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**U.S. ENVIRONMENTAL PROTECTION AGENCY  
2000 MEAT PRODUCTS INDUSTRY SURVEY**

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# INTRODUCTION

The U.S. Environmental Protection Agency (EPA) is conducting a survey of the Meat Products Industry as part of its effort to review and revise, as appropriate, effluent limitations guidelines and standards for this industry. This survey requests data on sites engaged in meat product processing. The technical data collected with this survey will be used to determine the production rates, use of water for processes, rates of wastewater generation, and the practices of wastewater management, treatment, and disposal of this industry. The financial and economic data collected in this survey will be used to characterize the economic status of the industry and to estimate the possible economic impacts of wastewater regulations.

## COMPLETION OF THE SURVEY

The survey should be completed by the person(s) most knowledgeable about the information requested. All sites must have the corporate official or designee responsible for directing or supervising of the survey response sign the Certification Statement (located on page iv) to verify and validate the information provided, or to certify that this site does not engage in meat product processes.

EPA has prepared this survey to be applicable to a variety of processes and operations; therefore, not all of the questions will apply to each site. Complete each applicable item in the survey. You are not required to perform nonroutine tests or measurements solely for the purpose of responding to this survey. In the event that exact data are not available, provide best engineering estimates and note the methods that were used to make the estimates on the Comments page located at the end of the survey. General instructions are provided on page v, and additional instructions are provided as needed with each question. A complete set of definitions can be found in the Definitions Section, starting on page vi.

If you would like to request a WordPerfect 8 version of the survey instrument, you must do so **in writing** within 10 days of receipt of this survey (see address under **WHERE TO RETURN THE SURVEY** on page iii). You are responsible for submitting a properly formatted hard copy of the survey by the due date which matches this survey's format. The electronic formatting of this survey is complex and may require more experienced clerical support. **Improperly formatted survey responses will be returned to the respondent!**

### EPA MEAT PRODUCTS SURVEY HELP LINES

#### **Information About Technical Information**

Tetra Tech. . . . . (800) ???-????  
Internet Electronic Mailing Address . . . . . ??? .com

#### **Information About Financial and Economic Information**

Eastern Research Group, Inc. . . . . (888)-???-????  
Internet Electronic Mailing Address . . . . . ??? .com

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## AUTHORITY

This survey is conducted under authority of Section 308 of the Clean Water Act (Federal Water Pollution Control Act, 33 U.S.C. Section 1318). **All sites that receive this survey must respond to it.** Return all portions of the survey to the EPA **within 60 days** of receiving it. Late filing or failure to comply with these instructions may result in criminal fines, civil penalties, and other sanctions, as provided by law.

If you wish to request an extension for your site or discuss a delivery schedule for a company with multiple sites, you must do so **in writing** within 20 days of receipt of this survey. Send written requests to:

Ms. Samantha Lewis  
U.S. Environmental Protection Agency (4303)  
1200 Pennsylvania Avenue NW  
Washington, DC 20460

Extension requests will be evaluated on a case-by-case basis. Submittal of an extension request to EPA does **not** alter the due date of your survey.

## PROVISIONS REGARDING DATA CONFIDENTIALITY

Regulations governing the confidentiality of business information are contained in the Code of Federal Regulations (CFR) at Title 40 Part 2, Subpart B. You may assert a business confidentiality claim covering part or all of the information you submit, other than effluent data, as described in 40 CFR 2.203(b):

*"(b) Method and time of asserting business confidentiality claim. A business which is submitting information to EPA may assert a business confidentiality claim covering the information by placing on (or attaching to) the information, at the time it is submitted to EPA, a cover sheet, stamped or typed legend, or other suitable form of notice complying language such as 'trade secret,' 'proprietary,' or 'company confidential.' Allegedly confidential portions of otherwise nonconfidential documents should be clearly identified by the business, and may be submitted separately to facilitate identification and handling by EPA. If the business desires confidential treatment only until a certain date or until the occurrence of a certain event, the notice should so state."*

**If no business confidentiality claim accompanies the information when it is received by EPA, EPA may make the information available to the public without further notice.**

You may claim as confidential all information included in the response to a question by checking the Confidential Business Information (CBI) box next to each question number for which responses contain CBI. Any individual response where "CBI" is **NOT** checked will be considered nonconfidential. Note that you may be required to justify any claim of confidentiality at a later time. Note also that plant effluent data are not eligible for confidential treatment, pursuant to Section 308(b) of the Clean Water Act, and thus will be treated as nonconfidential even if the "CBI" box is checked.

Information covered by a claim of confidentiality will be disclosed by EPA only to the extent of, and by means of, the procedures set forth in 40 CFR Part 2, Subpart B. In general, submitted information protected by a business confidentiality claim may be disclosed to other employees, officers, or authorized representatives of the United States concerned with implementing the Clean Water Act.

Information covered by a claim of confidentiality will be made available to EPA contractors under EPA Contract Numbers 68-C6-????, 68-C6-????, and 68-C4-???? to enable the contractors to perform the work required by their contracts with EPA. All EPA contracts provide that contractor employees use the information only for the purpose of performing the work required by their contracts and will not disclose any CBI to anyone other than EPA without prior written approval from each affected business or from EPA's legal office. Any comments you may wish to make on this issue must be submitted in writing along with your completed survey.

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## WHERE TO RETURN THE SURVEY

After completing the survey and certifying the information that it contains, use the enclosed mailing label to mail the completed survey to:

U.S. Environmental Protection Agency  
Collection of 1999 Meat Products Industry Data  
c/o Tetra Tech, Inc.  
10306 Eaton Place  
Suite 340  
Fairfax, VA 22030

**Retain a copy of the completed survey, including attachments.** EPA will review the information submitted and may request your cooperation in answering follow-up questions, if necessary, to complete our analyses.

## CERTIFICATION STATEMENT

Is your site engaged in full-time, part-time or intermittent meat product operations? (For purposes of this survey, meat product operations include red meat and poultry slaughtering operations, by-product operations, rendering, and further processing.)

- Yes(Complete the survey; **sign Certification Statement #1** below when survey has been completed)
- No (Sign Certification Statement #2 below and return the following to EPA at the given address: Pages iii and iv and the cover page containing the site address label)

When the survey has been completed or "No" has been checked above, the individual responsible for directing or supervising the preparation of this survey must read and sign the appropriate Certification Statement listed below. The certifying official must be a responsible corporate official or his/her authorized representative.

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**Certification Statement #1**

*I certify under penalty of law that the enclosed survey response was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. The information submitted is, to the best of my knowledge and belief, accurate and complete. In those cases where we did not possess the requested information, we provided best engineering estimates in response to the questions. We have to the best of our ability indicated what we believe to be company confidential business information as defined under 40 CFR Part 2, Subpart B. We understand that we may be required at a later time to justify our claim in detail with respect to each item claimed confidential. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment as explained in Section 308 of the Clean Water Act.*

\_\_\_\_\_  
Signature of Certifying Official

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name of Certifying Official

( \_\_\_\_\_ )  
Telephone Number

\_\_\_\_\_  
Title of Certifying Official

**Certification Statement #2**

*I certify under penalty of law that this site does not engage in meat product operations. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment as explained in Section 308 of the Clean Water Act.*

If you are certifying that your site is not engaged in meat product operations, indicate the classification of your site.

- Office
- Distribution
- Other (specify): \_\_\_\_\_

\_\_\_\_\_  
Signature of Certifying Official

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name of Certifying Official

( \_\_\_\_\_ )  
Telephone Number

\_\_\_\_\_  
Title of Certifying Official

## GENERAL INSTRUCTIONS

**Complete this survey for your entire site.** A site is one contiguous physical location at which meat product processes occur. In some instances, a site may include properties located within separate fence lines, but located close to each other.

**Mark responses for each question.** Fill in the appropriate response(s) to each question. Use **black ink** or **type** in the spaces provided. If the space allowed for the answer to any question is inadequate for your complete response, continue the response in the Comments area at the end of the survey, cross-referencing the appropriate section and question number. If additional attachments are required to clarify a response, place the associated question number and your site ID number (shown on the cover page) in the upper right corner of each page of the attachments.

