoring is required to establish and maintain these alternative

limits. When only a single regulated stream is being combined with unregulated streams which are not dilute streams, no flow or pollutant monitoring is required prior to treatment in order to calculate the alternative limit. When more than one regulated stream is combined, each such stream must be flow-monitored prior to combination. The total flow through the combined treatment facility and the flow of the dilute streams represented by F_D must also be monitored when a dilute stream is combined prior to the treatment facility.

The type and the frequency of sampling, analysis and flow measurement needed to determine compliance with the alternative discharge limit will be the same as that required by the self-monitoring requirements in the applicable categorical Pretreatment Standards. Those requirements will be spelled out in detail in each Standard. If the self-monitoring schedules for the appropriate categorical Pretreatment Standards differ, monitoring shall be done according to the most frequent schedule. In certain categorical Pretreatment Standards, regulated flow determines the frequency of self-monitoring. In those cases, the sum of all regulated flows combined in the treatment facility is the flow to be used to determine self-monitoring frequency.

Discussion. Before selecting the approach promulgated in these regulations, the Agency considered many options. A number of formulas were suggested in the comments on this section. Further possibilities evolved from variations or combinations of the suggested formulas. The Agency believes the selected approach will be fair to integrated Industrial Users while achieving environmental results comparable to those achieved by treating regulated wastestreams separately. These considerations of environmental versus economic impact dominated EPA's deliberations on this issue.

Many commenters stressed that the original combined wastestream formula would force segregation of wastestreams and separate treatment of process wastewaters in most cases. This would occur because the formula did not take into account the presence of pollutants in the unregulated streams. The initial formula adjusted the categorical effluent limit by lowering it in proportion to the flow of the other streams mixed with the regulated stream. This often produced an alternative effluent limit either below the analytical detection limit or below

the treatability level. In either instance segregation of streams would have resulted as a practical matter. Although the Agency does not have sufficient data to estimate with confidence the percentage of existing integrated facilities which would have been required to segregate wastestreams under the proposed formula, comments indicated it could have been substantial. Commenters also argued that the cost of this segregation would be high while the environmental benefits would be questionable compared to alternative proposals. EPA believes that the selected formula adequately addresses these concerns.

The Agency's concern about forcing segregation of wastestreams as a practical matter is most clearly brought to light in the electroplating category. It is the Agency's policy not to establish BAT standards which would be inconsistent with the technology routinely installed to meet BPT requirements. However, the BPT-equivalent electroplating categorical Pretreatment Standards for existing sources promulgated in September 1979, regulated individual electroplating process wastestreams. On the other hand, the BAT-PSES Metal Finishing regulation, which is scheduled for promulgation in November 1981, and which includes electroplating activities, will probably contain limitations that will allow wastestreams to be combined after appropriate isolated treatment for certain pollutants (e.g., cyanide destruction). This change could work a tremendous hardship on integrated facilities with electroplating operations. The BPT-equivalent electroplating Pretreatment Standards might require segregated treatment of wastestreams, whereas the BAT standards for these Industrial Users will probably allow combined treatment for most of these same wastestreams. We have adopted a combined wastestream approach that will eliminate this result by allowing the appropriate wastestreams to be combined in meeting the BPT-equivalent electroplating Pretreatment Standards.

The selected option accomplishes several goals. It avoids the need for segregation and parallel treatment in many cases since the alternative indirect discharge limit should not fall below the level of treatability achievable in a combined system unless the User is combining inappropriate streams. Thus, many Industrial Users will be saved the cost of installing multiple treatment systems. This formula also reduces, relative to other formulas that were considered, the monitoring burden on a facility and the

corresponding administrative burden on the control authority to oversee the monitoring.

In addition to monitoring and cost savings for integrated facilities, the selected formula can result in environmental benefits. An Industrial User may have process wastestreams which contain environmentally significant levels of pollutants but which are not yet regulated. If the User decides to install a combined treatment facility, it is more likely to treat such streams prior to Standards being promulgated.

The primary drawback of the formula is that it allows higher mass loadings of pollutants to be discharged where combined unregulated streams contain regulated pollutants at a concentration below the categorical limit established for a regulated stream. There is insufficient data to estimate how often use of the formula will result in such dilution. As mentioned above there are corresponding gains where pollutant levels are higher than the categorical limits. The formula promulgated today strikes a proper balance between these environmental trade-offs. Short-term environmental gains will be realized where unregulated wastestreams with high levels of pollutants (most often wastestreams which are scheduled for future regulations) are combined with regulated streams and treated jointly. As additional categorical Standards are promulgated, the number of unregulated wastestreams with high levels of pollutants should decrease, and an increasing proportion of the combined unregulated streams will have lower pollutant levels. While this shift may result in some environmental loss through dilution, it is anticipated that the dilution factor in the combined wastestream equation will maintain a proper balance between environmental gains and losses.

The comments of several persons could be read to criticize the adopted formula because it imposes limits on pollutants in wastestreams not regulated by categorical Standards. To illustrate, under the promulgated formula, if an unregulated stream with high concentrations of regulated pollutants is mixed with a regulated stream with a lower concentration limit, the higher pollutant levels in the unregulated stream must be "reduced" so that the concentration of the combined effluent after treatment does not exceed the concentration for the regulated stream specified in the categorical Standard. These commenters recommended that a formula be utilized which takes full account of the presence of regulated pollutants in the unregulated streams.

They argued that to do otherwise would be to *de facto* regulate the pollutant levels in these unregulated streams, an improper exercise of authority in the absence of a promulgated categorical Standard.

We disagree that the effect of the selected formula is to improperly regulate an unregulated stream. The Agency is directed by the Act and the provisions of the NRDC Consent Decree to develop technology-based standards for specific industrial subcategories. Where an industry elects to mix the process effluent from various subcategories with unregulated process water before treatment, the Agency believes that it has the discretion to impose those conditions reasonably necessary to ensure that BPT or BAT level treatment is provided for the regulated streams. The industry always retains the option of segregating unregulated streams and providing treatment only for the regulated streams.

A second drawback of the alternative concentration limit formula is that it provides no incentive for an Industrial User to conserve water. However, the availability of the formula to calculate an alternative limit in terms of mass insures that no facility is penalized for their conservation efforts.

The bulk of the commenters endorsed a combined wastestream formula which in all cases would produce an alternative pollutant limit requiring removal equivalent to that achieved by separate treatment. Under this approach, the alternative limit would reflect full credit for the pollutants in any combined wastestreams not regulated by a categorical Pretreatment Standard. EPA rejected this approach for two major reasons. First, some commenters suggested that this formula would, in many cases, effectively bar combined treatment and force stream segregation with little environmental benefit. This would occur when combined unregulated streams contained regulated pollutants at lower levels than the categorical limit, resulting in alternative effluent numbers less than the treatability level of the combined wastestream. Second, if the Agency were to avoid the foregoing problem it would have to develop a process to respond to requests to ameliorate the impact of this equation by relaxing the untreatably low limits to reach the treatability level. This case-by-case calculation of treatability levels for combined waste systems would impose a heavy resource burden that EPA and the States are not capable of supporting.

EPA also rejected the option of not adopting any formula, and relying

instead on guidance and the discretion of local pretreatment authorities to regulate combined streams as they deemed appropriate. As discussed earlier, the Agency decided it was necessary to promulgate a formula to eliminate confusion and provide national uniformity and equity in the application of federally-developed Standards.

Several comments also supported an approach calling for the establishment of alternative effluent limits through best engineering judgment determinations on a case-by-case basis rather than through use of a national formula. This would allow numerous criteria to be factored into the judgment and be most sensitive to the situation of an individual Industrial User. A commenter suggested that it also would most nearly parallel the method of control for direct dischargers. EPA believes this approach is unacceptable. It would require an extensive commitment of resources that neither EPA, States or local POTWs have available for the task. Equally important is that such a case-specific setting of effluent limitations is contrary to the Clean Water Act's requirements of a national categorical Pretreatment Standard approach.

Effect of Today's Regulation on Integrated Facilities. In a March 26, 1980 Federal Register notice, EPA suspended the general pretreatment regulations base-line monitoring and reporting requirements (§ 403.12(b)) as they apply to integrated facilities until promulgation of § 403.6(e). The effective date of today's amendments will trigger the responsibilities of these integrated facilities pursuant to § 403.12(b).

§ 403.7 Removal Allowances.

