United States
Environmental Protection
Agency

Technical Development Document for the Final Effluent Limitations Guidelines and Standards for the Meat and Poultry Products Point Source Category (40 CFR 432)

The full document is available at: http://www.epa.gov/ost/guide/mpp/

EPA-821-R-04-011

SECTION 15

REGULATORY IMPLEMENTATION

This section provides guidance to National Pollutant Discharge Elimination System (NPDES) permit writers and the regulated community for implementing 40 CFR Part 432 effluent limitations guidelines (ELGs) and standards for meat and poultry processing (MPP) facilities. The section is organized as follows:

- Section 15.1 describes the applicability of the revised Part 432 ELGs and standards.
- Section 15.2 summarizes compliance dates.
- Section 15.3 presents guidance on calculating NPDES permit effluent limitations.
- Section 15.4 summarizes compliance monitoring requirements.
- Section 15.5 discusses variances and modifications.

15.1 APPLICABILITY OF THE REVISED PART 432 EFFLUENT LIMITATIONS GUIDELINES AND STANDARDS

The MPP ELGs and standards regulate direct discharges of process wastewaters into waters of the United States (e.g., streams, lakes, oceans) that are authorized by an NPDES permit. MPP facilities that discharge their process wastewaters to a publicly owned treatment works (POTW) are not regulated by this final rule. The revised 40 CFR Part 432 applies to all existing and new meat and poultry first processing (slaughtering) and further processing facilities and independent rendering facilities. Facilities above certain production thresholds (Table 15-1) that are involved in any of the following activities are subject to the revised or new limitations in this rule:

Table 15-1. Summary of 40 CFR 432 Production Thresholds for Regulated Subcategories

Regulatory Subcategory	Production Threshold	
	Non-Small	**Small**
A - Simple Slaughterhouse	>50 million lb/yr	≤50 million lb/yr
B - Complex Slaughterhouse	>50 million lb/yr	≤50 million lb/yr
C - Low-Processing Packinghouse	>50 million lb/yr	≤50 million lb/yr
D - High-Processing Packinghouse	>50 million lb/yr	≤50 million lb/yr
E - Small Processor	--	≤1,560,000 lb/yr
F - Meat Cutter	>50 million lb/yr	>1,560,000 lb/yr but ≤50 million lb/yr
G - Sausage and Luncheon Meats Processor	>50 million lb/yr	>1,560,000 lb/yr but ≤50 million lb/yr
H - Ham Processor	>50 million lb/yr	>1,560,000 lb/yr but ≤50 million lb/yr
I - Canned Meats	>50 million lb/yr	>1,560,000 lb/yr but ≤50 million lb/yr
J - Renderer	>10 million lb/yr	
K - Poultry First processing	>100 million lb/yr	≤100 million lb/yr
L - Poultry Further Processing	>7 million lb/yr	≤7 million lb/yr

- ***First Processing***. A first processor is a facility that slaughters live animals and produces whole or cut-up carcasses. First processing operations can include the assembly and holding of animals for slaughter; killing, bleeding; removal of hide, hair or feathers; evisceration and variety meat (organ) harvest; carcass washing; trimming; carcass chilling and refrigeration; and cleanup. A facility is still a first processor if it performs operations in addition to slaughtering, such as further processing or rendering. First processors include facilities classified as simple slaughterhouses (40 CFR Part 432, Subpart A), complex slaughterhouses (Subpart B), low-processing

packinghouses (Subpart C), and high-processing packinghouses (Subpart D), in addition to the newly created Subpart K for poultry first processors.

- ***Further Processing***. A further processor are operations which utilize whole carcasses or cut-up meat or poultry products for the production of fresh or frozen products, and may include the following types of processing: cutting and deboning, cooking, seasoning, smoking, canning, grinding, chopping, dicing, forming, breading, breaking, trimming, skinning, tenderizing, marinating, curing, pickling, extruding, and/or linking. A facility is still a further processor if it performs operations in addition to further processing, such as rendering (but not slaughtering). Further processors include facilities classified as small processors (40 CFR Part 432, Subpart E), meat cutters (Subpart F), sausage and luncheon meats processors (Subpart G), ham processors (Subpart H), and canned meats processors (Subpart I), in addition to the newly created Subpart L for poultry further processors.

