



# **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/>

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## **SECTION 3**

### **DATA COLLECTION ACTIVITIES**

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EPA conducted a number of data collection activities in support of developing the final rule. Section 3.1 describes EPA's site visit and sampling program and Section 3.2 describes EPA's industry surveys. Section 3.3 discusses other information collection activities, including literature searches, National Pollutant Discharge Elimination System (NPDES) permits, and NPDES Discharge Monitoring Reports (DMRs). Section 3.4 describes EPA's outreach activities.

#### **3.1 SUMMARY OF EPA'S SITE VISIT AND SAMPLING PROGRAM**

##### **3.1.1 EPA Site Visits**

From 2000 to 2002 EPA conducted site visits at 17 meat and poultry products (MPP) processing facilities. Six of these site visits were conducted at meat facilities, eight at poultry facilities, two at rendering-only facilities, and one at a further processing-only facility. The purposes of these site visits were (1) to collect information on meat and poultry processing operations, (2) to collect information on wastewater generation and waste management practices used by MPP facilities, and (3) to evaluate each facility as a candidate for multiday sampling. In addition, EPA conducted limited sampling during several of the site visits to screen for potential contaminants that might be found in wastewaters from the different types of meat and poultry processing operations.

In selecting candidates for site visits, EPA attempted to identify facilities representative of various MPP processing operations, as well as both direct and indirect dischargers. EPA specifically considered the type of meat and/or poultry processing operation, age of the facility, size of the facility (in terms of production), wastewater treatment processes employed, and best management practices and pollution prevention techniques used. EPA also solicited recommendations for well-performing facilities (e.g., facilities with advanced wastewater treatment technologies) from EPA regional offices and state agencies. The site-specific selection

criteria are discussed in site visit reports prepared for each site visited by EPA. (They can be found in Sections 6.1.4.2 and 19.1.2.2 of the Administrative Record.)

During each site visit, EPA collected information on the facility and its operations, including (1) general production data and information; (2) the types of meat and poultry processing wastewaters generated and treated on-site; (3) water source and use; (4) wastewater treatment and disposal operations; (5) potential sampling locations for wastewater (raw influent, within the treatment system, and final effluent); and (6) other information necessary for developing a sampling plan for possible multiday sampling episodes. EPA also collected wastewater samples of influent and effluent at 7 of the 17 facilities for screening purposes only.

### **3.1.2 EPA Sampling**

#### ***3.1.2.1 Overview***

Based on data collected from the site visits, EPA selected 12 facilities for multiday sampling. The purpose of the multiday sampling was to characterize pollutants in raw wastewaters prior to treatment, as well as to document wastewater treatment plant performance (including selected unit processes). Selection of facilities for multiday sampling was based on an analysis of information collected during the site visits, as well as the following criteria:

- The facility performed meat and/or poultry slaughtering and/or further processing operations representative of MPP facilities.
- The facility used in-process treatment and/or end-of-pipe treatment technologies that EPA was considering for technology option selection.
- Compliance monitoring data for the facility indicated that it was among the better-performing treatment systems or that it employed a wastewater treatment process for which EPA sought data for option selection.

Multiday sampling occurred at six meat facilities and six poultry facilities. EPA performed multi-day sampling at four facilities, and nine facilities performed the multiday sampling on behalf of EPA. It should be noted that due to concerns related to the sampling

results, EPA re-sampled two facilities that were sampled prior to the proposal. After the proposed rule was published, EPA conducted two public outreach meetings on the proposed regulations and continued to meet with representatives of stakeholder groups, including representatives of various industry trade associations. EPA used several additional means to provide outreach to stakeholders, such as managing websites that post information related to these regulations. EPA provided supporting documents for the proposed rule on these sites. These documents included the “Technical Development Document,” “Economic Analysis,” and “Environmental Assessment” of the proposed regulations. These are available at [www.epa.gov/guide/mpp/](http://www.epa.gov/guide/mpp/). For the nine facilities that performed the sampling, EPA developed sampling plans that detailed the procedures for sample collection, including the pollutants to be sampled; location of sampling points; and sample collection, preservation, and shipment techniques. EPA assisted the nine facilities as necessary (e.g., by providing sample bottle labels, assistance in shipping, and in one instance on-site contractor support during the sampling event).