A substantial number of comments were devoted to the removal allowance provisions set forth in this section. In light of the apparent interest, and occasional misunderstanding, associated with these provisions, a quick restatement of the Agency's removal allowance policy would appear to be warranted. Section 307(b)(1) of the Clean Water Act sets forth the original authority for removal allowances. This provision provides that EPA-established categorical Pretreatment Standards may be relaxed to reflect the POTW's removal of the regulated pollutants. An objective of this provision, as set forth in the statute, is to ensure that the removal achieved by the indirect discharger in concert with the removal achieved by the POTW equals the removal required of a direct discharger in the same industrial category. In order to meet this objective, it is obvious that the POTW

should be credited only with that removal which it actually achieves. Thus, EPA has imposed, through the provisions of § 403.7, several requirements which ensure that industry Standards are relaxed only to the extent that the POTW actually removes the pollutants in question.

The first such requirement prohibits removal allowances for indicator or surrogate pollutants unless the categorical Standard employing the indicator or surrogate pollutant specifies that a removal allowance may be authorized for these pollutants. In addition, the provisions of § 403.7(b) provide that a removal allowance must reflect those periods where industrial pollutant-bearing wastes overflow the POTW and there is, consequently no actual removal of these pollutants by the POTW. Finally, the provisions of proposed § 403.7(c) (now § 403.7(d)) require that a demonstration of actual removal be based on representative sampling at the POTW.

Although some commenters have indicated that the foregoing requirements place unduly burdensome restrictions on the POTW wishing to request a removal allowance, the Agency believes that it has properly interpreted the statute to provide that the POTW will be credited only with that level of removal which is actually and consistently achieved. Support for this interpretation is found in the conference report accompanying the Clean Water Act and in the House debate on the Conference Report where it is stated that removal allowances must "reflect the degree of reduction of . . . pollutant(s) achieved by the treatment works." (Conference Report, 95-830, p. 87; House Debate, December 15, 1977, reprinted in Legis. Hist., vol. 3, at 343). In addition, the Senate debate on the Conference Report specified that in order to grant a removal allowance "there must be a demonstration that the pollutant is degraded or treated; credits will not be given for dilution." (Senate Debate, December 15, 1977, reprinted in Legis. Hist., vol. 3, at 461).

§ 403.7 Introductory paragraph. Removal Allowance and Indicator or Surrogate Pollutants.

EPA received numerous comments on the proposed provision which would eliminate removal allowances for indicator or surrogate pollutants. The comments were divided roughly into two areas. First, many commenters voiced general objections to the Agency policy of regulating toxic pollutants indirectly through indicator or surrogate parameters. Second, commenters objected to the provision, found in the

introductory language to § 403.7, prohibiting the approval of removal allowances for indicator or surrogate pollutants.

Before undertaking a discussion of the latter point dealing with the proposed amendment to § 403.7, it is important to note that the suggested language change in no way can or should be interpreted as a definitive Agency policy statement favoring the use of indicator or surrogate pollutants in setting Pretreatment Standards. The decision on whether or not to use indicator or surrogate pollutants in regulating underlying toxic parameters will be made on a case-by-case basis as individual categorical Standards are developed for each industrial category. The proper forum for resolving any divergence of opinion on the propriety of using indicators or surrogates is the public participation proceedings attendant to the development of those Standards and not the general pretreatment regulations placed in final form today. Therefore, this preamble will not address the numerous comments which raised substantive questions about EPA's authority to employ indicator or surrogate pollutants in regulating toxics.

The terms "surrogate" and "indicator" are sometimes used interchangeably. However, in their traditional use these terms have distinctly different meanings. While a strict statistical relationship exists between the surrogate pollutant and the underlying toxic pollutants, a statistical relationship does not exist between an indicator pollutant and the underlying toxic parameters. Thus, when a given level of the surrogate pollutant is removed, one can quantify the amount of removal obtained for the underlying toxic pollutant. On the other hand, while removal of a given level of the indicator pollutant should also result in removal of the underlying toxics, it is impossible to strictly identify how much. However, the usefulness of both indicator and surrogate pollutants is limited to the individual technology for which they are prescribed. The correlation between indicator and surrogate pollutants and the underlying toxics can be made because one can predict with some confidence that when a particular technology is installed and results in the discharge of a prescribed amount of an indicator or surrogate pollutant, the appropriate level of removal is also being achieved for the underlying toxic pollutants in that wastestream. This correlation holds true only where the underlying assumption regarding the generic type of technology employed remains unaltered.

The indicator or surrogate correlation that can be drawn for a particular industrial subcategory presumes the use of a class of treatment technologies which may be different from the treatment employed by the POTW. Where these technologies are different, one cannot equate the POTW's ability to remove the indicator or surrogate pollutants with its ability to remove a corresponding amount of the underlying toxic pollutants. Because a determination on whether the POTW's removal of an indicator pollutant (and the consequent granting of a removal allowance for this indicator or surrogate to the User) will result in an acceptable amount of removal for the underlying pollutants is so dependent on the technologies employed by the class of Users in question, the Agency has determined that decisions on whether a removal allowance will be allowed for an indicator or surrogate pollutant will be made in the context of each categorical Pretreatment Standard. Each Standard which limits an indicator or surrogate parameter will specify whether or not a removal allowance, developed pursuant to § 403.7, will be available for that indicator or surrogate. Section 403.7 of today's regulations has been modified to reflect this change.

§ 403.7(a) *Definitions.*

§ 403.7(a)(1) *"Removal."*

This section has been rearranged to provide a generic definition of "Removal" distinct from the definition of "Consistent Removal." The definition of "Removal" makes it clear that Removal means the alteration of the nature of a pollutant after it is introduced into the sewer and before it is discharged by the POTW or a reduction in the amount of a pollutant as determined by comparing the amount of that pollutant in the influent to and effluent from the POTW. The dilution of a pollutant in the POTW system or at the treatment plant does not constitute "Removal".

§ 403.7(a)(2) *"Consistent Removal"*

The June 26, 1978 regulations defined "Consistent Removal" as that level of removal observed in 95% of the influent/effluent samples taken at the POTW. Under this scheme, if the POTW were to conduct 12 influent/effluent samplings at the POTW (as is now required by section 403.7(d)(2)(iii)), the POTW's Consistent Removal level would be the lowest of the 12 Removals obtained. This result is statistically unsound in that it identifies as the "Consistent Removal" level, a level of Removal at the extreme end of the data distribution.

The data at the extremes of this 12 point distribution have the greatest chance of being in error. Thus, if the lowest level of Removal identified were unrepresentatively low, the POTW would be held to an unreasonably small level of Removal. This, in turn, would result in greater instances of redundant treatment as the Industrial Users would be required to meet effluent limits based on the low Removal level when the POTW frequently achieved greater levels of Removal.

In order to avoid the aforementioned statistical flaws and attendant potential for redundant treatment, the October amendments proposed to revise this Consistent Removal calculation.

Proposed § 403.7(a)(1) (now paragraph (a)(2)) defines "Consistent Removal" as that level of Removal demonstrated by averaging the lowest 50% of the Removals measured by 12 or more samples. Several commenters objected to this change and requested a return to the original calculation. These commenters premised their objections on two points: (1) the new calculation will result in higher Consistent Removal levels and therefore in less stringent Industrial User pretreatment limits, and (2) these less stringent pretreatment limits will result in unacceptable levels of pollutants passing through the POTW and into navigable waters.

In most cases the proposed calculation will indeed result in higher removal allowances and consequently, less stringent Industrial User pretreatment limits. The original computation selected the approved removal level from the extreme low end of the spectrum of removals achieved. The proposed calculation would average the lowest 50% of the removals documented. Stated another way, the original computation had the intent of ensuring that the approved removal allowance level could be achieved about 95% of the time. The modified calculation ensures that the approved level is one that the POTW will be able to meet about 75% of the time.

However, the fact that more generous removal levels would be granted under the modified computation does not lead to the conclusion that unacceptable amounts of pollutants will be discharged to navigable waters. Industrial users are subject to "daily maximum" and "long term average" pretreatment limits. If the Industrial User is to meet the long term average, the User can only infrequently approach the daily maximum number in its daily discharge. For the joint treatment provided by the Industrial User and POTW to be less effective than that required of a direct discharger, a discharge by the User at the daily

maximum level would have to coincide with abnormally lower removal at the POTW. The statistical complexities of the situation do not permit a numerical estimate of the number of times this coincidence might occur, but EPA expects it to be small. One comment received by EPA on this subject stated that a computer simulation of the problem showed that violations of the daily maximum would occur less than 2% of the time. This simulation made certain assumptions concerning the statistical distributions which EPA is unable to verify, and EPA did not rely on this result in reaching a decision on the final method of calculation of Consistent Removal.

