

**Development Document for the Proposed Effluent Limitations
Guidelines and Standards for the Meat and Poultry Products Industry
Point Source Category (40 CFR 432)
EPA-821-B-01-007**

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Complete proposed document available at:

<http://www.epa.gov/ost/guide/mpp/>

The Final Development Document is available as well.

SECTION 14

REGULATORY IMPLEMENTATION

14.1 IMPLEMENTATION OF PART 432 THROUGH THE NPDES PERMIT PROGRAM AND THE NATIONAL PRETREATMENT PROGRAM

Under sections 301, 304, 306, and 307 of the CWA, EPA promulgates national effluent limitations guidelines and standards of performance for major industrial categories for three classes of pollutants: (1) conventional pollutants (i.e., total suspended solids, oil and grease, biochemical oxygen demand, fecal coliform bacteria, and pH); (2) toxic pollutants (e.g., toxic metals such as chromium, lead, nickel, and zinc; toxic organic pollutants such as benzene, benzo-*a*-pyrene, and naphthalene); and (3) non-conventional pollutants (e.g., ammonia-N, fluoride, iron, total phenols, and 2,3,7,8-tetrachlorodibenzofuran).

As discussed in Section 2, EPA must consider six types of effluent limitations guidelines and standards for each major industrial category, as appropriate. The types of effluent limitation guidelines and standards are presented in Table 14-1.

Table 14-1. Types of Effluent Limitation Guidelines and Standards

Abbreviation	Effluent Limitation Guideline or Standard
BPT	Best practicable control technology currently available
BAT	Best available technology economically achievable
BCT	Best control technology for conventional pollutants
NSPS	New source performance standards
PSES	Pretreatment standards for existing sources
PSNS	Pretreatment standards for new sources

Pretreatment standards apply to industrial facilities with wastewater discharges to POTWs. The effluent limitations guidelines and new source performance standards apply to industrial facilities with direct discharges in to navigable waters.

14.1.1 NPDES Permit Program

Section 402 of the CWA establishes the National Pollutant Discharge Elimination System (NPDES) permit program. The NPDES permit program is designed to limit the discharge of pollutants into navigable waters of the United States through a combination of various requirements, including technology-based and water quality-based effluent limitations. Technology-based effluent limitations guidelines and standards applicable to the meat and poultry processing industry are used by permit writers to derive NPDES permit technology-based effluent limitations. Water quality-based effluent limitations (WQBELs) are based on receiving water characteristics and ambient water quality standards, including designated water uses. They are derived independently from technology-based effluent limitations. The CWA requires that NPDES permits contain the more stringent of the applicable technology-based and water quality-based effluent limitations.

Section 402(a)(1) of the CWA provides that in the absence of promulgated effluent limitations guidelines or standards, the Administrator, or her designee, may establish technology-based effluent limitations for specific dischargers on a case-by-case basis. Federal NPDES permit regulations provide that these limits may be established using “best professional judgment” (BPJ) taking into account any proposed effluent limitations guidelines and standards and other relevant scientific, technical, and economic information.

Section 301 of the CWA, as amended by the Water Quality Act of 1987, requires that BAT effluent limitations for toxic pollutants be achieved as expeditiously as possible, but not later than three years from date of promulgation of such limitations and in no case later than March 31, 1989. Because the revisions to 40 CFR Part 432 will be promulgated after March 31, 1989, NPDES permit effluent limitations based on the revised effluent limitations guidelines must be included in the next NPDES permit issued after promulgation of the regulation, and the permit must require immediate compliance.

14.1.2 New Source Performance Standards

New sources must comply with the New Source Performance Standards (NSPS) and limitations of the MPP rule at the time they commence discharging MPP process wastewater. The Agency considers a discharger a new source if construction of the source begins after promulgation of the final rule (see 40 CFR 122.2; 40 CFR 403.3).