### ***3.1.2.2 Description of Sampling Episodes***

During each multiday sampling episode, EPA sampled facility influent and effluent waste streams. EPA did not collect source water information but did collect source water data from three facilities after proposal. At some facilities, the Agency also collected samples at intermediate points throughout the wastewater treatment system to assess the performance of individual treatment units. Some of the facilities chosen for sampling perform rendering and/or further processing operations in addition to meat and/or poultry processing. For facilities that also perform rendering operations or further processing, EPA sampled wastewater from the rendering and/or further processing operations separately, when possible.

Sampling episodes were conducted over a 3-day or 5-day period. EPA obtained samples using a combination of 24-hour composite and grab samples, depending on the pollutant parameter to be analyzed. Depending on the type of wastewater processed and the treatment technology being evaluated, EPA analyzed wastewater for up to 53 parameters, including conventional pollutants (biochemical oxygen demand (BOD<sub>5</sub>), total suspended solids, oil and grease, fecal coliform bacteria, and pH); toxic pollutants (selected metals and pesticides); and

nonconventional pollutants (e.g., nutrients, microbiologicals). When possible for a given parameter, EPA collected 24-hour composite samples to capture the variability in the waste streams generated throughout the day (e.g., production wastewater versus cleanup wastewater).

Data collected from the influent samples contributed to characterizing of the industry, developing the list of pollutants of concern to be evaluated for regulation, and determining the raw wastewater pollutant concentrations. EPA used the data collected from the influent, intermediate, and effluent points to analyze the efficacy of treatment at the facilities and to develop current discharge concentrations and loadings, as well as the treatment technology options for the MPP industry. EPA used selected effluent data to estimate the potential long-term averages and numerical limits for each of the regulatory options considered for the final rule (see Chapter 13 for a description of the data EPA used for effluent limit development). During each sampling episode, EPA also collected flow rate data corresponding to each sample, when possible, and production information from each associated manufacturing operation for use in calculating pollutant loadings and production-normalized flow rates. EPA has included in the Administrative Record all information collected for which each facility has not asserted a claim of confidential business information (CBI) or which would indirectly reveal information claimed to be CBI.

### ***3.1.2.3 Sampling Episode Reports***

EPA used the site visit reports to prepare multiday sampling and analysis plans (SAPs) for each facility that would undergo multiday sampling. The Agency collected the following types of information during each sampling episode:

- Dates and times of sample collection.
- Flow data corresponding to each sample.
- Production data corresponding to each sample.
- Design and operating parameters for source reduction, recycling, and treatment technologies characterized during sampling.

- Information about site operations that had changed since the site visit or that were not included in the site visit report.
- In-situ readings for Temperature, pH, and dissolved oxygen of the sampled waste streams.

After the sampling episodes ended, EPA prepared a sampling episode report for each facility. The reports included descriptions of the wastewater treatment processes, sampling procedures, and analytical results. EPA documented all data collected during the sampling episodes in the sampling episode report for each sampled site and has included them in the MPP Administrative Record. For detailed information on sampling and preservation procedures, analytical methods, and quality assurance/quality control procedures, see the various sampling episode reports in the rulemaking record (see Sections 6 and 19 of the Administrative Record).

#### ***3.1.2.4 Pollutants Sampled***

The Agency (or facilities, as directed by the Agency) collected, preserved, and transported all samples according to EPA protocols, as specified in EPA's *Sampling and Analysis Procedures for Screening of Industrial Effluents for Priority Pollutants* and in the MPP Quality Assurance Project Plan (QAPP).