- ***Rendering***. A renderer processes slaughtering by-products (e.g., animal fat, bone, blood, hair, feathers, dead animals) into usable products. An independent renderer is subject to 40 CFR Part 432, Subpart J, and is a facility that performs only rendering operations at a production rate greater than 10 million pounds per year and does not do any first or further processing.

Facilities in the meat subcategories (A through I) whose production falls below the specified production thresholds (see Table 15-1) remain subject to Part 432, as specified; that is, EPA is not revising the current limits in Part 432 for those facilities.

15.2 COMPLIANCE DATES

New and reissued NPDES permits to direct dischargers must include these effluent limitations, and the permits must require immediate compliance with such limitations. If the permitting authority wishes to provide a compliance schedule, it must do so through an enforcement mechanism.

New sources must comply with the new source standards (NSPS) of this rule when they commence discharging MPP process wastewater. Because the final rule was not promulgated within 120 days of the proposed rule, the Agency considers a discharger to be a new source if its construction commences more than 30 days after publications of the final rule in the Federal Register.

There are meat product facilities that were new sources subject to the earlier NSPS provisions because they commenced construction after promulgation of the earlier NSPS. The CWA provides for a protection period for such facilities from any more stringent standards. The protection period is generally 10 years from the completion of construction. See section 306(d) of the CWA, 33 U.S.C. § 1316(d) and 40 C.F.R. 122.29(d). Thus, any source that commenced construction after promulgation of the earlier NSPS and before promulgation of today's NSPS will not be subject to any more stringent BAT limitations in today's rule until the protection period identified in 40 C.F.R. 122.29(d) expires.

15.3 CALCULATION OF NPDES PERMIT LIMITATIONS

The existing ELGs and standards that are being retained for Best Practical Control Technology currently available (BPT), Best Conventional Pollutant Control Technology (BCT), Best Available Technology Economically Achievable (BAT), and NSPS are production-based limitations in pounds (of pollutant) per 1,000 pounds (of production unit). The new ELGs and standards being established for BPT, BCT, BAT, and NSPS are concentration-based limitations in milligrams per liter (mg/L). The NPDES regulations (at 40 CFR 122.45(f)) require permit writers to include in permits mass-based limitations for direct dischargers, but they allow an exception when the limits are expressed in terms of other units of measurement (e.g., concentration). This section provides guidance on how the 40 CFR Part 432 effluent guidelines are to be included in NPDES permits.

The effluent limitations included in 40 CFR Part 432 are provided as maximum daily discharge limitations and maximum monthly average discharge limitations. Definitions provided at 40 CFR 122.2 state that the "maximum daily discharge limitation" is the "highest allowable 'daily discharge'" and the "maximum average for monthly discharge limitation" is the "highest

allowable average of 'daily discharges' over a calendar month, calculated as the sum of all 'daily discharges' measured during a calendar month divided by the number of 'daily discharges' measured during that month." "Daily discharge" is defined as the "'discharge of a pollutant' measured during a calendar day or any 24-hour period that reasonably represents the calendar day for purposes of sampling."

15.3.1 Meat and Independent Renderer Facilities

New and existing MPP facilities that are regulated under the meat and independent renderer subcategories will be subject to a combination of production- and concentration-based effluent limitations. The existing ELGs for Subcategories A through J that are being retained will remain as production-based limitations expressed in pounds (of pollutant) per 1,000 pounds (of production unit). In addition, the new 40 CFR Part 432 ELGs and standards established for several parameters are concentration-based limitations. A summary of the pollutants regulated under the meat and independent renderer subcategories and the basis by which they should be applied are provided in Table 15-2. In developing NPDES permit limitations for MPP facilities subject to both production- and concentration-based effluent limitations and standards, a permit writer must include both limitations.

Production units for existing effluent limitations and standards include live weight killed, equivalent live weight killed, finished product, and raw material. To convert the effluent limitations and standards expressed as pounds per 1,000 pounds of product to a monthly average or daily maximum permit limit, the permitting authority would use a production rate with units of 1,000 pounds per day. The NPDES permit regulations at 40 CFR 122.45(b)(2) require that NPDES permit limits be based on a "... reasonable measure of actual production." The production rates used for NPDES permitting for the MPP industry have commonly been the annual average production from the prior 5-year period, prorated to a daily basis.