The Agency believes for the foregoing reasons that the modified Consistent Removal calculation promulgated today will ensure a level of pollution control equivalent to that required of a direct discharger with identical BAT standards. This computation is admittedly a compromise. It seeks, on the one hand, to avoid placing more extensive sampling requirements on the POTW. More extensive sampling would be required to avoid the skewed statistical results which arise from employing the "95%" removal computation with a limited number of data points (12 or less). On the other hand, this revised calculation seeks to ensure that a reasonably consistent level of removal is maintained. The Agency believes that the final computation found in § 403.7(a)(2) addresses both of these concerns.

Pollutants not Detectable in Influent to POTW. If a pollutant, known to be contributed by Users discharging to a POTW sewer system, does not appear in the influent analysis performed at the POTW there are three possible explanations. First, the pollutant is one that settles out in the sewer pipes during the normal course of operations, and is only flushed through the POTW system during storm events with the associated high flows. Second, the pollutant may actually be degraded in the sewer lines. Third, and most likely, the pollutant is there at the POTW influent, but is masked from our analytical detection capabilities by the great dilution from all other inflowing wastes.

The Agency has three options for dealing with removal allowances where a pollutant does not appear at the influent to the POTW: (1) it can elect not to grant removal allowances at all; (2) it can assume that the pollutant is fully treated and grant a 100% removal allowance; or (3) it can grant removal allowances based on an alternative demonstration of Removal (i.e., one not

based on a simple analysis of influent vs. effluent concentration).

The Agency recognizes the inequities which would flow from option one and thus has rejected this solution. However, we do not believe that the opposite extreme, embodied in option two, is any more reasonable. Where pollutants settle in the sewer lines only to be flushed out during storm events, often by-passing *any* treatment by the POTW, it is not reasonable to give the POTW credit for 100% treatment. Similarly, where such pollutants are present at the influent in undetectable concentrations because of the high dilution factor, there is no justification for assuming 100% treatment. This is especially true in light of the fact that treatment efficiency generally decreases as the concentration of influent pollutants decreases. For these reasons the Agency disagrees with the two commenters who asserted that pretreatment requirements should be waived for all pollutants not detected in the influent to the POTW.

The Agency endorses option three which we find to be the most reasonable approach. Section 403.7(a)(2) provides that where the POTW, for whatever reason, cannot detect regulated pollutants in its influent it may nevertheless demonstrate to EPA or the regulating State that such pollutants are indeed Removed.

§ 403.7(a)(3) "Overflow."

The term "Overflow" has been substituted for the term "Bypass" throughout the final regulation. The term Bypass is employed in the Consolidated Permit regulations and, in the context of those regulations, has a meaning which is quite distinct from the intended use of the word in the pretreatment regulations. To avoid confusion, the general pretreatment regulations now employ the term Overflow instead of Bypass. New paragraph (a)(3) of § 403.7 defines an Overflow as any diversion of flow from the POTW's pipes, sewers or other conveyances which occurs before the flow reaches the headworks of the POTW, i.e., that portion of the POTW designed to provide treatment. The diversion may either be intentional, e.g., through manual diversion of flow, or unintentional, e.g., through diversion at combined sewer overflow points due to precipitation events which exceed the hydraulic capacity of the POTW.

Diversion of flow from the POTW Treatment Plant itself, e.g., diversion of flow after primary treatment by before secondary, will not constitute "Overflow." It should be noted, however, that frequent diversion of flow from the POTW Treatment Plant, because the plant's hydraulic capacity is

underdesigned or for other reasons, must be reflected in the determination of average Removal made in accordance with § 403.7(d)(2). Thus, in order to obtain a "representative" demonstration of the POTW's Removal as required by § 403.7(d)(2)(i) and (ii), POTW's which frequently provided only primary treatment because of diversions from the Treatment Plant would have to reflect this fact by including in the samples used to establish Removal an appropriate number of samples taken during wet weather flows. Further guidance on the compilation of "representative" sampling data will be provided through the removal allowance guidance document to be distributed shortly.

§ 403.7(b)(2) Conditional Removal Allowance Approval.

The overwhelming majority of commenters on this section favored EPA's proposal to allow conditional removal allowances prior to POTW program approval. However, three commenters raised questions about EPA's authority to require POTW program approval as a precondition to removal allowance approval. The major argument raised by all three commenters was that EPA has no legislative basis for tying pretreatment programs to removal allowances.

The Agency disagrees with these comments, and believes that the statute and the legislative history of the Clean Water Act when read together provide the Agency with authority to condition removal allowances on the eventual development of local pretreatment program. The 1977 amendments to the FWPCA introduced two major new provisions dealing with pretreatment. Section 402 (b)(8) was amended to provide that POTWs receiving waste from industries subject to categorical Pretreatment Standards will be required to develop a local program to ensure that these industries comply with applicable Standards. Section 307(b)(1) was amended to provide that a POTW can relax its industries' categorical Pretreatment Standards to reflect the degree to which the POTW removes any or all of the regulated pollutants. When these two provisions dealing with pretreatment are read in light of the legislative history of the Clean Water Act, it is apparent that Congress intended that removal allowances be integrally tied to the presence of a local pretreatment program.

The Senate debate on the Conference Report on the Clean Water Act amendments addressed the connection between removal allowances, or "local

credits" and local programs in the following manner:

Where a local compliance program is approved, EPA and the permitting States may approve case-by-case modifications of the national pretreatment standards—or local credits—for documented pollutant removals attained by a publicly owned treatment works. To receive a local credit there must be a demonstration that the pollutant is degraded or treated; credits will not be given for dilution. . . . Tying local credits to local compliance programs not only provides an incentive for local participation, but more importantly, it provides assurance that the removal levels which justified the local credits will be maintained by a publicly owned treatment works committed to operating a sound pretreatment program. (Legis. Hist., Vol. 3, p. 461-462)

The House debate on the conference Report reflects a similar intention to connect the provisions of 402(b)(8) and 307(b). In that debate, the following statement was made:

Under the amendment to section 307(b) the Administrator would establish national pretreatment standards for toxic pollutants based on the best available technology economically achievable, or any more stringent effluent standards under section 307(a). Then in applying these pretreatment standards *through its pretreatment programs*, the owner or operator of a municipal treatment works could modify the requirements applicable to individual classes of sources introducing that pollutant into the treatment works to reflect the degree of reduction of that pollutant achieved by the treatment works. (Emphasis added) (Legis. Hist., Vol. 3, at 342-343.)

The language reflected in the House debate was drawn directly from the Conference Report. (Legis. Hist., Vol. 3, at 271).

Thus, it is apparent to the Agency that the Congress intended the provisions of sections 307(b) and 402(b)(8) to be read together to require that a local program be developed as a condition to granting removal allowances. In addition, in promulgating regulations which condition the approval of removal allowances on the development of a program, the Agency is exercising its broad authority to establish any regulatory provision reasonably related to the purpose of the enabling legislation. (*Mourning v. Family Publications Service*, 411 U.S. 356, 369 (1973), *National Petroleum Refiners Association v. FTC*, 482 F. 2d. 672, 678-79 (D.C. Cir. 1973), *cert. denied*, 415 U.S. 951 (1974).)

Provisional Removal Allowances. Section 403.7(d)(2)(vii) (see preamble discussion of that section) provides that a POTW requesting provisional removal allowance authorization for pollutants not yet being discharged must comply

with the requirements of § 403.7(b)(1)-(4). EPA agrees with the commenter who noted that it is inappropriate to require compliance with proposed § 403.7(b)(2)(iii) as a precondition to receiving a provisional allowance. Proposed paragraph (b)(2)(iii) requires Industrial Users currently discharging into the POTW to enter into a compliance schedule which obligates the User to install pretreatment technology within a specified time. Industries subject to the provisional allowance section (403.7(d)(2)(vii)) are required to comply with applicable new or existing source Pretreatment Standards before the commencement of discharge. Thus, it is unnecessary and inappropriate for these Industrial Users to enter into a compliance schedule which would allow for the installation of treatment technology beyond the point in time that discharge commences. The provisions of paragraph (b)(2) have accordingly been amended to provide that industries need not enter into the required compliance schedule when the POTW is requesting a provisional removal allowance for pollutants not yet being discharged. Language to this effect is now found in § 403.7(b)(2)(i). Paragraph (b)(2)(iii) as proposed has been deleted altogether since the requirement that Industrial Users enter into a compliance schedule is already encompassed by the provisions of paragraph (b)(2)(i) requiring that Users submit the compliance schedule required by § 403.12(b)(7).

