



# **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 16

### GLOSSARY, ACRONYMS, AND ABBREVIATIONS

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#### 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.

**BOD<sub>5</sub>** - 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 defleshing, 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 BOD<sub>5</sub>, 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.