Table 15-2. Summary of Basis for Pollutants Regulated under the Meat and Independent Renderer Subcategories

Applicable Subcategory(ies)	Size	Facility Type	Pollutants Regulated Under Existing 40 CFR Part 432 Production-Based Effluent Guidelines[a]	Additional Pollutants Regulated Under New 40 CFR Part 432 Concentration-Based Effluent Guidelines[b]
A–D	Non-small (>50 million lb/yr)	Existing	BOD_5, TSS, oil and grease, fecal coliforms, pH	Ammonia (as N), total nitrogen
		New	BOD_5, TSS, oil and grease, fecal coliforms, pH, ammonia (as N)	Total nitrogen
	Small (≤50 million lb/yr)	Existing	BOD_5, TSS, oil and grease, fecal coliforms, pH	--
		New	BOD_5, TSS, oil and grease, fecal coliforms, pH, ammonia (as N)	--
E	Small (≤1,560,000 lb/yr)	Existing/New	BOD_5, TSS, oil and grease, fecal coliforms, pH	--
F–I	Non-small (>50 million lb/yr)	Existing	BOD_5, TSS, oil and grease, fecal coliforms, pH, ammonia (as N)	Total nitrogen
		New	BOD_5, TSS, oil and grease, fecal coliforms, pH	Ammonia (as N), total nitrogen
	Small (>1,560,000 but ≤50 million lb/yr)	Existing	BOD_5, TSS, oil and grease, fecal coliforms, pH, ammonia (as N)	--
		New	BOD_5, TSS, oil and grease, fecal coliforms, pH	--
J	(>10 million lb/yr)	Existing	BOD_5, TSS, oil and grease, fecal coliforms, pH, ammonia (as N)	Total nitrogen
		New	BOD_5, TSS, oil and grease, fecal coliforms, pH, ammonia (as N)	Total nitrogen

Note: BOD_5 = 5-day biochemical oxygen demand; TSS = total suspended solids; N = nitrogen.

[a] Effluent limitations for fecal coliform bacteria and pH are not production-based. Furthermore, additional allocations are provided for BOD_5 and TSS for hide and by-product processing.

[b] Effluent limitations for all pollutants are concentration-based.

The objective in determining a production estimate for a facility is to develop a measure of production that can reasonably be expected to prevail during the next term of the permit. This measure is used in combination with the production-based limitations to establish a maximum

mass of pollutant that may be discharged each day and month. If the permit production rate is based on the maximum month, however, permit could allow excessive discharges of pollutants during significant portions of the life of the permit. These excessive allowances might discourage facilities from ensuring optimal waste management, water conservation, and wastewater treatment practices during lower production periods. On the other hand, if the average permit production rate is based on an average derived from the lowest year of production over the past 5 years, facilities might have trouble ensuring that their waste management, water conservation, and wastewater treatment practices can accommodate shorter periods of higher production. Facilities might need to target a more stringent treatment level than that on which the limits were based during periods of high production. To accomplish this, facilities would likely have to develop more efficient treatment systems and better water conservation and waste management practices for use during these periods.

The new ELGs and standards being established for BPT, BAT, and NSPS for ammonia and total nitrogen are concentration-based limitations. The permit writer, however, has the option to also include mass-based limitations in pounds (of pollutant) per day. Mass-based effluent limitations may be included in permits to ensure that dilution of process wastewaters will not be used as a substitute for treatment. Therefore, the permit writer would need to determine whether the potential exists for dilution of process wastewaters in the facility to be permitted.

The U.S. Department of Agriculture (USDA), Food Safety and Inspection Service (FSIS), issued a landmark rule in 1996, the Pathogen Reduction: Hazard Analysis and Critical Control Point (HACCP) Systems. The HAACP program is designed to ensure the safety of food products in the United States by reducing the occurrence and numbers of pathogenic microorganisms on meat and poultry products and thereby reducing the incidence of foodborne illness associated with consuming those products. The HACCP rule specifically requires MPP facilities (excluding renderers) to develop and implement a system of preventive controls to improve the safety of their products. The HACCP rule also mandates all MPP facilities to develop and implement written standard operating procedures for sanitation. To comply with the HACCP requirements, water is commonly used at MPP facilities to flush loose meat, blood, soluble protein, and inorganic particles from processing areas. As a result, MPP plants can use large quantities of

water during various processing and cleaning operations. Information collected by EPA as part of the MPP rule development effort indicates that water conservation is still practiced at MPP plants in light of the HAACP requirements. For example, within the USDA guidelines, water used in some MPP operations may be reclaimed and reused. Also, using dry cleaning to clean process area floors reduces the amount of water used. Section 6 provides additional information on reported water use levels for meat and poultry processing operations and rendering. EPA believes this information will be useful to permit writers and control authorities in those instances where they deem it appropriate to set mass-based limitations.