§ 403.7(b)(3) Removal Allowances for POTWs That Overflow.

This provision has been modified to allow POTWs with combined sewers or systems which at least once annually overflow (as defined in § 403.7(a)(3)) untreated wastewater to receiving waters to obtain a removal allowance if either one of two conditions is met. First POTWs with Overflows may receive removal allowance authorization to revise discharge limits for Industrial Users that demonstrate that they can contain or cease discharges to the POTW during circumstances in which an Overflow event reasonably can be expected to occur. Alternatively POTWs which overflow may receive removal allowance authorization if they calculate consistent removal according to an equation which factors in hours of Overflow and, after July 1, 1983, are making an effort to implement an Overflow-control program in accordance with requirements of "PRM 75-34." (See Appendix A.)

In light of some of the comments received on this provision, it appears desirable to discuss the Agency's

rationale for conditioning removal allowances on the institution of some Overflow controls. Section 307(b)(1) of the Clean Water Act states that a POTW may obtain a removal allowance if it "removes all or any part of . . . [a] toxic pollutant and the discharge from such works does not violate that effluent limitation or standard which would be applicable to such toxic pollutant if it were discharged by such source other than through a publicly owned treatment works. . . ." The obvious intent of this provision, as indicated by the plain words of the statute and by the legislative history of the Clean Water Act, is to avoid redundant treatment while at the same time ensuring that the treatment provided by the POTW and indirect discharger working together is equivalent to the treatment which would be required of a direct discharger. Thus, the above-cited language of the statute establishes a clearly conditioned authority. The POTW may grant a removal allowance, but this allowance may be granted only if, after treatment by the POTW and indirect discharger, the reduction in pollutants discharged to the receiving water is equivalent to the reduction which would be achieved by a direct discharger in the same industrial category and subject to BAT standards. In order to adequately fix the amount of pollution control for which the Industrial User is responsible, the POTW must establish a fixed and consistent level of removal. In order to arrive at an average consistent removal level, the POTW must factor in both those periods of high removal and those periods of low or zero removal. Thus, in determining consistent removal, the POTW must factor in those periods when no removal is obtained because untreated waste is overflowing the POTW. The regulation provides that Overflows may be factored into the calculation of consistent removal either by using the equation of § 403.7(b)(3)(ii) or by demonstrating that regulated industrial wastes will not overflow in unacceptable amounts during storm events (§ 403.7(b)(3)(i)).

One commenter indicated that the Agency did not go far enough in factoring periods of Overflow into the computation of consistent removal. That commenter suggested that where the discharge from an Industrial User completely overflows the POTW during storm events no removal allowance should be allowed. In addition, that commenter suggested that, where only part of the industry's discharge overflows the POTW during storm events, the removal be calculated by taking a weighted average of the

removal of the various portions of the industrial discharge. The Agency believes that this approach would be unduly burdensome for POTWs to implement because few POTWs are capable of distinguishing that portion of each Industrial User's waste which overflows. Fewer POTWs would be able to grant removal allowances and, consequently, increased numbers of Industrial Users would be unable to take advantage of pollutant abatement achieved by the POTW. This result is clearly contrary to the Congressional intent that redundant treatment be avoided to the extent possible. The Agency has concluded that the position set forth in amended § 403.7(b)(3) reflects a justifiable compromise.

Other commenters felt that the provisions of proposed § 403.7(b)(3) went too far in imposing requirements on POTWs which have Overflows. In particular, comment was directed at the provision of § 403.7(b)(3)(i) which provides that, as an alternative to using the calculation of subparagraph (3)(ii), Industrial Users of a POTW may contain their discharge during periods of peak flow. Specifically, one commenter indicated that the provisions of this subparagraph were practically unworkable for the industries in its system as containment would require considerable space, which many existing facilities did not have, and since containment potentially would require Industrial Users to shut down their operations during what could be an extended period of time. EPA recognizes the difficulties which may be inherent with this option, and thus has not mandated containment during times of Overflow. The option simply is available to those industries and municipalities for which it is a practical alternative. It is anticipated that most municipalities and industries will make use of the alternative equation in § 403.7(b)(3)(ii).

Another commenter felt that the provision of § 403.7(b)(3)(i) requiring industries to cease all discharges during times of Overflow was unreasonable since the POTW may provide some treatment of influent wastes even during Overflow events. EPA agrees with this commenter and therefore has amended the section to provide that Industrial Users must reduce discharges or increase pretreatment during Overflow events in an amount equivalent to the removal not being provided by the POTW. The Agency also agrees with this commenter's position that Industrial Users need only demonstrate containment when Overflows occur from the POTW treatment plant or sewer to which the Industrial User is

connected. The regulations have been so clarified.

Two commenters asserted that it would be difficult to comply with the Overflow calculation set forth in § 403.7(b)(3)(ii)(A) because the unique features of their POTW systems made actual monitoring of Overflow events administratively and technically infeasible. These commenters appear to be proceeding under the misunderstanding that the provisions of subparagraph (ii)(A) require actual monitoring at the Overflow points. While, ideally, actual POTW removal should be documented to meet the requirements of Section 307 of the Act, we appreciate that this may be impossible in some situations. Therefore it is appropriate to read the language of § 403.7(b)(3)(ii)(A) to allow for a verifiable engineering estimate of the annual hours of Overflow where actual monitoring of Overflow points is infeasible. The demonstration accompanying this estimate should reflect, at a minimum, actual historical rainfall information, the area served by combined sewers, local soil and topographic conditions, the age and maintenance of the combined sewers, ground water levels and any inflow/infiltration problems. Further information on how these factors should be incorporated into an estimate of annual Overflow will be available from an EPA guidance document on computing removal allowances to be distributed in the near future.

Another commenter suggested that Overflows should not inhibit approval of a removal allowance as long as the pollutants overflowed do not constitute a public health problem. This comment highlights a common misapprehension of the pretreatment program's objectives. The pretreatment program, like its sister direct discharge NPDES program is charged with controlling industrial pollutants to the extent that current technology allows. The POTW and industry working together must achieve that level of pollution control obtained by direct dischargers employing the "best available technology". This technology-based mandate focuses the Agency's attention on the current state of our technical expertise rather than on the varying water quality needs of diverse stream segments. As a result, the imposition of technology controls, may, for some water bodies, achieve a higher level of water quality than would be required by applicable water quality criteria or standards.

The rationale for this approach is well-documented throughout the legislative history of the FWPCA and

amendments thereto and the Agency does not have the authority or the intention to depart from the technology-based control approach in the pretreatment program. Thus, returning to the commenter's suggestion, the POTW must actually remove (along with removal provided by the industrial User) that level of pollutants dictated by available technology and not that level suggested by the condition of local water quality.

Two additional changes have been made to § 403.7(b)(3). First, the equation of § 403.7(b)(3)(ii) has changed from the proposal. The original formula was mathematically incorrect in that it corrected the revised categorical Standard, rather than the consistent removal. The error can best be illustrated by an example. Assume a POTW Overflows one-half of the time. Further assume an original categorical limit, X, of 4 mg/l and a removal, r, of .2. The old formula calculates a revised categorical limit of:

$$\frac{4}{1-.2} (1/2) = 5(1/2) = 2.5 \text{ mg/l,}$$

This revised limit is lower than the original categorical limit. The new formula calculates a corrected removal of .10 and therefore a revised limit of 4.4 mg/l (applying the equation of § 403.7(d)(4)).

In addition, a non-substantive change was made to the introductory paragraph of § 403.7(b)(3). The first sentence, requiring that the POTW demonstrate "Consistent Removal" before obtaining a removal credit, has been moved to a more appropriate spot in the introductory language to paragraph (b). Similarly, the language formerly found in paragraph (b)(3)(ii)(B), exempting POTWs from the requirement to factor Overflow into removal allowances where no Overflow occurs between the industry and the POTW, has been moved to a more appropriate place in paragraph (b)(3).

§403.7(b)(4). Compliance with sludge disposal requirements.

General Discussion

Before entering into a detailed discussion of the comments received on this section, it would appear to be desirable to explain briefly the connection between removal allowances and compliance with municipal sludge disposal regulations.

Several commenters apparently misread the provisions of § 403.7(b)(4) to demand compliance with requirements currently published under section 405 of the Clean Water Act (See 44 FR 53438) regardless of the manner in which the POTW is disposing of its sludge.