EPA collected composite samples for most parameters because the Agency expected the wastewater composition to vary over the course of a day. The Agency took grab samples from unit operations for oil and grease and microbiologicals. EPA collected composite samples manually or by using an automated sampler. The Agency collected individual aliquots for the composite samples at least once every 4 hours over each 24-hour period. Oil and grease samples were collected every 4 hours, and microbiologicals were collected once a day.

Table 3-1 lists the parameters sampled at most of the facilities. Some of the parameters have not been identified as pollutants of concern (see Chapter 7 for an evaluation of the pollutants of concern in the MPP industry).

**Table 3-1. MPP Sampled Parameters**

Biochemical oxygen demand (BOD <sub>5</sub> )	Oil and grease
Carbonaceous biochemical oxygen demand (CBOD <sub>5</sub> )	Metals (e.g., arsenic, chromium, copper, mercury, zinc)
Dissolved biochemical oxygen demand (DBOD <sub>5</sub> )	Carbamate pesticide (carbaryl)
Chemical oxygen demand (COD)	Permethrin (cis- and trans-)
Total organic carbon (TOC)	Malathion
Total suspended solids (TSS)	Stirofos
Total dissolved solids (TDS)	Dichlorvos
Total volatile solids (TVS)	Total coliform bacteria
Chloride	Fecal coliform bacteria
Total residual chlorine (TRC)	<i>Escherichia coli</i>
Ammonia as nitrogen	Fecal streptococci
Nitrate/nitrite	<i>Salmonella</i>
Total Kjeldahl nitrogen (TKN)	<i>Aeromonas</i>
Total phosphorus (TP)	<i>Cryptosporidium</i> (meat facilities only)
Total dissolved phosphorus (TDP)	
Orthophosphate	

EPA contract laboratories completed all wastewater sample analyses except the field measurements of temperature, DO, and pH. EPA or facility staff collected field measurements of temperature, DO, and pH at the sampling site. The analytical chemistry methods used, as well as the sample volume requirements, detection limits, and holding times, were consistent with the individual laboratory’s quality assurance and quality control plan. Laboratories contracted for MPP sample analysis followed EPA-approved analysis methods for all parameters.

The EPA contract laboratories reported data on their standard report sheets and submitted the sheets to EPA’s sample control center (SCC). The SCC reviewed the report sheets for completeness and reasonableness. EPA reviewed all reports from the laboratories to verify that the data were consistent with requirements, reported in the proper units, and in compliance with the applicable protocol. Appendix A provides brief descriptions of each of the analytical methods.

Quality control measures used in performing all analyses complied with the guidelines specified in the analytical methods and in the MPP QAPP. EPA reviewed all analytical data to ensure that these measures had been followed and that the resulting data were within the QAPP-specified acceptance criteria for accuracy and precision. The SCC’s review is summarized

in the Data Review Narratives available in Sections 6.1.4.2 and 22.6 of the Administrative Record.

## **3.2 EPA MPP INDUSTRY SURVEYS**

### **3.2.1 Overview of Industry Surveys**

EPA did not have the site-specific technical and economic information required for the development of technologically achievable regulatory options for the MPP industry. Therefore, EPA used two survey questionnaires to collect that information.

EPA published a notice in the *Federal Register* on May 1, 2000 (65 FR 25325) announcing its intent to submit the MPP industry survey Information Collection Request (ICR) to the Office of Management and Budget (OMB). The May 1, 2000, notice requested comment on the draft ICR and the survey questionnaires. EPA received five sets of comments during the 60-day public comment period. Commentors on the ICR included the National Chicken Council, National Renderers Association, American Meat Institute, U.S. Poultry and Egg Association, and BCR Foods. EPA made minor clarifying revisions to the survey methodology and questionnaires as a result of the public comments received.

EPA made every reasonable attempt to ensure that data and information to be collected in the survey questionnaires were not currently available through less burdensome mechanisms. Before publishing the May 1, 2000, notice, EPA met with and distributed draft copies of the survey questionnaires to three trade associations representing the MPP industry: American Meat Institute, National Chicken Council, and National Renderers Association. EPA subsequently obtained approval from OMB for the use and distribution of two survey questionnaires—a short screener survey and a more detailed survey.

