

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

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Office of Water (4303T)
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Complete proposed document available at:

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

The Final Development Document is available as well.

APPENDIX C

TABLES TO SECTION 9

Table C-1. Average Baseline Concentrations for Meat First Processing (R1) Direct Dischargers

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	99.00	7.60	mg/L
Total suspended solids (TSS)	172.0	8.00	mg/L
Hexane extractable material (HEM)	9.00	14.54	mg/L
Fecal coliform bacteria	508.0	20.00	cfu/100 mL
Ammonia as nitrogen	6.12	8.77	mg/L
Carbaryl	0.001	0.001	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	5.80	11.00	mg/L
Chemical oxygen demand (COD)	85.37	118.4	mg/L
Chloride	513.0	2,070	mg/L
Dissolved biochemical oxygen demand	5.00	5.20	mg/L
Dissolved phosphorus	20.62	7.10	mg/L
Nitrate-nitrite	245.5	102.0	mg/L
Total nitrogen	239.3	89.82	mg/L
Orthophosphate	24.09	11.73	mg/L
Total dissolved solids (TDS)	1,953	3,067	mg/L
Total Kjeldahl nitrogen (TKN)	5.66	7.65	mg/L
Total organic carbon (TOC)	17.69	19.14	mg/L
Total phosphorus	23.42	7.63	mg/L
Total residual chlorine	0.594	0.030	mg/L
Volatile residue	273.5	121.2	mg/L
Barium	— ^a	—	
Copper	0.00367	0.00297	mg/L
Chromium	1.21	0.00656	mg/L
Manganese	0.05069	0.19680	mg/L
Molybdenum	0.00679	0.00755	mg/L
Nickel	0.00305	0.03117	mg/L
Titanium	0.00153	0.00387	mg/L
Vanadium	0.00583	0.00356	mg/L
Zinc	0.05881	0.02281	mg/L
<i>Aeromonas</i>	2,951	1,296	cfu/100 mL
<i>Cryptosporidium</i>	0.3000	0.300	cysts/L
<i>E. Coli</i>	228.3	180.1	cfu/100 mL
Fecal streptococci	30.98	150.1	cfu/100 mL
<i>Salmonella</i>	—	—	
Total coliform	400.0	476.5	cfu/100 mL
<i>cis</i> -Permethrin	0.0160	0.0040	mg/L
<i>trans</i> -Permethrin	0.0160	0.0040	mg/L

^a not applicable

Table C-2. Average Baseline Concentrations for Meat First/Further Processing (R12)^a
Direct Dischargers

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	6.16	6.16	mg/L
Total suspended solids (TSS)	25.67	25.67	mg/L
Hexane extractable material (HEM)	11.78	11.78	mg/L
Fecal coliform bacteria	38.94	38.94	cfu/100 mL
Ammonia as nitrogen	0.38	0.38	mg/L
Carbaryl	0.00100	0.00100	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	4.00	4.00	mg/L
Chemical oxygen demand (COD)	48.33	48.33	mg/L
Chloride	1,587	1,587	mg/L
Dissolved biochemical oxygen demand	4.00	4.00	mg/L
Dissolved phosphorus	13.57	13.57	mg/L
Nitrate-nitrite	300.7	300.7	mg/L
Total nitrogen	304.7	304.7	mg/L
Orthophosphate	12.27	12.27	mg/L
Total dissolved solids (TDS)	3,930	3,930	mg/L
Total Kjeldahl nitrogen (TKN)	3.99	3.99	mg/L
Total organic carbon (TOC)	11.50	11.50	mg/L
Total phosphorus	15.43	15.43	mg/L
Total residual chlorine	0.792	0.792	mg/L
Volatile residue	270.0	270.0	mg/L
Barium	— ^b	—	
Copper	0.00417	0.00417	mg/L
Chromium	0.00100	0.00100	mg/L
Manganese	0.00553	0.00553	mg/L
Molybdenum	0.00757	0.00757	mg/L
Nickel	0.00183	0.00183	mg/L
Titanium	0.00100	0.00100	mg/L
Vanadium	0.00573	0.00573	mg/L
Zinc	0.02337	0.02337	mg/L
<i>Aeromonas</i>	36.33	36.33	cfu/100 mL
<i>Cryptosporidium</i>	0.300	0.300	cysts/L
<i>E. Coli</i>	54.00	54.00	cfu/100 mL
Fecal streptococci	20.67	20.67	cfu/100 mL
<i>Salmonella</i>	—	—	
Total coliform	124.7	124.7	cfu/100 mL
<i>cis</i> -Permethrin	0.0160	0.0160	mg/L
<i>trans</i> -Permethrin	0.0160	0.0160	mg/L

^a Baseline concentration of R12 (small) was derived using R12 (non-small) since no R12 small direct discharge facilities were represented in the detailed survey

^b not applicable

**Table C-3. Average Baseline Concentrations for Meat First Processing and Rendering (R13)^a
Direct Dischargers**

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	32.08	32.08	mg/L
Total suspended solids (TSS)	19.13	19.13	mg/L
Hexane extractable material (HEM)	84.67	84.67	mg/L
Fecal coliform bacteria	92.36	92.36	cfu/100 mL
Ammonia as nitrogen	2.47	2.47	mg/L
Carbaryl	0.00100	0.00100	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	24.21	24.21	mg/L
Chemical oxygen demand (COD)	63.17	63.17	mg/L
Chloride	856.8	856.8	mg/L
Dissolved biochemical oxygen demand	11.29	11.29	mg/L
Dissolved phosphorus	23.87	23.87	mg/L
Nitrate-nitrite	134.4	134.4	mg/L
Total nitrogen	140.8	140.8	mg/L
Orthophosphate	12.72	12.72	mg/L
Total dissolved solids (TDS)	2,610	2,610	mg/L
Total Kjeldahl nitrogen (TKN)	7.46	7.46	mg/L
Total organic carbon (TOC)	16.72	16.72	mg/L
Total phosphorus	30.17	30.17	mg/L
Total residual chlorine	2.66	2.66	mg/L
Volatile residue	182.7	182.7	mg/L
Barium	— ^b	—	
Copper	0.00888	0.00888	mg/L
Chromium	0.00308	0.00308	mg/L
Manganese	0.07028	0.07028	mg/L
Molybdenum	0.00395	0.00395	mg/L
Nickel	0.01530	0.01530	mg/L
Titanium	0.00132	0.00132	mg/L
Vanadium	0.00454	0.00454	mg/L
Zinc	0.06153	0.06153	mg/L
<i>Aeromonas</i>	89,822	89,822	cfu/100 mL
<i>Cryptosporidium</i>	0.371	0.371	cysts/L
<i>E. Coli</i>	106,326	106,326	cfu/100 mL
Fecal streptococci	1,478.18	1,478.18	cfu/100 mL
<i>Salmonella</i>	—	—	
Total coliform	84,624	84,624	cfu/100 mL
<i>cis</i> -Permethrin	0.0069	0.0069	mg/L
<i>trans</i> -Permethrin	0.0069	0.0069	mg/L

^a Baseline concentration of R13 (small) was derived using R13 (non-small) since no R13 small direct discharge facilities were represented in the detailed survey

^b not applicable

Table C-4. Average Baseline Concentrations for Meat First/Further Processing and Rendering (R123)^a Direct Dischargers

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	30.51	30.51	mg/L
Total suspended solids (TSS)	44.94	44.94	mg/L
Hexane extractable material (HEM)	36.08	36.08	mg/L
Fecal coliform bacteria	131.76	131.76	cfu/100 mL
Ammonia as nitrogen	3.43	3.43	mg/L
Carbaryl	0.00100	0.00100	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	12.20	12.20	mg/L
Chemical oxygen demand (COD)	71.13	71.13	mg/L
Chloride	1,245	1,245	mg/L
Dissolved biochemical oxygen demand	6.80	6.80	mg/L
Dissolved phosphorus	17.10	17.10	mg/L
Nitrate-nitrite	202.9	202.9	mg/L
Total nitrogen	203.3	203.3	mg/L
Orthophosphate	14.30	14.30	mg/L
Total dissolved solids (TDS)	3,017	3,017	mg/L
Total Kjeldahl nitrogen (TKN)	6.03	6.03	mg/L
Total organic carbon (TOC)	15.54	15.54	mg/L
Total phosphorus	20.38	20.38	mg/L
Total residual chlorine	1.26	1.26	mg/L
Volatile residue	216.7	216.7	mg/L
Barium	— ^b	—	
Copper	0.00546	0.00546	mg/L
Chromium	0.20412	0.20412	mg/L
Manganese	0.06652	0.06652	mg/L
Molybdenum	0.00623	0.00623	mg/L
Nickel	0.01142	0.01142	mg/L
Titanium	0.00168	0.00168	mg/L
Vanadium	0.00499	0.00499	mg/L
Zinc	0.04190	0.04190	mg/L
<i>Aeromonas</i>	30,661	30,661	cfu/100 mL
<i>Cryptosporidium</i>	0.324	0.324	cysts/L
<i>E. Coli</i>	35,528	35,528	cfu/100 mL
Fecal streptococci	529.79	529.79	cfu/100 mL
<i>Salmonella</i>	—	—	
Total coliform	28,396	28,396	cfu/100 mL
<i>cis</i> -Permethrin	0.0110	0.0110	mg/L
<i>trans</i> -Permethrin	0.0110	0.0110	mg/L

^a Baseline concentration of R123 was derived using average concentrations of R1 (small and non-small facilities) + R12 (non-small) + R13 (non-small facilities), since no R123 small or non-small direct discharge facilities were represented in the detailed survey

^b not applicable

**Table C-5. Average Baseline Concentrations for Meat Further Processing (R2)^a
Direct Dischargers**

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	6.16	6.16	mg/L
Total suspended solids (TSS)	25.67	25.67	mg/L
Hexane extractable material (HEM)	11.78	11.78	mg/L
Fecal coliform bacteria	38.94	38.94	cfu/100 mL
Ammonia as nitrogen	0.38	0.38	mg/L
Carbaryl	0.00100	0.00100	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	4.00	4.00	mg/L
Chemical oxygen demand (COD)	48.33	48.33	mg/L
Chloride	1,587	1,587	mg/L
Dissolved biochemical oxygen demand	4.00	4.00	mg/L
Dissolved phosphorus	13.57	13.57	mg/L
Nitrate-nitrite	300.7	300.7	mg/L
Total nitrogen	304.7	304.7	mg/L
Orthophosphate	12.27	12.27	mg/L
Total dissolved solids (TDS)	3,930	3,930	mg/L
Total Kjeldahl nitrogen (TKN)	3.99	3.99	mg/L
Total organic carbon (TOC)	11.50	11.50	mg/L
Total phosphorus	15.43	15.43	mg/L
Total residual chlorine	0.792	0.792	mg/L
Volatile residue	270.0	270.0	mg/L
Barium	— ^b	—	
Copper	0.00417	0.00417	mg/L
Chromium	0.00100	0.00100	mg/L
Manganese	0.00553	0.00553	mg/L
Molybdenum	0.00757	0.00757	mg/L
Nickel	0.00183	0.00183	mg/L
Titanium	0.00100	0.00100	mg/L
Vanadium	0.00573	0.00573	mg/L
Zinc	0.02337	0.02337	mg/L
<i>Aeromonas</i>	36.33	36.33	cfu/100 mL
<i>Cryptosporidium</i>	0.300	0.300	cysts/L
<i>E. Coli</i>	54.00	54.00	cfu/100 mL
Fecal streptococci	20.67	20.67	cfu/100 mL
<i>Salmonella</i>	—	—	
Total coliform	124.7	124.7	cfu/100 mL
<i>cis</i> -Permethrin	0.0160	0.0160	mg/L
<i>trans</i> -Permethrin	0.0160	0.0160	mg/L

^a Baseline concentration of R2 was derived using R12 (non-small), since no R2 small or non-small direct discharge facilities were represented in the detailed survey

^b not applicable

Table C-6. Average Baseline Concentrations for Meat Further Processing and Rendering (R23)^a
Direct Dischargers

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	19.12	19.12	mg/L
Total suspended solids (TSS)	22.40	22.40	mg/L
Hexane extractable material (HEM)	48.23	48.23	mg/L
Fecal coliform bacteria	65.65	65.65	cfu/100 mL
Ammonia as nitrogen	1.42	1.42	mg/L
Carbaryl	0.00100	0.00100	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	14.11	14.11	mg/L
Chemical oxygen demand (COD)	55.75	55.75	mg/L
Chloride	1,222	1,222	mg/L
Dissolved biochemical oxygen demand	7.64	7.64	mg/L
Dissolved phosphorus	18.72	18.72	mg/L
Nitrate-nitrite	217.5	217.5	mg/L
Total nitrogen	222.7	222.7	mg/L
Orthophosphate	12.49	12.49	mg/L
Total dissolved solids (TDS)	3,270	3,270	mg/L
Total Kjeldahl nitrogen (TKN)	5.72	5.72	mg/L
Total organic carbon (TOC)	14.11	14.11	mg/L
Total phosphorus	22.80	22.80	mg/L
Total residual chlorine	1.73	1.73	mg/L
Volatile residue	226.3	226.3	mg/L
Barium	— ^b	—	
Copper	0.00652	0.00652	mg/L
Chromium	0.00204	0.00204	mg/L
Manganese	0.03791	0.03791	mg/L
Molybdenum	0.00576	0.00576	mg/L
Nickel	0.00857	0.00857	mg/L
Titanium	0.00116	0.00116	mg/L
Vanadium	0.00514	0.00514	mg/L
Zinc	0.04245	0.04245	mg/L
<i>Aeromonas</i>	44,929	44,929	cfu/100 mL
<i>Cryptosporidium</i>	0.336	0.336	cysts/L
<i>E. Coli</i>	53,190	53,190	cfu/100 mL
Fecal streptococci	749.42	749.42	cfu/100 mL
<i>Salmonella</i>	—	—	
Total coliform	42,374	42,374	cfu/100 mL
<i>cis</i> -Permethrin	0.0114	0.0114	mg/L
<i>trans</i> -Permethrin	0.0114	0.0114	mg/L

^a Baseline concentration of R23 was derived using average concentrations of R12 (non-small) + R13 (non-small), since no R23 small or non-small direct discharge facilities were represented in the detailed survey

^b not applicable

Table C-7. Average Baseline Concentration for Meat First Processing (R1) Indirect Dischargers