The manner of sludge disposal is a local decision. EPA regulations and guidelines do not prescribe methods of disposal. Instead, the requirements developed pursuant to the authority of section 405 of the CWA and related statutory provisions specify applicable constraints on the disposition of the sludge depending upon the disposal method selected. Thus, the POTW first determines the manner in which it will dispose of its sludge, then it identifies and complies with the appropriate Federal regulations or guidelines pertaining to that method of disposal. Section 403.7 provides that the POTW will not be able to receive removal allowance approval (§ 403.7(b)(4)) or maintain an approved level of removal (§ 403.7(f)(2)) if it fails to comply with Federal, State or local requirements applicable to its selected method of sludge disposal.

For example, if a POTW has elected to dispose of its sludge on agricultural land, it must comply with the regulations for land application, 40 CFR Part 257, promulgated on September 13, 1979 at 44 FR 53438. As long as the municipal sludge is disposed of in compliance with these regulations, the POTW may continue to grant a removal allowance to its Industrial Users relaxing their categorical Pretreatment Standards. Application of the sludge to the land in concentrations which are found to violate the limits prescribed in the September 13th regulation would constitute grounds for potential revocation or modification of the removal allowance. Similarly, if a POTW's sludge is contaminated to the degree that it is classified as a hazardous waste under the provisions of Subtitle C of RCRA, the POTW must comply with all applicable requirements of the Subtitle C regulations, including the requirements for land disposal under 40 CFR Part 264, in order to continue to grant removal allowances.

Where the POTW is employing more than one sludge-disposal method, and a parameter for which a removal allowance has been requested fails to meet federal (or State or local) requirements pertaining to one of the methods of disposal, but not the other, then the removal allowance may not be granted until the disposal of sludge containing that parameter is brought into compliance with federal (or State or

local) requirements pertaining to all methods of disposal employed by the POTW. Similarly, if the removal allowance for this parameter has already been authorized at the time the violation is found, the allowance for that pollutant will be modified or withdrawn until the POTW complies with federal (or State or local) requirements for that

pollutant for all methods of disposal employed by the POTW.

The chart below sets forth the major federal regulations which should be reviewed in order to determine whether the POTW's selected sludge disposal option is in compliance with the appropriate regulatory provisions.

Major Federal Regulations Relating to Sewage Sludge Disposal

Sludge disposal	Regulation	Date of promulgation	Authority
1. Landspreading:			
a. Food-chain application	40 CFR Part 257	9/79	RCRA/CWA.
b. Non-food-chain application	40 CFR Part 257	9/79	RCRA/CWA.
c. Distribution and marketing	40 CFR Part 258	12/81	CWA and others.
2. Land disposal:			
a. Solid wastes (nonhazardous)	40 CFR Part 257	9/79	RCRA/CWA.
b. Hazardous wastes	40 CFR Parts 260 et seq	5/80	RCRA.
c. PCB's; criteria modification	40 CFR Part 761	5/79	TSCA.
3. Incineration:			
a. New stationary sources of air emissions	40 CFR Part 60	10/75	CAA.
b. Hazardous pollutants	40 CFR Part 61	10/75	CAA.
c. Hazardous wastes	40 CFR Parts 260 et seq	5/80	RCRA.
d. PCB's; criteria modification	40 CFR Part 761	5/79	TSCA.

¹ Estimated.

Key

RCRA=Resource Conservation and Recovery Act. CWA=Clean Water Act. TSCA=Toxic Substances Control Act.
CAA=Clean Air Act.

Reference to Other Statutes. Several commenters challenged the Agency's authority to condition removal allowances on the POTW's compliance with statutory provisions outside of the Clean Water Act. These commenters argued that section 307(b) of the Clean Water Act requires compliance only with those standards and guidelines promulgated under section 405 of the Clean Water Act. The Agency believes that it is acting within the authority granted to it by sections 307(b) and 405 of the Clean Water Act in conditioning removal allowances on compliance with applicable requirements established under the Solid Waste Disposal Act (including Title II of this Act, more commonly referred to as the Resource Conservation and Recovery Act (RCRA)), the Clean Air Act, the Toxic Substances Control Act (TSCA), and State regulations developed under Subtitle D of RCRA.

Section 405 of the Clean Water Act grants the Agency authority to promulgate "regulations providing guidelines for the disposal of sludge and the utilization of sludge for various purposes." The disposal of sludge may of course involve various media. Incineration of sludge will result in an impact on air quality; land disposal of sludge may result in effects on ground water and local flora. Therefore, in fulfilling its mandate to develop

regulations under section 405 which "identify concentrations of pollutants which interfere with each . . . [sludge] use or disposal" the Agency must of necessity make reference to environmental protection standards set forth in regulations developed under various statutes including the Clean Water Act, Clean Air Act, TSCA, and RCRA. In order to avoid duplication of effort and to ensure consistency between the regulatory provisions promulgated under section 405 and those related provisions found under these various statutes, the section 405 regulations will, to a large degree, simply reference the existing requirements applicable to sludge disposal found under the aforementioned statutes. The Agency's plan for developing this consolidated sludge disposal regulation is discussed in the pre-proposal draft regulation for Distribution and Marketing of Sewage Sludge Products dated May 6, 1980.

Thus, if the Agency, in the general pretreatment regulation, were simply to reference the section 405 regulations in defining appropriate circumstances for granting removal allowances, it would achieve the same result as is realized by referencing the statutory provisions directly. Therefore, the Agency is not over-stepping its statutory authority in making direct reference to the

aforementioned statutes. By referencing these statutes directly, § 403.7(b)(4) ensures that the regulated community has notice that continued authorization to grant removal allowances may depend upon compliance with various statutorily-derived requirements applicable to the selected manner of sludge disposal.

In addition, in referencing these related statutory provisions the Agency is acting well within its authority to implement those regulatory provisions which are reasonably related to carrying out the intent established by Congress. Relevant sections of the Clean Water Act and the referenced statutes were discussed above in the context of the definition of Interference. (See § 403.3(i).) The Legislative History also supports references to other statutes. Senator Muskie stated that "[s]uch credit approvals will be conditioned initially upon municipal compliance with Resource Conservation and Recovery Act requirements under subtitles C and D, and in 1983 upon treatment works being capable of making beneficial use of its municipal sludge as established under subsection 405—unless such use is shown to be infeasible." Senate Debate on Conference Report, *reprinted in Legis. Hist.*, Vol. 3, at 461-62 (1978). This remark indicates that Senator Muskie contemplated consideration of at least one other statute in the creation of removal allowances or "credits." It is logical that the Administrator consider other relevant standards in establishing the criteria for removal allowances.

Finally, removal allowances are not required by law but are an option of the POTW (section 307(b) of the Act). It is perfectly reasonable for the Administrator to impose conditions on the granting of removal allowances which effectively carry out the intent of Congress, i.e., that removal allowances not be granted where they might result in Interference with the POTW's selected sludge disposal alternatives.

The October 1979 proposal amended § 403.7(b)(4) by deleting the requirement that the POTW comply with "guidelines" or "criteria" adopted under the referenced statutes. This deletion avoided legal problems which might arise from requiring POTWs to comply with Agency policies not subject to rulemaking procedures, including notice and public comment. However, one commenter noted that the Agency went too far in limiting the compliance requirement only to "regulations".

promulgated under these statutes. That commenter accurately noted that the provisions of these statutes often have vitality apart from regulations promulgated thereunder. For example, section 405(a) of the Clean Water Act contains a prohibition that does not require implementing regulations to be effective. Similarly, the requirements of section 405 as well as Subtitle C of RCRA may be established through permits whether or not regulations exist. Therefore, limiting compliance to regulations established under a statute would unduly limit the intended scope of the statutes' authority. In response to this comment, EPA has amended the reference to statutory provisions found in § 403.7(b)(4) (and § 403.3(i)) to require sludge use and disposal in accordance with the statutes themselves, or regulations or permits issued thereunder, if a removal allowance is to be authorized.

§ 403.7(c) Application for Removal Allowances.

The final amendments to this section adopt the proposed changes published in October, 1979. Section 403.7(c) provides that application for removal allowance authorization may be requested once a year with respect to certain pollutants instead of only at the time of program approval or subsequent permit reissuance as provided for in the existing regulation. All such requests for removal allowance authorization submitted prior to program approval are considered to be "conditional" allowances, as described in § 403.7(b), if the Approval Authority does not review and make a decision on them. The Approval Authority may review and make a determination on the POTW's authority to revise discharge limits at any time after the submission of an application for removal allowance approval up until the time of pretreatment program approval. At the time of pretreatment program approval the Approval Authority is required to review and make a determination on any pending requests for removal allowance approval.