### **3.2.2 Description of Survey Instruments**

In February 2001 EPA mailed a short screener survey entitled “2001 Meat Products Industry Screener Survey” to 1,650 MPP facilities. The screener survey consisted of seven questions that elicited site-specific information such as the type of animal processed and

processing operation, wastewater disposal method, and number of full-time employees at the site and in the company. EPA used the information collected from the screener survey to describe industry operations, wastewater generation rates, and wastewater disposal practices. EPA also used the responses to the site employment question to classify each facility as small or not-small according to the Small Business Administration regulations at 13 CFR Part 121.

EPA designed the second survey to collect detailed, site-specific technical and financial information. In March 2001 the second survey, “2001 Meat Products Industry Survey,” was mailed to 350 MPP facilities. The detailed survey was divided into five parts. The first four parts collected general facility and technical data. The first set of questions requested general facility site information. The general facility information questions asked the site to identify itself; characterize itself by certain parameters (including MPP operations, age, and location); and confirm that it was engaged in meat and/or poultry processing operations. Respondents also indicated whether they use trisodium phosphate (TSP) as a biocide. (Substituting other non-phosphorus-based biocides with TSP has the potential to lower overall phosphorus concentrations in the raw wastewater and treated effluent.) The second set of questions requested analytical and production data, including detailed daily analytical and flow rate data for selected sampling points, monthly production data, and operating hours for selected manufacturing operations. Survey respondents were also required to provide existing sampling data and information. The Agency used the analytical data to estimate baseline pollutant loadings and pollutant removals from facilities with treatment in place resembling projected regulatory options and to evaluate the variability associated with MPP industry discharges. The Agency used the production data collected to evaluate possible relationships between production and wastewater quantity and characteristics.

The next two sections of the survey focused on wastewater characteristics and current treatment practices, respectively. Questions regarding wastewater and treatment were designed to gather the following: information on the wastewater treatment systems (including flow diagrams) and discharge flow rates, analytical monitoring data, and operating and maintenance cost data (including treatment chemical usage). The outfall information questions covered permit information such as discharge location, wastewater sources to the outfall, flow rates, regulated

parameters and limits, and permit monitoring data. EPA used this information to calculate the effluent limitations guidelines (ELGs) and standards and the pollutant loadings associated with the regulatory options that the Agency considered for the final rule. The Agency also used data received in response to these questions to identify treatment technologies in place; to determine the feasibility of regulatory options and potential revision of the subcategorization scheme for the MPP industry; and to estimate compliance costs, the pollutant reductions associated with the likely technology-based options, and potential environmental impacts associated with the regulatory options EPA considered for the final rule.

The fifth part of the detailed survey elicited site-specific financial and economic data. EPA used this information to characterize the economic status of the industry and to estimate the potential economic impacts of the final rule. The financial and economic information collected in the survey was necessary to complete the economic analysis of the ELGs and standards for the MPP industry. EPA requested financial and economic information for the fiscal years ending 1997, 1998, and 1999, the most recent years for which data are available.

### **3.2.3 Development of Survey Mailing List**

EPA sent the two MPP industry survey questionnaires to a random sample of facilities included in the United States Department of Agriculture (USDA) Food Safety and Inspection Service (FSIS) Hazard Analysis and Critical Control Points (HACCP) database and to a list of renderers provided by the National Renderers Association. The HACCP database provided a list of 7,891 federally and state-inspected meat and poultry processing facilities. The HACCP database used by EPA was dated March 9, 2000, for the federally inspected facilities and May 10, 2000, for the state-inspected facilities. The entire database is classified into large, small, and very small facilities, corresponding to more than 500 employees, 10 to 500 employees, and fewer than 10 employees at the facility (site) level. The 231 renderers from the Association's list were not classified by size. The *Urner Barry Meat and Poultry Directory 2000* included production information (that is, whether a facility was a slaughterer or further processor) for at least 242 of the 292 large facilities (82 percent) and 1,236 of the 2,381 small facilities (52 percent). No such

information was available for the remaining large and small facilities or for any of the 5,308 very small facilities.