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	1,823	1,636	mg/L
Total suspended solids (TSS)	1,266	1,233	mg/L
Hexane extractable material (HEM)	246.2	256.5	mg/L
Fecal coliform bacteria	1,982,510	1,763,340	cfu/100 mL
Ammonia as nitrogen	381.0	217.2	mg/L
Carbaryl	0.0116	0.0148	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	1,925	1890.6	mg/L
Chemical oxygen demand (COD)	3,884	3,600	mg/L
Chloride	1,087	1,381	mg/L
Dissolved biochemical oxygen demand	1,174	1,152	mg/L
Dissolved phosphorus	40.09	44.25	mg/L
Nitrate-nitrite	4.26	6.35	mg/L
Total nitrogen	393.1	369.0	mg/L
Orthophosphate	36.66	39.02	mg/L
Total dissolved solids (TDS)	2,554	2,400	mg/L
Total Kjeldahl nitrogen (TKN)	388.8	362.6	mg/L
Total organic carbon (TOC)	661.1	592.0	mg/L
Total phosphorus	55.15	61.96	mg/L
Total residual chlorine	0.611	0.676	mg/L
Volatile residue	2,028	1,800	mg/L
Barium	— ^a	—	
Copper	0.100	0.1193	mg/L
Chromium	0.0361	0.0318	mg/L
Manganese	1.02	0.7994	mg/L
Molybdenum	0.0164	0.0158	mg/L
Nickel	0.0321	0.0267	mg/L
Titanium	0.00864	0.0113	mg/L
Vanadium	0.00382	0.0047	mg/L
Zinc	0.457	0.4899	mg/L
<i>Aeromonas</i>	1,467,870	1,321,636	cfu/100 mL
<i>Cryptosporidium</i>	106.3	127.5	cysts/L
<i>E. Coli</i>	1,844,750	1,763,167	cfu/100 mL
Fecal streptococci	918,043	820,620	cfu/100 mL
<i>Salmonella</i>	—	—	
Total coliform	1,600,000	1,600,000	cfu/100 mL
<i>cis</i> -Permethrin	0.00411	0.00414	mg/L
<i>trans</i> -Permethrin	0.00434	0.00400	mg/L

^a not applicable

**Table C-8. Average Baseline Concentration for Red Meat First/Further Processing (R12)
Indirect Dischargers**

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	1,406	1,083	mg/L
Total suspended solids (TSS)	1,256	568.9	mg/L
Hexane extractable material (HEM)	192.6	117.1	mg/L
Fecal coliform bacteria	1,400,769	1,341,847	cfu/100 mL
Ammonia as nitrogen	334.4	404.5	mg/L
Carbaryl	0.01228	0.00952	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	1,883	868.9	mg/L
Chemical oxygen demand (COD)	2,691	1,965	mg/L
Chloride	1,269	793.6	mg/L
Dissolved biochemical oxygen demand	1,183	921.6	mg/L
Dissolved phosphorus	40.92	36.19	mg/L
Nitrate-nitrite	4.97	45.20	mg/L
Total nitrogen	246.0	276.8	mg/L
Orthophosphate	32.44	24.58	mg/L
Total dissolved solids (TDS)	1,871	2,412	mg/L
Total Kjeldahl nitrogen (TKN)	241.0	231.6	mg/L
Total organic carbon (TOC)	684.2	477.1	mg/L
Total phosphorus	56.51	48.80	mg/L
Total residual chlorine	0.671	0.436	mg/L
Volatile residue	2,104	1,491	mg/L
Barium	— ^a	—	
Copper	0.108	0.0755	mg/L
Chromium	0.0315	0.0445	mg/L
Manganese	0.505	0.6194	mg/L
Molybdenum	0.0166	0.0136	mg/L
Nickel	0.0183	0.0205	mg/L
Titanium	0.0100	0.0059	mg/L
Vanadium	0.00363	0.00324	mg/L
Zinc	0.501	0.3204	mg/L
<i>Aeromonas</i>	839,877	1,127,373	cfu/100 mL
<i>Cryptosporidium</i>	127.5	59.53	cysts/L
<i>E. Coli</i>	1,600,000	1,500,066	cfu/100 mL
Fecal streptococci	950,517	656,497	cfu/100 mL
<i>Salmonella</i>	—	—	
Total coliform	1,600,000	1,431,028	cfu/100 mL
<i>cis</i> -Permethrin	0.00411	0.00649	mg/L
<i>trans</i> -Permethrin	0.00445	0.00640	mg/L

^a not applicable

Table C-9. Average Baseline Concentration for Red Meat First Processing and Rendering (R13)
Indirect Dischargers

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	412.0	1,514	mg/L
Total suspended solids (TSS)	93.00	581.4	mg/L
Hexane extractable material (HEM)	2.40	108.0	mg/L
Fecal coliform bacteria	1,811,050	1,811,050	cfu/100 mL
Ammonia as nitrogen	91.00	611.9	mg/L
Carbaryl	0.0010	0.0098	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	478.0	1,546	mg/L
Chemical oxygen demand (COD)	862.0	2,725	mg/L
Chloride	542.0	542.0	mg/L
Dissolved biochemical oxygen demand	7.11	1,150	mg/L
Dissolved phosphorus	13.86	37.59	mg/L
Nitrate-nitrite	128.7	2.13	mg/L
Total nitrogen	250.5	336.0	mg/L
Orthophosphate	27.07	23.28	mg/L
Total dissolved solids (TDS)	2,517	2,400	mg/L
Total Kjeldahl nitrogen (TKN)	98.20	333.8	mg/L
Total organic carbon (TOC)	23.33	592.0	mg/L
Total phosphorus	14.38	51.07	mg/L
Total residual chlorine	0.404	0.248	mg/L
Volatile residue	257.7	1,800	mg/L
Barium	— ^a	—	
Copper	0.0027	0.0779	mg/L
Chromium	0.0500	0.0500	mg/L
Manganese	0.0303	0.9936	mg/L
Molybdenum	0.0065	0.0158	mg/L
Nickel	0.0029	0.0288	mg/L
Titanium	0.0010	0.0045	mg/L
Vanadium	0.0047	0.0021	mg/L
Zinc	0.0487	0.3234	mg/L
<i>Aeromonas</i>	1,251,966	1,251,966	cfu/100 mL
<i>Cryptosporidium</i>	0.150	42.50	cysts/L
<i>E. Coli</i>	1,487,234	1,600,000	cfu/100 mL
Fecal streptococci	16,664	820,620	cfu/100 mL
<i>Salmonella</i>	—	—	
Total coliform	1,177,498	1,600,000	cfu/100 mL cfu/100 mL
<i>cis</i> -Permethrin	0.00400	0.00409	mg/L
<i>trans</i> -Permethrin	0.00400	0.00400	mg/L

^a not applicable

Table C-10. Average Baseline Concentration for Red Meat First/Further Processing and Rendering (R123)^a Indirect Dischargers

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	156.7	156.7	mg/L
Total suspended solids (TSS)	210.1	210.1	mg/L
Hexane extractable material (HEM)	50.48	50.48	mg/L
Fecal coliform bacteria	728,066	728,066	cfu/100 mL
Ammonia as nitrogen	210.5	210.5	mg/L
Carbaryl	0.0054	0.0054	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	654.6	654.6	mg/L
Chemical oxygen demand (COD)	1,201	1,201	mg/L
Chloride	1,306	1,306	mg/L
Dissolved biochemical oxygen demand	577.6	577.6	mg/L
Dissolved phosphorus	22.34	22.34	mg/L
Nitrate-nitrite	3.95	3.95	mg/L
Total nitrogen	120.4	120.4	mg/L
Orthophosphate	14.08	14.08	mg/L
Total dissolved solids (TDS)	2,827	2,827	mg/L
Total Kjeldahl nitrogen (TKN)	116.5	116.5	mg/L
Total organic carbon (TOC)	305.6	305.6	mg/L
Total phosphorus	29.08	29.08	mg/L
Total residual chlorine	0.179	0.179	mg/L
Volatile residue	960.6	960.6	mg/L
Barium	— ^b	—	
Copper	0.0404	0.0404	mg/L
Chromium	0.0266	0.0266	mg/L
Manganese	0.4409	0.4409	mg/L
Molybdenum	0.0110	0.0110	mg/L
Nickel	0.0169	0.0169	mg/L
Titanium	0.0028	0.0028	mg/L
Vanadium	0.0016	0.0016	mg/L
Zinc	0.1709	0.1709	mg/L
<i>Aeromonas</i>	496,918	496,918	cfu/100 mL
<i>Cryptosporidium</i>	21.40	21.40	cysts/L
<i>E. Coli</i>	803,169	803,169	cfu/100 mL
Fecal streptococci	410,313	410,313	cfu/100 mL
<i>Salmonella</i>	—	—	
Total coliform	803,664	803,664	cfu/100 mL
<i>cis</i> -Permethrin	0.0040	0.0040	mg/L
<i>trans</i> -Permethrin	0.0040	0.0040	mg/L

^a Baseline concentration of R123 (small) was derived using R123 (non-small), since no R123 small indirect discharge facilities were represented in the detailed survey

^b not applicable

Table C-11. Average Baseline Concentration for Red Meat Further Processing (R2)
Indirect Dischargers

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	1,301	1,035	mg/L
Total suspended solids (TSS)	374.4	258.5	mg/L
Hexane extractable material (HEM)	135.0	96.59	mg/L
Fecal coliform bacteria	810,899	820,000	cfu/100 mL
Ammonia as nitrogen	22.81	37.87	mg/L
Carbaryl	0.00968	0.0108	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	1,385	1,220	mg/L
Chemical oxygen demand (COD)	2,330	2,368	mg/L
Chloride	6,421	6,674	mg/L
Dissolved biochemical oxygen demand	1,076	1,150	mg/L
Dissolved phosphorus	65.09	59.05	mg/L
Nitrate-nitrite	15.61	2.13	mg/L
Total nitrogen	39.0	21.46	mg/L
Orthophosphate	21.82	22.80	mg/L
Total dissolved solids (TDS)	8,145	8,238	mg/L
Total Kjeldahl nitrogen (TKN)	23.39	19.33	mg/L
Total organic carbon (TOC)	566.6	600.2	mg/L
Total phosphorus	73.67	68.56	mg/L
Total residual chlorine	0.265	0.248	mg/L
Volatile residue	1,857	1,911	mg/L
Barium	— ^a	—	
Copper	0.0733	0.0779	mg/L
Chromium	0.0172	0.0267	mg/L
Manganese	0.0284	0.0293	mg/L
Molybdenum	0.0176	0.0176	mg/L
Nickel	0.00682	0.0067	mg/L
Titanium	0.00431	0.0045	mg/L
Vanadium	0.00224	0.0021	mg/L
Zinc	0.2902	0.2877	mg/L
<i>Aeromonas</i>	341,181	345,000	cfu/100 mL
<i>Cryptosporidium</i>	39.77	42.50	cysts/L
<i>E. Coli</i>	1,197,695	1,352,381	cfu/100 mL
Fecal streptococci	1,422,046	1,375,958	cfu/100 mL
<i>Salmonella</i>	—	—	
Total coliform	1,571,742	1,600,000	cfu/100 mL
<i>cis</i> -Permethrin	0.00486	0.00410	mg/L
<i>trans</i> -Permethrin	0.00477	0.00400	mg/L

^a not applicable

Table C-12. Average Baseline Concentration for Meat Further Processing and Rendering (R23)^a
Indirect Dischargers

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	883.1	883.1	mg/L
Total suspended solids (TSS)	444.1	444.1	mg/L
Hexane extractable material (HEM)	94.09	94.09	mg/L
Fecal coliform bacteria	1,181,468	1,181,468	cfu/100 mL
Ammonia as nitrogen	240.4	240.4	mg/L
Carbaryl	0.0080	0.0080	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	1,086	1,086	mg/L
Chemical oxygen demand (COD)	1,918	1,918	mg/L
Chloride	2,357	2,357	mg/L
Dissolved biochemical oxygen demand	830.3	830.3	mg/L
Dissolved phosphorus	37.17	37.17	mg/L
Nitrate-nitrite	25.83	25.83	mg/L
Total nitrogen	176.3	176.3	mg/L
Orthophosphate	22.52	22.52	mg/L
Total dissolved solids (TDS)	3,905	3,905	mg/L
Total Kjeldahl nitrogen (TKN)	147.5	147.5	mg/L
Total organic carbon (TOC)	444.3	444.3	mg/L
Total phosphorus	46.39	46.39	mg/L
Total residual chlorine	0.329	0.329	mg/L
Volatile residue	1,418	1,418	mg/L
Barium	— ^b	—	
Copper	0.0620	0.0620	mg/L
Chromium	0.0341	0.0341	mg/L
Manganese	0.3860	0.3860	mg/L
Molybdenum	0.0137	0.0137	mg/L
Nickel	0.0147	0.0147	mg/L
Titanium	0.0045	0.0045	mg/L
Vanadium	0.0026	0.0026	mg/L
Zinc	0.2642	0.2642	mg/L
<i>Aeromonas</i>	768,900	768,900	cfu/100 mL
<i>Cryptosporidium</i>	44.34	44.34	cysts/L
<i>E. Coli</i>	1,292,964	1,292,964	cfu/100 mL
Fecal streptococci	757,866	757,866	cfu/100 mL
<i>Salmonella</i>	—	—	
Total coliform	1,323,449	1,323,449cfu/1	cfu/100 mL
<i>cis</i> -Permethrin	0.0045	0.0045	mg/L
<i>trans</i> -Permethrin	0.0045	0.0045	mg/L

^a Baseline concentration of R23 was derived using average concentrations of R12 (small and non-small facilities) + R123 (non-small), +R13 (small and non-small facilities) + R2 (small and non-small facilities), since no R23 small or non-small indirect discharge facilities were represented in the detailed survey

^b not applicable

**Table C-13. Average Baseline Concentrations for Poultry First Processing (P1)
Direct Dischargers**

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	7.00	4.15	mg/L
Total suspended solids (TSS)	31.50	11.73	mg/L
Hexane extractable material (HEM)	23.60	9.96	mg/L
Fecal coliform bacteria	560.0	173.4	cfu/100 mL
Ammonia as nitrogen	2.00	1.09	mg/L
Carbaryl	0.00100	0.00100	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	478.0	4.08	mg/L
Chemical oxygen demand (COD)	862.0	25.09	mg/L
Chloride	542.0	81.55	mg/L
Dissolved biochemical oxygen demand	5.20	2.08	mg/L
Dissolved phosphorus	7.10	0.36	mg/L
Nitrate-nitrite	27.18	33.54	mg/L
Total nitrogen	89.82	27.22	mg/L
Orthophosphate	14.00	1.95	mg/L
Total dissolved solids (TDS)	3,067	721.3	mg/L
Total Kjeldahl nitrogen (TKN)	98.20	1.80	mg/L
Total organic carbon (TOC)	19.14	5.70	mg/L
Total phosphorus	7.63	2.39	mg/L
Total residual chlorine	— ^a	—	
Volatile residue	178.8	174.6	mg/L
Barium	0.06797	0.0057	mg/L
Copper	0.00876	0.0082	mg/L
Chromium	—	—	
Manganese	0.19680	0.0111	mg/L
Molybdenum	—	—	
Nickel	0.01212	0.0011	mg/L
Titanium	—	—	
Vanadium	—	—	
Zinc	0.0769	0.0715	mg/L
<i>Aeromonas</i>	65,085	1,431	cfu/100 mL
<i>Cryptosporidium</i>	—	—	
<i>E. Coli</i>	66,480	5.05	cfu/100 mL
Fecal streptococci	1,980	36.65	cfu/100 mL
<i>Salmonella</i>	111.2	2.00	cfu/100 mL
Total coliform	163,280	580	cfu/100 mL
<i>cis</i> -Permethrin	—	—	mg/L
<i>trans</i> -Permethrin	—	—	mg/L

^a not applicable

Table C-14. Average Baseline Concentrations for Poultry First/Further Processing (P12)^a
Direct Dischargers