One commenter sought to clarify whether removal allowance requests would be entertained after POTW pretreatment program approval or the reissuance of the POTW's permit. Additional requests for removal allowances may be submitted, on a yearly basis, after POTW program approval and permit reissuance. The Approval Authority may elect to act on these requests upon receipt, or may defer consideration until the next permit reissuance date.

Several commenters objected to the provision of § 403.7(c) which requires the POTW to apply for a removal allowance for a particular pollutant within 18 months of the effective date of a categorical Pretreatment Standard regulating that pollutant. These commenters felt that the 18-month period is too restrictive and suggested that requests for removal allowances should be entertained at any time. The Agency continues to believe that an 18-month period provides sufficient time for the POTW to determine its ability to remove a regulated pollutant. Section 403.7(d) of this regulation requires, at a maximum, 12 months of operating data in order to establish a removal level. In addition, comments from POTWs have indicated that they expect to conduct sampling and analysis to determine their removal capability for all pollutants at one time. Once the removal capability has been established for all pollutants for which regulations are anticipated, when the final Pretreatment Standard is promulgated, the removal data will already be on hand. For the foregoing reasons, the final regulations continue to employ an 18-month time limit. Allowing POTWs to request removal allowances at any time would overburden the State and EPA reviewing authorities and defeat the Act's and regulation's goal of defining a fixed and constant level of removal.

§ 403.7(d)(2)(iii) Sampling Schedule for Determining Removal Allowances.

In an attempt to improve the readability of the regulations, paragraphs (c)(1)-(7) of § 403.7, pertaining to the contents of a Removal Allowance application, have been redesignated paragraphs (d)(1)-(7).

The October 1979 amendments to the general pretreatment regulations proposed to revise the sampling period needed to demonstrate the POTW's removal of regulated pollutants. The proposed revision provides for a minimum of twelve composite samples taken at approximately equal intervals throughout the year. This revision provides data less dependent on short term trends and, therefore, more representative of seasonal and yearly trends in influent and effluent quality. The original regulations had provided for a composite sample taken on each of three consecutive days during each season.

Several commenters suggested that the proposed modified sampling regime is still unduly restrictive. For example, one commenter indicated that a more representative indication of the average removal achieved by his city's POTW could be obtained by collecting seven

consecutive days of samples once per quarter. The Agency agrees that there should be more flexibility in the sampling requirements imposed by this section. Therefore, today's regulations amend § 403.7(d)(2)(iii) to provide that the POTW may seek approval from the Approval Authority of an alternative sampling scheme where the scheme outlined in the regulation will not provide the most representative determination of the POTW's removal ability. The Approval Authority may also approve the use of supporting historical data maintained by the POTW where such data provide a representative demonstration of annual removal performance.

Another commenter indicated that EPA's proposed procedures for collecting flow-proportional composite samples were too narrowly drawn. Specifically, that commenter suggested that section 403.7(d)(2)(iii) be amended to allow the collection of flow-proportional samples through 1) continuous, rather than discrete sampling at varying rates corresponding to flow; 2) discrete sampling at a constant rate or aliquot volume but at varying frequencies depending upon flow, as well as 3) discrete sampling at a constant frequency but varying aliquot volume as proposed by EPA. EPA agrees with this commenter and has modified § 403.7(d)(2)(iii) to provide for these alternative methods of obtaining flow-proportional samples.

The same commenter expressed concern that the provision of the amended regulations requiring that effluent sampling at the POTW be conducted one detention time later than the corresponding influent sample will result in erroneous and misleading estimates of the POTW's removal. The commenter also noted that, ideally, collection of influent samples should precede collection of effluent samples by a period of time equal to in-plant detention at the 24-hour average flow during the sampling period.

EPA believes that in most cases the results of 24-hour POTW composite sampling are not significantly affected by the failure to compensate for a calculated hydraulic detention time. At most treatment works, small amounts of influent constituents pass through the POTW in time periods less than the calculated hydraulic detention period. Thus, the operation of most treatment works serves to dampen out variations in POTW effluent concentrations which would otherwise appear as a result of influent concentration variations. There is Agency experience which suggests that very small differences, well within

normal sample error, arise by not compensating for hydraulic detention time for composite sampling. Hence, the fact that the prescribed methods of § 403.7(d) require a 24-hour sampling event, which encompasses one or more detention periods at most POTWs, leads the Agency to conclude that for the general case the added burden of delaying effluent sampling by one detention period is not worth the minimal benefit obtained. However, it is within the discretion of either the POTW or the Approval Authority to include detention time compensation. The Approval Authority may wish to require that influent sampling precede effluent sampling by approximately one detention period (based on an estimated average daily flow during a corresponding period in the previous year) in cases where to do otherwise would yield unrepresentative results. Circumstances where such compensation may be justified include, but are not limited to, instances of extremely long detention periods or pure plug flow operation and batch discharges by Industrial users.

§ 403.7(d)(2)(vii) (formerly paragraph (c)(2)(v)) Provisional Removal Allowances.

The proposed amendments to the General Pretreatment Regulation included a new paragraph, Section 403.7(c)(2)(v) (now redesignated paragraph (d)(2)(vii)), which would enable the POTW to provisionally revise categorical Standards for new pollutants discharged into its system in the same manner as it grants conditional revisions for existing discharges under § 403.7(b)(2). The new provision allows the POTW to estimate the percentage of removal the POTW would achieve for these pollutants based on treatability studies for the pollutants in question or data indicating the level of removal obtained for those pollutants by similar municipal treatment systems.

EPA agrees with the commenter who suggested that the amended language does not clearly indicate that the provisional allowance would be contingent upon the POTW's compliance with applicable sludge disposal requirements set forth in § 403.7(b)(4).

The Agency has amended this section to make it clear that in order to receive a provisional removal allowance, a POTW must comply with the same requirements, set forth in § 403.7(b)(1)-(4), which must be met prior to obtaining the more conventional removal allowance. Thus, under the provisions of paragraph (b)(4), the provisional allowance may not be authorized if it

contributes to the POTW's inability to comply with its NPDES permit or with applicable sludge disposal requirements.

Under the provisions of paragraph (b)(1) the POTW must apply for the provisional allowance. Paragraph (b)(2) allows the POTW to receive conditional approval of its provisional allowance prior to the development of a local pretreatment program. Finally, if the POTW requesting the provisional allowance has a combined sewer system which at least once annually overflows untreated wastewater to receiving waters, then the provisional removal allowance must comply with the requirements of § 403.7(b)(3).

Section 403.7(d)(2)(vii) has also been amended, in response to comments, to provide a specific time frame in which the POTW must commence a demonstration of removal as required by § 403.7(d). The final regulation establishes that the POTW must provide the operating data required by § 403.7(d) to support the provisional credit within 18 months after commencing discharge of the pollutant for which the provisional allowance is requested.

§ 403.7(f)(5) (formerly paragraph (e)(4) Withdrawal or Modification of Removal Allowances.

The Agency received comments that the phrase "significantly contributing" is unworkably vague. While EPA believes that a reasonable person would understand the meaning of this phrase, the Agency has clarified its meaning by including in the final language of § 403.7(f)(5) a reference to the definition of this phrase found in § 403.3(i). Thus, all uses of this phrase in the regulation shall be accorded the meaning set forth in that paragraph.

Another commenter expressed concern with the provision providing for withdrawal or modification of the removal allowance unless corrective action is taken in a reasonable time "not to exceed 60 days unless the POTW or the affected Industrial Users demonstrate that a longer time period is reasonably necessary to undertake appropriate corrective action." This commenter was concerned that the quoted language could be used to justify allowing problems to continue for long periods of time while major construction or long-term upgrading projects were undertaken. The above-quoted language should not be read to provide for such long-term remedies. The Agency intends the quoted language to allow time for the correction of only relatively minor, short-term problems. If a POTW is not meeting its approved removal level and a long-term modification is necessary to improve the POTW's removal, the

existing allowance should be adjusted downward until the higher removals are actually attained.

§ 403.7(e)(2) (Formerly paragraph (d)(2)) POTW's Receiving Construction Grants.

A new sentence added to the end of this paragraph highlights the interaction between the pretreatment regulations and the construction grants regulations (49 CFR Part 35) by pointing out that POTWs receiving grant funds for sludge disposal or treatment technology should consider the impacts which the granting of removal credits will have on the grant eligibility of sludge disposal or treatment systems in accordance with 35.917-1(d)(6) and Appendix A of Part 35 (40 CFR Part 35). In addition, the Construction Grant regulations are currently being amended to establish procedures for assessing the impact of granting removal credits on sludge disposal alternatives. These amendments are expected to clarify that sludge disposal or treatment systems are subject to the same cost-effective analysis contained in Appendix A of 40 CFR Part 35 as are all other projects funded under Title II of the CWA. Additionally, the amendments are expected to clarify that the level of federal participation will be limited to the most cost-effective, environmentally sound treatment technologies. In light of these anticipated amendments, POTWs expecting to seek Title II funding for sludge disposal systems should be prepared to consider the impact of granting removal credits on potential federal participation.