### 3.2.4 Sample Selection

EPA grouped the facilities into seven strata by size and the type of meat and poultry processing operation that takes place at each facility, so that each stratum would encompass facilities with similar operations. Such grouping (also known as stratification) increases precision (reducing one source of uncertainty) for estimates of costs, benefits, and other quantities.

Table 3-2 shows the stratification of the MPP industry based on employment and other information from the HACCP database, the *Urner Barry Meat and Poultry Directory 2000*, and the National Renderers Association.

Various meat and poultry processors were randomly selected within each grouping. EPA weighted each survey response to account for facilities not surveyed and to develop national estimates from the survey responses. EPA deliberately selected the 65 “certainty” facilities to obtain site-specific information on the top producers for all types of MPPs, as well as facilities identified as good performers by state and EPA Regional personnel.

**Table 3-2.** Meat and Poultry Products Industry Strata

Stratum (No. of Employees)	Number of Facilities in Stratum	Screener Survey Sample Size	Detailed Survey Sample Size
Certainty	65	0	65
Large further processor (≥ 500)	43	31	3
Large first processor (≥ 500)	190	100	52
Small further processor (10–499)	1,878	688	62
Small first processor (10–499)	498	130	69
Very small further processor (< 10)	5,308	649	57
Renderer	235	52	42
Total	8,217	1,650	350

EPA focused much of its analysis on the characteristics of larger facilities because small facilities as a group are estimated to discharge fewer than 3 percent of the conventional pollutants, 1 percent of the toxic pollutants, 4 percent of the nutrients, and less than 1.5 percent of the pathogens as compared to all discharges from the entire MPP industry. Moreover, most of these small facilities discharge small volumes of wastewater into large urban publicly owned treatment works (POTWs) and therefore the impact on POTW operations and the passing of MPP pollutants of concern through POTWs into waters of the United States are minimal. Consequently, larger facilities were oversampled in the sample design. The oversampling rate is approximately 6:3:1, meaning that the large facilities were sampled at six times the rate of the very small facilities, and the small facilities at three times the rate of the very small. In addition, many of the very small facilities were not eligible for the survey because they were no longer in operation. Appendix B provides additional information on how the Agency designed the survey, developed the sample size, and extrapolated the survey results.

### **3.2.5 Survey Response**

Among the 2,000 mailed surveys, 350 facilities were mailed detailed surveys and 1,650 facilities were mailed screener surveys. Of the detailed surveys, 65 were certainty facilities. EPA received 1,498 out of the 1,650 screener surveys, and 328 out of the 350 detailed surveys. Out of the 328 returned detailed surveys, 249 were considered complete based on meeting the requirements of a survey completeness checklist. Out of the 1,498 returned screener surveys, 1,191 screener surveys were considered complete. Only 64 out of the 65 certainties were returned, and one of these was a duplicate. Thus, only 63 certainty surveys were considered complete. EPA used all surveys in analyses for the NODA (68 FR 48472; August 13, 2003) and final rule.

### **3.2.6 Survey Review and Follow-up**

EPA conducted several follow-up efforts to ensure that the detailed survey data collected from MPP facilities were as complete and accurate as possible, including follow-up phone calls to facilities if survey responses were incomplete or if there were discrepancies in the data reported. EPA then made an effort to systematically confirm information for all direct discharge