**Answer all questions unless instructed otherwise.** The purpose of this survey is to gather all available information pertinent to meat product processes. Answer the questions in sequence unless you are directed to SKIP. Report only whole numbers, unless instructed otherwise. If a particular part of the required information is not applicable to your site, enter "NA" rather than leaving the answer blank. Enter zero where appropriate. Do not leave an entry blank if the answer is zero. As noted throughout the survey, you are required to provide best engineering estimates when data are not readily available. If you provide an estimate, note the methods that were used to make the estimates on the Comments page at the end of the survey. EPA does not intend for sites to conduct detailed studies to obtain the data. If you feel you need to conduct a detailed study, please call the Technical Information Help Line at (800) ???-???? or email your questions to ???@com.

**Some PAGES in the survey will likely need to be photocopied before you respond.** Indicate how many copies of the page you are submitting by completing the entry "Copy \_\_\_\_\_ of \_\_\_\_\_" in the top right corner.

**Pay close attention to the measurement units requested (e.g., gallons, pounds) in each question.** Be careful to provide data in the requested units.

**Retain a copy of the completed survey for your records.** EPA will review the information submitted and may request, if necessary, your cooperation in answering follow-up clarification questions to complete the data collection effort. Retain a copy of the completed survey, including attachments, in case you (i.e., the contact identified in Question 4) are contacted to clarify your responses. Also, please maintain a record of sources used to complete the questions.

**Refer to the Definitions Section for terms which are used in this survey.**

**If you have any comments on a question or you feel an answer needs clarification, use the Comments page at the end of the survey.** Be sure to cross-reference your comments by question number.

**Indicate information which should be treated as confidential by checking the Confidential Business Information (CBI) box next to each question number with responses containing CBI.** Any response where "CBI" is not checked will be considered nonconfidential. Refer to the instructions given in the PROVISIONS REGARDING DATA CONFIDENTIALITY section on page ii for additional information regarding EPA's confidentiality procedures set forth in 40 CFR Part 2, Subpart B. The CBI boxes begin with Question 8.

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# DEFINITIONS

## GENERAL DEFINITIONS

**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 sewered.

**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.

**Effluent Limitations Guidelines and Standards.** Regulations promulgated by U.S. EPA under authority of Sections 301, 304, 306, and 307 of the Clean Water Act that set out minimum, national technology-based standards of performance for point source wastewater discharges from specific industrial categories (e.g., iron and steel manufacturing plants). Effluent limitations guidelines and standards regulations are implemented through the NPDES permit and national pretreatment programs and include the following:

- Best Practicable Control Technology Currently Available (BPT)
- Best Available Technology Economically Achievable (BAT)
- Best Conventional Pollutant Control Technology (BCT)
- New Source Performance Standards (NSPS)
- Pretreatment Standards for Existing Sources (PSES)
- Pretreatment Standards for New Sources (PSNS)

The pretreatment standards (PSES, PSNS) are applicable to industrial facilities with process wastewater discharges to publicly owned treatment works (POTWs). The effluent limitations guidelines and new source performance standards (BPT, BAT, BCT, and NSPS) are applicable to industrial facilities with direct discharges of process wastewaters to waters of the United States.

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

**Live Weight Killed (LWK).** The total weight of the total number of animals slaughtered during the time to which the effluent limitations apply; i.e., during any one day or any period of thirty consecutive days.

**Meat Product Operations.** Include red meat and poultry slaughtering operations, by-product operations, rendering, and further processing.

**Noncontact 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.

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

**Privately Owned Treatment Works (PrOTWs).** Any device or system owned and operated by a private entity and used for storage, treatment, recycling, or reclamation of liquid industrial wastes.

**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 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 process wastewater.

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**Publicly Owned Treatment Works (POTWs).** Any device or system owned and operated by a public entity and used in the storage, treatment, recycling, or reclamation of liquid municipal sewage and/or liquid industrial wastes. The sewerage system that conveys wastewaters to treatment works is considered part of the POTW.

**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.

**Surface Water.** Waters of the United States as defined at 40 CFR 122.2.

**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.

**Zero Discharge or Alternative Disposal Methods.** 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.



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## RED MEAT DEFINITIONS

**Canned Meat Processor.** (Definition for 40 CFR 432, Subpart I) An operation which 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.

**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.

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

**Finished Product.** (Definition for Table 10.1) 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 red meat animals and produce a raw, dressed red meat product, either whole or in parts.

**Further Processing.** Operations which utilize whole or cut-up meat products for the production of cooked, canned, ground, chopped, diced, or breaded fresh or frozen products.

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

**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 which processes both animals slaughtered at the site and additional carcasses from outside sources.

**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.

**Meat Cutter.** (Definition for 40 CFR 432, Subpart F) An operation which 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.

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

**Red Meat.** The term "red meat" includes all animal products from cattle, calves, hogs, sheep and lambs, etc., except those defined as Poultry.

**Red Meat Operations.** Includes red meat slaughtering operations, by-product operations, rendering, and further processing.

**Renderer.** (Definition for 40 CFR 432, Subpart J) An independent or off-site rendering operation, conducted separate from a slaughterhouse, packinghouse, or poultry dressing or processing plant, which 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.

**Simple Slaughterhouse.** (Definition for 40 CFR 432, Subpart A) A slaughterhouse which 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.

**Sausage and Luncheon Meat Processor.** (Definition for 40 CFR 432, Subpart G) An operation which 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.

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

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**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.

**Viscera Handling.** Wet or dry viscera handling. Includes removal of partially digested feed and washing of viscera.

**Wet Rendering.** The process of cooking animal byproducts by steam under pressure in closed tanks.

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## POULTRY DEFINITIONS

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

**Finished Product.** (Definition for Table 12.1) 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 poultry and produce a raw, dressed poultry product, either whole or in parts.

**Further Processing.** Operations which receive dressed poultry (whole, cut up or deboned) for the production of cooked, canned, ground, chopped, diced, breaded, stuffed, fresh, or frozen products.

**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.

**Renderer.** (Definition for 40 CFR 432, Subpart J) An independent or off-site rendering operation, conducted separate from a slaughterhouse, packinghouse, or poultry dressing or processing plant, which 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.

**Wet Rendering.** The process of cooking animal byproducts by steam under pressure in closed tanks.

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## FACILITY INFORMATION

1. If the site mailing address shown on the cover page is correct, check (✓) the box below. If it is not the correct address for this site, provide the correct site name and address in the spaces provided below.

Address on cover page is correct **(Skip to Question 2)**

_____ Company Name	_____ Site Address or P.O. Box
_____ Subsidiary Name (if any)	_____ Site Address continued
_____ Site or Plant Name	_____ City
	_____ State
	_____ ZIP Code

2. If the street (i.e., physical) address of your site is different from the mailing address on the cover page or given in Question 1, provide the street address in the spaces provided below. If the mailing address and street address are the same, check (✓) the box below.

Address on cover page or response to Question 1 is physical address.

_____ Street Address City	_____ State	_____ ZIP Code
_____ Street Address continued	_____ State	_____ ZIP Code

3. What is the name and address of the company that owns this site?

Name of Company \_\_\_\_\_

Mailing Address or P.O. Box \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ ZIP \_\_\_\_\_

4. Provide the names, titles, telephone numbers, and facsimile numbers of the technical and financial contacts at your site for information supplied in this survey.

_____ Technical Contact Name	_____ Financial Contact Name
_____ Technical Contact Title	_____ Financial Contact Title
( ) _____ Telephone Number	( ) _____ Telephone Number
( ) _____ Facsimile Number	( ) _____ Facsimile Number

5. What year did operations begin at your site? If unknown, estimate the date to the nearest year. Operations are any processes related to the meat products industry and not necessarily operations as they are currently performed. Operations at the site may have begun under other ownership.

\_\_\_\_\_  
Year Operations Began

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6. Please list up to three primary, secondary, and other Standard Industrial Classification (SIC) codes or North American Industry Classification System (NAICS) codes which apply to the operations performed at your facility in 1999. (See Appendix B for listing of codes.)

\_\_\_\_\_  
(Primary)                      (Secondary)                      (Other)                      (Other)                      (Other)

7. Is this site operated under:

- Federal Inspection
- Federal-State Cooperative Inspection
- State Inspection
- Other (please explain)

\_\_\_\_\_

\_\_\_\_\_

Not Applicable

**CBI 8.** Does this site file annual reports with the USDA, Grain Inspection, Packers and Stockyards Administration?

- Yes
- No

## PRODUCTION INFORMATION

9. Effluent limitations guidelines and pretreatment standards for the Meat Products Point Source Category are presented at 40 CFR Part 432. Based upon your facility's 1999 operations, under which Subcategory or 40 CFR Part 432 would your facility be classified? (Definitions for these Subcategories are provided in the Definitions Section of this survey.)