Following promulgation of revised NSPS, existing NSPS continue to apply for a limited period of time to new sources that commenced discharging MPP process wastewater within the time period beginning 10 years before the effective date of a final rule revising Part 432. Thus, if EPA promulgates revised NSPS for Part 432 in December 2003, and those regulations take effect in January 2004, any direct discharging new source that commenced discharge after January 1994 but before February 2004 would be subject to the currently codified NSPS for 10 years from the date it commenced discharge or during the period of depreciation or amortization of such facility, whichever comes first (see CWA section 306(d)). After that 10 year period expires, any new or revised BAT limitations would apply with respect to toxics and nonconventional pollutants. Limitations on conventional pollutants would be based on the current NSPS for conventional pollutants unless EPA promulgates revisions to BPT/BCT for conventional pollutants that are more stringent than these NSPS requirements. Appendix I provides the regulations at 40 CFR Part 432 (including NSPS), as codified in the 2001 edition of the Code of Federal Regulations for use during the applicable 10 year period.

14.1.3 National Pretreatment Standards

40 CFR Part 403 sets out national pretreatment standards which have three principal objectives. The first objective is to prevent the introduction of pollutants into publicly owned treatment works (POTWs) that will interfere with POTW operations, including use or disposal of municipal sludge. Second, national pretreatment standards are in place to prevent the introduction of pollutants into POTWs which will pass through the treatment works or will otherwise be incompatible with the treatment works. The final objective is to improve opportunities to recycle and reclaim municipal and industrial wastewaters and sludges.

The national pretreatment and categorical standards comprise a series of prohibited discharges to prevent the discharge of “any pollutant(s) which cause Pass Through or Interference” (see 40 CFR 403.5(a)(1)). Local control authorities are required to implement the national pretreatment program, including applying the federal categorical pretreatment standards to any industrial users that are subject to such categorical pretreatment standards, as well as any pretreatment standards derived locally (i.e., local limits) that are more restrictive than the federal standards.

The federal categorical pretreatment standards for existing sources must be achieved not later than three years following the date of publication of the final standards. This proposed regulation does not revise federal categorical pretreatment standards (PSES and PSNS) applicable to meat and poultry processing facilities regulated by 40 CFR Part 432. If EPA were to promulgate PSNS in the final rule, MPP new sources would be required to comply with the new source performance standards of the MPP rule at the time they commence discharging MPP process wastewater. Because the final rule is not expected within 120 days of the proposed rule, the Agency considers an indirect discharger a new source if its construction commences following promulgation of the final rule (see 40 CFR 122.2; 40 CFR 403.3). EPA expects to take final action on this proposal in December 2003.

In addition, Section 403.7 of the Clean Water Act provides the criteria and procedures to be used by a Control Authority to grant a categorical industrial user (CIU) variance from a pollutant limit specified in a categorical pretreatment standard to reflect removal by the POTW treatment plant of the pollutant. Procedures for granting removal credits are specified in 40 CFR 403.11.

14.2 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 there is unintentional and temporary noncompliance with technology-based permit effluent limitations 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) and for indirect dischargers at 40 CFR 403.16 and 403.17.

14.3 VARIANCES AND MODIFICATIONS

The CWA requires application of effluent limitations established pursuant to section 301 or 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 effluent limitations guidelines and pretreatment standards for categories of existing sources for toxic, conventional, and nonconventional pollutants.

14.3.1 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 factors considered in establishing the limitation of standards applicable to the individual facility. Such a modification is known as a "fundamentally different factors" (FDF) variance.

EPA provides for the FDF modifications from the BPT effluent limitations, BAT limitations for toxic and nonconventional pollutants, and BPT limitations for conventional pollutants for direct dischargers. For indirect dischargers, EPA provides for modifications from pretreatment standards. 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 Act 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 those considered by EPA 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 a 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 alternate 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.

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 or not 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 considered by EPA in developing the nationally applicable effluent guidelines. The regulation also lists four other factors (e.g., infeasibility of installation within the time allowed or 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. EPA regulations provide for an FDF variance for indirect dischargers at 40 CFR 403.13. The conditions for approval of a request to modify applicable pretreatment standards and factors considered are the same as those for direct dischargers.

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 upon 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 considered by EPA in establishing the applicable guidelines. The criteria for applying for and evaluating

applications for variances from categorical pretreatment standards are included in the pretreatment regulations at 40 CFR 403.13(h)(9). An FDF variance is not available to a new source performance subject to NSPS or PSNS.