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	15.67	15.67	mg/L
Total suspended solids (TSS)	30.92	30.92	mg/L
Hexane extractable material (HEM)	19.12	19.12	mg/L
Fecal coliform bacteria	200,311	200,311	cfu/100 mL
Ammonia as nitrogen	2.22	2.22	mg/L
Carbaryl	0.00100	0.00100	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	7.41	7.41	mg/L
Chemical oxygen demand (COD)	32.50	32.50	mg/L
Chloride	125.9	125.9	mg/L
Dissolved biochemical oxygen demand	2.49	2.49	mg/L
Dissolved phosphorus	7.44	7.44	mg/L
Nitrate-nitrite	39.32	39.32	mg/L
Total nitrogen	41.80	41.80	mg/L
Orthophosphate	4.28	4.28	mg/L
Total dissolved solids (TDS)	900.5	900.5	mg/L
Total Kjeldahl nitrogen (TKN)	2.76	2.76	mg/L
Total organic carbon (TOC)	8.68	8.68	mg/L
Total phosphorus	7.97	7.97	mg/L
Total residual chlorine	— ^b	—	
Volatile residue	526.4	526.4	mg/L
Barium	0.00531	0.00531	mg/L
Copper	0.02450	0.02450	mg/L
Chromium	—	—	
Manganese	0.01598	0.01598	mg/L
Molybdenum	—	—	
Nickel	0.00324	0.00324	mg/L
Titanium	—	—	
Vanadium	—	—	
Zinc	0.1173	0.1173mg/L	
<i>Aeromonas</i>	49,288	49,288	cfu/100 mL
<i>Cryptosporidium</i>	—	—	
<i>E. Coli</i>	16,622	16,622	cfu/100 mL
Fecal streptococci	929.6	929.6	cfu/100 mL
<i>Salmonella</i>	29.30	29.30	cfu/100 mL
Total coliform	200,753	200,753	cfu/100 mL
<i>cis</i> -Permethrin	—	—	
<i>trans</i> -Permethrin	—	—	

^a Baseline concentration of P12 (small) was derived using P12 (non-small), since no P12 small direct discharge facilities were represented in the detailed survey

^b not applicable

Table C-15. Average Baseline Concentrations for Poultry First Processing and Rendering (P13)
Direct Dischargers

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	4.00	7.26	mg/L
Total suspended solids (TSS)	9.40	13.43	mg/L
Hexane extractable material (HEM)	5.97	15.25	mg/L
Fecal coliform bacteria	434.0	163	cfu/100 mL
Ammonia as nitrogen	1.33	0.78	mg/L
Carbaryl	0.00100	0.00127	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	3.20	4.62	mg/L
Chemical oxygen demand (COD)	29.60	44.25	mg/L
Chloride	94.40	89.34	mg/L
Dissolved biochemical oxygen demand	2.20	4.67	mg/L
Dissolved phosphorus	14.50	11.49	mg/L
Nitrate-nitrite	64.76	50.00	mg/L
Total nitrogen	66.58	57.16	mg/L
Orthophosphate	12.56	9.73	mg/L
Total dissolved solids (TDS)	1,916	1,505	mg/L
Total Kjeldahl nitrogen (TKN)	1.82	2.50	mg/L
Total organic carbon (TOC)	11.49	11.51	mg/L
Total phosphorus	15.22	10.62	mg/L
Total residual chlorine	— ^a	—	
Volatile residue	130.0	166	mg/L
Barium	0.00256	0.00668	mg/L
Copper	0.04024	0.03279	mg/L
Chromium	—	—	
Manganese	0.02456	0.03721	mg/L
Molybdenum	—	—	
Nickel	0.00544	0.00562	mg/L
Titanium	—	—	
Vanadium	—	—	
Zinc	0.0925	0.0867	mg/L
<i>Aeromonas</i>	57.67	289.0	cfu/100 mL
<i>Cryptosporidium</i>	—	—	
<i>E. Coli</i>	123.3	91.69	cfu/100 mL
Fecal streptococci	73.20	58.88	cfu/100 mL
<i>Salmonella</i>	2.00	2.00	cfu/100 mL
Total coliform	1,308	959.1	cfu/100 mL
<i>cis</i> -Permethrin	—	—	
<i>trans</i> -Permethrin	—	—	

^a not applicable

Table C-16. Average Baseline Concentrations for Poultry First/Further Processing and Rendering (P123)^a Direct Dischargers

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	5.83	5.83	mg/L
Total suspended solids (TSS)	8.60	8.60	mg/L
Hexane extractable material (HEM)	95.26	95.26	mg/L
Fecal coliform bacteria	2.55	2.55	cfu/100 mL
Ammonia as nitrogen	0.44	0.44	mg/L
Carbaryl	0.00100	0.00100	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	4.61	4.61	mg/L
Chemical oxygen demand (COD)	131.4	131.4	mg/L
Chloride	53.00	53.00	mg/L
Dissolved biochemical oxygen demand	4.62	4.62	mg/L
Dissolved phosphorus	7.44	7.44	mg/L
Nitrate-nitrite	39.32	39.32	mg/L
Total nitrogen	77.99	77.99	mg/L
Orthophosphate	4.28	4.28	mg/L
Total dissolved solids (TDS)	460.0	460.0	mg/L
Total Kjeldahl nitrogen (TKN)	4.18	4.18	mg/L
Total organic carbon (TOC)	12.38	12.38	mg/L
Total phosphorus	7.97	7.97	mg/L
Total residual chlorine	— ^b	—	
Volatile residue	577.0	577	mg/L
Barium	0.00600	0.00600	mg/L
Copper	0.02450	0.02450	mg/L
Chromium	—	—	
Manganese	0.01598	0.01598	mg/L
Molybdenum	—	—	
Nickel	0.00324	0.00324	mg/L
Titanium	—	—	
Vanadium	—	—	
Zinc	0.1362	0.1362	mg/L
<i>Aeromonas</i>	1,550	1,550	cfu/100 mL
<i>Cryptosporidium</i>	—	—	
<i>E. Coli</i>	2.00	2.00	cfu/100 mL
Fecal streptococci	0.0300	0.03	cfu/100 mL
<i>Salmonella</i>	2.00	2.00	cfu/100 mL
Total coliform	621.0	621.0	cfu/100 mL
<i>cis</i> -Permethrin	—	—	
<i>trans</i> -Permethrin	—	—	

^a Baseline concentration of P123 (small) was derived using P123 (non-small), since no P123 small direct discharge facilities were represented in the detailed survey

^b not applicable

**Table C-17. Average Baseline Concentrations for Poultry Further Processing (P2)^a
Direct Dischargers**

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	10.75	10.75	mg/L
Total suspended solids (TSS)	19.76	19.76	mg/L
Hexane extractable material (HEM)	57.19	57.19	mg/L
Fecal coliform bacteria	100,157	100,157	cfu/100 mL
Ammonia as nitrogen	1.33	1.33	mg/L
Carbaryl	0.00100	0.00100	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	6.01	6.01	mg/L
Chemical oxygen demand (COD)	81.96	81.96	mg/L
Chloride	89.43	89.43	mg/L
Dissolved biochemical oxygen demand	3.55	3.55	mg/L
Dissolved phosphorus	7.44	7.44	mg/L
Nitrate-nitrite	39.32	39.32	mg/L
Total nitrogen	59.89	59.89	mg/L
Orthophosphate	4.28	4.28	mg/L
Total dissolved solids (TDS)	680	680	mg/L
Total Kjeldahl nitrogen (TKN)	3.47	3.47	mg/L
Total organic carbon (TOC)	10.53	10.53	mg/L
Total phosphorus	7.97	7.97	mg/L
Total residual chlorine	— ^b	—	
Volatile residue	552	552	mg/L
Barium	0.0057	0.0057	mg/L
Copper	0.0245	0.0245	mg/L
Chromium	—	—	
Manganese	0.0160	0.0160	mg/L
Molybdenum	—	—	
Nickel	0.0032	0.0032	mg/L
Titanium	—	—	
Vanadium	—	—	
Zinc	0.1268	0.1268	mg/L
<i>Aeromonas</i>	25,419	25,419	cfu/100 mL
<i>Cryptosporidium</i>	—	—	
<i>E. Coli</i>	8,312	8,312	cfu/100 mL
Fecal streptococci	464.80	464.80	cfu/100 mL
<i>Salmonella</i>	15.65	15.65	cfu/100 mL
Total coliform	100,687	100,687	cfu/100 mL
<i>cis</i> -Permethrin	—	—	
<i>trans</i> -Permethrin	—	—	

^a Baseline concentration of P2 was derived using average concentrations of P12 (non-small) +P123 (non-small) since no P2 small or non-small direct discharge facilities were represented in the detailed survey

^b not applicable

Table C-18. Average Baseline Concentrations for Non-Small Poultry Further Processing and Rendering (P23)^a Direct Dischargers

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	9.04	9.04	mg/L
Total suspended solids (TSS)	16.98	16.98	mg/L
Hexane extractable material (HEM)	41.66	41.66	mg/L
Fecal coliform bacteria	66,871	66,871	cfu/100 mL
Ammonia as nitrogen	1.24	1.24	mg/L
Carbaryl	0.00105	0.00105	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	5.31	5.31	mg/L
Chemical oxygen demand (COD)	66.95	66.95	mg/L
Chloride	90.24	90.24	mg/L
Dissolved biochemical oxygen demand	3.51	3.51	mg/L
Dissolved phosphorus	9.29	9.29	mg/L
Nitrate-nitrite	45.34	45.34	mg/L
Total nitrogen	60.55	60.55	mg/L
Orthophosphate	6.57	6.57	mg/L
Total dissolved solids (TDS)	1,024	1,024	mg/L
Total Kjeldahl nitrogen (TKN)	3.03	3.03	mg/L
Total organic carbon (TOC)	10.85	10.85	mg/L
Total phosphorus	9.62	9.62	mg/L
Total residual chlorine	— ^b	—	
Volatile residue	417	417	mg/L
Barium	0.0053	0.0053	mg/L
Copper	0.0285	0.0285	mg/L
Chromium	—	—	
Manganese	0.0209	0.0209	mg/L
Molybdenum	—	—	
Nickel	0.0040	0.0040	mg/L
Titanium	—	—	
Vanadium	—	—	
Zinc	0.1144	0.1144	mg/L
<i>Aeromonas</i>	17,004	17,004	cfu/100 mL
<i>Cryptosporidium</i>	—	—	
<i>E. Coli</i>	5,577	5,577	cfu/100 mL
Fecal streptococci	331.88	331.88	cfu/100 mL
<i>Salmonella</i>	11.10	11.10	cfu/100 mL
Total coliform	67,503	67,503	cfu/100 mL
<i>cis</i> -Permethrin	—	—	
<i>trans</i> -Permethrin	—	—	

^a Baseline concentration of P23 was derived using average concentrations of P12 (non-small) + P13 (small and non-small facilities) + P123 (non-small), since no P23 small or non-small direct discharge facilities were represented in the detailed survey

^b not applicable

**Table C-19. Average Baseline Concentration for Poultry First Processing (P1)
Indirect Dischargers**

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	1,657	392.2	mg/L
Total suspended solids (TSS)	667	147.5	mg/L
Hexane extractable material (HEM)	743.7	55.77	mg/L
Fecal coliform bacteria	790,333	1,243,178	cfu/100 mL
Ammonia as nitrogen	7.82	10.62	mg/L
Carbaryl	0.163	0.00227	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	1,013	345.4	mg/L
Chemical oxygen demand (COD)	1,990	472.9	mg/L
Chloride	92.74	217.3	mg/L
Dissolved biochemical oxygen demand	314.5	498.3	mg/L
Dissolved phosphorus	13.17	3.40	mg/L
Nitrate-nitrite	0.613	2.75	mg/L
Total nitrogen	38.44	48.77	mg/L
Orthophosphate	5.20	6.08	mg/L
Total dissolved solids (TDS)	503.8	752.0	mg/L
Total Kjeldahl nitrogen (TKN)	37.83	53.62	mg/L
Total organic carbon (TOC)	193.9	139.5	mg/L
Total phosphorus	10.61	17.40	mg/L
Total residual chlorine	— ^a	—	
Volatile residue	1,171	282.4	mg/L
Barium	0.0371	0.0180	mg/L
Copper	0.1218	0.0283	mg/L
Chromium	—	—	
Manganese	0.0575	0.1614	mg/L
Molybdenum	—	—	
Nickel	0.0066	0.0065	mg/L
Titanium	—	—	
Vanadium	—	—	
Zinc	0.239	0.0598	mg/L
<i>Aeromonas</i>	39,593	182,879	cfu/100 mL
<i>Cryptosporidium</i>	—	—	
<i>E. Coli</i>	786,333	1,291,380	cfu/100 mL
Fecal streptococci	663,583	58,746	cfu/100 mL
<i>Salmonella</i>	188.5	11.93	cfu/100 mL
Total coliform	1,054,000	1,248,749	cfu/100 mL
<i>cis</i> -Permethrin	—	—	
<i>trans</i> -Permethrin	—	—	

^a not applicable

Table C-20. Average Baseline Concentration for Poultry First/Further Processing (P12)^a
Indirect Dischargers

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	403.8	403.8	mg/L
Total suspended solids (TSS)	188.6	188.6	mg/L
Hexane extractable material (HEM)	42.26	42.26	mg/L
Fecal coliform bacteria	923,559	923,559	cfu/100 mL
Ammonia as nitrogen	13.60	13.60	mg/L
Carbaryl	0.00100	0.00100	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	160.0	160.0	mg/L
Chemical oxygen demand (COD)	466.5	466.5	mg/L
Chloride	185.1	185.1	mg/L
Dissolved biochemical oxygen demand	59.57	59.57	mg/L
Dissolved phosphorus	6.14	6.14	mg/L
Nitrate-nitrite	16.12	16.12	mg/L
Total nitrogen	47.00	47.00	mg/L
Orthophosphate	4.46	4.46	mg/L
Total dissolved solids (TDS)	954.9	954.9	mg/L
Total Kjeldahl nitrogen (TKN)	78.55	78.55	mg/L
Total organic carbon (TOC)	59.64	59.64	mg/L
Total phosphorus	13.89	13.89	mg/L
Total residual chlorine	— ^b	—	
Volatile residue	710.7	710.7	mg/L
Barium	0.0095	0.0095	mg/L
Copper	0.0236	0.0236	mg/L
Chromium	—	—	
Manganese	0.0673	0.0673	mg/L
Molybdenum	—	—	
Nickel	0.0044	0.0044	mg/L
Titanium	—	—	
Vanadium	—	—	
Zinc	0.1358	0.1358	mg/L
<i>Aeromonas</i>	192,500	192,500	cfu/100 mL
<i>Cryptosporidium</i>	—	—	
<i>E. Coli</i>	920,652	920,652	cfu/100 mL
Fecal streptococci	4,140	4,140	cfu/100 mL
<i>Salmonella</i>	45.68	45.68	cfu/100 mL
Total coliform	900,898	900,898	cfu/100 mL
<i>cis</i> -Permethrin	—	—	
<i>trans</i> -Permethrin	—	—	

^a Baseline concentration of P12 (small) was derived using P12 (non-small), since no P12 small indirect discharge facilities were represented in the detailed survey