In making the decision whether to include mass-based limitations in NPDES permits, a permit writer needs to evaluate whether appropriate water conservation practices are being used at the MPP plant. If dilution of wastewater is a concern at a particular MPP plant, the permit writer should derive them mass-based limitations and include them in the permit. Mass-based effluent limitations are derived by multiplying the concentration-based effluent limitations from the final rule by an appropriate wastewater flow rate for the facility's MPP operations (expressed in gallons per day). The permit writer must use a reasonable estimate of process wastewater flows and the concentration limitations to develop mass-based limitations for the NPDES permit. Process wastewater discharge is defined in the regulation (40 CFR Part 432) to include wastewaters resulting from production of meat and poultry products that come into direct contact with raw materials, further-processed products, or final products, and surface runoff from the immediate process area that has the potential to become contaminated. The MPP effluent guidelines do not apply to nonprocess wastewater. Nonprocess wastewater means sanitary wastewater, noncontact cooling water, water from laundering, and noncontact storm water. Nonprocess wastewater also includes wastewater discharges from nonindustrial sources, such as residential housing, schools, churches, recreational parks, and shopping centers, as well as wastewater discharges from gas stations, utility plants, and hospitals. EPA considers storm water that is commingled with MPP operations process wastewater prior to treatment or discharge (contact storm water) subject to the MPP effluent guidelines. In cases where the process wastewater flow claimed by industry might be excessive, the permit writer may develop a more appropriate process wastewater flow for use in computing the mass-based effluent limitations.

15.3.2 Poultry Facilities

New and existing MPP facilities that are regulated under the poultry processing subcategories will be subject to concentration-based effluent limitations. The new 40 CFR Part 432 ELGs and standards established for several parameters are concentration-based limitations (in milligrams per liter). A summary of the pollutants regulated under the poultry processing subcategories is provided in Table 15-3.

Table 15-3. Summary Basis for Pollutants Regulated under the Meat and Independent Renderer Subcategories

Applicable Subcategory(ies)	Size	Facility Type	Pollutants Regulated Under New 40 CFR Part 432 Concentration-Based Effluent Guidelines
K	Non-small (>100 million lb/yr)	Existing and new	BOD_5, TSS, oil and grease (as HEM), fecal coliforms, pH, ammonia (as N), total nitrogen
	Small (≤100 million lb/yr)	Existing	--
		New	BOD_5, TSS, oil and grease (as HEM), fecal coliforms, pH, ammonia (as N)
L	Non-Small (>7 million lb/yr)	Existing and new	BOD_5, TSS, oil and grease (as HEM), fecal coliforms, pH, ammonia (as nitrogen) total nitrogen
	Small (≤ 7 million lbs/yr)	Existing	--
		New	BOD_5, TSS, oil and grease (as HEM), fecal coliforms, pH, ammonia (as N)

Note: HEM=hexane-extractable material.

The ELGs and standards being established for BPT, BCT, BAT, and NSPS are concentration-based limitations. The permit writer, however, has the option to include mass-based limitations in pounds (of pollutant) per day as well. As described in Section 15.3.2, there are several considerations for a permit writer in deciding whether to include, as well as in calculating, mass-based limitations for MPP facilities.

15.3.3 Mixed Meat and Poultry Production Facilities

A limited number of MPP facilities process both meat and poultry products at the same site. In these instances, a permit writer will need to apply all applicable effluent guidelines for each subcategory applicable to the particular operations at the MPP facility. Permit writers should use the "building block approach," whereby the allowable pollutant loads from individual regulated waste streams are combined to derive a single limitation applicable to the combined wastewaters.

For example, if an existing facility discharges wastewater from meat slaughtering operations commingled with wastewater discharges from poultry further processing operations, the permit writer must base the effluent limitations in the permit on the limitations for Subparts A through D as well as Subpart L. It should be noted that the ELGs for certain conventional pollutants (BOD, TSS, and oil and grease) are based on production in Subparts A through I. However, in Subparts K and L (for poultry plants) the ELGs for these same conventional pollutants are concentration-based. In this instance, the permit writer would need to convert the concentration-based limitations in subparts K and L to mass-based limits to allow for combination with the applicable production-based limitations (in pounds per day). Section 15.3.2 describes several considerations for a permit writer when calculating mass-based limitations at MPP facilities.