14.3.2 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. The request for a variance from effluent limitations developed from BAT guidelines must normally be filed by the discharger during the public notice period for the draft permit. Other filing time periods may apply, as specified in 40 CFR 122.21(1)(2). Specific guidance for this type of variance is available from EPA's Office of Wastewater Management.

14.3.3 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 include ammonia, chlorine, color, iron, and total phenols.

14.4 PRODUCTION BASIS FOR CALCULATION OF PERMIT LIMITATIONS

14.4.1 Background

The proposed effluent limitations guidelines and standards for BPT, BAT, and NSPS are expressed as mass limitations in pounds (of pollutant) per 1,000 pounds (of production unit). EPA is soliciting comment on PSES and PSNS numeric standards that are concentration-based. The NPDES regulations (40 CFR 122.45(f)) require permit writers to implement mass-based limitations for direct dischargers, but allow an exception when the limits are expressed in terms of other units of measurement (e.g., concentration). The General Pretreatment Regulations (40 CFR 403.6(d)) provide that the control authority may impose mass limitations on industrial users using dilution to meet applicable pretreatment requirements or where mass limitations are appropriate. EPA believes that MPP facilities that have been using the best pollution prevention and water conservation practices may also request that the permit writer or POTW use mass-

based limits in their permits or control mechanism. See Section 6 for detailed information on 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 limits.

14.4.2 Mass-Based Limitations and Standards

The proposed effluent limitations guidelines and standards for BPT, BAT, and NSPS are expressed as mass limitations in pounds (of pollutant) per 1,000 pounds (of production unit). Production units include live weight killed (LWK), equivalent live weight killed (ELWK), finished product (FP), and raw material (RM). The mass limitation is derived by multiplying an effluent concentration (determined from the analysis of treatment system performance) by an appropriate normalized wastewater volume (“production-normalized flow”) determined for each MPP operation expressed in gallons per 1,000 pounds of product. The following equation describes how EPA calculated mass-based limitations and standards.

$$\text{Mass-Based Limit} = [\text{CONC, mg/L}] \times [\text{PNF, gal/1,000 lb}] \times [3.7854 \text{ L/gal}] \times [1 \text{ lb/453,592 mg}]$$

where:

Mass-based limit = technology-based mass-based limit for each pollutant proposed for regulation. Expressed as a unitless fraction in terms of mass (lb) of pollutant per mass (1,000 lb) of production.

CONC, mg/L = technology-based concentration limits for each pollutant proposed for regulation. Expressed in units of mass (mg) of pollutant per volume (L) of wastewater.

PNF, gal/1,000 lb = production normalized flow (PNF) for the regulatory subcategory. Expressed in units of volume of wastewater generated (gal) per 1,000 pounds of production (LWK, ELWK, FP, or RM).

[3.7854 L/gal], [1 lb/453,592 mg] = conversion factors.

EPA developed the production-normalized flows to generate the limits in the proposed rule from survey questionnaire responses from MPP facilities. See Section 13.11 for a description of these production-normalized flows.

A facility subject to today's proposed regulation can use a combination of various treatment alternatives and/or water conservation practices to achieve a particular effluent limitation or standard. The model treatment systems provided in Section 11 illustrate several available options to achieve the proposed effluent limitations guidelines and standards.

The NPDES permit regulations discuss the use of mass-based limitations and standards. In order 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 or control authority would use a production rate with units of 1,000 pounds per day. The NPDES permit regulations (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 highest annual average production from the prior five year period prorated to a daily basis.

The objective in determining a production estimate for a facility is to develop a measure of production which 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. However, if the permit production rate is based on the maximum month, then the permit could allow excessive discharges of pollutants during significant portions of the life of the permit. These excessive allowances may 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 highest year of production over the past five years, then facilities may have trouble ensuring that their waste management, water conservation, and wastewater treatment practices can accommodate shorter periods of higher production. This might require facilities to target a more stringent treatment level than that on which the limits were based during these 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 during these periods.

When a facility is also covered by other existing effluent guidelines, 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 it as the “building block approach.”