^b not applicable

Table C-21. Average Baseline Concentration for Poultry First Processing and Rendering (P13)^a
Indirect Dischargers

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	253.0	253.0	mg/L
Total suspended solids (TSS)	41.33	41.33	mg/L
Hexane extractable material (HEM)	111.6	111.6	mg/L
Fecal coliform bacteria	944,808	944,808	cfu/100 mL
Ammonia as nitrogen	13.16	13.16	mg/L
Carbaryl	0.00100	0.00100	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	232.7	232.7	mg/L
Chemical oxygen demand (COD)	434.0	434.0	mg/L
Chloride	214.0	214.0	mg/L
Dissolved biochemical oxygen demand	97.53	97.53	mg/L
Dissolved phosphorus	4.59	4.59	mg/L
Nitrate-nitrite	8.37	8.37	mg/L
Total nitrogen	71.42	71.42	mg/L
Orthophosphate	4.57	4.57	mg/L
Total dissolved solids (TDS)	890.5	890.5	mg/L
Total Kjeldahl nitrogen (TKN)	65.49	65.49	mg/L
Total organic carbon (TOC)	93.62	93.62	mg/L
Total phosphorus	18.18	18.18	mg/L
Total residual chlorine	— ^b	—	
Volatile residue	228.2	228.2	mg/L
Barium	0.0118	0.0118	mg/L
Copper	0.0234	0.0234	mg/L
Chromium	—	—	
Manganese	0.1016	0.1016	mg/L
Molybdenum	—	—	
Nickel	0.0052	0.0052	mg/L
Titanium	—	—	
Vanadium	—	—	
Zinc	0.0703	0.0703	mg/L
<i>Aeromonas</i>	192,500	192,500	cfu/100 mL
<i>Cryptosporidium</i>	—	—	
<i>E. Coli</i>	933,564	933,564	cfu/100 mL
Fecal streptococci	4,645	4,645	cfu/100 mL
<i>Salmonella</i>	36.05	36.05	cfu/100 mL
Total coliform	914,926	914,926	cfu/100 mL
<i>cis</i> -Permethrin	—	—	
<i>trans</i> -Permethrin	—	—	

^a Baseline concentration of P12 (small) was derived using P12 (non-small), since no P12 small indirect discharge facilities were represented in the detailed survey

^b not applicable

Table C-22. Average Baseline Concentration for Poultry First/Further Processing and Rendering (P123)^a Indirect Dischargers

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	1,215	1,215	mg/L
Total suspended solids (TSS)	3,672	3,672	mg/L
Hexane extractable material (HEM)	244.6	244.6	mg/L
Fecal coliform bacteria	772,891	772,891	cfu/100 mL
Ammonia as nitrogen	15.56	15.56	mg/L
Carbaryl	0.02427	0.02427	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	1,159	1,159	mg/L
Chemical oxygen demand (COD)	2,026	2,026	mg/L
Chloride	212.8	212.8	mg/L
Dissolved biochemical oxygen demand	287.9	287.9	mg/L
Dissolved phosphorus	21.98	21.98	mg/L
Nitrate-nitrite	6.78	6.78	mg/L
Total nitrogen	71.95	71.95	mg/L
Orthophosphate	6.65	6.65	mg/L
Total dissolved solids (TDS)	969.7	969.7	mg/L
Total Kjeldahl nitrogen (TKN)	79.55	79.55	mg/L
Total organic carbon (TOC)	215.8	215.8	mg/L
Total phosphorus	48.37	48.37	mg/L
Total residual chlorine	— ^b	—	
Volatile residue	4,198	4,198	mg/L
Barium	0.0249	0.0249	mg/L
Copper	0.0334	0.0334	mg/L
Chromium	—	—	
Manganese	0.0788	0.0788	mg/L
Molybdenum	—	—	
Nickel	0.0094	0.0094	mg/L
Titanium	—	—	
Vanadium	—	—	
Zinc	0.313	0.313	mg/L
<i>Aeromonas</i>	163,955	163,955	cfu/100 mL
<i>Cryptosporidium</i>	—	—	
<i>E. Coli</i>	774,597	774,597	cfu/100 mL
Fecal streptococci	104,827	104,827	cfu/100 mL
<i>Salmonella</i>	45.99	45.99	cfu/100 mL
Total coliform	830,389	830,389	cfu/100 mL
<i>cis</i> -Permethrin	—	—	
<i>trans</i> -Permethrin	—	—	

^a Baseline concentration of P123 was derived using average concentrations of P1 (small and non-small facilities) + P12 (non-small) + P13 (non-small) + P2 (small and non-small facilities), since no P123 small or non-small indirect discharge facilities were represented in the detailed survey

^b not applicable

Table C-23. Average Baseline Concentration for Poultry Further Processing (P2)
Indirect Dischargers

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	5,481	872.7	mg/L
Total suspended solids (TSS)	27,523	582.7	mg/L
Hexane extractable material (HEM)	608.0	241.6	mg/L
Fecal coliform bacteria	87,500	325,383	cfu/100 mL
Ammonia as nitrogen	27.68	24.86	mg/L
Carbaryl	0.0150	0.0103	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	4,185	2,941	mg/L
Chemical oxygen demand (COD)	7,032	4,910	mg/L
Chloride	297.3	297.3	mg/L
Dissolved biochemical oxygen demand	686.2	489.9	mg/L
Dissolved phosphorus	78.68	59.15	mg/L
Nitrate-nitrite	0.938	0.938	mg/L
Total nitrogen	141.9	109.6	mg/L
Orthophosphate	13.18	10.68	mg/L
Total dissolved solids (TDS)	1,707	1,105	mg/L
Total Kjeldahl nitrogen (TKN)	141.0	115.8	mg/L
Total organic carbon (TOC)	633.0	453.2	mg/L
Total phosphorus	192.5	102.4	mg/L
Total residual chlorine	— ^a	—	mg/L
Volatile residue	17,574	12,677	mg/L
Barium	0.0583	0.0432	mg/L
Copper	0.0100	0.0134	mg/L
Chromium	—	—	
Manganese	0.0242	0.0500	mg/L
Molybdenum	—	—	
Nickel	0.0242	0.0189	mg/L
Titanium	—	—	
Vanadium	—	—	
Zinc	0.986	0.810	mg/L
<i>Aeromonas</i>	153,000	166,167	cfu/100 mL
<i>Cryptosporidium</i>	—	—	
<i>E. Coli</i>	86,150	324,483	cfu/100 mL
Fecal streptococci	58,500	40,217	cfu/100 mL
<i>Salmonella</i>	2.00	2.00	cfu/100 mL
Total coliform	265,000	443,717	cfu/100 mL
<i>cis</i> -Permethrin	—	—	
<i>trans</i> -Permethrin	—	—	

^a not applicable

Table C-24. Average Baseline Concentration for Poultry Further Processing and Rendering (P23)^a Indirect Dischargers

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	1,278	1,278	mg/L
Total suspended solids (TSS)	4,761	4,761	mg/L
Hexane extractable material (HEM)	192.9	192.9	mg/L
Fecal coliform bacteria	691,603	691,603	cfu/100 mL
Ammonia as nitrogen	17.67	17.67	mg/L
Carbaryl	0.00489	0.00489	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	1,318	1,318	mg/L
Chemical oxygen demand (COD)	2,290	2,290	mg/L
Chloride	232.1	232.1	mg/L
Dissolved biochemical oxygen demand	248.4	248.4	mg/L
Dissolved phosphorus	26.55	26.55	mg/L
Nitrate-nitrite	8.47	8.47	mg/L
Total nitrogen	81.40	81.40	mg/L
Orthophosphate	6.98	6.98	mg/L
Total dissolved solids (TDS)	1,084	1,084	mg/L
Total Kjeldahl nitrogen (TKN)	90.82	90.82	mg/L
Total organic carbon (TOC)	232.1	232.1	mg/L
Total phosphorus	59.83	59.83	mg/L
Total residual chlorine	— ^b	—	
Volatile residue	5,355	5,355	mg/L
Barium	0.0240	0.0240	mg/L
Copper	0.0195	0.0195	mg/L
Chromium	—	—	
Manganese	0.0687	0.0687	mg/L
Molybdenum	—	—	
Nickel	0.0104	0.0104	mg/L
Titanium	—	—	
Vanadium	—	—	
Zinc	0.3680	0.3680	mg/L
<i>Aeromonas</i>	181,528	181,528	cfu/100 mL
<i>Cryptosporidium</i>	—	—	
<i>E. Coli</i>	686,511	686,511	cfu/100 mL
Fecal streptococci	19,381	19,381	cfu/100 mL
<i>Salmonella</i>	27.91	27.91	cfu/100 mL
Total coliform	723,394	723,394	cfu/100 mL
<i>cis</i> -Permethrin	—	—	
<i>trans</i> -Permethrin	—	—	

^a Baseline concentration of P23 was derived using average concentrations of P12 (non-small) + P13 (non-small) + P2 (small and non-small facilities), since no P23 small or non-small indirect discharge facilities were represented in the detailed survey

^b not applicable

Table C-25. Average Baseline Concentrations for Rendering Only (REND)^a Direct Dischargers

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	389.5	389.5	mg/L
Total suspended solids (TSS)	885	885	mg/L
Hexane extractable material (HEM)	155	155	mg/L
Fecal coliform bacteria	163.2	163.2	cfu/100 mL
Ammonia as nitrogen	4.42	4.42	mg/L
Carbaryl	0.001	0.001	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	4.73	4.73	mg/L
Chemical oxygen demand (COD)	3,940	3,940	mg/L
Chloride	347	347	mg/L
Dissolved biochemical oxygen demand	11.5	11.5	mg/L
Dissolved phosphorus	11.5	11.5	mg/L
Nitrate-nitrite	40.1	40.1	mg/L
Total nitrogen	94.5	94.5	mg/L
Orthophosphate	33.02	33.02	mg/L
Total dissolved solids (TDS)	1,749	1,749	mg/L
Total Kjeldahl nitrogen (TKN)	108.8	108.8	mg/L
Total organic carbon (TOC)	36.07	36.07	mg/L
Total phosphorus	23.94	23.94	mg/L
Total residual chlorine	0.52	0.52	mg/L
Volatile residue	406.1	406.1	mg/L
Barium	0.01404	0.01404	mg/L
Copper	0.0086	0.0086	mg/L
Chromium	0.00344	0.00344	mg/L
Manganese	0.05477	0.05477	mg/L
Molybdenum	0.00438	0.00438	mg/L
Nickel	0.01211	0.01211	mg/L
Titanium	0.00961	0.00961	mg/L
Vanadium	0.02985	0.02985	mg/L
Zinc	0.08734	0.08734	mg/L
<i>Aeromonas</i>	806.9	806.9	cfu/100 mL
<i>Cryptosporidium</i>	0.50	0.50	cysts/L
<i>E. Coli</i>	271.9	271.9	cfu/100 mL
Fecal streptococci	240.5	240.5	cfu/100 mL
<i>Salmonella</i>	2.00	2.00	cfu/100 mL
Total coliform	593.8	593.8	cfu/100 mL
<i>cis</i> -Permethrin	0.004	0.004	mg/L
<i>trans</i> -Permethrin	0.004	0.004	mg/L

^a Baseline concentration of small REND was derived using REND (non-small), since no REND small direct discharge facilities were represented in the detailed survey

Table C-26. Average Baseline Concentration for Rendering (Rend) Indirect Dischargers

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	476.4	1,691	mg/L
Total suspended solids (TSS)	352.6	694.7	mg/L
Hexane extractable material (HEM)	73.95	163.6	mg/L
Fecal coliform bacteria	1,021,164	562,878	cfu/100 mL
Ammonia as nitrogen	98.98	71.87	mg/L
Carbaryl	0.0098	0.0010	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	1,715	720.1	mg/L
Chemical oxygen demand (COD)	2,629	2,887	mg/L
Chloride	542.0	339.9	mg/L
Dissolved biochemical oxygen demand	1,889	635.5	mg/L
Dissolved phosphorus	37.59	19.52	mg/L
Nitrate-nitrite	2.13	18.49	mg/L
Total nitrogen	1,130	611.5	mg/L
Orthophosphate	22.80	22.89	mg/L
Total dissolved solids (TDS)	2,453	1,807	mg/L
Total Kjeldahl nitrogen (TKN)	1,128	1,557	mg/L
Total organic carbon (TOC)	1,258	836.4	mg/L
Total phosphorus	51.07	26.24	mg/L
Total residual chlorine	0.248	0.3226	mg/L
Volatile residue	1,800	1,466	mg/L
Barium	N/A ^a	0.0281	mg/L
Copper	0.0779	0.0095	mg/L
Chromium	0.0500	0.0045	mg/L
Manganese	0.182	0.124	mg/L
Molybdenum	0.0158	0.0036	mg/L
Nickel	0.0067	0.0084	mg/L
Titanium	0.0045	0.0097	mg/L
Vanadium	0.0021	0.0272	mg/L
Zinc	0.323	0.0882	mg/L
<i>Aeromonas</i>	345,000	154,667	cfu/100 mL
<i>Cryptosporidium</i>	42.50	0.1500	cysts/L
<i>E. Coli</i>	1,600,000	1,233,333	cfu/100 mL
Fecal streptococci	1,385,099	1,600,000	cfu/100 mL
<i>Salmonella</i>	N/A	51.64	cfu/100 mL
Total coliform	1,600,000	1,233,333	cfu/100 mL
<i>cis</i> -Permethrin	0.0041	0.0040	mg/L
<i>trans</i> -Permethrin	0.0040	0.0040	mg/L

^a not available

Table C-27. Average Baseline Concentrations for Mixed Poultry/Meat Further Processing (M2)^a
Direct Dischargers

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	8.45	8.45	mg/L
Total suspended solids (TSS)	22.72	22.72	mg/L
Hexane extractable material (HEM)	34.49	34.49	mg/L
Fecal coliform bacteria	50,098	50,098	cfu/100 mL
Ammonia as nitrogen	0.854	0.854	mg/L
Carbaryl	0.001	0.001	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	5.01	5.01	mg/L
Chemical oxygen demand (COD)	65.15	65.15	mg/L
Chloride	838.0	838.0	mg/L
Dissolved biochemical oxygen demand	3.78	3.78	mg/L
Dissolved phosphorus	10.50	10.50	mg/L
Nitrate-nitrite	170.0	170.0	mg/L
Total nitrogen	182.3	182.3	mg/L
Orthophosphate	8.27	8.27	mg/L
Total dissolved solids (TDS)	2,305	2,305	mg/L
Total Kjeldahl nitrogen (TKN)	3.73	3.73	mg/L
Total organic carbon (TOC)	11.02	11.02	mg/L
Total phosphorus	11.70	11.70	mg/L
Total residual chlorine	0.555	0.555	mg/L
Volatile residue	410.8	410.8	mg/L
Barium	0.09816	0.09816	mg/L
Copper	0.01433	0.01433	mg/L
Chromium	0.00473	0.00473	mg/L
Manganese	0.01076	0.01076	mg/L
Molybdenum	0.00529	0.00529	mg/L
Nickel	0.00254	0.00254	mg/L
Titanium	0.00112	0.00112	mg/L
Vanadium	0.00772	0.00772	mg/L
Zinc	0.07507	0.07507	mg/L
<i>Aeromonas</i>	12,728	12,728	cfu/100 mL
<i>Cryptosporidium</i>	0.150	0.150	cysts/L
<i>E. Coli</i>	4,183	4,183	cfu/100 mL
Fecal streptococci	242.7	242.7	cfu/100 mL
<i>Salmonella</i>	8.83	8.83	cfu/100 mL
Total coliform	50,406	50,406	cfu/100 mL
<i>cis</i> -Permethrin	N/A ^b	N/A	
<i>trans</i> -Permethrin	N/A	N/A	