- Yes, Identify Meat Product Subcategory in 40 CFR 432
  - A - Simple Slaughterhouse Subcategory
  - B - Complex Slaughterhouse Subcategory
  - C - Low-Processing Packinghouse Subcategory
  - D - High-Processing Packinghouse Subcategory
  - E - Small Processor Subcategory
  - F - Meat Cutter Subcategory
  - G - Sausage and Luncheon Meats Subcategory
  - H - Ham Processor Subcategory
  - I - Canned Meats Subcategory
  - J - Renderer Subcategory (Note: Applicable to independent or off-site rendering operations only.)
- No (Skip to Question 11)

**CBI 10.(a)(1)** During 1999, did your facility slaughter or "further process" any type of **Red Meat**?

- Yes, slaughtered only
- Yes, slaughtered and further processed red meat from on-site slaughtering
- Yes, slaughtered and further processed red meat from both on-site and off-site slaughtering
- Yes, further processed red meat slaughtered off site
- No

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**CBI (a)(2)** During 1999, did your facility render any type of animal by-products (**including Red Meat and Poultry by-products**)?

- Yes, rendered animal by-products from on-site operations only
- Yes, rendered animal by-products from both on-site and off-site operations
- Yes, rendered animal by-products from off-site operations only (*you should have checked 9J above and you should complete Table 10.3 below*)
- No

**CBI (a)(3)** In 1999, how many days did your facility operate? \_\_\_\_\_  
Number of days

**CBI 10.(a)(4)** Please complete Table 10.1 in either pounds or kilograms for **Red Meat Operations** in 1999. (In the event that exact production records or data are not available, provide best engineering estimates and note the methods that were used to make the estimates on the Comments page located at the end of the survey.)

**TABLE 10.1** Values in (Please check one):  1000 Pounds

1000 Kilograms

Type of Meat Product	Cattle	Calves	Hogs	Sheep and Lambs	Other (Specify )
<b>Animals Slaughtered on Site [as LWK]</b>					
<b>Carcasses, Animal Parts, or By-Products Received from Off Site for Processing</b>					
<b>All By-Product Operations (includes by-products received from off site for rendering or processing)</b>					
Weight of blood rendered on site					
Weight of hides processed on site					
Weight of hair rendered on site					
Weight of offal rendered on site					
Weight of skimmings rendered on site					
Weight of total by-products to wet or low temperature rendering on site					
Weight of total by-products to dry rendering on site					
<b>All Finished Products Produced On Site</b>					
Weight of whole carcasses as a finished product					
Weight of cut-up carcasses as a finished product					
Weight of other finished products (Please describe in comments section)					
<b>Byproducts Produced On Site and Sent Off Site for Rendering</b>					

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Blood					
Hides					
Hair					
Offal					
Skimmings					
Other Byproducts					



**CBI 10.(b)** As you indicated in Question 9 above, if your facility is classified under Subcategory E, F, G, H, or I of 40 CFR Part 432, please complete Table 10.2 in either pounds or kilograms. For this question, use the following definitions for “finished product,” as appropriate:

**Finished product.** (Definition for 40 CFR Part 432, Subpart E) The final manufactured product as fresh meat cuts, hams, bacon or other smoked meats, sausage, luncheon meats, stew, canned meats, or related products.

**Finished product.** (Definition for 40 CFR Part 432, Subpart F) The final manufactured product as fresh meat cuts including, but not limited to, steaks, roasts, chops, or boneless meats.

**Finished product.** (Definition for 40 CFR Part 432, Subpart G) The final manufactured product as fresh meat cuts including steaks, roasts, chops, or boneless meat, bacon or other smoked meats (except hams) such as sausage, bologna or other luncheon meats, or related products (except canned meats).

**Finished product.** (Definition for 40 CFR Part 432, Subpart H) The final manufactured product as fresh meat cuts including steaks, roasts, chops, or boneless meat, smoked or cured hams, bacon or other smoked meats, sausage, bologna or other luncheon meats (except canned meats).

**Finished product.** (Definition for 40 CFR Part 432, Subpart I) The final manufactured product as fresh meat cuts including steaks, roasts, chops, or boneless meat, hams, bacon or other smoked meats, sausage, bologna or other luncheon meats, stews, sandwich spreads or other canned meats.

**TABLE 10.2**

<b>Meat Product Subcategory in 40 CFR 432 (Check One)</b>	<b>Product Type</b>	<b>1000 kg of Finished Product in 1999</b>	<b>OR</b>	<b>1000 lb of Finished Product in 1999</b>
<input type="checkbox"/> E	Specify _____			
<input type="checkbox"/> F	Specify _____			
<input type="checkbox"/> G	Specify _____			
<input type="checkbox"/> H	Specify _____			
<input type="checkbox"/> I	Specify _____			

- CBI 10.(c)** As you indicated in Question 9 above, if your facility is classified under Subcategory J (Renderer) of 40 CFR Part 432, please complete Table 10.3 in either pounds or kilograms. (In the event that exact production records or data are not available, provide best engineering estimates and note the methods that were used to make the estimates on the Comments page located at the end of the survey.) For this question, the following definition for “raw material” applies:

**Raw Material.** (Definition for 40 CFR Part 432, Subpart J, Table 10.3) The basic input materials to a renderer composed of animal and poultry trimmings, bones, meat scraps, dead animals, feathers, and related usable by-products.

**TABLE 10.3**

Meat Product Subcategory in 40 CFR Part 432	Type of Raw Material and Type of Animal as Source of Raw Material	1000 kg of Raw Material in 1999	OR	1000 lb of Raw Material in 1999
J – Renderer	Raw Material _____ Animal Type _____			
	Raw Material _____ Animal Type _____			
	Raw Material _____ Animal Type _____			
	Raw Material _____ Animal Type _____			
	Raw Material _____ Animal Type _____			

- CBI 11.(a)** During 1999, did your facility slaughter or “further process” any type of **Poultry**?
- Yes, slaughtered only
  - Yes, slaughtered and further processed poultry slaughtered on site
  - Yes, slaughtered and further processed poultry from both on site and off site slaughtering
  - Yes, further processed poultry slaughtered off site
  - No (Skip to Question 13)
- CBI (b)** In 1999, how many days did your facility operate? \_\_\_\_\_  
Number of days

**CBI 12.** Please complete Table 12.1 in either pounds or kilograms for **Poultry Operations** at your facility in 1999. (In the event that exact data are not available, provide best engineering estimates and note the methods that were used to make the estimates on the Comments page located at the end of the survey.) If you are an independent or off-site rendering operation, as defined in 40 CFR Part 432, you should have presented your facility's information in Table 10.3 and you do not need to complete Table 12.1 below.

**TABLE 12.1** Values in (Please check one):  1000 Pounds  
 1000 Kilograms

Type of Meat Product	Broilers and Other Young Chickens	Hens (or Fowl) and Other Chickens	Turkeys	Other Poultry and Small Game (Specify _____)
<b>Poultry Slaughtered On Site (First Processing LWK)</b>				
<b>Dressed Poultry Produced On Site for Further Processing</b>				
<b>Dressed Poultry Received from Off Site for Further Processing</b>				
<b>All By-Product Operations (Poultry Rendering)- Complete only if rendering occurs at this facility</b>				
Feathers from On Site First Processing				
Feathers from Off Site Facilities				
Offal from On Site First Processing				
Offal form Off Site Facilities				
Skimmings from On Site First Processing				
Skimmings from Off Site Facilities				
Blood from On Site First Processing				
Blood from Off Site Facilities				
Other Byproducts from On Site First Processing				
Other Byproducts from Off Site				

Weight of total by-products to wet or low temperature rendering on site				
Weight of total by-products to dry rendering on site				
<b>All Finished Products Produced On Site</b>				
Dressed poultry, Whole				
Dressed poultry, Parts				
Deboned meat, Raw				
Further Processed, Raw or Cooked				
Other Finished Products (Please describe in Comments Section)				
<b>Byproducts Produced On Site and Sent Off Site for Rendering</b>				
Feathers				
Blood				
Offal				
Skimmings				
Other Byproducts				

## WASTEWATER INFORMATION

- CBI 13.(a)** Please identify the type(s) and quantity of process wastewater generated at your facility for **Red Meat Operations** in 1999. Indicate all that apply. (In the event that exact data are not available, provide best engineering estimates and note the methods that were used to make the estimates on the Comments page located at the end of the survey.) Note: Please see definitions for Red Meat Operations and for process wastewater in Definitions section.