The proposed limitations neither require the installation of any specific control technology nor the attainment of any specific flow rate or effluent concentration. A facility can use various treatment alternatives or water conservation practices to achieve a particular effluent limitation or standard. Appendix J provides several examples of how these proposed limitations and standards will be applied.

14.5 BEST MANAGEMENT PRACTICES

Sections 304(e), 308(a), 402(a), and 501(a) of the CWA authorize the Administrator to prescribe BMPs as part of effluent limitations guidelines and standards, or as part of a permit. Section 304(e) of the CWA authorizes EPA to include BMPs in effluent limitations guidelines 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.” Section 402(a)(1) and NPDES regulations at 40 CFR 122.44(k) also provide for best management practices 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 in order to ensure compliance with applicable effluent limitations and standards and such other requirements as the Administrator deems appropriate.

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

detailed discussion of pollution prevention and best management practices used in the MPP industry.

SECTION 15

GLOSSARY, ACRONYMS, AND ABBREVIATIONS

A

AAMP - The American Association of Meat Processors

Administrator - The Administrator of the U.S. Environmental Protection Agency

Agency - The U.S. Environmental Protection Agency

Alternate discharge - See Zero discharge

AMI - American Meat Institute

AMSA - Association of Metropolitan Sewerage Agencies

Average monthly discharge limitation - The highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during the calendar month divided by the number of "daily discharges" measured during the month.

B

BAT - The best available technology economically achievable, applicable to effluent limitations for industrial discharges to surface waters, as defined by Section 304(b)(2)(B) of the CWA.

BCT - The best control technology for conventional pollutants, applicable to discharges of conventional pollutants from existing industrial point sources, as defined by Section 304(b)(4) of the CWA.

Blood processing - The blood may be heated to coagulate the albumin; then, the albumin and fibrin are separated (e.g., with a screen or centrifuge) from the blood water and forwarded for further processing. The blood water or serum remaining after coagulation may be evaporated for animal feed, or it may be sewerred.

BOD₅ - Biochemical oxygen demand measured over a 5 day period.

BPJ - Best professional judgment

BPT - The best practicable control technology currently available, applicable to effluent limitations, for industrial discharges to surface waters, as defined by Section 304(b)(1) of the CWA.

C

Canned meat processor (Definition for 40 CFR 432, Subpart I) - An operation that prepares and cans meats (such as stew, sandwich spreads, or similar products) alone or in combination with other finished products at rates greater than 2730 kg (6000 lb) per day.

CFR - Code of Federal Regulations

Clean water act (CWA) - The Federal Water Pollution Control Act Amendments of 1972 (33 U.S.C. Section 1251 et seq.), as amended.

Complex slaughterhouse (Definition for 40 CFR 432, Subpart B) - A slaughterhouse that accomplishes extensive by-product processing, usually at least three of such operations as rendering, paunch and viscera handling, blood processing, hide processing, or hair processing

Conventional pollutants - Constituents of wastewater as determined by Section 304(a)(4) of the CWA (and EPA regulations), i.e., pollutants classified as biochemical oxygen demand, total suspended solids, oil and grease, fecal coliform, and pH.

D

Daily discharge - The discharge of a pollutant measured during any calendar day or any 24-hour period that reasonably represents a calendar day.

Deep-well injection - Long-term or permanent disposal of untreated, partially treated, or treated wastewaters by pumping the wastewater into underground formations of suitable character through a bored, drilled, or driven well.

Direct discharger - A facility that discharges or may discharge treated or untreated wastewaters into waters of the United States.

DMR - Discharge monitoring report

Dry rendering - The process of cooking animal byproducts by dry heat in open steam-jacketed tanks.

E

Effluent limitation guideline (ELGs) - Under CWA section 502(11), any restriction, including schedules of compliance, established by a State or the Administrator on quantities, rates, and concentrations of chemical, physical, biological, and other constituents which are discharged from point sources into navigable waters, the waters of the contiguous zone, or the ocean (CWA Sections 301(b) and 304(b)).

ELWK - Equivalent live weight killed

Existing source - For this rule, any facility from which there is or may be a discharge of pollutants, the construction of which is commenced before the publication of the final regulations prescribing a standard of performance under Section 306 of the CWA.