^a Baseline concentration of M2 was derived using average concentrations of P2 (non-small) + R2 (non-small), since no M2 small or non-small direct discharge facilities were represented in the detailed survey

^b not available

Table C-28. Average Baseline Concentration for Mixed Poultry/Meat Further Processing (M2)
Indirect Dischargers

Pollutant of Concern	Small Facility Concentration	Non-Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	2,026	2,201	mg/L
Total suspended solids (TSS)	808.8	531.8	mg/L
Hexane extractable material (HEM)	170.2	98.69	mg/L
Fecal coliform bacteria	960,000	820,000	cfu/100 mL
Ammonia as nitrogen	92.81	41.66	mg/L
Carbaryl	0.0133	0.0092	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	1,702	1,556	mg/L
Chemical oxygen demand (COD)	2,542	1,770	mg/L
Chloride	4,658	5,080	mg/L
Dissolved biochemical oxygen demand	1,151	1,150	mg/L
Dissolved phosphorus	59.70	59.70	mg/L
Nitrate-nitrite	3.71	2.13	mg/L
Total nitrogen	87.17	26.42	mg/L
Orthophosphate	27.23	56.90	mg/L
Total dissolved solids (TDS)	5,907	6,494	mg/L
Total Kjeldahl nitrogen (TKN)	83.68	24.73	mg/L
Total organic carbon (TOC)	599.2	599.2	mg/L
Total phosphorus	80.44	74.54	mg/L
Total residual chlorine	0.822	1.10	mg/L
Volatile residue	1,897	1,897	mg/L
Barium	0.079405	0.0829	mg/L
Copper	0.0934	0.0779	mg/L
Chromium	0.0116	0.0112	mg/L
Manganese	0.0314	0.0293	mg/L
Molybdenum	0.0173	0.0173	mg/L
Nickel	0.0090	0.0071	mg/L
Titanium	0.0071	0.0045	mg/L
Vanadium	0.0029	0.0021	mg/L
Zinc	0.241	0.1587	mg/L
<i>Aeromonas</i>	470,000	345,000	cfu/100 mL
<i>Cryptosporidium</i>	74.38	42.50	cysts/L
<i>E. Coli</i>	1,383,333	1,383,333	cfu/100 mL
Fecal streptococci	1,140,310	1,140,310	cfu/100 mL
<i>Salmonella</i>	2.00	2.00	cfu/100 mL
Total coliform	1,600,000	1,600,000	cfu/100 mL
<i>cis</i> -Permethrin	0.0042	0.0042	mg/L
<i>trans</i> -Permethrin	0.0040	0.0040	mg/L

Table C-29. Average Baseline Concentration for Mixed Poultry/Meat Further Processing and Rendering (M23)^{a, b} Indirect Dischargers

Pollutant of Concern	Small Facility Concentration	Units
5-Day biochemical oxygen demand (BOD ₅)	1,080	mg/L
Total suspended solids (TSS)	2,603	mg/L
Hexane extractable material (HEM)	143.5	mg/L
Fecal coliform bacteria	936,536	cfu/100 mL
Ammonia as nitrogen	129.1	mg/L
Carbaryl	0.006433296	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	1,202	mg/L
Chemical oxygen demand (COD)	2,104	mg/L
Chloride	1,294	mg/L
Dissolved biochemical oxygen demand	539.4	mg/L
Dissolved phosphorus	31.86	mg/L
Nitrate-nitrite	17.15	mg/L
Total nitrogen	128.9	mg/L
Orthophosphate	14.75	mg/L
Total dissolved solids (TDS)	2,494	mg/L
Total Kjeldahl nitrogen (TKN)	119.2	mg/L
Total organic carbon (TOC)	338.2	mg/L
Total phosphorus	53.11	mg/L
Total residual chlorine	0.164	mg/L
Volatile residue	3,386	mg/L
Barium	N/A ^c	
Copper	0.0408	mg/L
Chromium	0.0171	mg/L
Manganese	0.227	mg/L
Molybdenum	0.0069	mg/L
Nickel	0.0126	mg/L
Titanium	0.0022	mg/L
Vanadium	0.0013	mg/L
Zinc	0.316	mg/L
<i>Aeromonas</i>	475,214	cfu/100 mL
<i>Cryptosporidium</i>	22.17	cysts/L
<i>E. Coli</i>	989,737	cfu/100 mL
Fecal streptococci	388,624	cfu/100 mL
<i>Salmonella</i>	N/A	
Total coliform	1,023,422	cfu/100 mL
<i>cis</i> -Permethrin	0.0022	mg/L
<i>trans</i> -Permethrin	0.0022	mg/L

^a Baseline concentration of M23 was derived using average concentrations of P23 (small) + R23 (small) since no M23 small indirect discharge facilities were represented in the detailed survey

^b No non-small indirect discharge facilities exist for Mixed Poultry/Red Meat Further Processing/Rendering (M23).

^c not available

Table C-30. Data to Derive Technology Option Pollutant Concentrations for First Processing, Further Processing, and Rendering Effluent Wastewaters

BAT-1 Technology Option for Meat Facilities			
	First Processing (R1) Effluent Concentrations	Further Processing (R2) Effluent Concentrations	Rendering (R3) Effluent Concentrations
Option Average For All Pollutants Except Ammonia, Nitrate/Nitrite, TKN	R1 of BAT-2	R2 of BAT-2	R3 of BAT-2
Option Average For Ammonia, Nitrate/Nitrite, TKN	See methodology described in Section 9	See methodology described in Section 9	See methodology described in Section 9

R1 of BAT-2 = average BAT-2 treated pollutant concentration of meat first processing wastewater

R2 of BAT-2 = average BAT-2 treated pollutant concentration of meat further processing wastewater

R3 of BAT-2 = average BAT-2 treated pollutant concentration of meat rendering wastewater

Table C-31. Data and Equations to Derive Technology Option Pollutant Concentrations for First Processing, Further Processing, and Rendering Effluent Wastewaters

Facility	First Processing (R1)		Further Processing (R2)		Rendering (R3)		Total Flow (MGD)
	Effluent Concentrations	Flow (MGD)	Effluent Concentrations	Flow (MGD)	Effluent Concentrations	Flow (MGD)	
6440	$[(\text{effluent@6440} \cdot \text{total flow of 6440}) - (\text{R3 concentration of 6440} \cdot \text{R3 flow of 6440})] / (\text{R1 flow of 6440})$	0.83	N/A	N/A	(a) • (rendering influent@6447)	0.52	1.35
6441	$[(\text{effluent@6441} \cdot \text{total flow of 6441}) - (\text{R3 concentration of 6441} \cdot \text{R3 flow of 6441})] / (\text{R1 flow of 6441})$	1.31	N/A	N/A	(a) • (rendering influent@6447)	0.48	1.79
6442	$[(\text{effluent@6442} \cdot \text{total flow of 6442}) - (\text{R3 concentration of 6442} \cdot \text{R3 flow of 6442})] / (\text{R1 flow of 6442})$	1.53	N/A	N/A	(a) • (rendering influent@6447)	0.42	1.95
6447	$[(\text{effluent@6447} \cdot \text{total flow of 6447}) - (\text{R2 concentration of 6447} \cdot \text{R2 flow of 6447}) - (\text{R3 concentration of 6447} \cdot \text{R3 flow of 6447})] / (\text{R1 flow of 6447})$	0.51	(a) • (further processing influent@6335)	0.07	(a) • (rendering influent@6447)	0.15	0.73
Option Average	Average of R1 concentrations for facilities 6440, 6441, 6442, and 6447		R2 concentration for 6447		Average of R3 concentrations for 6440, 6441, 6442, and 6447		

(a) = (1 - removal fraction) where the removal fraction is the average removal fraction of sampling episodes 6440, 6441, 6442, and 6447.

Table C-32. Data and Equations to Derive Technology Option Pollutant Concentrations for First Processing, Further Processing, and Rendering Effluent Wastewaters

Facility	First Processing (R1)		Further Processing (R2)		Rendering (R3)		Total Flow (MGD)
	Effluent Concentrations	Flow (MGD)	Effluent Concentrations	Flow (MGD)	Effluent Concentrations	Flow (MGD)	
6335	$[(\text{reuse water effluent@6335} \cdot \text{total flow}) - (\text{R2 concentration} \cdot \text{R2 flow}) - (\text{R3 concentration} \cdot \text{R3 flow})] / (\text{R1 flow})$	0.17	(b) • (further processing influent@6335)	0.45	(b) • (rendering influent@6447)	0.13	0.75
Option Average	R1 concentration for 6335		R2 concentration for 6335		R3 concentrations for 6335		

(b) = 1 - removal fraction of sampling episode 6335 (through reuse water effluent)

Table C-33. Data and Equations to Derive Technology Option Pollutant Concentrations for First Processing, Further Processing, and Rendering Effluent Wastewaters

Option Average	First Processing (R1)	Further Processing (R2)	Rendering (R3)
	Effluent Concentrations	Effluent Concentrations	Effluent Concentrations
	(c) • (R1 of BAT-3)	(c) • (R2 of BAT-3)	(c) • (R3 of BAT-3)

(c) = (1 - removal fraction between poultry BAT-3 and BAT-4 pollutant averages), where the “removal fraction between poultry BAT-3 and BAT-4 pollutant averages” is the removal fraction between the poultry BAT-3 option pollutant average concentration and corresponding poultry BAT-4 option average concentration. The removal fraction for each pollutant and subcategory is calculated as follows:

Removal fraction = $[\text{BAT-3 poultry concentration} - \text{BAT-4 poultry concentration}] / [\text{BAT-3 poultry concentration}]$

R1 of BAT-3 = average BAT-3 treated pollutant concentration of meat first processing wastewater

R2 of BAT-3 = average BAT-3 treated pollutant concentration of meat further processing wastewater

R3 of BAT-3 = average BAT-3 treated pollutant concentration of meat rendering wastewater

Table C-34. Data and Equations to Derive Technology Option Pollutant Concentrations for First Processing, Further Processing, and Rendering Effluent Wastewaters

BAT-1 Technology Option for Poultry Facilities

	First Processing (P1) Effluent Concentrations	Further Processing (P2) Effluent Concentrations	Rendering (P3) Effluent Concentrations
Option Average For All Pollutants Except Ammonia, Nitrate/Nitrite, TKN	P1 of BAT-2	P2 of BAT-2	P3 of BAT-2
Option Average For Ammonia, Nitrate/Nitrite, TKN	See methodology described in Section 9	See methodology described in Section 9	See methodology described in Section 9

P1 of BAT-2 = average BAT-2 treated pollutant concentration of poultry first processing wastewater
 P2 of BAT-2 = average BAT-2 treated pollutant concentration of poultry further processing wastewater
 P3 of BAT-2 = average BAT-2 treated pollutant concentration of poultry rendering wastewater

Table C-35. Data and Equations to Derive Technology Option Pollutant Concentrations for First Processing, Further Processing, and Rendering Effluent Wastewaters

BAT-2 Technology Option for Poultry Facilities

Facility	First Processing (P1) Effluent Concentrations	Further Processing (P2) Effluent Concentrations	Rendering (P3) Effluent Concentrations
6445	effluent@6445	N/A	N/A
Option Average	P1 for 6445	A1	B1

A1 = average of [(further processing influent@6443) • (1 - removal fraction of 6445)] and [(further processing influent@6444) • (1 - removal fraction of 6445)]
 B1 = (rendering influent@6448) • (1 - removal fraction of 6445)

Table C-36. Data and Equations to Derive Technology Option Pollutant Concentrations for First Processing, Further Processing, and Rendering Effluent Wastewaters

BAT-3 Technology Option for Poultry Facilities

	First Processing (P1) Effluent Concentrations	Further Processing (P2) Effluent Concentrations	Rendering (P3) Effluent Concentrations
Option Average	$(1 - Z) \cdot (P1 \text{ of BAT-2})$	$(1 - Z) \cdot (P2 \text{ of BAT-2})$	$(1 - Z) \cdot (P3 \text{ of BAT-2})$

'Z' values were calculated for each wastewater stream (P1, P2, or P3) as follows:

$$Z (P1, P2, \text{ or } P3) = [\text{BAT-2 meat concentration (R1, R2, or R3)} - \text{BAT-3 meat concentration (R1, R2, or R3)}] / [\text{BAT-2 meat concentration (R1, R2, or R3)}]$$

P1 of BAT-2 = average BAT-2 treated pollutant concentration of poultry first processing wastewater

P2 of BAT-2 = average BAT-2 treated pollutant concentration of poultry further processing wastewater

P3 of BAT-2 = average BAT-2 treated pollutant concentration of poultry rendering wastewater

Table C-37. Data and Equations to Derive Technology Option Pollutant Concentrations for First Processing, Further Processing, and Rendering Effluent Wastewaters

BAT-4 Technology Option for Poultry Facilities

Facility	First Processing (P1) Effluent Concentrations	Further Processing (P2) Effluent Concentrations	Rendering (P3) Effluent Concentrations
6304	effluent prior to filter@6304	N/A	N/A
Option Average	P1 for 6304	A2	B2

A2 = average of [(influent@6443) • (1 - removal fraction of 6304 prior to filter)] and [(influent@6444) • (1 - removal fraction of 6304 prior to filter)]

B2 = (influent@6448) • (1 - removal fraction of 6304 prior to filter)

Table C-38. Data and Equations to Derive Technology Option Pollutant Concentrations for First Processing, Further Processing, and Rendering Effluent Wastewaters

BAT-5 Technology Option for Poultry Facilities				
Facility	First Processing (P1) Effluent Concentrations	Further Processing (P2) Effluent Concentrations	Rendering (P3) Effluent Concentrations	
6304	effluent through filter@6304	N/A	N/A	
Option Average	P1 for 6304	A3	B3	

A3 = average of [(further processing influent@6443) • (1 - removal fraction of 6304 through filter)] and [(further processing influent@6444) • (1 - removal fraction of 6304 through filter)]

B3 = (rendering influent@6448) • (1 - removal fraction of 6304 through filter)

Table C-39. Data and Equations to Derive Technology Option Pollutant Concentrations for First Processing, Further Processing, and Rendering Effluent Wastewaters

PSES-1 Technology Option for Meat Facilities						
Facility	First Processing (R1)		Further Processing (R2)		Rendering (R3)	
	Effluent Concentrations	Flow (MGD)	Effluent Concentrations	Flow (MGD)	Effluent Concentrations	Flow (MGD)
6335	((effluent ¹ @6335 • (total flow)) - ([R2] • (R2 flow)) - ([R3] • (R3 flow))) / (R1 flow)	0.17	(e) • (further processing influent@6335)	0.45	(e) • (rendering influent@6447)	0.13
Option Average	R1 for 6335		R2 for 6335		R3 for 6335	

(e) = 1 - removal fraction @ 6335

¹EPA used effluent data from the sampling point located after DAF and equalization of the treatment train to represent the performance of the PSES-1 technology option.