Under certain circumstances, a mixed MPP facility will be subject to two different concentration-based limitations. For example, the final rule includes different concentration-based effluent limitations for total nitrogen for those subparts applicable to meat processing (A through D and F through I) and those subparts applicable to poultry processing (K and L). Because a permit writer is required to apply all applicable effluent guidelines, and in most instances all process flows are combined before treatment, the permit writer should establish a flow-weighted concentration that would serve as the effluent limitation. Before selecting appropriate process flow values for use in flow-weighting the different concentration-based limitations, the permit writer should consider the factors discussed in Section 15.3.2 above. Alternatively, permit writers may also combine concentration-based effluent limitations by

converting each to a mass limitation using the appropriate waste water flow from each applicable waste stream and then combining the mass values. As noted previously, Section 15.3.2 describes several considerations for a permit writer when calculating mass-based limitations at MPP facilities.

15.3.4 Facilities Covered by Additional Guidelines or Technology-Based Effluent Limitations Established on a Case-By-Case Basis

When a facility is also covered by other existing effluent guidelines (e.g., leather tanning), the facility will need to comply with both regulations. In those cases, the permit writer will combine the limitations using an approach that proportions the limitations based on the different production levels (for production-based standards) or wastewater flows (for concentration-based standards). NPDES permit writers refer to this approach as the "building block approach."

There might also be instances when other existing effluent guidelines regulate a set of pollutants different from those in the MPP final rule. As described in the EPA *NPDES Permit Writers' Manual* (USEPA, (EPA-833-B-96-003; USEPA, 1996), if all regulated process wastewaters are combined, there are two approaches for properly applying the effluent guidelines:

- If one waste stream containing a pollutant that is not covered by an effluent guideline is combined with another waste stream that has applicable effluent guidelines for the same pollutant, then the permit writers must use best professional judgment (BPJ) to establish a technology-based effluent limit for the nonregulated wastewater.

- If one waste stream that does not contain a pollutant is combined with another waste stream that has applicable effluent guidelines for the pollutant, the permit writer must ensure that the nonregulated waste stream does not dilute the regulated waste stream to the point where the pollutant is not analytically detectable. If this circumstance occurs, the permit writer will most likely need to establish internal outfalls, as allowed under 40 CFR 122.45(h).

The NPDES permit regulations at 40 CFR 125.3 require the establishment of technology-based limits derived on a case-by-case basis using BPJ for nonmunicipal (industrial) facilities. BPJ limits may be particularly established by permit writers for MPP facilities in cases where the effluent limitations in the final rule are not available for, or do not regulate, a particular pollutant of concern or a particular waste stream (e.g., nonprocess waste waters). Like the approach described above for applying effluent limitations from different effluent guidelines, permit writers will need to combine as appropriate any BPJ-based effluent limitations. If the limitations are based on production or mass, the final NPDES permit limitations will be the sum of the mass effluent limitations derived in Sections 15.3.1 and 15.3.2 and any mass effluent limitations developed on a case-by-case basis using BPJ by the permit writer to take into account nonprocess wastewater discharge. If applicable effluent limitations are based on concentration, the permit writer should flow-weight the applicable effluent concentrations.

15.3.5 Facilities With Highly Variable or Seasonal Production

Certain MPP facilities might expect production to change significantly during the permit term. In those cases where highly variable production is expected, a permit writer can include alternative or tiered limits. According to the EPA *NPDES Permit Writer's Manual* (EPA-833-B-96-003; USEPA, 1996), up to a 20 percent fluctuation in production is considered normal. To address instances where the production at an MPP facility is expected to be highly variable, a permit writer can establish tiered limits. Tiered limits are simply a set of limits that vary based on the production at the facility. In establishing tiered limits, permit writers should ensure that the permit clearly identifies how the tiered limits are to be applied (e.g., how to calculate and report production).

For facilities with large seasonal variations in production, permit writers might want to consider the use of seasonal limitations (one set of limits based on spring/summer production rates and another set of limits based on fall/winter production rates).