F

Facility- All contiguous property and equipment owned, operated, leased, or under the control of the same person or entity.

FDF - Fundamentally different factor

Finished product - The final manufactured product produced on site, including products intended for consumption with no additional processing as well as products intended for further processing, when applicable.

First processing - Operations which receive live meat animals or poultry and produce a raw, dressed meat or poultry product, either whole or in parts.

FSIS - Food Safety and Inspection Service

FTE - Full time equivalent employee

Further processing - Operations which use 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, or breading.

G

Ground water - Water in a saturated zone or stratum beneath the surface of land or water

H

Ham processor (Definition for 40 CFR 432, Subpart H) - An operation that manufactures hams alone or in combination with other finished products at rates greater than 2730 kg (6000 lb) per day.

Hazardous waste - Any waste, including wastewater, defined as hazardous under RCRA, TSCA, or any state law.

Hexane extractable method (HEM) - A measure of oil and grease in wastewater by mixing the wastewater with hexane and measuring the oils and greases that are removed from the wastewater with the hexane. See 40 CFR Part 136.

Hide processing - Wet or dry hide processing. Includes demanuring, washing, and de fleshing, followed by curing.

High-processing packinghouse (Definition for 40 CFR 432, Subpart D) - A packinghouse that processes both animals slaughtered at the site and additional carcasses from outside sources.

I

In scope - Facilities and/or wastewaters that EPA proposes to be subject to this guidelines.

Indirect discharger - A facility that discharges or may discharge wastewaters into a publicly owned treatment works.

L

Live weight killed (LWK) - The total weight of the total number of animals slaughtered during a specific time period.

Long-term average (LTA) - For purposes of the effluent guidelines, average pollutant levels achieved over a period of time by a facility, subcategory, or technology option. LTAs were used in developing the effluent limitations guidelines and standards in the proposed regulation.

Low-processing packinghouse (Definition for 40 CFR 432, Subpart C) - A packinghouse that processes no more than the total animals killed at that plant, normally processing less than the total kill.

M

Maximum monthly average discharge limitation - The highest allowable average of "daily discharges" over a calendar month, calculated as the sum of all "daily discharges" measured during the calendar month, divided by the number of "daily discharges" measured during the month.

Meat - The term "meat" includes all animal products from cattle, calves, hogs, sheep and lambs, etc., except those defined as poultry.

Meat cutter (Definition for 40 CFR 432, Subpart F) - An operation fabricates, cuts, or otherwise produces fresh meat cuts and related finished products from livestock carcasses, at rates greater than 2730 kg (6000 lb) per day.

Meat product operations - Include meat and poultry slaughtering operations, by-product operations, rendering, and further processing.

Minimum level - The level at which an analytical system gives recognizable signals and an acceptable calibration point.

MPP - Meat and poultry products

N

NAICS - North American Industry Classification System. NAICS was developed jointly by the U.S., Canada, and Mexico to provide new comparability in statistics about business activity across North America.

National pollutant discharge elimination system (NPDES) permit - A permit to discharge wastewater into waters of the United States issued under the National Pollutant Discharge Elimination system, authorized by Section 402 of the CWA. See NPDES.

Nitrification capability - The capability of a POTW treatment system to oxidize ammonia or ammonium salts initially to nitrites (via nitrosomonas bacteria,) and subsequently to nitrates (via Nitrobacter bacteria). Criteria for determining the nitrification capability of a POTW treatment system are: bioassays confirming the presence of nitrifying bacteria, and analyses of the nitrogen balance demonstrating a reduction in the concentration of ammonia or ammonium salts and an increase in the concentrations of nitrites and nitrates.

Non-contact cooling water - Water used for cooling in process and nonprocess applications which does not come into contact with any raw material, intermediate product, by-product, waste product (including air emissions), or finished product.

Non-conventional pollutants - Pollutants that are neither conventional pollutants nor priority pollutants listed at 40 CFR 401.15 and Part 423 Appendix A.

Non-detect value - The analyte is below the level of detection that can be reliably measured by the analytical method. This is also known in statistical terms as left-censoring.