Table C-40. Data and Equations to Derive Technology Option Pollutant Concentrations for First Processing, Further Processing, and Rendering Effluent Wastewaters

PSES-2 Technology Option for Meat Facilities

	First Processing (R1) Effluent Concentrations	Further Processing (R2) Effluent Concentrations	Rendering (R3) Effluent Concentrations
Option Average For All Pollutants Except Microbials	R1 of BAT-2	R2 of BAT-2	R3 of BAT-2
Option Average For Microbials	R1 of PSES-1	R2 of PSES-1	R3 of PSES-1

R1 of BAT-2 = average BAT-2 treated pollutant concentration of meat first processing wastewater
 R2 of BAT-2 = average BAT-2 treated pollutant concentration of meat further processing wastewater
 R3 of BAT-2 = average BAT-2 treated pollutant concentration of meat rendering wastewater
 R1 of PSES-1 = average PSES-1 treated pollutant concentration of meat first processing wastewater
 R2 of PSES-1 = average PSES-1 treated pollutant concentration of meat further processing wastewater
 R3 of PSES-1 = average PSES-1 treated pollutant concentration of meat rendering wastewater

Table C-41. Data and Equations to Derive Technology Option Pollutant Concentrations for First Processing, Further Processing, and Rendering Effluent Wastewaters

PSES-3 Technology Option for Meat Facilities

	First Processing (R1) Effluent Concentrations	Further Processing (R2) Effluent Concentrations	Rendering (R3) Effluent Concentrations
Option Average For All Pollutants Except Microbials	R1 of BAT-3	R2 of BAT-3	R3 of BAT-3
Option Average For Microbials	effluent ² @6335	effluent ² @6335	effluent ² @6335

R1 of BAT-3 = average BAT-3 treated pollutant concentration of meat first processing wastewater
 R2 of BAT-3 = average BAT-3 treated pollutant concentration of meat further processing wastewater
 R3 of BAT-3 = average BAT-3 treated pollutant concentration of meat rendering wastewater
² EPA used effluent data from the sampling point located prior to disinfection.

Table C-42. Data and Equations to Derive Technology Option Pollutant Concentrations for First Processing, Further Processing, and Rendering Effluent Wastewaters

PSES-4 Technology Option for Meat Facilities			
	First Processing (R1) Effluent Concentrations	Further Processing (R2) Effluent Concentrations	Rendering (R3) Effluent Concentrations
Option Average For All Pollutants Except Microbials	R1 of BAT-4	R2 of BAT-4	R3 of BAT-4
Option Average For Microbials	effluent ² @6335	effluent ² @6335	effluent ² @6335

R1 of BAT-4 = average BAT-4 treated pollutant concentration of meat first processing wastewater
 R2 of BAT-4 = average BAT-4 treated pollutant concentration of meat further processing wastewater
 R3 of BAT-4 = average BAT-4 treated pollutant concentration of meat rendering wastewater
² EPA used effluent data from the sampling point located prior to disinfection

Table C-43. Data and Equations to Derive Technology Option Pollutant Concentrations for First Processing, Further Processing, and Rendering Effluent Wastewaters

PSES-1 Technology Option for Poultry Facilities						
Facility	First Processing (P1)		First Processing (P2)		Rendering (P3)	
	Effluent Concentrations	Flow (MGD)	Effluent Concentrations	Flow (MGD)	Effluent Concentrations	Flow (MGD)
6443	[(effluent@6443 • total flow of 6443) - (P2 concentration of 6443 • P2 flow of 6443)] / (P1 flow)	0.91	(f) • (further processing influent@6443)	0.84	N/A	N/A
6444	[(effluent@6444 • total flow of 6444) - (P2 concentration of 6444 • P2 flow of 6444)] / (P1 flow)	0.53	(f) • (further processing influent@6444)	0.02	N/A	N/A
Option Average	Average of P1 for 6443 and 6444		Average of P2 for 6443 and 6444		M	

(f) = (1 - removal fraction of 6443)

M = (rendering influent@6448) • (1 - removal fraction of 6443)

Table C-44. Data and Equations to Derive Technology Option Pollutant Concentrations for First Processing, Further Processing, and Rendering Effluent Wastewaters

PSES-2 Technology Option for Poultry Facilities

	First Processing (P1) Effluent Concentrations	First Processing (P2) Effluent Concentrations	Rendering (P3) Effluent Concentrations
Options Average For All Pollutants Except Microbials	P1 of BAT-2	P2 of BAT-2	P3 of BAT-2
Options Average For Microbials	effluent after DAF@6304	effluent after DAF@6304	effluent after DAF@6304

P1 of BAT-2 = average BAT-2 treated pollutant concentration of poultry first processing wastewater
 P2 of BAT-2 = average BAT-2 treated pollutant concentration of poultry further processing wastewater
 P3 of BAT-2 = average BAT-2 treated pollutant concentration of poultry rendering wastewater

Table C-45. Data and Equations to Derive Technology Option Pollutant Concentrations for First Processing, Further Processing, and Rendering Effluent Wastewaters

PSES-3 Technology Option for Poultry Facilities

	First Processing (P1) Effluent Concentrations	First Processing (P2) Effluent Concentrations	Rendering (P3) Effluent Concentrations
Options Average For All Pollutants Except Microbials	P1 of BAT-3	P2 of BAT-3	P3 of BAT-3
Options Average For Microbials	effluent@6443	effluent@6443	effluent@6443

P1 of BAT-3 = average BAT-3 treated pollutant concentration of poultry first processing wastewater
 P2 of BAT-3 = average BAT-3 treated pollutant concentration of poultry further processing wastewater
 P3 of BAT-3 = average BAT-3 treated pollutant concentration of poultry rendering wastewater

Table C-46. Data and Equations to Derive Technology Option Pollutant Concentrations for First Processing, Further Processing, and Rendering Effluent Wastewaters

PSES-4 Technology Option for Poultry Facilities			
	First Processing (P1) Effluent Concentrations	First Processing (P2) Effluent Concentrations	Rendering (P3) Effluent Concentrations
Options Average For All Pollutants Except Microbials	P1 of BAT-4	P2 of BAT-4	P3 of BAT-4
Options Average For Microbials	effluent@6443	effluent@6443	effluent@6443

P1 of BAT-4 = average BAT-4 treated pollutant concentration of poultry first processing wastewater
 P2 of BAT-4 = average BAT-4 treated pollutant concentration of poultry further processing wastewater
 P3 of BAT-4 = average BAT-4 treated pollutant concentration of poultry rendering wastewater

**Table C-47. Average Technology Option Concentrations for Meat First Processing (R1)
Direct Dischargers**

Pollutant of Concern	BAT 1	BAT 2	BAT 3	BAT 4	Units
5-Day biochemical oxygen demand (BOD ₅)	6.28	6.28	6.17	6.17	mg/L
Total suspended solids (TSS)	24.28	24.28	14.75	14.75	mg/L
Hexane extractable material (HEM)	7.28	7.28	14.28	3.31	mg/L
Fecal coliform bacteria	343.0	343.0	47.61	47.61	cfu/100 mL
Ammonia as nitrogen	5.03	0.408	15.40	12.06	mg/L
Carbaryl	N/A ^a	N/A	N/A	N/A	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	5.62	5.62	9.44	9.44	mg/L
Chemical oxygen demand (COD)	62.01	62.01	41.98	41.98	mg/L
Chloride	733.9	733.9	N/A	774.3	mg/L
Dissolved biochemical oxygen demand	2.19	2.19	1.38	1.38	mg/L
Dissolved phosphorus	17.46	17.46	0.340	0.340	mg/L
Nitrate-nitrite	240.9	245.5	22.66	5.65	mg/L
Total nitrogen	239.3	239.3	30.62	15.12	mg/L
Orthophosphate	17.53	17.53	11.73	2.92	mg/L
Total dissolved solids (TDS)	2,964	2,964	N/A	2,162	mg/L
Total Kjeldahl nitrogen (TKN)	7.07	2.45	7.65	5.82	mg/L
Total organic carbon (TOC)	1.54	1.54	N/A	N/A	mg/L
Total phosphorus	19.97	19.97	6.10	6.10	mg/L
Total residual chlorine	0.336	0.336	58.18	58.18	mg/L
Volatile residue	273.5	273.5	74.07	74.07	mg/L
Barium	— ^b	—	—	—	
Copper	0.0023	0.0023	0.0030	0.0015	mg/L
Chromium	0.0019	0.0019	0.0066	0.0066	mg/L
Manganese	0.0507	0.0507	0.1326	0.1326	mg/L
Molybdenum	0.0068	0.0068	0.0076	0.0024	mg/L
Nickel	0.0031	0.0031	0.0312	0.0312	mg/L
Titanium	0.0015	0.0015	0.0039	0.0039	mg/L
Vanadium	0.0058	0.0058	0.0036	0.0012	mg/L
Zinc	0.0541	0.0541	0.0228	0.0228	mg/L
<i>Aeromonas</i>	1,235	1,235	6.50	6.50	cfu/100 mL
<i>Cryptosporidium</i>	N/A	N/A	N/A	N/A	
<i>E. Coli</i>	228.3	228.3	3.90	3.90	cfu/100 mL
Fecal streptococci	30.98	30.98	N/A	1.82	cfu/100 mL
<i>Salmonella</i>	—	—	—	—	
Total coliform	400.0	400.0	26.53	2.45	cfu/100 mL
<i>cis</i> -Permethrin	N/A	N/A	N/A	N/A	
<i>trans</i> -Permethrin	N/A	N/A	N/A	N/A	

^a not available^b not applicable

Table C-48. Average Technology Option Concentrations for Meat First/Further Processing (R12)^a Direct Dischargers

Pollutant of Concern	BAT 1	BAT 2	BAT 3	BAT 4	Units
5-Day biochemical oxygen demand (BOD ₅)	3.31	3.31	3.25	3.25	mg/L
Total suspended solids (TSS)	12.78	12.78	7.77	7.77	mg/L
Hexane extractable material (HEM)	3.84	3.84	7.52	1.74	mg/L
Fecal coliform bacteria	180.6	180.6	25.07	25.07	cfu/100 mL
Ammonia as nitrogen	2.65	0.215	8.11	6.35	mg/L
Carbaryl	N/A ^b	N/A	N/A	N/A	
Carbonaceous biochemical oxygen demand (CBOD)	2.96	2.96	4.97	4.97	mg/L
Chemical oxygen demand (COD)	32.65	32.65	22.11	22.11	mg/L
Chloride	386.5	386.5	N/A	407.8	mg/L
Dissolved biochemical oxygen demand	1.16	1.16	0.725	0.725	mg/L
Dissolved phosphorus	9.20	9.20	0.179	0.179	mg/L
Nitrate-nitrite	126.8	129.3	11.93	N/A	mg/L
Total nitrogen	126.0	126.0	16.13	7.96	mg/L
Orthophosphate	9.23	9.23	6.18	1.54	mg/L
Total dissolved solids (TDS)	1,561	1,561	N/A	1,139	mg/L
Total Kjeldahl nitrogen (TKN)	3.72	1.29	4.03	3.07	mg/L
Total organic carbon (TOC)	0.811	0.811	N/A	N/A	mg/L
Total phosphorus	10.52	10.52	3.21	3.21	mg/L
Total residual chlorine	0.177	0.177	30.64	30.64	mg/L
Volatile Residue	144.0	144.0	39.01	39.01	mg/L
Barium	— ^c	—	—	—	
Copper	0.0012	0.0012	0.0016	0.0008	mg/L
Chromium	0.0010	0.0010	0.0035	0.0035	mg/L
Manganese	0.0267	0.0267	0.0698	0.0698	mg/L
Molybdenum	0.0036	0.0036	0.0040	0.0013	mg/L
Nickel	0.0016	0.0016	0.0164	0.0164	mg/L
Titanium	0.0008	0.0008	0.0020	0.0020	mg/L
Vanadium	0.0031	0.0031	0.0019	0.0006	mg/L
Zinc	0.0285	0.0285	0.0120	0.0120	mg/L
<i>Aeromonas</i>	650.1	650.1	3.42	3.42	cfu/100 mL
<i>Cryptosporidium</i>	N/A	N/A	N/A	N/A	
<i>E. Coli</i>	120.2	120.2	2.05	2.05	cfu/100 mL
Fecal streptococci	16.31	16.31	N/A	0.960	cfu/100 mL
<i>Salmonella</i>	—	—	—	—	
Total coliform	210.6	210.6	13.97	1.29	cfu/100 mL
<i>cis</i> -Permethrin	N/A	N/A	N/A	N/A	
<i>trans</i> -Permethrin	N/A	N/A	N/A	N/A	

^a Data for this category were derived using methods described in Section 9.2.3^b not available^c not applicable

Table C-49. Average Technology Option Concentrations for Meat First Processing and Rendering (R13)^a Direct Dischargers

Pollutant of Concern	BAT 1	BAT 2	BAT 3	BAT 4	Units
5-Day biochemical oxygen demand (BOD ₅)	6.86	6.86	7.07	7.07	mg/L
Total suspended solids (TSS)	16.53	16.53	8.73	8.73	mg/L
Hexane extractable material (HEM)	7.67	7.67	10.41	2.02	mg/L
Fecal coliform bacteria	295.9	295.9	34.08	34.08	cfu/100 mL
Ammonia as nitrogen	2.70	0.797	8.74	6.99	mg/L
Carbaryl	N/A ^b	N/A	N/A	N/A	
Carbonaceous biochemical oxygen demand (CBOD)	4.99	4.99	10.48	10.48	mg/L
Chemical oxygen demand (COD)	49.86	49.86	40.69	40.69	mg/L
Chloride	479.3	479.3	N/A	533.0	mg/L
Dissolved biochemical oxygen demand	7.11	7.11	3.97	3.97	mg/L
Dissolved phosphorus	13.86	13.86	1.82	1.77	mg/L
Nitrate-nitrite	129.1	128.7	12.03	2.99	mg/L
Total nitrogen	138.9	138.9	18.04	8.39	mg/L
Orthophosphate	14.14	14.14	7.58	2.84	mg/L
Total dissolved solids (TDS)	2,517	2,517	N/A	2,301	mg/L
Total Kjeldahl nitrogen (TKN)	3.79	4.18	4.52	3.57	mg/L
Total organic carbon (TOC)	23.33	23.33	13.37	13.83	mg/L
Total phosphorus	14.38	14.38	4.74	4.74	mg/L
Total residual chlorine	0.299	0.299	30.65	30.65	mg/L
Volatile Residue	257.7	257.7	124.1	124.1	mg/L
Barium	— ^c	—	—	—	
Copper	0.0027	0.0027	0.0020	0.0013	mg/L
Chromium	0.0010	0.0010	0.0036	0.0036	mg/L
Manganese	0.0303	0.0303	0.0785	0.0785	mg/L
Molybdenum	0.0039	0.0039	0.0045	0.0018	mg/L
Nickel	0.0019	0.0019	0.0182	0.0182	mg/L
Titanium	0.0010	0.0010	0.0024	0.0024	mg/L
Vanadium	0.0034	0.0034	0.0020	0.0008	mg/L
Zinc	0.0352	0.0352	0.0143	0.0143	mg/L
<i>Aeromonas</i>	1,377	1,377	3.58	3.58	cfu/100 mL
<i>Cryptosporidium</i>	N/A	N/A	N/A	N/A	
<i>E. Coli</i>	195.8	195.8	2.78	2.78	cfu/100 mL
Fecal streptococci	36.01	36.01	0.111	5.37	cfu/100 mL
<i>Salmonella</i>	—	—	—	—	
Total coliform	326.4	326.4	21.79	4.15	cfu/100 mL
<i>cis</i> -Permethrin	N/A	N/A	N/A	N/A	
<i>trans</i> -Permethrin	N/A	N/A	N/A	N/A	