15.4 OTHER NPDES PERMIT CONDITIONS

In accordance with the requirements contained in 40 CFR Parts 122 and 125, a number of other NPDES permit conditions are applicable to direct discharging MPP facilities. This section highlights several conditions with particular relevance to such MPP facilities.

15.4.1 Upset and Bypass Provisions

A "bypass" is an intentional diversion of the streams from any portion of a treatment facility. An "upset" is an exceptional incident in which unintentional and temporary noncompliance with technology-based permit effluent limitations occurs because of factors beyond the reasonable control of the permittee. EPA's regulations concerning bypasses and upsets for direct dischargers are set forth at 40 CFR 122.41(m) and (n).

15.4.2 Best Management Practices

Sections 304(e), 308(a), 402(a), and 501(a) of the Clean Water Act (CWA) authorize the EPA Administrator to prescribe BMPs as part of ELGs and standards, or as part of a permit. Section 304(e) of the CWA authorizes EPA to include BMPs in ELGs for certain toxic or hazardous pollutants for the purpose of controlling “plant site runoff, spillage or leaks, sludge or waste disposal, and drainage from raw material storage.” CWA Section 402(a)(1) and the NPDES regulations at 40 CFR 122.44(k) also provide for BMPs to control or abate the discharge of pollutants when numeric limitations and standards are infeasible. In addition, section 402(a)(2), read in concert with section 501(a), authorizes EPA to prescribe as wide a range of permit conditions as the Administrator deems appropriate to ensure compliance with applicable effluent limitations and standards and such other requirements.

Dikes, curbs, and other control measures are being used at some MPP facilities to contain leaks and spills as part of “good housekeeping” practices. On a facility-by-facility basis, however, a permit writer may choose to incorporate BMPs into the permit. Section 8.8 provides a detailed discussion of pollution prevention practices and BMPs used in the MPP industry.

15.4.3 Compliance Monitoring

NPDES permit writers must establish requirements for regulated MPP facilities to monitor their effluent to ensure that they are complying with effluent limitations. As specified at 40 CFR 122.41, 122.44, and 122.48, all NPDES permits must specify requirements for using, maintaining, and installing (if appropriate) monitoring equipment; monitoring type, intervals, and frequencies that will provide representative data; analytical methods; and reporting and recordkeeping. The NPDES program requires permittees (with certain specific exceptions) to monitor for limited pollutants and report data at least once a year.

EPA has not promulgated specific monitoring requirements or monitoring frequencies in the MPP final rule; therefore, NPDES permit writers may establish monitoring requirements and monitoring frequencies at their discretion. The Agency notes, however, that in developing the Part 432 limitations, it considered a weekly sampling frequency. EPA expects that facilities properly operating and maintaining the option technology will be able to comply with the monthly average limitation/standard when they sample at the assumed weekly monitoring frequency, although compliance is required regardless of the number of samples analyzed and averaged in a month. EPA does not, however, condone the practice of allowing the number of monitoring samples to vary arbitrarily merely to allow a facility to achieve a desired average concentration, (a value below the limit). It is expected that enforcement authorities would prefer, or even require, monitoring samples at some regular, predetermined frequency. If a facility has difficulty complying with the standards on an ongoing basis, the facility should improve its equipment, operations, and/or maintenance.

In addition, Part 136 requires facilities to collect grab samples for oil and grease. In developing the Part 432 oil and grease limitations, EPA generally collected six grab samples in a 24-hour monitoring day. The sample types for pH can range from a one-time grab sample during a monitoring day to continuous sampling throughout a monitoring day where pH is a critical aspect of the wastewater treated or the wastewater treatment operation.

In May 2000 EPA promulgated a regulation streamlining the NPDES regulations (Amendments to Streamline the National Pollutant Discharge Elimination System Program

Regulations: Round Two (65 FR 30886; May 15, 2000)), which includes a monitoring waiver for direct dischargers subject to effluent guidelines. A direct discharging facility may choose not to sample a guideline-limited pollutant if that discharger "has demonstrated through sampling and other technical factors that the pollutant is not present in the discharge or is present only at background levels from intake water and without any increase in the pollutant due to activities of the discharger" (65 FR 30908; 40 CFR 122.44). EPA noted in the preamble to the final NPDES streamlining rule that the Agency is granting a waiver from monitoring requirements but not a waiver from the limit. In addition, the revision does not waive monitoring for any pollutants for which there are limits based on water quality standards. The waiver for direct dischargers lasts for the term of the reissued NPDES permit and is not available during the term of the first permit issued to a discharger. Any request for this waiver must be submitted with the application for a reissued permit or request for modification of a reissued permit. With the permit writer's authorization, any direct discharging facility covered by the MPP ELGs and standards may use the monitoring waiver contained in the NPDES streamlining final rule.