### Red Meat Operations

Check All That Apply	Code for PFDs in Question 21 Below	Type of Process Wastewater	Gallons/Year	Treated on Site? (Yes or No)	Final Disposal Method (Code from Appendix A)
<input type="checkbox"/>		None			
<input type="checkbox"/>	R1	Process wastewater generated from animal pens			
<input type="checkbox"/>	R2	Process wastewater generated from killing and bleeding operations			
<input type="checkbox"/>	R3	Process wastewater generated from hide removal operations			
<input type="checkbox"/>	R4	Process wastewater generated from evisceration operations			
<input type="checkbox"/>	R5	Process wastewater generated from paunch operations			
<input type="checkbox"/>	R6	Process wastewater generated from scalding and hair removal operations			
<input type="checkbox"/>	R7	Process wastewater generated from meat washing operations			
<input type="checkbox"/>	R8	Process wastewater generated from rendering operations [please specify type(s) of rendering (e.g., wet or dry) _____]			
<input type="checkbox"/>	R9	Process wastewater generated from cutting operations			
<input type="checkbox"/>	R10	Process wastewater generated from further processing operations (e.g., thaw tanks, cooking vats, cooling tanks)			
<input type="checkbox"/>	R11	Process wastewater generated from clean-up operations			
<input type="checkbox"/>	R12	Process wastewater generated from rendering plant condensate and condensor water			
<input type="checkbox"/>	R13	Process wastewater from truck washing			
<input type="checkbox"/>	R14	Stormwater runoff from meat product activity area			
<input type="checkbox"/>	R15	Other--Please specify _____			
<input type="checkbox"/>	R16	Other--Please specify _____			

<input type="checkbox"/>	R17	Other--Please specify _____			
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**CBI 13.(b)** Please identify the type(s) and quantity of wastewater generated at your facility for **Poultry Operations** in 1999. Indicate all that apply. (In the event that exact data are not available, provide best engineering estimates and note the methods that were used to make the estimates on the Comments page located at the end of the survey.) Note: Please see definitions for poultry operations and for process wastewater in Definitions section.

**Poultry Operations**

Check All That Apply	Code for PFDs in Question 21 Below	Type of Process Wastewater	Gallons/Year	Treated on Site? (Yes or No)	Final Disposal Method (Code from Appendix A)
<input type="checkbox"/>		None			
<input type="checkbox"/>	P1	Process Wastewater from Live Receiving			
<input type="checkbox"/>	P2	Process Wastewater from Killing			
<input type="checkbox"/>	P3	Process Wastewater from Bleeding			
<input type="checkbox"/>	P4	Process Wastewater from Scalding			
<input type="checkbox"/>	P5	Process Wastewater from Defeathering			
<input type="checkbox"/>	P6	Process Wastewater from Whole Bird Wash			
<input type="checkbox"/>	P7	Process Wastewater from Evisceration			
<input type="checkbox"/>	P8	Process Wastewater from Final Bird Wash			
<input type="checkbox"/>	P9	Process Wastewater from Chilling			
<input type="checkbox"/>	P10	Process Wastewater from Cut-up			
<input type="checkbox"/>	P11	Process Wastewater from Packaging			
<input type="checkbox"/>	P12	Process Wastewater from Deboning Operations			
<input type="checkbox"/>	P13	Process Wastewater from Injection/Marination Operations			
<input type="checkbox"/>	P14	Process Wastewater from Breeding/Batter Operations			
<input type="checkbox"/>	P15	Process Wastewater from Cooking Operations			
<input type="checkbox"/>	P15	Process Wastewater from Offal Rendering/Condensing			
<input type="checkbox"/>	P16	Process Wastewater from Feather Rendering/Condensing			

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<input type="checkbox"/>	P17	Process Wastewater from Other Rendering/Condensing			
<input type="checkbox"/>	P18	Stormwater Runoff from Manufacturing Areas			
<input type="checkbox"/>	P19	Other--Please specify_____			
<input type="checkbox"/>	P20	Other--Please specify_____			
<input type="checkbox"/>	P21	Other--Please specify_____			

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## TREATMENT INFORMATION

- CBI 14.(a)** Please identify all types of on-site treatment processes (a list of common treatment processes for the meat products industry is provided below) used to treat the process wastewater stream(s) identified in Item 13. Please indicate all applicable processes utilized at the site. If a treatment process is used that is not listed below, or if a unique variation of a listed treatment process is used, please provide specific details in the response. (Also note that Question 20 below requests the submission of a process flow diagram of the wastewater treatment processes at your facility.)

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- CBI (b)** Are any of these wastewater treatment processes listed in 14(a) used for nutrient removal?  
 Yes (Specify which ones \_\_\_\_\_, \_\_\_\_\_)  
 No
- CBI (c)** Do you use trisodium phosphate as a treatment chemical in your wastewater treatment system?  
 Yes  
 No
- CBI (d)** For the wastewater treatment operations described above, please attach any readily available information for 1999 on:  
i. the design specifications (e.g. design flow, removal efficiencies)  
ii. operating capacities, and  
iii. costing information (i.e., total costs for construction and operation and maintenance costs).  
Please note that EPA is not soliciting detailed and voluminous design specifications and cost information, but instead desires general information related to the design and operation of the wastewater treatment system.

### Treatment Processes

#### Primary Treatment

Screening

Flow Equalization

pH Adjustment

Grease Recovery System

– Catch Basin

– Wet Well

– Sump

Dissolved Air Flotation

Dissolved Air Flotation (with Chemical Coagulation)

Electrocoagulation

– Aerated

Activated Sludge

– Conventional

– Oxidation Ditch

– Extended Aeration

– Step Aeration

– Contact Stabilization

– Sequencing Batch Reactor

Trickling Filter

Rotating Biological Contactors

#### Biosolids Processing

Thickening

– Gravity thickening

– Air Flotation

– Centrifugation

#### Biological Wastewater Treatment Systems

Lagoons (Stabilization Ponds)

– Anaerobic (Facultative)

– Aerobic (Oxidation)



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Stabilization

- Anaerobic Digestion
- Aerobic Digestion
- Heat Treatment

Dewatering

- Vacuum Filtration
- Drying Beds
- Filter Press
- Centrifugation

Other/Advanced Wastewater Treatment

Clarification

- Primary
- Secondary
- With Chemical Coagulation

Neutralization

Chemical Precipitation

Filtration

- Sand
- Mixed-Media
- Packed Bed
- Filter Cloth

Microscreen/Microstrainer

Nitrogen Control

- Nitrification
- Nitrification/Denitrification
- Ammonia Stripping
- Breakpoint Chlorination
- Chemical Oxidation

Disinfection

- Chlorine
- Ozone
- Ultraviolet Light

Spray/Flood Irrigation

Ion Exchange

Carbon Adsorption

Reverse Osmosis

Electrodialysis

Evaporation

- CBI 15.** Provide the average amount of sludge generated (on dry weight basis) from the treatment of process wastewaters identified in Question 13 in 1999.

\_\_\_\_\_ [ \_\_\_\_\_ ]  
Number Units

- CBI 16.** Please indicate the land area occupied by your facility (for the entire site).

	Location	Number	Units (Specify)
a.	Total Site Area		
b.	Total First Processing Area		
c.	Total Further Processing Area		

d.	Total Byproduct Rendering Area		
e.	Total Waste Treatment Area		
f.	Total Area for Warehousing and Ancillary Facilities (e.g., administrative building, parking, utilities, etc.)		
g.	Total Undeveloped Area		

h. Is the undeveloped area suitable for construction of new or additional wastewater treatment systems?

Yes

No If no, please provide explanation \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**CBI 17.** How many discharge locations (outfalls) and other permit monitoring locations are present at this site? Include discharge locations discharging to surface waters, publicly owned treatment works (POTWs), and privately owned treatment works (PrOTWs).

\_\_\_\_\_  
 Number of locations

For each discharge location (outfall), complete one row of this table and provide the site designation of the outfall, the type(s) of wastewater discharged, and the discharge destination (e.g., river, POTW). If you need space for additional outfalls, please photocopy this page before completing it. For discharges regulated under an NPDES permit (or equivalent State discharge permit), use the outfall designations specified in the permit (e.g. 001, 002, etc.). For discharges to POTWs or PrOTWs, use applicable outfall designations provided by the POTW or PrOTW. If no outfall designation exists for the discharge, please indicate "None" in the first column of this table.