^a Data for this category were derived using methods described in Section 9.2.3

^b not available

^c not applicable

Table C-50. Average Technology Option Concentrations for Meat First/Further Processing and Rendering (R123)^a Direct Dischargers

Pollutant of Concern	BAT 1	BAT 2	BAT 3	BAT 4	Units
5-Day biochemical oxygen demand (BOD ₅)	5.59	5.59	5.80	5.80	mg/L
Total suspended solids (TSS)	12.35	12.35	6.23	6.23	mg/L
Hexane extractable material (HEM)	6.38	6.38	7.97	1.46	mg/L
Fecal coliform bacteria	253.2	253.2	27.26	27.26	cfu/100 mL
Ammonia as nitrogen	1.86	0.600	6.01	4.82	mg/L
Carbaryl	N/A ^b	N/A	N/A	N/A	
Carbonaceous biochemical oxygen demand (CBOD)	4.01	4.01	8.80	8.80	mg/L
Chemical oxygen demand (COD)	39.08	39.08	33.23	33.23	mg/L
Chloride	1,910	1,910	N/A	2,489	mg/L
Dissolved biochemical oxygen demand	6.95	6.95	3.85	3.85	mg/L
Dissolved phosphorus	18.11	18.11	4.26	4.13	mg/L
Nitrate-nitrite	88.79	88.23	8.66	N/A	mg/L
Total nitrogen	96.11	96.11	12.52	5.91	mg/L
Orthophosphate	12.55	12.55	6.00	2.70	mg/L
Total dissolved solids (TDS)	3,889	3,889	N/A	4,201	mg/L
Total Kjeldahl nitrogen (TKN)	2.61	3.17	3.13	2.48	mg/L
Total organic carbon (TOC)	21.96	21.96	13.03	13.34	mg/L
Total phosphorus	16.48	16.48	5.86	5.86	mg/L
Total residual chlorine	0.255	0.255	20.92	20.92	mg/L
Volatile Residue	240.5	240.5	133.0	133.0	mg/L
Barium	— ^c	—	—	—	
Copper	0.0026	0.0026	0.0016	0.0011	mg/L
Chromium	0.00078	0.00078	0.0027	0.0026	mg/L
Manganese	0.0210	0.0210	0.0543	0.0543	mg/L
Molybdenum	0.0043	0.0043	0.0055	0.0037	mg/L
Nickel	0.0015	0.0015	0.0138	0.0138	mg/L
Titanium	0.00079	0.00079	0.0018	0.0018	mg/L
Vanadium	0.0026	0.0026	0.0015	0.0007	mg/L
Zinc	0.0287	0.0287	0.0113	0.0113	mg/L
<i>Aeromonas</i>	2,030	2,030	2.69	2.69	cfu/100 mL
<i>Cryptosporidium</i>	N/A	N/A	N/A	N/A	
<i>E. Coli</i>	181.6	181.6	2.36	2.36	cfu/100 mL
Fecal streptococci	36.61	36.61	2.78	6.35	cfu/100 mL
<i>Salmonella</i>	—	—	—	—	
Total coliform	323.9	323.9	21.70	5.32	cfu/100 mL
<i>cis</i> -Permethrin	N/A	N/A	N/A	N/A	
<i>trans</i> -Permethrin	N/A	N/A	N/A	N/A	

^a Data for this category were derived using methods described in Section 9.2.3^b not available^c not applicable

**Table C-51. Average Technology Option Concentrations for Meat Further Processing (R2)
Direct Dischargers**

Pollutant of Concern	BAT 1	BAT 2	BAT 3	BAT 4	Units
5-Day biochemical oxygen demand (BOD ₅)	2.89	2.89	3.11	3.11	mg/L
Total suspended solids (TSS)	3.47	3.47	0.912	0.912	mg/L
Hexane extractable material (HEM)	3.65	3.65	2.78	0.27	mg/L
Fecal coliform bacteria	162.4	162.4	12.78	12.78	cfu/100 mL
Ammonia as nitrogen	0.0639	0.183	0.211	0.211	mg/L
Carbaryl	N/A ^a	N/A	N/A	N/A	
Carbonaceous biochemical oxygen demand (CBOD)	1.94	1.94	5.24	5.24	mg/L
Chemical oxygen demand (COD)	16.17	16.17	17.38	17.38	mg/L
Chloride	4,952	4,952	6,674	6,645	mg/L
Dissolved biochemical oxygen demand	6.59	6.59	3.59	3.59	mg/L
Dissolved phosphorus	27.15	27.15	9.44	9.16	mg/L
Nitrate-nitrite	3.06	2.13	1.51	0.27	mg/L
Total nitrogen	5.21	5.21	0.769	0.631	mg/L
Orthophosphate	9.16	9.16	2.65	2.42	mg/L
Total dissolved solids (TDS)	6,803	6,803	8,238	8,238	mg/L
Total Kjeldahl nitrogen (TKN)	0.0897	1.02	0.182	0.182	mg/L
Total organic carbon (TOC)	19.07	19.07	12.29	12.29	mg/L
Total phosphorus	20.94	20.94	8.23	8.23	mg/L
Total residual chlorine	0.161	0.161	0.248	0.248	mg/L
Volatile Residue	203.98	203.98	151.99	151.99	mg/L
Barium	— ^b	—	—	—	
Copper	0.0022	0.0022	0.00069	0.00069	mg/L
Chromium	0.00023	0.00023	0.00084	0.00050	mg/L
Manganese	0.0013	0.0013	0.0031	0.0031	mg/L
Molybdenum	0.0050	0.0050	0.0077	0.0077	mg/L
Nickel	0.00070	0.00070	0.0046	0.0046	mg/L
Titanium	0.00024	0.00024	0.00037	0.00037	mg/L
Vanadium	0.00091	0.00091	0.00042	0.00042	mg/L
Zinc	0.0147	0.0147	0.0050	0.0050	mg/L
<i>Aeromonas</i>	3,419	3,419	0.817	0.817	cfu/100 mL
<i>Cryptosporidium</i>	N/A	N/A	N/A	N/A	
<i>E. Coli</i>	151.5	151.5	1.46	1.46	cfu/100 mL
Fecal streptococci	37.89	37.89	8.45	8.45	cfu/100 mL
<i>Salmonella</i>	—	—	—	—	
Total coliform	318.6	318.6	21.50	7.81	cfu/100 mL
<i>cis</i> -Permethrin	N/A	N/A	N/A	N/A	
<i>trans</i> -Permethrin	N/A	N/A	N/A	N/A	

^a not available^b not applicable

Table C-52. Average Technology Option Concentrations for Meat Further Processing and Rendering (R23)^a Direct Dischargers

Pollutant of Concern	BAT 1	BAT 2	BAT 3	BAT 4	Units
5-Day biochemical oxygen demand (BOD ₅)	5.21	5.21	5.60	5.60	mg/L
Total suspended solids (TSS)	5.76	5.76	1.51	1.51	mg/L
Hexane extractable material (HEM)	5.89	5.89	4.48	0.442	mg/L
Fecal coliform bacteria	203.5	203.5	16.02	16.02	cfu/100 mL
Ammonia as nitrogen	0.0987	0.707	0.816	0.816	mg/L
Carbaryl	N/A ^b	N/A	N/A	N/A	
Carbonaceous biochemical oxygen demand (CBOD)	3.13	3.13	8.45	8.45	mg/L
Chemical oxygen demand (COD)	26.41	26.41	28.39	28.39	mg/L
Chloride	2,560	2,560	3,451	3,436	mg/L
Dissolved biochemical oxygen demand	9.57	9.57	5.21	5.21	mg/L
Dissolved phosphorus	18.47	18.47	6.42	6.23	mg/L
Nitrate-nitrite	4.73	1.30	0.923	N/A	mg/L
Total nitrogen	16.96	16.96	2.51	0.815	mg/L
Orthophosphate	9.79	9.79	2.83	2.58	mg/L
Total dissolved solids (TDS)	4,399	4,399	5,327	5,327	mg/L
Total Kjeldahl nitrogen (TKN)	0.139	3.57	0.636	0.636	mg/L
Total organic carbon (TOC)	33.26	33.26	21.44	21.44	mg/L
Total phosphorus	14.55	14.55	5.72	5.72	mg/L
Total residual chlorine	0.210	0.210	0.324	0.324	mg/L
Volatile Residue	222.3	222.3	165.6	165.6	mg/L
Barium	— ^c	—	—	—	
Copper	0.0027	0.0027	0.00084	0.00084	mg/L
Chromium	0.00018	0.00018	0.00064	0.00038	mg/L
Manganese	0.0046	0.0046	0.0111	0.0111	mg/L
Molybdenum	0.0028	0.0028	0.0044	0.0044	mg/L
Nickel	0.00065	0.00065	0.0042	0.0042	mg/L
Titanium	0.00037	0.00037	0.00058	0.00058	mg/L
Vanadium	0.00081	0.00081	0.00037	0.00037	mg/L
Zinc	0.0146	0.0146	0.0050	0.0050	mg/L
<i>Aeromonas</i>	2,470	2,470	0.590	0.590	cfu/100 mL
<i>Cryptosporidium</i>	N/A	N/A	N/A	N/A	
<i>E. Coli</i>	155.8	155.8	1.50	1.50	cfu/100 mL
Fecal streptococci	39.72	39.72	8.86	8.86	cfu/100 mL
<i>Salmonella</i>	—	—	—	—	
Total coliform	281.9	281.9	19.02	6.91	cfu/100 mL
<i>cis</i> -Permethrin	N/A	N/A	N/A	N/A	
<i>trans</i> -Permethrin	N/A	N/A	N/A	N/A	

^a Data for this category were derived using methods described in Section 9.2.3^b not available^c not applicable

Table C-53. Average Technology Option Concentrations for Meat First Processing (R1) Indirect Dischargers

Pollutant of Concern	PSES 1	PSES 2	PSES 3	PSES 4	Units
5-Day biochemical oxygen demand (BOD ₅)	1,697	6.28	6.17	6.17	mg/L
Total suspended solids (TSS)	966.7	24.28	14.75	14.75	mg/L
Hexane extractable material (HEM)	39.01	7.28	14.28	3.31	mg/L
Fecal coliform bacteria	2,530,020	2,530,020	7,328	7,328	cfu/100 mL
Ammonia as nitrogen	1,079	0.408	15.40	12.06	mg/L
Carbaryl	N/A ^a	N/A	N/A	N/A	
Carbonaceous biochemical oxygen demand (CBOD)	1,392	5.62	9.44	9.44	mg/L
Chemical oxygen demand (COD)	2,812	62.01	41.98	41.98	mg/L
Chloride	N/A	733.9	N/A	774.3	mg/L
Dissolved biochemical oxygen demand	381.52	2.19	1.38	1.38	mg/L
Dissolved phosphorus	1.51	17.46	0.340	0.340	mg/L
Nitrate-nitrite	0.324	245.5	22.66	5.65	mg/L
Total nitrogen	564.9	239.3	30.62	15.12	mg/L
Orthophosphate	36.05	17.53	11.73	2.92	mg/L
Total dissolved solids (TDS)	N/A	2,964	N/A	2,162	mg/L
Total Kjeldahl nitrogen (TKN)	564.8	2.45	7.65	5.82	mg/L
Total organic carbon (TOC)	N/A	1.54	N/A	N/A	mg/L
Total phosphorus	28.62	19.97	6.10	6.10	mg/L
Total residual chlorine	0.340	0.34	58.18	58.18	mg/L
Volatile Residue	307.1	273.5	74.07	74.07	mg/L
Barium	— ^b	—	—	—	
Copper	0.0310	0.0023	0.0030	0.0015	mg/L
Chromium	0.0200	0.0019	0.0066	0.0066	mg/L
Manganese	1.73	0.0507	0.133	0.133	mg/L
Molybdenum	0.0033	0.0068	0.0076	0.0024	mg/L
Nickel	0.0499	0.0031	0.0312	0.0312	mg/L
Titanium	0.0042	0.0015	0.0039	0.0039	mg/L
Vanadium	0.0032	0.0058	0.0036	0.0012	mg/L
Zinc	0.125	0.0541	0.0228	0.0228	mg/L
<i>Aeromonas</i>	2,274,907	2,274,907	51,000	51,000	cfu/100 mL
<i>Cryptosporidium</i>	N/A	N/A	0.300	0.300	cysts/L
<i>E. Coli</i>	2,089,500	2,089,500	6,338	6,338	cfu/100 mL
Fecal streptococci	N/A	N/A	6.50	6.50	cfu/100 mL
<i>Salmonella</i>	—	—	—	—	
Total coliform	1,433,988	1,433,988	7,328	7,328	cfu/100 mL
<i>cis</i> -Permethrin	N/A	N/A	N/A	N/A	
<i>trans</i> -Permethrin	N/A	N/A	N/A	N/A	

^a not available^b not applicable

Table C-54. Average Technology Option Concentrations for Meat First/Further Processing (R12)^a Indirect Dischargers