§ 403.7(g) (formerly paragraph (f)) Removal Allowances for POTWs not Required to Develop a Pretreatment Program.

The proposed § 403.7(f) (now designated paragraph (g)) provided that POTWs in States electing to exercise their § 403.10(e) authority to forego requiring the developing of local pretreatment programs may nevertheless receive removal allowances. Several commenters raised questions pertaining to the implementation of this provision. Section 403.10(e) allows a State to run a centralized pretreatment program at State-level which would be responsible for carrying out those responsibilities otherwise relegated to the POTW, i.e., the responsibilities set forth in § 403.8(f). The State would, for example, receive the various reports required of industry by § 403.12 and would be responsible for seeing that applicable categorical Pretreatment Standards were complied with. States make application for the authority to run a § 403.10(e) program in

the State Pretreatment Program submission required by § 403.10(b) or amendments thereto.

Where the State elects to run a centralized program under § 403.10(e), certain responsibilities should nevertheless remain with the POTW. Section 403.7(g) provides that, where the State develops a program under § 403.10(e), the POTW must remain responsible for the demonstration of and periodic reporting on removal according to the provisions of § 403.7 in order to receive and maintain a removal allowance. The approved removal level is incorporated into the POTW's State- or EPA-issued section 402 permit and becomes enforceable as a condition thereof.

In addition, several commenters noted an apparent contradiction between the provisions of § 403.7(g) and those of § 403.8(a) requiring that a POTW program be developed as a condition to receiving removal allowance approval. As the following discussion indicates, § 403.8(a) has been amended to rectify this inconsistency. Where the State exercises its § 403.10(e) authority and assumes, at the State level, the responsibility for developing the components of a local pretreatment program, the POTW is deemed to have a program sufficient to meet the requirements of § 403.8(a).

§ 403.8 POTW Pretreatment Programs.

§ 403.8(a) Local Programs and Removal Credits.

Several commenters pointed out that the last sentence in § 403.8(a) requiring that a local pretreatment program be developed where removal allowances are approved appears to be inconsistent with the new provisions of § 403.7(b)(2) allowing for conditional removal allowance approval prior to the submission of a local pretreatment program and with the provisions of § 403.7(g) which authorize removal allowance approval in selected circumstances where a local program does not exist. The relevant language of § 403.8(a) promulgated on June 26, 1978 provided that "any POTW desiring to modify national Pretreatment Standards for pollutants removed by the POTW (as provided for by § 403.7) must first have an approved POTW Pretreatment Program." The word "first" was deleted in the October proposal so that this provision would be consistent with the provision of § 403.7(b)(2) allowing for conditional allowances. It is apparent from the comments received that this language change did not clearly convey this intent. Therefore, paragraph (a) has again been amended to avoid any

appearance of inconsistency with § 403.7(b)(2). Section 403.8(a) now provides that in order to receive *final* approval of a removal allowance, a POTW program must first have been developed and approved by or submitted to the approval authority. Where a *conditional* removal allowance has been requested, § 403.8(a) provides that the POTW must develop a local pretreatment program according to the requirements of § 403.7(b)(2).

We agree that the proposed provision is inconsistent with the new language of § 403.7(g). Paragraph (a) of § 403.8 has accordingly been amended to provide for an explicit exception to the rule that a POTW receiving a removal allowance must ultimately develop a pretreatment program. The amended paragraph provides for an exception in the case outlined in § 403.7(g) where the State has elected to assume responsibility for running a local program in lieu of the POTW in accordance with § 403.10(e), and the POTW is accordingly not required to develop a local program.

§ 403.8(e) Cause for Reissuance or Modification of Permits.

Two additional circumstances constituting cause to modify or reissue a POTW's NPDES permit have been added to this paragraph. Paragraphs (e) (4) and (5) now make explicit State and EPA authority to modify or reissue permits to incorporate the provisions of an approved pretreatment program or a compliance schedule for the development of such a program. These authorities were already provided for by paragraphs (c) and (d) and have been consolidated in paragraph (e) for the sake of clarity.

§ 403.8(f)(1)(iv) Confidential Information.

The comment following this paragraph has been deleted in the final regulation. The comment provided that POTWs and NPDES States are encouraged to develop procedures to protect trade secrets and confidential information. Section 403.14 of the regulation now requires that POTW's and States develop such procedures. In addition, a new paragraph, (f)(1)(vii) has been added which requires the POTW to comply with the requirements of § 403.14. In light of these changes, the comment is redundant and has been deleted accordingly.

§ 403.8(f)(1)(v)(B) POTW's Emergency Authorities.

The proposed regulations amend this section to require that the POTW provide Industrial Users with: (1) informal notice before requiring them to

halt discharges that appear to present an imminent danger to health or welfare; and (2) a more formal notice prior to halting discharges which threaten the environment or the operation of the POTW. Two of the three commenters who addressed this issue directed their concerns at the more substantive provisions of this paragraph rather than at the proposed changes with regard to notice. These commenters expressed concern that POTWs might overzealously exercise this authority if more definition were not given to the term "imminent endangerment." One of these commenters went further to suggest that this emergency response provision only be applied to demonstrated rather than potential dangers. It would appear to be useful to reiterate the rationale behind these provisions.

The Agency does not believe that it is desirable or possible to chronicle all situations which would constitute an imminent endangerment to human welfare, the POTW, or the environment. The local POTW is, in most cases, must better able to identify those circumstances which constitute an immediate danger to local inhabitants, local streams, or the operation of the treatment works. The Agency therefore believes that it should accord wide discretion to the POTW to act in those instances which it deems to constitute an imminent danger. In addition, one of the major functions of the emergency provision would be severely undercut if it were limited to situations where an actual harm had become manifest. One of the primary purposes of this provision is to give the POTW authority to intervene in dangerous circumstances before they result in harm to persons, the environment, or to the operation of the treatment works. Therefore, the final regulations promulgated today preserve the POTW emergency response authority promulgated in the June, 1978 regulations.

§ 403.8(f)(2)(vii). Newspaper Notification of Pretreatment Violations.

In the June 26, 1978 regulations, this paragraph provided that the POTW should provide for annual notice in the municipality's largest newspaper of Industrial Users that were not in compliance with Pretreatment Standards or other pretreatment Requirements during the preceding twelve months. This provision inspired concern that the language might be too broadly interpreted to cover very minor instances of noncompliance, such as the delay of one day in submitting a status report. The provision was amended accordingly to provide that only

significant violations occurring during the year need be reported. The amended paragraph then defined a significant violation as those violations which remain uncorrected forty-five days after notification of noncompliance, which are part of a pattern of noncompliance over a twelve month period, or which involve a failure to accurately report noncompliance. Several commenters addressing this proposed change suggested a return to the original language. Another suggested that the modified language also include provision for notification of violations pertaining to toxic pollutants or violations having severe consequences.

The Agency believes that the proposed language adequately addresses its concern that the public receive notice of significant industrial violations while avoiding inequities which might arise from publishing notices of very minor excursions. Requiring the POTW to report any violation appears unduly burdensome on the POTW and unduly harsh for those Users responsible only for minor reporting violations. Therefore, in the final regulations promulgated today, the Agency has adopted the basic changes incorporated in the proposed amendments. The final regulations also reflect a change in response to the aforementioned commenter who favored incorporation of a notice requirement where toxic pollutants or discharges resulting in serious damage to health, environment or the operation of the POTW were concerned. Section 403.8(f)(2)(vii) now provides that a violation is deemed to be significant if it results in the exercise of the POTW's emergency authority under § 403.8(f)(2)(vi)(B). Thus, the POTW must give newspaper notice of those violations which elicited an "imminent endangerment" response under the above-referenced paragraph.

Another commenter indicated that the public participation provisions of 40 CFR Part 25, referenced in § 403.8(f)(2)(vii), were so varied in nature that reference to this part was unworkably vague. This commenter suggested that the Agency specify those requirements to be complied with in order to avoid regional discrepancies. EPA agrees with this comment, but feels that the proper forum for such distinctions is guidance rather than regulations. The Agency therefore will ensure that the Pretreatment Guidance package to be distributed following the promulgation of this regulation will discuss the public participation mandated by 40 CFR Part 25.

§ 403.9 Submission of POTW Program and Removal Allowance Approval Requests.