Outfall Designation	Type(s) of Wastewater	Discharge Destination
	<input type="checkbox"/> Process Wastewater (Other Than Stormwater Associated with Industrial Activity) <input type="checkbox"/> Landfill Leachate <input type="checkbox"/> Sanitary Wastewater <input type="checkbox"/> Ground Water <input type="checkbox"/> Noncontact Cooling Water <input type="checkbox"/> Stormwater Associated with Industrial Activity <input type="checkbox"/> Stormwater Not Associated with Industrial Activity <input type="checkbox"/> Other: _____	

	<input type="checkbox"/> Process Wastewater (Other Than Stormwater Associated with Industrial Activity) <input type="checkbox"/> Landfill Leachate <input type="checkbox"/> Sanitary Wastewater <input type="checkbox"/> Ground Water <input type="checkbox"/> Noncontact Cooling Water <input type="checkbox"/> Stormwater Associated with Industrial Activity <input type="checkbox"/> Stormwater Not Associated with Industrial Activity <input type="checkbox"/> Other: _____	
	<input type="checkbox"/> Process Wastewater (Other Than Stormwater Associated with Industrial Activity) <input type="checkbox"/> Landfill Leachate <input type="checkbox"/> Sanitary Wastewater <input type="checkbox"/> Ground Water <input type="checkbox"/> Noncontact Cooling Water <input type="checkbox"/> Stormwater Associated with Industrial Activity <input type="checkbox"/> Stormwater Not Associated with Industrial Activity <input type="checkbox"/> Other: _____	
	<input type="checkbox"/> Process Wastewater (Other Than Stormwater Associated with Industrial Activity) <input type="checkbox"/> Landfill Leachate <input type="checkbox"/> Sanitary Wastewater <input type="checkbox"/> Ground Water <input type="checkbox"/> Noncontact Cooling Water <input type="checkbox"/> Stormwater Associated with Industrial Activity <input type="checkbox"/> Stormwater Not Associated with Industrial Activity <input type="checkbox"/> Other: _____	

**18.(a)** Does your site discharge process wastewater by pipeline, sewer, or other discrete conveyance to surface water? (Please see definition of process wastewater in Definitions section of this survey.)

- Yes
- No

**(b)** Does your site have a National Pollutant Discharge Elimination System (NPDES) permit or permits (or state-issued water discharge permit or permits) which authorize and/or regulate the discharge of process wastewaters, nonprocess wastewaters, or stormwater discharges?

- Yes; Provide applicable permit number(s). (e.g., US1234567) below

\_\_\_\_\_  
(Please attach a copy of your site's permit and fact sheet or statement of basis to the survey. Please include your site ID number, as shown on the cover page of this survey, in the upper right corner.)

- No

**19.(a)** Indicate the type of facility to which your site discharges process wastewater by pipeline, sewer, or other conveyance. Check all that apply.

- Publicly owned treatment works (POTWs)
- Privately owned treatment works (PrOTWs)
- Process waters are NOT discharged to a POTW or a PrOTW (**Skip to question 20**)

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**19.(b)** Is the discharge of process wastewater, nonprocess wastewater, or stormwater regulated under a control mechanism (e.g. permit, order or agreement) issued by a POTW or PrOTW?

Yes; Please provide:

Site Discharge Permit, Order or Agreement Number \_\_\_\_\_

Expiration Date (if applicable) \_\_\_\_\_

(Please attach a copy of your site's permit, order or agreement and fact sheet to the survey. Please include your site ID number, as shown on the cover page of this survey, in the upper right corner. Then, go to Question 20)

No (Please answer Question 19.(c) and (d) below)

**(c)** If the discharge of process wastewater, nonprocess wastewater, or stormwater is subject to regulation under a local ordinance, please provide copies of the applicable portions of the local ordinance related to discharge (e.g., local limits, general and specific prohibitions, etc.)

**(d)** Provide the name, address, telephone number, and name of your contact at the POTW or PrOTW. Provide the permit number provided by the POTW or PrOTW and the expiration date (if applicable) and, if known, the NPDES permit number of the permit issued to the POTW or PrOTW.

Name of POTW or PrOTW \_\_\_\_\_

Street Address \_\_\_\_\_

City \_\_\_\_\_

State, Zip Code \_\_\_\_\_

Name of Contact \_\_\_\_\_

Telephone Number \_\_\_\_\_

Site Discharge Permit Number (if applicable) \_\_\_\_\_

Expiration Date (if applicable) \_\_\_\_\_

NPDES Permit Number of the POTW or PrOTW (if known) \_\_\_\_\_

- 
- CBI 20. Attach process flow diagrams (PFDs) to the survey.** In order to understand your site's overall process, EPA is requiring that you include PFDs. Write the site ID number (shown on the cover page) on each diagram, and number each PFD in the upper right corner, starting with "PFD-1" and numbering each sequentially. More than one meat product process, wastewater treatment operation, and/or wastewater discharge location may be shown on the same PFD. If a PFD should be treated as confidential, stamp it "Confidential" or write "Confidential" or "CBI" across the top. If any diagram is not marked "Confidential," it will be considered nonconfidential under EPA's confidentiality procedures set forth in 40 CFR Part 2, Subpart B. See Appendix D for examples of process flow diagrams.

Specifically, attach one or more general process flow diagrams (PFDs) that show:  
 the production process(es) and the final products;  
 wastewater treatment operations; and  
 wastewater discharge locations.

You are **NOT** required to create a new PFD if an existing diagram will suffice. Number the diagrams in the upper right corner, and include your site ID number (as shown on the cover page). Specific instructions for including the PFD(s) are provided below.

PFD(s)-\_\_\_\_\_

**Process and Wastewater Treatment Flow Diagrams Checklist**

- |  |                          |
|--|--------------------------|
| <b>Be sure that...</b>   | ✓                        |
| All processes, wastewater treatment operations, and discharge locations (identified in Questions 14 and 17 above) on site are included.  | <input type="checkbox"/> |
| The diagram of each production process includes the input of your starting materials (e.g., chickens, cattle), the flow of the meat products through the processes, and the final products shipped.  | <input type="checkbox"/> |
| The diagram of each wastewater treatment process includes the types of process wastewater treated (using codes from Questions 13(a) and 13(b) above) and the final discharge location.   | <input type="checkbox"/> |
| All processes are labeled.   | <input type="checkbox"/> |
| All products produced at your site are indicated and labeled.  | <input type="checkbox"/> |
| The PFD number(s) and your site ID number have been written on each diagram(s).  | <input type="checkbox"/> |
| If you believe that a diagram should be treated as confidential, stamp it "Confidential" or write "Confidential" or "CBI" across the top. If any diagram is not marked "Confidential," it will be considered nonconfidential under 40 CFR Part 2, Subpart B. | <input type="checkbox"/> |

- 
- CBI 21.** Question 21 requires summary information for data collected by your site, including (1) monitoring data your site may have collected for permit monitoring requirements [Question 21.(a)], (2) any data collected simultaneously at both influent and effluent streams from a wastewater treatment system or a treatment unit [Question 21.(b)], and (3) any other wastewater characterization data collected at nonpermitted monitoring locations [Question 21.(b)].

Each part of this question requires you to assign a unique sampling point (SP) number to each sampling location and provide the SP number at the top of the table for each question. At the top of each table, provide (1) the entire wastewater treatment system (using treatment types identified in Question 14) from where the wastewater stream is an effluent and to where the stream is an influent, **OR** (2) the outfall to where the wastewater stream is discharged (e.g., Outfall 001 - Mill Creek). Check (✓) the appropriate choice and provide the source and/or destination of the stream.

Each part of this question contains a table to specify the following information:

- The pollutant analyzed (using the Pollutant Parameter Codes shown on the following page);
- The EPA (or alternative) analytical method used;
- Whether the samples were collected as grabs or as composites;
- The total number of samples collected at that sampling point for that pollutant;
- The number of samples in which the pollutant was not detected;
- The typical detection limit or range of detection limits for that sampling point for that pollutant;
- The average concentration of the pollutant;
- The calculation methodology used to determine the average concentration when some or all measurements were not detected (see the following detailed description);
- The maximum concentration of the pollutant;
- The minimum concentration of the pollutant; and
- The average flow rate at this sampling point during the sampling period for that pollutant.