Non-water quality environmental impact - Deleterious aspects of control and treatment technologies applicable to point source category wastes, including, but not limited to air pollution, noise, radiation, sludge and solid waste generation, and energy used.

NRA - National Renderers Association

NRDC - Natural Resources Defense Council

NPDES program - The National Pollutant Discharge Elimination System (NPDES) program authorized by Sections 307, 318, 402, and 405 of the Clean Water Act. It applies to facilities that discharge wastewater directly to United States surface waters.

NSPS - New Source Performance Standards, applicable to industrial facilities whose construction is begun after the effective date of the final regulations (if those regulations are promulgated after 120 days from publication of proposal in the Federal Register). See 40 CFR 122.2.

NTTA - National Technology Transfer and Advancement Act

NWPCAM - The National Water Pollution Control Assessment Model (version 1.1) is a computer model to model the instream dissolved oxygen concentration, as influenced by pollutant reductions of BOD₅, total Kjeldahl nitrogen, total suspended solids, and fecal coliform bacteria.

O

Off-site - Outside the boundaries of a facility

On-site - The same or geographically contiguous property, which may be divided by a public or private right-of-way, provided the entrance and exit between the properties is at a crossroads intersection, and access is by crossing as opposed to going along the right-of-way. Non-contiguous properties owned by the same company or locality but connected by a right-of-way, which it controls, and to which the public does not have access, is also considered on-site property.

Out-of-scope - Out-of-scope facilities are facilities which EPA has not determined to be subject to provisions of this guideline, or facilities that do not engage in meat products operations.

Outfall - The mouth of conduit drains and other conduits from which a facility effluent discharges into receiving waters.

P

Packinghouse - A plant that both slaughters animals and subsequently processes carcasses into cured, smoked, canned, or other prepared meat products.

Pass through - The term "pass through" means a discharge that exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, is a cause of a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).

Point source - Any discernable, confined, and discrete conveyance from which pollutants are or may be discharged. See CWA section 502(14).

Pollutants of concern (POCs) - Pollutants commonly found in meat and poultry processing wastewaters. Generally, a chemical is considered as a POC if it is detected in untreated process wastewater at five times a baseline value in more than 10 percent of the samples.

Poultry - Broilers, other young chickens, hens, fowl, mature chickens, turkeys, capons, geese, ducks, and small game such as quail, pheasants, and rabbits.

Poultry operations - Includes poultry slaughtering operations, by-product operations, rendering, and further processing.

Priority pollutant - 126 compounds that are a subset of the 65 toxic pollutants and classes of pollutants outlined, pursuant to Section 307 of the CWA.

Process wastewater - Any water which, during red meat or poultry operations, comes into direct contact with or results from the storage, production, or use of any raw material, intermediate

product, finished product, by-product, or waste product. Wastewater from equipment cleaning, direct-contact air pollution control devices, rinse water, storm water associated with industrial activity, and contaminated cooling water are considered to be process wastewater. Process wastewater may also include wastewater that is contract hauled for off-site disposal. Sanitary wastewater, uncontaminated noncontact cooling water, and storm water not associated with industrial activity are not considered to be process wastewater.

PSES - Pretreatment standards for existing sources of indirect discharges, under Section 307(b) of the CWA, applicable (for this rule) to indirect dischargers that commenced construction prior to promulgation of the final rule.

PSNS - Pretreatment standards for new sources under Section 307(c) of the CWA.

Publicly owned treatment works (POTW) - A treatment works as defined by section 212 of the Clean Water Act, which is owned by a State or municipality (as defined by section 502(4) of the Clean Water Act). This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances, only if they convey wastewater to a POTW treatment plant. The term also means the municipality as defined in section 502(4) of the Clean Water Act, which has jurisdiction over the indirect discharges to and the discharges from such a treatment works.

R

Raw material - The basic input materials to a renderer, composed of animal and poultry trimmings, bones, meat scraps, dead animals, feathers and related usable by-products.

RCRA - The Resource Conservation and Recovery Act of 1976 (RCRA) (42 U.S.C. Section 6901 et seq.), which regulates the generation, treatment, storage, disposal, or recycling of solid and hazardous wastes.