detailed survey recipients. Specifically, EPA mailed a summary of facility-specific responses (referred to as a “fact sheet”) to the 58 detailed survey respondents that had indicated in their survey response that they were direct dischargers. The fact sheet requested confirmation of the following information for 1999 by product type (meat or poultry): the type of processing (first processing, further processing, rendering); the related production volume; and the wastewater flows from various production operations. In addition, the Agency requested information on each site’s wastewater treatment system. This included confirmation of EPA’s classification of the treatment level of the facility’s wastewater treatment system according to the Agency’s treatment option designations, as identified in the cover letter to the facility; average effluent flow rate; targeted pollutant parameters (e.g., BOD removal, nitrification, phosphorus removal); and confirmation of the summary of the effluent parameters and concentrations from the survey that EPA intends to use in developing pollutant loading estimates. Facilities were contacted when clarification was needed on any responses provided. Based on the revised fact sheets, EPA incorporated changes to its database to the extent possible (e.g., EPA did not incorporate revisions to microbial concentrations that had been calculated using the geometric mean).

In addition to incorporating the survey data described above, EPA sought to clarify screener survey information and collected additional information from screener survey sites in response to comments regarding the validity of the Agency’s database and the Agency’s characterization of the baseline pollutant loadings from the MPP industry. EPA contacted 34 screener survey facilities that appeared to be direct dischargers based on their survey responses. These 34 facilities represent direct dischargers that were not engaged in slaughtering operations; that is, performed only further processing or rendering. Most of these sites were identified as further processors, but five sites were renderers. EPA contacted these facilities to discuss the wastewater treatment systems in place at the sites in 1999 (the base year of the survey), as well as to verify the following information: manufacturing type (e.g., meat further processor vs. poultry further processor); wastewater flows; production classification (small vs. non-small); discharge mode/wastewater management type (e.g., indirect discharge to POTW, direct discharge to receiving water, land application); monitored pollutant parameters; current wastewater treatment system and target concentrations; and receiving waterbody. EPA obtained responses from 30

sites. Of these, 18 were in fact direct dischargers, 11 turned out to be indirect dischargers, and 1 was not operating. EPA also received discharge monitoring report DMR data from three further processing sites in response to these follow-up discussions. EPA has incorporated the information described above into the analyses of further processors and renderers.

### **3.3 OTHER INFORMATION COLLECTION ACTIVITIES**

EPA conducted a number of other data collection efforts to supplement information gathered through the survey process, facility sampling activities, site visits, and meetings with industry experts and the public. The main purpose of these other data collection efforts was to obtain information on the documented environmental impacts of MPP industry facilities, as well as additional data on animal processing waste characteristics, pollution prevention practices, wastewater treatment technology innovation, and facility management practices. These other data collection activities included a literature search, a review of current NPDES permits, and a review of NPDES DMRs.

#### **3.3.1 Literature Search**

EPA conducted a literature search to obtain information on various aspects of the animal processing industry, including documented environmental impacts, wastewater treatment technologies, waste generation and facility management, and pollution prevention. EPA performed extensive Internet and library searches for applicable information. The Agency used the resources of its own environmental library and of the USDA's National Research Library to obtain technical articles on environmental issues related to the MPP industry. Researchers also consulted several university libraries and industry experts during the literature search. As a result, EPA was able to compile a list of environmental impacts associated with the MPP industry. The scope of the literature search included government reports of permit violations and any associated environmental impacts. EPA has included a summary of the case studies in the Administrative Record associated with the MPP rule. The primary sources for the case studies are newspaper and technical journal articles, government reports, and papers included in industry and academic conference proceedings.

### **3.3.2 Current NPDES Permits**

EPA extracted information from the Agency's Permit Compliance System (PCS) to identify meat and poultry processing industry point source dischargers with NPDES permits. PCS is a database that contains monitoring and NPDES permit data from major and some minor point sources that discharge wastewater directly to surface waters. This initial extraction was performed by searching PCS using reported Standard Industrial Classification (SIC) codes used to describe the primary activities that occur at the site. Specifically, the following SIC codes were used:

- 2011—Meat Packing Facilities
- 2013—Sausages and Other Prepared Meats
- 2015—Poultry Slaughtering and Processing
- 2077—Animal and Marine Fats and Oils

EPA identified 359 active meat and poultry product facilities with NPDES permits in PCS. The PCS estimate of MPP direct dischargers is approximately equivalent to the screener survey estimate of direct dischargers.