At the top of the table for Question 21(a) and 21(b), you are also required to provide the range of dates in which data were collected. Complete the table, one page per sampling point, one row per pollutant parameter. If you have provided these data elsewhere in the survey, do **NOT** repeat it in this question. Indicate that the data are provided elsewhere on the Comments page for this section.

**Pollutant Parameter Codes**

<b>Pollutant Parameter Code</b>	<b>Pollutant Parameter Name</b>	<b>Pollutant Parameter Code</b>	<b>Pollutant Parameter Name</b>
P-1	Acute Toxicity (ceriodaphmia)	P-16	Oil and Grease, Total Recoverable
P-2	Acute Toxicity (pimephales)	P-17	pH
P-3	Ammonia as Nitrogen	P-18	Soluble Reactive Phosphorus (as P)
P-4	Arsenic	P-19	Temperature
P-5	5-Day Biochemical Oxygen Demand (BOD <sub>5</sub> )	P-20	Total Kjeldahl Nitrogen
P-6	Carbonaceous Biochemical Oxygen Demand	P-21	Total Nitrogen <sup>2</sup>
P-7	Chemical Oxygen Demand (COD)	P-22	Total Phosphorus (as P)
P-8	Chloride	P-23	Total Dissolved Solids (TDS)
P-9	Chromium	P-24	Total Reactive Phosphorus (as P)
P-10	Dissolved Oxygen	P-25	Total Residual Chlorine
P-11	Fecal Coliform	P-26	Total Suspended Solids (TSS)
P-12	Fecal Streptococci	P-27	Total Volatile Solids
P-13	Mercury	P-28	Other (specify): _____
P-14	Nitrate + Nitrite (as Nitrogen)	P-29	Other (specify): _____
P-15	Oil and Grease, HEM <sup>1</sup>	P-30	Other (specify): _____

<sup>1</sup> N-Hexane Extractable Material (HEM)

<sup>2</sup> Total Nitrogen is defined as the sum of TKN, Nitrate, and Nitrite.

**Not Detected (ND) Calculation Method**

To complete Questions 21(a) and 21(b), you are requested to provide the calculation method you used to calculate the average concentration of each pollutant parameter when some or all measurements were not detected (ND). Since laboratories may report pollutant parameters as ND, EPA expects that you will also use the NDs in the calculation of the average concentration. There are several methods which may be used to calculate an average pollutant parameter concentration when ND values have been reported by the laboratory. EPA requests that you identify which method you used to calculate an average pollutant parameter concentration. The following is a description of the different types of detection limits, the ND calculation methods, and examples:

- The method detection limit is the detection limit set by the analytical methods in 40 CFR Part 136; if an alternative method was used, please specify the method and detection limit.
- The sample detection limit is the detection limit set by the matrix complexity and reported to you by the laboratory.



In calculating an average pollutant concentration, the following methods of including ND sample results are typically used:

- ND value set equal to the method detection limit;
- ND value set equal to one-half of the method detection limit;
- ND value set equal to the sample detection limit;
- ND value set equal to one-half of the sample detection limit; and
- ND value set equal to zero (0).

**EXAMPLE:** Suppose a site analyzes two samples for benzo(a)pyrene. Benzo(a)pyrene is detected in the first sample at 100 ppb, but is not detected in the second sample. The analytical laboratory reports the second result as <50 ppb, where the method detection limit is 10 ppb and the sample detection limit is 50 ppb. Depending on which calculation method is used, the following averages could be calculated.

Result 1	Result 2	Method	Average
100 ppb	ND(50 ppb)	Used method detection limit (10 ppb)	55 ppb
100 ppb	ND(50 ppb)	Used one-half method detection limit (5 ppb)	52.5 ppb
100 ppb	ND(50 ppb)	Used sample detection limit (50 ppb)	75 ppb
100 ppb	ND(50 ppb)	Used one-half sample detection limit (25 ppb)	62.5 ppb
100 ppb	ND(50 ppb)	Used zero (0)	50 ppb

Use the following list of ND Calculation Method Codes to complete Questions 21(a) and 21(b).

ND Calculation Method Code	ND Calculation Method
ND-1	Used method detection limit
ND-2	Used one-half of the method detection limit
ND-3	Used sample detection limit
ND-4	Used one-half of the sample detection limit
ND-5	Used zero (0)
ND-6	Other (specify):

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### Submittal of Hard Copy

If you have any of the data requested in Questions 21(a) or 21(b) readily available in the requested format (see the question), you may attach it to the survey in lieu of responding to each question; write your site ID (shown on the cover page) and the question number on the upper right corner of each attachment. Indicate below whether you are submitting hard copies of the data requested in Questions 21(a) and 21(b) in lieu of filling out these questions.

Question	Hard Copy
21(a)	<input type="checkbox"/>
21(b)	<input type="checkbox"/>



- 
- CBI 21.(b)(1)** Has your site collected any data for any parameter from **NONPERMITTED MONITORING LOCATIONS** in this system by EPA-approved methods as described in 40 CFR Part 136 **during 1999?** **For purposes of this question, nonpermitted monitoring refers to monitoring for purposes of permit compliance (e.g., internal process control monitoring locations, production or treatment unit process performance monitoring, etc.);** permit compliance monitoring data are requested in Question 21(a).
- Yes (**continue**)
- No (**skip to Question 22**)
- CBI (2)** Indicate the type of data collected from nonpermitted monitoring locations in this system. Check (✓) **ALL** that apply.
- Data collected simultaneously at both influent and effluent streams from this system or any unit in this system.
- Wastewater characterization analytical data collected from separate nonpermitted monitoring location(s).
- CBI (3)** Has your site collected any data for any parameter from nonpermitted monitoring locations in this system by EPA-approved methods as described in 40 CFR Part 136 **during 1997 or 1998?**
- Yes
- No



- 
- CBI 22.** In this section, describe environmental management or pollution prevention (waste reduction) practices. Examples include, but are not limited to:

Collection of solids before clean up;  
Dry clean up;  
Draining/collecting residual product before cleaning;  
Flow reduction nozzles;  
Automatic flow shutoff valves;  
Composting as disposal;  
Nutrient reduction technologies and treatment systems;  
Industrial eco-parks concept - EPA model; and  
Water treatment and reuse system.

For each practice, try to include the following information:

- Affected processes and wastewater streams;
- Targeted process parameters (e.g. flow) and/or pollutants;
- Cost information (e.g., total cost of installation and implementation costs, net change in operating costs as a result of the practice); and
- Measurable results (e.g., pollutant reductions, flow reductions).

Please note that EPA is not soliciting detailed and voluminous design specifications and cost information, but instead desires general information related to the design and operation of environmental management or pollution prevention (waste reduction) practices that have been implemented at the site.

## FINANCIAL INFORMATION

- CBI 23.** Please check the corporation type that best describes the company listed in Question 3 above.

- Corporation (C Corporation)
  - Subchapter S Corporation/Limited Liability Corporation
  - Limited partnership
  - General partnership
  - Sole proprietor
  - Other (specify)
- 

- CBI 24.** Is the company listed in Question 3 above publicly or privately held?

- Publicly held
- Privately held

- CBI 25.** For fiscal year 1999, list the average number of full-time equivalent (FTE) employees at the site and company (i.e., 2080 hr/yr). For example, four half-time employees would be listed as two full-time equivalent employees.

- a. \_\_\_\_\_  
Number of FTE employees at the site
- b. \_\_\_\_\_  
Number of FTE employees at the company

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**CBI 26.** Does this site typically operate on a single or double shift?

Single shift

Double shift

**CBI 27.** If the company borrows money to finance capital improvements, such as wastewater treatment equipment, what interest rate would it pay on such loans?

\_\_\_ \_\_ \_\_. \_\_ %

Interest rate

**CBI 28.** In the event the company does not borrow money to finance capital improvements, what discount rate would it use? The discount rate is the minimum rate of return on capital required to compensate debt holders and equity owners for bearing risk. If the company borrows to finance capital improvements, the discount rate is equivalent to the interest rate paid on those loans. Identify whether the rate is pre-tax or post-tax and whether the rate is real or nominal. Corporate expectations for return on investment, or hurdle rate, are not intended answers for this question.