Renderer (Definition for 40 CFR 432, Subpart J) - An independent or off-site rendering operation, conducted separately from a slaughterhouse, packinghouse, or poultry dressing or

processing plant, that manufactures at rates greater than 75,000 pounds of raw material per day of meat meal, tankage, animal fats or oils, grease, and tallow, and may cure cattle hides, but excluding marine oils, fish meal, and fish oils.

RFA - Regulatory Flexibility Act

S

Sample-specific detection limit - The smallest quantity in the experiment calibration range that may be measured reliably in any given sample.

SAP - Sampling and analysis plan.

Sausage and luncheon meat processor (Definition for 40 CFR 432, Subpart G) - An operation that cuts fresh meats, grinds, mixes, seasons, smokes, or otherwise produces finished products, such as sausage, bologna, and luncheon meats at rates greater than 2730 kg (6000 lb) per day.

SBREFA - Small Business Regulatory Enforcement Fairness Act of 1996.

SCC - Sample control center

SER - Small entity representative

SIC - Standard Industrial Classification (SIC) - A numerical categorization system used by the U.S. Department of Commerce to catalogue economic activity. SIC codes refer to the products, or group of products, produced or distributed, or to services rendered by an operating establishment. SIC codes are used to group establishments by the economic activities in which they are engaged. SIC codes often denote a facility's primary, secondary, tertiary, etc. economic activities.

Simple slaughterhouse (Definition for 40 CFR 432, Subpart A) - A slaughterhouse that accomplishes very limited by-product processing, if any, usually no more than two of such operations as rendering, paunch and viscera handling, blood processing, hide processing, or hair processing.

Site - A site is generally one contiguous physical location at which manufacturing operations related to the meat products industry occur. This includes, but is not limited to, slaughtering, processing, and rendering. In some instances, a site may include properties located within separate fence lines, but located close to each other.

Slaughter house - A plant that slaughters animals and has as its main product fresh meat as whole, half, or quarter carcasses, or smaller meat cuts.

Small-business - The definitions of small business for the meat products industries are in SBA's regulations at 13 CFR 121.201. These size standards were updated effective October 1, 2000. SBA size standards for the meat and poultry products industry (i.e., for NAICS codes 311611, 311612, 311613, and 311615) define a "small business" as one with 500 or fewer employees.

Small processor - (Definition for 40 CFR 432, Subpart E) An operation that produces up to 2730 kg (6000 lb) per day of any type or combination of finished products.

Stearin - An ester of glycerol and stearic acid found in MPP wastewaters.

Surface water - Waters of the United States, as defined at 40 CFR 122.2.

T

TKN - Total Kjeldahl nitrogen

Treatment - Any method, technique, or process designed to change the physical, chemical, or biological character or composition of any metal-bearing, oily, or organic waste so as to neutralize such wastes, to render such wastes amenable to discharge, or to recover metal, oil, or organic content from the wastes.

TSS - Total suspended solids

V

Variability factor - Used in calculating a limitation (or standard) to allow for reasonable variation in pollutant concentrations when processed through extensively and well designed

treatment systems. Variability factors assure that normal fluctuations in a facility's treatment are accounted for in the limitations. By accounting for these reasonable excursions above the long-term average, EPA's use of variability factors results in limitations that are generally well above the actual long-term averages.

Viscera handling (wet or dry viscera handling) - Includes removal of partially digested feed and washing of viscera.

W

Wastewater - See Process Wastewater.

Wastewater treatment - The processing of wastewater by physical, chemical, biological, or other means to remove specific pollutants from the wastewater stream, or to alter the physical or chemical state of specific pollutants in the wastewater stream. Treatment is performed for discharge of treated wastewater, recycle of treated wastewater to the same process which generated the wastewater, or for reuse of the treated wastewater in another process.

Wet rendering - The process of cooking animal byproducts by steam under pressure in closed tanks.

Z

Zero (or alternate) Discharge - Disposal of process and/or nonprocess wastewaters other than by direct discharge to a surface water or by indirect discharge to a POTW or PrOTW. Examples include land application, deep well injection, and contract hauling.