EPA selected a sample from the universe of direct dischargers in PCS. The Agency then reviewed NPDES permits and permit applications to obtain information on treatment technologies and wastewater characteristics for each of the respective animal processing and rendering sectors. EPA used this information as part of its initial screening process to identify the universe of processing facilities that would be covered under the proposal. In addition, the Agency used this information to better define the scope of the ICRS and to supplement other information collected on meat and poultry processing waste management practices.

In an effort to obtain additional information without burdening the facilities directly, EPA gathered permits, permit applications, and permit fact sheets from EPA regional offices and states for some facilities from which EPA did not receive a detailed survey and which were identified as meat or poultry processors either in PCS or in the screener survey database.

EPA was interested in obtaining information on the permit requirements and treatment in place at facilities that had specific production processes about which the Agency had limited information for the proposal (e.g., stand-alone further processors and renderers). EPA identified over 980 facilities in PCS classified under SIC codes 2011, 2013, 2015, and 2077 (the codes that identify meat or poultry processing and rendering), plus some related sic codes referring to different aspects of food processing such as 2091 (Canned and Cured Fish and Seafoods) and 2099 (Food Preparations, Not Elsewhere Classified). EPA then refined the list by selecting those facilities that had data in PCS for at least one of the pollutants (POCs) of concern, for which EPA had limited data. EPA identified facilities with the following POCs: total Kjeldahl, nitrogen (TKN), nitrate + nitrite, total phosphorus, chemical oxygen demand, carbonaceous biochemical oxygen demand, total nitrogen, fecal streptococci, total dissolved solids, chloride, Eschenchia. coli, oil and grease as hexane-extractable material, copper, chromium, nickel, and zinc. EPA then added to the list all further processors and independent renderers that were in the screener survey database but were not currently on the list generated through PCS. Detailed survey recipients were then excluded because they had provided sufficient information in their survey responses. EPA then sought permits for all the facilities identified on this refined list (104 facilities), which is included in the Administrative Record (see Section 18.1.1, DCN 100769).

EPA obtained a copy of the NPDES permit, permit application, and/or fact sheet for 61 facilities (in 20 states) of 104 total facilities (in 27 states) on the refined list and obtained notice of closure on an additional 14 of the 104 facilities.

### **3.3.3 Discharge Monitoring Reports**

In addition, the Agency collected long-term effluent data from facility DMRs through PCS in an effort to perform a “real world” check on the achievability of the MPP limits. DMRs summarize the quality and volume of wastewater discharged from a facility under an NPDES permit. They are critical for monitoring compliance with NPDES permit provisions and for generating national trends in Clean Water Act compliance. DMRs may be submitted monthly, quarterly, or annually depending on the requirements of the NPDES permit.

EPA extracted discharge data and permit limits from the DMRs (through PCS) to help identify pollutants of concern (pollutants currently being regulated) and to identify better-performing facilities. EPA conducted this analysis in part to identify potential facilities for sampling, as well as to assist in identifying a selection of facilities for the certainty component of the detailed survey exercise.

EPA was able to collect DMR information on a total of 176 facilities from four MPP sectors: 77 meat packing facilities, 17 facilities producing sausages and other prepared meat products; 65 poultry slaughtering and processing facilities, and 17 animal and marine fat and oils facilities. EPA collected 31,311 data points on 83 separate pollutant parameters.

Indirect dischargers file compliance monitoring reports with their control authority (e.g., POTW) at least twice a year as required under the General Pretreatment Standards (40 CFR 403), while direct dischargers file DMRs with their permitting authority at least once a year. EPA did not collect compliance monitoring reports for MPP facilities that are indirect dischargers for two reasons: (1) a vast majority of MPP indirect dischargers are small facilities (in terms of volume of wastewater), and (2) this information is less centralized and therefore harder to collect than information on direct dischargers.