\_\_\_ \_\_ \_\_. \_\_ %

Discount rate

**CBI 29.** When you finance capital improvements, what is the approximate mix of debt and equity?

a. \_\_\_ \_\_ \_\_. \_\_ %  
Debt

b. \_\_\_ \_\_ \_\_. \_\_ %  
Equity





CBI

**31. Income statement information (1997).** For fiscal year 1997, complete the following income statement information. If the site is the company, complete both columns with the same entries. If certain items are not held on the site's books, enter zero for the item under the site column. **Report amounts in dollars; round to the nearest thousand.**

	Site	Company
<b>REVENUES</b>		
a. Net sales from meat products	\$____,____,000	\$____,____,000
b. Other income (such as equity earnings and interest)	\$____,____,000	\$____,____,000
c. Total revenues (sum of a and b)	\$____,____,000	\$____,____,000
<b>COSTS AND EXPENSES</b>		
d. Cost of goods sold (purchases and operating expenses; do not include depreciation and amortization)	\$____,____,000	\$____,____,000
e. Depreciation and amortization	\$____,____,000	\$____,____,000
f. Selling, general, and administrative expenses	\$____,____,000	\$____,____,000
g. Total costs and expenses (sum of d through f)	\$____,____,000	\$____,____,000
h. EARNINGS BEFORE INTEREST AND TAXES (EBIT) (subtract g from c)	\$____,____,000	\$____,____,000
i. INTEREST EXPENSE	\$____,____,000	\$____,____,000
j. TAXES	\$____,____,000	\$____,____,000
k. NET INCOME (subtract i and j from h)	\$____,____,000	\$____,____,000

CBI

**32. Income statement information (1998).** For fiscal year 1998, complete the following income statement information. If the site is the company, complete both columns with the same entries. If certain items are not held on the site's books, enter zero for the item under the site column. **Report amounts in dollars; round to the nearest thousand.**

	Site	Company
<b>REVENUES</b>		
a. Net sales from meat products	\$____,____,000	\$____,____,000
b. Other income (such as equity earnings and interest)	\$____,____,000	\$____,____,000
c. Total revenues (sum of a and b)	\$____,____,000	\$____,____,000
<b>COSTS AND EXPENSES</b>		
d. Cost of goods sold (purchases and operating expenses; do not include depreciation and amortization)	\$____,____,000	\$____,____,000
e. Depreciation and amortization	\$____,____,000	\$____,____,000
f. Selling, general, and administrative expenses	\$____,____,000	\$____,____,000
g. Total costs and expenses (sum of d through f)	\$____,____,000	\$____,____,000
h. EARNINGS BEFORE INTEREST AND TAXES (EBIT) (subtract g from c)	\$____,____,000	\$____,____,000
i. INTEREST EXPENSE	\$____,____,000	\$____,____,000
j. TAXES	\$____,____,000	\$____,____,000
k. NET INCOME (subtract i and j from h)	\$____,____,000	\$____,____,000

CBI

**33. Income statement information (1999).** For fiscal year 1999, complete the following income statement information. If the site is the company, complete both columns with the same entries. If certain items are not held on the site's books, enter zero for the item under the site column. **Report amounts in dollars; round to the nearest thousand.**

	Site	Company
<b>REVENUES</b>		
a. Net sales from meat products	\$____,____,000	\$____,____,000
b. Other income (such as equity earnings and interest)	\$____,____,000	\$____,____,000
c. Total revenues (sum of a and b)	\$____,____,000	\$____,____,000
<b>COSTS AND EXPENSES</b>		
d. Cost of goods sold (purchases and operating expenses; do not include depreciation and amortization)	\$____,____,000	\$____,____,000
e. Depreciation and amortization	\$____,____,000	\$____,____,000
f. Selling, general, and administrative expenses	\$____,____,000	\$____,____,000
g. Total costs and expenses (sum of d through f)	\$____,____,000	\$____,____,000
h. EARNINGS BEFORE INTEREST AND TAXES (EBIT) (subtract g from c)	\$____,____,000	\$____,____,000
i. INTEREST EXPENSE	\$____,____,000	\$____,____,000
j. TAXES	\$____,____,000	\$____,____,000
k. NET INCOME (subtract i and j from h)	\$____,____,000	\$____,____,000

CBI

**34. Balance sheet information (1999).** For fiscal year 1999, complete the following balance sheet information. If the site is the company, complete both columns with the same entries. If certain items are not held on the site's books, enter zero for the item under the site column. **Report amounts in dollars; round to the nearest thousand.**

	Site	Company
<b>ASSETS</b>		
a. Current assets, excluding inventories	\$ ____, ____, 0 0 0	\$ ____, ____, 0 0 0
b. Inventories	\$ ____, ____, 0 0 0	\$ ____, ____, 0 0 0
c. Land (original cost)	\$ ____, ____, 0 0 0	\$ ____, ____, 0 0 0
d. Buildings (original cost)	\$ ____, ____, 0 0 0	\$ ____, ____, 0 0 0
e. Equipment (original cost)	\$ ____, ____, 0 0 0	\$ ____, ____, 0 0 0
f. Other noncurrent assets (original cost)	\$ ____, ____, 0 0 0	\$ ____, ____, 0 0 0
g. Cumulative depreciation	\$ ____, ____, 0 0 0	\$ ____, ____, 0 0 0
h. Total assets (sum of a through f minus g)	\$ ____, ____, 0 0 0	\$ ____, ____, 0 0 0
<b>LIABILITIES AND EQUITY</b>		
i. Current liabilities (including accounts payable, accrued expenses and taxes, and the current portion of long-term debt)	\$ ____, ____, 0 0 0	\$ ____, ____, 0 0 0
j. Long-term debt (including bonds, debentures, long-term leases, bank debt, and all other noncurrent liabilities such as deferred income taxes)	\$ ____, ____, 0 0 0	\$ ____, ____, 0 0 0
k. Retained earnings	\$ ____, ____, 0 0 0	\$ ____, ____, 0 0 0
l. Owner equity (other than retained earnings)	\$ ____, ____, 0 0 0	\$ ____, ____, 0 0 0
m. Total liabilities and equity (sum of i through l)	\$ ____, ____, 0 0 0	\$ ____, ____, 0 0 0

CBI

**35. What were the total quantities of meat products and by-products from the site?** Fill in the code for each applicable category. These product categories are listed in Appendix C with their associated codes. These codes must be used below to identify the product categories. If additional product category spaces are required, photocopy these pages BEFORE writing on them and label each copy in the space provided at the top right corner of the page. **Report amounts in 1000 lb.**

Product Category	1999 Not in Operation..... <input type="checkbox"/> (Leave column blank)
_ _ _ _	_ _ _ _ , _ _ _ _ , _ _ _ _
_ _ _ _	_ _ _ _ , _ _ _ _ , _ _ _ _
_ _ _ _	_ _ _ _ , _ _ _ _ , _ _ _ _
_ _ _ _	_ _ _ _ , _ _ _ _ , _ _ _ _
_ _ _ _	_ _ _ _ , _ _ _ _ , _ _ _ _
_ _ _ _	_ _ _ _ , _ _ _ _ , _ _ _ _
_ _ _ _	_ _ _ _ , _ _ _ _ , _ _ _ _
_ _ _ _	_ _ _ _ , _ _ _ _ , _ _ _ _
_ _ _ _	_ _ _ _ , _ _ _ _ , _ _ _ _
_ _ _ _	_ _ _ _ , _ _ _ _ , _ _ _ _
_ _ _ _	_ _ _ _ , _ _ _ _ , _ _ _ _
<b>Total</b>	_ _ _ _ , _ _ _ _ , _ _ _ _

Check box if data are best estimates

**36.  CBI** In 1999, what percentage of meat production by weight did this site transfer to other facilities under the same ownership?