§ 403.9(a) Responsible Approval Authority.

Paragraph (a) has been amended to make it clear that requests for local program and removal allowance approval are to be submitted to a State for a final approval determination only if the State has an approved pretreatment program. In all other cases, these requests are to be approved by the appropriate EPA Regional office. This provision does not preclude an agreement between the State and EPA that the State will conduct an initial review and make an advisory determination on the approvability of a POTW program or removal allowance where the State does not have actual approval authority. The provision also is not intended to relieve the State of responsibility for making an approval determination where it has been determined (as provided for by § 403.10(a)) that the State has authority to make such a determination.

§ 403.9(c)(3) (formerly paragraph (b)(3)) Conditional Program Approvals.

As originally promulgated this section required that removal allowances be withdrawn if funding was not acquired to implement any delayed elements of a conditionally approved local pretreatment program within the necessary time period. To conform to the change in § 403.7(f)(5), this provision has been amended to make clear that allowances may be modified rather than withdrawn. The sole commenter on this section supported the change and it is adopted as proposed.

§ 403.9(f) Pretreatment Program Submissions—Procedural Defects.

The proposed amendment to this section would have required public notice by the EPA or State in the event it was determined that a submission for pretreatment program approval or removal allowance approval did not comply with the procedural application requirements set forth in the regulation. POTW and State comments all objected to this proposal on grounds that it would impose a heavy administrative and resource burden with minimal benefits. They pointed out that any procedural defects were usually remedied most expeditiously by direct contact with POTWs during the review process prior to formal submission. A POTW also noted that publication of a "notice of noncompliance" is misleading in that it implies that the POTW failed to meet its

permit compliance schedule for the development of a program.

The one commenter supporting the change felt public notice was necessary to alert Industrial Users who could then assist the POTW in complying with the procedural requirements in resubmitting its proposal. The Agency agrees that such notice can prove useful and the final regulations, accordingly, provide that the Approval Authority shall provide notice of program deficiencies to all persons who have specifically requested such notice. The Agency is convinced by the comments that it is unnecessary to impose a mandatory public notice requirement in this situation.

§ 403.10 State Pretreatment Programs.

§ 403.10(a) State Pretreatment Programs—Exercise of Current Authorities.

Section 403.10(b)(1) of the proposed amendments provides that an NPDES State will be required to exercise those authorities related to the operation of a State pretreatment program which it possesses even if the State has not yet obtained approval of its pretreatment program. In most States these are authorities, such as the authority to apply and enforce requirements under section 307(b) and (c) of the Clean Water Act, which the State already attested to in its application for NPDES program approval. Since former paragraph (b)(1) has been deleted in today's final regulation (it imposed a reporting requirement which states have subsequently complied with), the language discussed above has been moved to paragraph (a). No comments were received on this amendment and it is adopted as proposed.

§ 403.10(c) EPA Pretreatment Authority.

This amendment substituted "EPA" for "Administrator" in describing the Agency's exercise of pretreatment authority prior to State implementing action. This technical change will be adopted as proposed.

Several commenters suggested that EPA replace the word "may" in the phrase ". . . EPA may exercise the authorities . . ." to recognize the mandatory nature of the Agency's obligation in this situation. EPA agrees and "shall" has been substituted in the phrase.

§ 403.10(e) State Program in Lieu of POTW Program.

The preamble to this section in the proposed amendments suggested a new policy which would prohibit granting

section 201 funds to a POTW for development of a pretreatment program where the State had elected to implement the program at the local level. This suggestion generated considerable comment in opposition to the policy and endorsing the merits of local pretreatment programs as opposed to those run by States. EPA agrees that in most cases local pretreatment programs are preferable to State-operated programs. However, this section makes provision for those circumstances when the State determines that its resources and capabilities are better suited to administer the program than its local POTW's. The regulation makes it clear that there is no bar to a POTW developing its own program even where a State has elected to operate a program. In response to the comments, EPA has rejected the proposed policy of not funding the development of these local programs. Therefore, POTWs in this situation will be at no economic disadvantage in establishing pretreatment programs relative to POTWs in States not operating local programs.

Several commenters suggested that a conflict existed between this provision and the language in § 403.8(a) requiring POTWs with a daily flow in excess of 5 million gallons to develop local pretreatment programs. These commenters believed a State decision to operate local programs would be limited by § 403.8(a) to those POTWs with less than 5 mgd flow. This is not the intent of the regulation. The language of this section has been clarified to indicate a State decision to operate a pretreatment program in lieu of a POTW will supersede the requirements of § 403.8(a) even for those facilities with daily flows greater than or equal to 5 mgd.

§ 403.10(f)(2)(iii) Compliance Schedules.

The amendment to this section deletes the word "expiring" prior to "POTW permits." This change clarifies that the State must develop procedures to include pretreatment compliance schedules in all permits, not just those which are expiring. In response to the sole commenter on this section, EPA has added a phrase indicating that the shortest reasonable compliance schedule may not extend the time for POTW compliance beyond the July 1, 1983 deadline.

§ 403.10(h) EPA Approval of State Programs.

The proposed amendment altered the references in this section from "Administrator" to "Regional

Administrator" to reflect the delegation of the authority to review the initial State program submission. No comments were received on this amendment and it is adopted as proposed.

§ 403.10(h)(2) Approval Procedures for State Programs.

This amendment alters the reference concerning State pretreatment program approval procedures from § 403.11 to 40 CFR Part 123.13 pursuant to the changes in the revision of the NPDES regulations in the June 7, 1979 Federal Register and the promulgation of the Consolidated Permit regulations in the May 19, 1980 Federal Register.

§ 403.11 Approval Procedures for POTW Programs and Removal Allowances.

This section has been modified to delete references to State program approval procedure. As § 403.10(h)(2) now indicates, State program approvals are now governed by the procedural requirements found in Part 123 of the Consolidated Permit regulations.

§ 403.11(b) Review and Preparation of Notice.

The proposed amendment to this paragraph required the Approval Authority to have a Submission ready for public review and comment within 5 days of its receipt. A commenter noted that this period may be unrealistically brief for the Approval Authority to conduct a preliminary review of the Submission to determine its procedural sufficiency and prepare the required public notice. The language has been changed to indicate that the 5 day period for preparing the public notice commences after the Approval Authority has made its preliminary determination that the Submission contains all the required information.

§ 403.11(b)(1)(i)(A) Notice.

The final amendment to this section provides that those persons requesting individual notice must also be included among the persons to whom copies of the request for program or removal allowance approval must be mailed. The Approval Authority may notify persons and organizations other than those listed in paragraph (b)(1)(i)(A) as the Approval Authority deems necessary. The opportunity for the exercise of discretion should address one commenter's concern that in certain circumstances notices of requests for approval of Submissions should be sent to adjoining States whose waters may be affected.

§ 403.11(b)(3) Review of Conditional Removal Allowances.

The proposed amendment added a new section requiring the Approval Authority to publish notice of its decision to defer review of a Submission which authorizes a POTW to grant conditional revised discharge limits. Commenters indicated that this requirement would impose a large additional burden upon the Approval Authority. The requirement imposes no greater burden upon the Approval Authority than if it chose to review the package rather than defer the review. One commenter argued that formal action of record by the Approval Authority was required prior to a POTW exercising its power to grant conditional revised discharge limits. This is not the intention of §§ 403.7(b)(2) and (c). Submission of the request alone authorizes the POTW to grant removal allowances. The section is adopted as proposed.

§ 403.11(c) and former paragraph (e) Approval Authority Decision.

Paragraph (e) of the proposed regulation provides that the Approval Authority shall provide notice of a decision not to approve a Submission and that this notice shall be accompanied by suggested revisions needed to bring the Submission into compliance with applicable requirements. This provision has been moved to a more appropriate location in paragraph (c) which discusses the Approval Authority's decision to approve or deny a Submission.

§ 403.12(b) Industrial Reporting Requirements—General.

The first part of § 403.12(b) has been amended today to incorporate the changes proposed on October 1979 which make clear EPA's intent to require the 180 day baseline reports only of those Industrial Users subject to specific categorical Standards. Industrial Users subject only to prohibited discharge limits need not submit baseline reports unless otherwise required by the Control Authority.

A commenter noted, and the regulations today reflect, that since the effective date of 40 CFR 403 is August 25, 1978, the reporting dates triggered by the effective date of Part 403 can be deleted.

One commenter suggested that the baseline report required by § 403.12(b) should be due 180 days after the final decision concerning the applicable subcategory determination made pursuant to § 403.6 instead of 180 days