Because DMRs and indirect dischargers' compliance monitoring reports do not provide information about processes and production, EPA was not able to use these data directly in calculating the limitations and standards. Instead, in the detailed survey EPA requested that facilities provide the individual daily measurements from their monitoring (for DMRs or the control authority) along with detailed information about their treatment systems and processes. After further evaluation of the detailed surveys, EPA used the self-monitoring data corresponding to the treatment options to calculate the final limits and to reassess the achievability of the limits by well-operated best available technology economically achievable (BAT) systems. In cases where EPA determined that improved system operation will allow the limits to be achieved consistently, it included additional treatment costs for the facility in its cost estimations for the final rule where it had not already done so. In following the approach described above, EPA

addressed issues related to the achievability of the numerical limits by well-operated and economically achievable treatment systems.

Following proposal, based on the DMR summary data provided in the detailed surveys or PCS, EPA requested individual data points (e.g., daily or weekly measurements) from 24 detailed survey sites in the slaughtering subcategories (Subcategories A through D and K) for use in evaluating and revising the ELGs and standards and supporting analyses. EPA also has received complete data from 16 facilities, partial data from 5 facilities, and no data from 3 facilities (see Section 19.3.3 of the Administrative Public Record). EPA has incorporated the daily/weekly data sets into its development of facility-level (episode-level) long-term averages and variability factors.

### **3.3.4 Data Submitted by Industry**

EPA received some estimated summary-level cost data in the industry comments on what it might cost for a meat or rendering facility to upgrade its existing technologies. EPA also obtained upgrade/retrofit cost information from one meat site and one poultry products site as a follow-up to earlier, pre-proposal sampling and from one poultry site that was sampled after proposal. EPA has used this information in the development of the cost estimates.

In response to its request in the proposed rule, EPA received data submitted for several facilities, two companies (one provided site-specific data for four facilities, and one provided generalized data for its facilities), an industry coalition, and an industry trade association. The data submitted by the industry coalition and the industry trade association were the same and represented data for four pollutants for one of the poultry facilities sampled by EPA for the proposal. Of the facilities for which data were submitted, data for two of the facilities were the same as the data provided in the facilities' detailed surveys (the data were provided only for TKN.) EPA included the TKN data in the loadings and cost analyses but did not use data from some facilities for its analyses because the Agency requires supporting information about the facilities (e.g., treatment system type, production type) before the data can be used to classify the data properly. EPA did not incorporate some TKN data because it supplied only a typical range of TKN values for a number of poultry facilities, not data for any specific facility.

### **3.4 STAKEHOLDER MEETINGS**

EPA encouraged the participation of all interested parties throughout the development of the MPP rule. The Agency conducted outreach to the following trade associations (which represent the vast majority of the facilities that will be affected by the ELGs and standards): American Meat Institute, American Association of Meat Processors, National Renderers Association, U.S. Poultry and Egg Association, and National Chicken Council. EPA met on numerous occasions with various industry representatives to discuss aspects of the regulation development. EPA also participated in industry meetings and gave presentations on the status of the regulation development. Summaries of these meetings are in the Administrative Record for the rulemaking.

In the development of the surveys used to gather facility-specific information on the MPP industry, EPA consulted with the industry groups and several of their members to ensure that the information was being requested in an intelligible manner and that they would provide it in the form requested.

EPA also met with representatives from USDA to discuss this regulation and how it might be affected by or affect requirements on the meat and poultry processing industry implemented by USDA FSIS. EPA met with representatives from state and local governments to discuss about concerns about meat and poultry processing facilities and how EPA should approach these facilities in regulation. Summaries of these meetings are in the Administrative Record. In addition, EPA regional and state pretreatment coordinators were contacted to identify MPP indirect dischargers that were causing POTW interference or pass-through. The results of that search are summarized in the Administrative Record. After proposal, EPA conducted a more systematic and thorough study of POTWs accepting MPP indirect discharges to better characterize interference and pass-through issues. EPA presented the results of the findings in the NODA (see 68 FR 48477; August 13, 2003)