\_ \_ \_ \_ . \_ %

CBI

**37. What was the total value of meat products and by-products from the site?** Fill in the code for each applicable category. These product categories are listed in Appendix C with their associated codes. These codes must be used below to identify the product categories. If additional product category spaces are required, photocopy these pages BEFORE writing on them and label each copy in the space provided at the top right corner of the page. **Report amounts in dollars; round to the nearest thousand.**

Product Category	Not in Operation..... <input type="checkbox"/> (Leave column blank) <span style="float: right;">1999 (\$)</span>
____	\$ ____, ____, 0 0 0
____	\$ ____, ____, 0 0 0
____	\$ ____, ____, 0 0 0
____	\$ ____, ____, 0 0 0
____	\$ ____, ____, 0 0 0
____	\$ ____, ____, 0 0 0
____	\$ ____, ____, 0 0 0
____	\$ ____, ____, 0 0 0
____	\$ ____, ____, 0 0 0
<b>Total</b> (Should equal Questions 31a, 32a, and 33a)	\$ ____, ____, 0 0 0

Check box if data are best estimates

- 
- 38.** Include a copy of the company's end-of-year financial statements for 1999 with the completed questionnaire. These may be accountant reports, annual reports, and/or 10-K forms, and **MUST** include both an income statement and balance sheets for the company. These statements need not be audited, but should conform to generally accepted accounting principles (GAAP). In all cases, **INCLUDE THE NOTES TO THE FINANCIAL STATEMENTS**. You may claim the information as confidential by marking the document(s) with the word "Confidential."

**APPENDIX A. Disposal Methods**

- 1 - Discharged to a surface water under an NPDES permit
- 2 - Discharged to publicly owned treatment works (POTW)
- 3 - Land applied on site
- 4 - Surface impoundment on site (as final disposal)
- 5 - Transferred to an off-site commercial waste treatment facility
- 6 - Transferred to an off-site intracompany wastewater treatment facility
- 7 - Other (Please specify \_\_\_\_\_)

**APPENDIX B. 1987 Standard Industrial Classification (SIC) Codes Matched to 1997 North American Industry Classification System (NAICS) Codes**

1987 SIC Code	1987 SIC Description	1997 NAICS Code	1997 NAICS Description
0254	Poultry Hatcheries	11234	Poultry Hatcheries
0751	Livestock Services, Except Veterinary		
	Custom Slaughtering	311611	Animal (Except Poultry) Slaughtering (pt)
	Other Livestock Service, Except Veterinary	11521	Support Activities for Animal Production (pt)
2011	Meat Packing Plants	311611	Animal (Except Poultry) Slaughtering (pt)
2013	Sausages and Other Prepared Meats	311612	Meat Processed from Carcasses (pt)
2015	Poultry Slaughtering and Processing		
	Poultry Processing	311615	Poultry Processing
	Egg Processing	311999	All Other Miscellaneous Food Manufacturing (pt)
2047	Dog and Cat Food	311111	Dog and Cat Food Manufacturing



1987 SIC Code	1987 SIC Description	1997 NAICS Code	1997 NAICS Description
2048	Prepared Feed and Feed Ingredients for Animals and Fowls, Except Dogs and Cats		
	Animal Slaughtering for Pet Food	311611	Animal (Except Poultry) Slaughtering (pt)
	Except Slaughtering Animals for Pet Food	311119	Other Animal Food Manufacturing
2077	Animal and Marine Fats and Oils		
	Animal Fats and Oils	311613	Rendering and Meat By-Product Processing
	Canned Marine Fats and Oils	311711	Seafood Canning (pt)
	Fresh and Frozen Marine Fats and Oils	311712	Fresh and Frozen Seafood Processing (pt)
	Vegetable Oil Foods	311225	Fats and Oils Refining and Blending (pt)
2079	Shortening, Table Oils, Margarine, and Other Edible Fats and Oils, NEC		
	Processing Fats and Oils from Purchased Fats and Oils	311225	Fats and Oils Refining and Blending (pt)
	Processing Soybean Oil from Soybeans Crushed in the Same Establishment	311222	Soybean Processing (pt)
	Processing Vegetable Oils, except Soybeans, from Oilseeds Crushed in the Same Establishment	311223	Other Oilseed Processing (pt)
3111	Leather Tanning and Finishing	31611	Leather and Hide Tanning and Finishing (pt)

The abbreviation "pt" means "part of."

The abbreviation NEC is used for Not Elsewhere Classified.

## APPENDIX C - Product Categories for Questions 35 and 37

The product category codes to be used in this survey are given in the first numerical column. The survey categories follow categories established by the U.S. Department of Commerce, Bureau of the Census, for its Census of Manufactures. For reference purposes, both the 5-digit and 7-digit Bureau of Census codes are given in the two right hand columns.

Product Category		EPA Survey Code	Bureau of the Census Product Code (Forms MC-2001, -2002, -2003)	
			5-digit	7-digit
<b>Meat and meat byproducts from animals slaughtered in this plant</b>				
Beef (fresh or frozen)	Whole and half carcass	11	20111	20111 12
	Primal cuts	12	20111	20111 14
	Subprimal and fabricated cuts (boxed beef)	13	20111	20111 16
	Other subprimal and fabricated cuts	14	20111	20111 18
	Boneless beef, including hamburger	15	20111	20111 31
	Other	16	20111	20111 51, 20111 71
Veal: fresh or frozen, not canned or made into sausage		17	20112	20112 12, 20112 17, 20112 61
Lamb and mutton: fresh or frozen, not canned or made into sausage		18	20113	20113 12, 20113 52
Pork (fresh or frozen)	Whole and half carcass	19	20114	20114 12
	Primal and fabricated cuts	20	20114	20114 17
	Other	21	20114	20114 51
Pork, processed or cured (not canned or made into sausage); <i>differs from EPA Survey Code 31 in that products for EPA Code 22 are made from animals slaughtered in this plant</i>		22	20116	20116 12, 20116 22, 20116 31, 20116 35, 20116 41, 20116 52, 20116 61
Sausage and similar products (not canned)		23	20117	20117 11, 20117 17, 20117 21, 20117 35, 20117 91
Canned meats (excluding dog, cat, and baby food) containing 20 percent or more meat		24	20118	20118 00

Product Category	EPA Survey Code	Bureau of the Census Product Code (Forms MC-2001, -2002, -2003)	
		5-digit	7-digit
Hides, skins, and pelts	25	20119	20119 14, 20119 22, 20119 51, 20119 97
Miscellaneous byproducts of meat packing plants, including horsemeat for human consumption, pork rind pellets, edible tallow, natural sausage casings, and killing floor offal	26	2011B	2011B 15, 2011B 17, 2011B 41, 2011B 45, 2011B 55, 2011B 59
<b>Sausage and other prepared meats from purchased carcasses</b>			
Pork, processed or cured (not canned or made into sausage); <i>differs from EPA Survey Code 22 in that products for EPA Code 31 are made from purchased carcasses</i>	31	20136	20136 12, 20136 22, 20136 31, 20136 35, 20136 41, 20136 52, 20136 61
Sausage and similar products (not canned)	32	20137	20137 11, 20137 17, 20137 21, 20137 35, 20137 41, 20137 91
Canned meats (excluding dog, cat, and baby food) and other processed, frozen, or cooked meats	33	20138	20138 00
		2013B	2013B 11, 2013B 13, 2013B 17, 2013B 18, 2013B 21, 2013B 45
<b>Poultry</b>			
Young chickens (usually under 20 weeks of age), whole or parts	41	20151	20151 33, 20151 34, 20151 36, 20151 39, 20151 41
Hens and/or fowl (including frozen), whole or parts	42	20152	20152 21, 20152 23
Turkeys (including frozen), whole or parts	43	20153	20153 22, 20153 24, 20153 26, 20153 27
Other poultry and small game (including frozen), whole or parts	44	20154	20154 14, 20154 16
Processed poultry and small game	45	20155	20155 12, 20155 31, 20155 32, 20155 33, 20155 34, 20155 39, 20155 48

Product Category	EPA Survey Code	Bureau of the Census Product Code (Forms MC-2001, -2002, -2003)	
		5-digit	7-digit
<b>Other meat and meat byproducts, not elsewhere classified</b>			
Other meat products for human consumption, including baby food, frozen foods, and nationality foods	51	20321	20321 00
		20382	20382 00
Specialty feeds (pet food)	52	2048A	2048A 01
Lard, grease, and inedible tallow	53	20115	20115 13, 20115 17
		20771	20771 11, 20771 13
Feed and fertilizer byproducts from meat rendering operations	54	20772	20772 00, 20772 11, 20772 12, 20772 98
Feed and fertilizer byproducts, including feather meal, from poultry rendering operations	55	20772	20772 00, 20772 37, 20772 98
Baking or frying fats	56	20791	20791 13, 20791 15
Finished and unfinished leather	57	31116	31116 37, 31116 38, 31116 43
Custom slaughter	58	93201	93201 11
Miscellaneous receipts, including contract work, sales of scrap, and resales	59	93000	93000 00
		99980	99980 00
		99989	99989 00

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APPENDIX D - Process Flow Diagrams