15.5 VARIANCES AND MODIFICATIONS

The CWA requires application of effluent limitations established pursuant to section 301 or the pretreatment standards of section 307 to all direct and indirect dischargers. However, the statute provides for the modification of these national requirements in a limited number of circumstances. Moreover, the Agency has established administrative mechanisms to provide an opportunity for relief from the application of the national ELGs and pretreatment standards for categories of existing sources for toxic, conventional, and nonconventional pollutants.

15.5.1 Fundamentally Different Factors Variances

EPA will develop effluent limitations or standards different from the otherwise applicable requirements if an individual discharging facility is fundamentally different with respect to the factors considered in establishing the limitations or standards applicable to the individual facility. Such a modification is known as a "fundamentally different factors" (FDF) variance.

EPA provides for FDF variances from the BPT effluent limitations, BAT limitations for toxic and nonconventional pollutants, and BCT limitations for conventional pollutants for direct dischargers. FDF variances for toxic pollutants were challenged judicially and ultimately sustained by the Supreme Court (see *Chemical Manufacturers Assn* v. *NRDC*, 479 U.S. 116 (1985)).

Subsequently, in the Water Quality Act of 1987, Congress added section 301(n) to the CWA to authorize modifications of the otherwise applicable BAT effluent limitations or categorical pretreatment standards for existing sources if a facility is fundamentally different with respect to the factors specified in section 304 (other than costs) from the facilities EPA considered in establishing the effluent limitations or pretreatment standard. Section 301(n) also defined the conditions under which EPA may establish alternative requirements. Under Section 301(n), an application for approval of an FDF variance must be based solely on either information submitted during rulemaking raising the factors that are fundamentally different or information the applicant did not have an opportunity to submit. The alternative limitation or standard must be no less stringent than justified by the difference and must not result in markedly more adverse non-water quality environmental impacts than does the national limitation or standard.

The EPA regulations at 40 CFR Part 125, Subpart D, authorizing the Regional Administrators to establish alternative limitations and standards, further detail the substantive criteria used to evaluate FDF variance requests for direct dischargers. Thus, 40 CFR 125.31(d) identifies six factors (e.g., volume of process wastewater, age and size of a discharger's facility) that may be considered in determining whether a facility is fundamentally different. The Agency must determine whether, on the basis of one or more of these factors, the facility in question is fundamentally different from the facilities and factors EPA considered in developing the nationally applicable effluent guidelines. The regulation also lists four other factors (e.g., the infeasibility of installation within the time allowed, a discharger's ability to pay) that may not provide a basis for an FDF variance. In addition, under 40 CFR 125.31(b)(3), a request for limitations less stringent than the national limitation may be approved only if compliance with the national limitations would result in either a removal cost wholly out of proportion to the

removal cost considered during development of the national limitations, or a non-water quality environmental impact (including energy requirements) fundamentally more adverse than the impact considered during development of the national limits.

The legislative history of section 301(n) underscores the necessity for the FDF variance applicant to establish eligibility for the variance. EPA's regulations at 40 CFR 125.32(b)(1) are explicit in imposing this burden on the applicant. The applicant must show that the factors relating to the discharge controlled by the applicant's permit which are claimed to be fundamentally different are, in fact, fundamentally different from those factors EPA considered in establishing the applicable guidelines. An FDF variance is not available to a new source subject to NSPS.

15.5.2 Economic Variances

Section 301(c) of the CWA authorizes a variance from the otherwise applicable BAT effluent guidelines for nonconventional pollutants due to economic factors. Normally, the discharger must file the request for a variance from effluent limitations developed from BAT guidelines during the public notice period for the draft permit. Other filing time periods might apply, as specified at 40 CFR 122.21(1)(2). Specific guidance for this type of variance is available from EPA's Office of Wastewater Management.

15.5.3 Water Quality Variances

Section 301(g) of the CWA authorizes a variance from BAT effluent guidelines for certain nonconventional pollutants due to localized environmental factors. These pollutants are ammonia, chlorine, color, iron, and total phenols.