Pollutant of Concern	PSES 1	PSES 2	PSES 3	PSES 4	Units
5-Day biochemical oxygen demand (BOD ₅)	1,298	3.31	4.72	3.25	mg/L
Total suspended solids (TSS)	537.4	12.78	8.20	7.77	mg/L
Hexane extractable material (HEM)	24.14	3.84	8.83	1.74	mg/L
Fecal coliform bacteria	1,653,717	1,332,308	7,328	3,859	cfu/100 mL
Ammonia as nitrogen	575.1	0.215	8.21	6.35	mg/L
Carbaryl	N/A ^b	N/A	N/A	N/A	
Carbonaceous biochemical oxygen demand (CBOD)	1,098	2.96	7.45	4.97	mg/L
Chemical oxygen demand (COD)	2,032	32.65	30.34	22.11	mg/L
Chloride	N/A	386.5	N/A	407.8	mg/L
Dissolved biochemical oxygen demand	672.0	1.16	2.42	0.725	mg/L
Dissolved phosphorus	20.69	9.20	4.65	0.179	mg/L
Nitrate-nitrite	N/A	N/A	N/A	N/A	
Total nitrogen	304.2	126.0	16.49	7.96	mg/L
Orthophosphate	22.84	9.23	7.43	1.54	mg/L
Total dissolved solids (TDS)	N/A	1,561	N/A	1,139	mg/L
Total Kjeldahl nitrogen (TKN)	303.8	1.29	4.11	3.07	mg/L
Total organic carbon (TOC)	192.5	0.811	4.66	N/A	mg/L
Total phosphorus	33.36	10.52	7.11	3.21	mg/L
Total residual chlorine	0.193	0.177	30.76	30.64	mg/L
Volatile Residue	460.0	144.0	111.0	39.01	mg/L
Barium	— ^c	—	—	—	
Copper	0.0198	0.0012	0.0019	0.00081	mg/L
Chromium	0.0117	0.0010	0.0039	0.0035	mg/L
Manganese	0.926	0.0267	0.0713	0.0698	mg/L
Molybdenum	0.0033	0.0036	0.0076	0.0013	mg/L
Nickel	0.0295	0.0016	0.0186	0.0164	mg/L
Titanium	0.0024	0.00081	0.0022	0.0020	mg/L
Vanadium	0.0019	0.0031	0.0021	0.00064	mg/L
Zinc	0.0788	0.0285	0.0144	0.0120	mg/L
<i>Aeromonas</i>	1,333,263	1,197,966	51,000	26,857	cfu/100 mL
<i>Cryptosporidium</i>	N/A	N/A	0.300	0.158	cysts/L
<i>E. Coli</i>	1,470,027	1,100,331	6,338	3,337	cfu/100 mL
Fecal streptococci	N/A	N/A	6.50	3.42	cfu/100 mL
<i>Salmonella</i>	—	—	—	—	
Total coliform	1,305,229	755,138	7,328	3,859	cfu/100 mL
<i>cis</i> -Permethrin	N/A	N/A	N/A	N/A	
<i>trans</i> -Permethrin	N/A	N/A	N/A	N/A	

^a Data for this category were derived using methods described in Section 9.2.3^b not available^c not applicable

Table C-55. Average Technology Option Concentrations for Meat First Processing and Rendering (R13)^a Indirect Dischargers

Pollutant of Concern	PSES 1	PSES 2	PSES 3	PSES 4	Units
5-Day biochemical oxygen demand (BOD ₅)	1,945	6.86	7.07	7.07	mg/L
Total suspended solids (TSS)	571.8	16.53	8.73	8.73	mg/L
Hexane extractable material (HEM)	28.45	7.67	10.41	2.02	mg/L
Fecal coliform bacteria	1,811,050	1,811,050	7,328	7,328	cfu/100 mL
Ammonia as nitrogen	611.9	0.797	8.74	6.99	mg/L
Carbaryl	N/A ^b	N/A	N/A	N/A	
Carbonaceous biochemical oxygen demand (CBOD)	1,546	4.99	10.48	10.48	mg/L
Chemical oxygen demand (COD)	2,725	49.86	40.69	40.69	mg/L
Chloride	N/A	479.3	N/A	533.0	mg/L
Dissolved biochemical oxygen demand	1,100	7.11	3.97	3.97	mg/L
Dissolved phosphorus	8.09	13.86	1.82	1.77	mg/L
Nitrate-nitrite	0.172	128.7	12.03	2.99	mg/L
Total nitrogen	332.8	138.9	18.04	8.39	mg/L
Orthophosphate	23.28	14.14	7.58	2.84	mg/L
Total dissolved solids (TDS)	N/A	2,517	N/A	2,301	mg/L
Total Kjeldahl nitrogen (TKN)	333.8	4.18	4.52	3.57	mg/L
Total organic carbon (TOC)	551.8	23.33	13.37	13.83	mg/L
Total phosphorus	22.23	14.38	4.74	4.74	mg/L
Total residual chlorine	0.201	0.299	30.65	30.65	mg/L
Volatile Residue	514.6	257.7	124.1	124.1	mg/L
Barium	— ^c	—	—	—	
Copper	0.0212	0.0027	0.0020	0.0013	mg/L
Chromium	0.0111	0.0010	0.0036	0.0036	mg/L
Manganese	0.994	0.0303	0.0785	0.0785	mg/L
Molybdenum	0.0020	0.0039	0.0045	0.0018	mg/L
Nickel	0.0288	0.0019	0.0182	0.0182	mg/L
Titanium	0.0026	0.0010	0.0024	0.0024	mg/L
Vanadium	0.0018	0.0034	0.0020	0.00079	mg/L
Zinc	0.0783	0.0352	0.0143	0.0143	mg/L
<i>Aeromonas</i>	1,251,966	1,251,966	51,000	51,000	cfu/100 mL
<i>Cryptosporidium</i>	N/A	N/A	0.300	0.300	cysts/L
<i>E. Coli</i>	1,487,234	1,487,234	6,338	6,338	cfu/100 mL
Fecal streptococci	16,664	16,664	6.50	6.50	cfu/100 mL
<i>Salmonella</i>	—	—	—	—	
Total coliform	1,177,498	1,177,498	7,328	7,328	cfu/100 mL
<i>cis</i> -Permethrin	N/A	N/A	N/A	N/A	
<i>trans</i> -Permethrin	N/A	N/A	N/A	N/A	

^a Data for this category were derived using methods described in Section 9.2.3

^b not available

^c not applicable

Table C-56. Average Technology Option Concentrations for Meat First/Further Processing and Rendering (R123)^a Indirect Dischargers

Pollutant of Concern	PSES 1	PSES 2	PSES 3	PSES 4	Units
5-Day biochemical oxygen demand (BOD ₅)	1,596	5.59	5.80	5.80	mg/L
Total suspended solids (TSS)	407.9	12.35	6.23	6.23	mg/L
Hexane extractable material (HEM)	21.78	6.38	7.97	1.46	mg/L
Fecal coliform bacteria	1,448,804	1,448,804	7,328	7,328	cfu/100 mL
Ammonia as nitrogen	420.9	0.600	6.01	4.82	mg/L
Carbaryl	N/A ^b	N/A	N/A	N/A	
Carbonaceous biochemical oxygen demand (CBOD)	1,298	4.01	8.80	8.80	mg/L
Chemical oxygen demand (COD)	2,225	39.08	33.23	33.23	mg/L
Chloride	N/A	1,910	N/A	2,489	mg/L
Dissolved biochemical oxygen demand	1,066	6.95	3.85	3.85	mg/L
Dissolved phosphorus	18.95	18.11	4.26	4.13	mg/L
Nitrate-nitrite	N/A	N/A	N/A	N/A	
Total nitrogen	230.9	96.11	12.52	5.91	mg/L
Orthophosphate	18.44	12.55	6.00	2.70	mg/L
Total dissolved solids (TDS)	N/A	3,889	N/A	4,201	mg/L
Total Kjeldahl nitrogen (TKN)	231.3	3.17	3.13	2.48	mg/L
Total organic carbon (TOC)	537.5	21.96	13.03	13.34	mg/L
Total phosphorus	27.48	16.48	5.86	5.86	mg/L
Total residual chlorine	0.146	0.255	20.92	20.92	mg/L
Volatile Residue	551.6	240.5	133.0	133.0	mg/L
Barium	— ^c	—	—	—	
Copper	0.0167	0.0026	0.0016	0.0011	mg/L
Chromium	0.0084	0.00078	0.0027	0.0026	mg/L
Manganese	0.685	0.0210	0.0543	0.0543	mg/L
Molybdenum	0.0024	0.0043	0.0055	0.0037	mg/L
Nickel	0.0217	0.0015	0.0138	0.0138	mg/L
Titanium	0.0019	0.00079	0.0018	0.0018	mg/L
Vanadium	0.0014	0.0026	0.0015	0.00067	mg/L
Zinc	0.0621	0.0287	0.0113	0.0113	mg/L
<i>Aeromonas</i>	942,835	942,835	51,000	51,000	cfu/100 mL
<i>Cryptosporidium</i>	N/A	N/A	0.300	0.300	cysts/L
<i>E. Coli</i>	1,261,244	1,261,244	6,338	6,338	cfu/100 mL
Fecal streptococci	415,728	415,728	6.50	6.50	cfu/100 mL
<i>Salmonella</i>	—	—	—	—	
Total coliform	1,172,549	1,172,549	7,328	7,328	cfu/100 mL
<i>cis</i> -Permethrin	N/A	N/A	N/A	N/A	
<i>trans</i> -Permethrin	N/A	N/A	N/A	N/A	

^a Data for this category were derived using methods described in Section 9.2.3^b not available^c not applicable

Table C-57. Average Technology Option Concentrations for Meat Further Processing (R2) Indirect Dischargers

Pollutant of Concern	PSES 1	PSES 2	PSES 3	PSES 4	Units
5-Day biochemical oxygen demand (BOD ₅)	854.7	2.89	3.11	3.11	mg/L
Total suspended solids (TSS)	59.75	3.47	0.912	0.912	mg/L
Hexane extractable material (HEM)	7.59	3.65	2.78	0.274	mg/L
Fecal coliform bacteria	678,936	678,936	7,328	7,328	cfu/100 mL
Ammonia as nitrogen	14.80	0.183	0.211	0.211	mg/L
Carbaryl	N/A ^a	N/A	N/A	N/A	
Carbonaceous biochemical oxygen demand (CBOD)	772.0	1.94	5.24	5.24	mg/L
Chemical oxygen demand (COD)	1,164	16.17	17.38	17.38	mg/L
Chloride	6,674	4,952	6,674	6,645	mg/L
Dissolved biochemical oxygen demand	995.2	6.59	3.59	3.59	mg/L
Dissolved phosphorus	42.02	27.15	9.44	9.16	mg/L
Nitrate-nitrite	0.0216	2.13	1.51	0.275	mg/L
Total nitrogen	14.19	5.21	0.769	0.631	mg/L
Orthophosphate	8.15	9.16	2.65	2.42	mg/L
Total dissolved solids (TDS)	8,238	6,803	8,238	8,238	mg/L
Total Kjeldahl nitrogen (TKN)	13.44	1.02	0.182	0.182	mg/L
Total organic carbon (TOC)	507.2	19.07	12.29	12.29	mg/L
Total phosphorus	38.63	20.94	8.23	8.23	mg/L
Total residual chlorine	0.0300	0.161	0.248	0.248	mg/L
Volatile Residue	630.1	204.0	152.0	152.0	mg/L
Barium	— ^b	—	—	—	
Copper	0.0072	0.0022	0.00069	0.00069	mg/L
Chromium	0.0026	0.0002	0.00084	0.00050	mg/L
Manganese	0.0293	0.0013	0.0031	0.0031	mg/L
Molybdenum	0.0034	0.0050	0.0077	0.0077	mg/L
Nickel	0.0067	0.0007	0.0046	0.0046	mg/L
Titanium	0.00040	0.00024	0.00037	0.00037	mg/L
Vanadium	0.00038	0.00091	0.00042	0.00042	mg/L
Zinc	0.0276	0.0147	0.0050	0.0050	mg/L
<i>Aeromonas</i>	285,799	285,799	51,000	51,000	cfu/100 mL
<i>Cryptosporidium</i>	N/A	N/A	0.300	0.300	cysts/L
<i>E. Coli</i>	780,938	780,938	6,338	6,338	cfu/100 mL
Fecal streptococci	1,263,903	1,263,903	6.50	6.50	cfu/100 mL
<i>Salmonella</i>	—	—	—	—	
Total coliform	1,162,000	1,162,000	7,328	7,328	cfu/100 mL
<i>cis</i> -Permethrin	N/A	N/A	N/A	N/A	
<i>trans</i> -Permethrin	N/A	N/A	N/A	N/A	

^a not available^b not applicable

Table C-58. Average Technology Option Concentrations for Meat Further Processing and Rendering (R23)^a Indirect Dischargers

Pollutant of Concern	PSES 1	PSES 2	PSES 3	PSES 4	Units
5-Day biochemical oxygen demand (BOD ₅)	1,540	5.21	5.60	5.60	mg/L
Total suspended solids (TSS)	99.06	5.76	1.51	1.51	mg/L
Hexane extractable material (HEM)	12.25	5.89	4.48	0.44	mg/L
Fecal coliform bacteria	851,145	851,145	7,328	7,328	cfu/100 mL
Ammonia as nitrogen	57.16	0.707	0.816	0.816	mg/L
Carbaryl	N/A ^b	N/A	N/A	N/A	
Carbonaceous biochemical oxygen demand (CBOD)	1,247	3.13	8.45	8.45	mg/L
Chemical oxygen demand (COD)	1,902	26.41	28.39	28.39	mg/L
Chloride	3,451	2,560	3,451	3,436	mg/L
Dissolved biochemical oxygen demand	1,445	9.57	5.21	5.21	mg/L
Dissolved phosphorus	28.58	18.47	6.42	6.23	mg/L
Nitrate-nitrite	N/A	N/A	N/A	N/A	
Total nitrogen	46.23	16.96	2.51	0.81	mg/L
Orthophosphate	8.70	9.79	2.83	2.58	mg/L
Total dissolved solids (TDS)	5,327	4,399	5,327	5,327	mg/L
Total Kjeldahl nitrogen (TKN)	46.97	3.57	0.636	0.636	mg/L
Total organic carbon (TOC)	884.8	33.26	21.44	21.44	mg/L
Total phosphorus	26.85	14.55	5.72	5.72	mg/L
Total residual chlorine	0.0392	0.210	0.324	0.324	mg/L
Volatile Residue	686.7	222.3	165.6	165.6	mg/L
Barium	— ^c	—	—	—	
Copper	0.0088	0.0027	0.00084	0.00084	mg/L
Chromium	0.0020	0.00018	0.00064	0.00038	mg/L
Manganese	0.106	0.0046	0.0111	0.0111	mg/L
Molybdenum	0.0019	0.0028	0.0044	0.0044	mg/L
Nickel	0.0062	0.00065	0.0042	0.0042	mg/L
Titanium	0.0006	0.00037	0.00058	0.00058	mg/L
Vanadium	0.00034	0.00081	0.00037	0.00037	mg/L
Zinc	0.0274	0.0146	0.0050	0.0050	mg/L
<i>Aeromonas</i>	206,458	206,458	51,000	51,000	cfu/100 mL
<i>Cryptosporidium</i>	N/A	N/A	0.300	0.300	cysts/L
<i>E. Coli</i>	803,393	803,393	6,338	6,338	cfu/100 mL
Fecal streptococci	1,324,889	1,324,889	6.50	6.50	cfu/100 mL
<i>Salmonella</i>	—	—	—	—	
Total coliform	1,028,002	1,028,002	7,328	7,328	cfu/100 mL
<i>cis</i> -Permethrin	N/A	N/A	N/A	N/A	
<i>trans</i> -Permethrin	N/A	N/A	N/A	N/A	

^a Data for this category were derived using methods described in Section 9.2.3^b not available^c not applicable

Table C-59. Average Technology Option Concentrations for Poultry First Processing (P1) Direct Dischargers

Pollutant of Concern	BAT 1	BAT 2	BAT 3	BAT 4	BAT 5	Units
5-Day biochemical oxygen demand (BOD ₅)	2.00	2.00	1.96	8.60	3.00	mg/L
Total suspended solids (TSS)	8.20	8.20	4.98	5.60	4.00	mg/L
Hexane extractable material (HEM)	23.60	23.60	23.60	5.47	5.50	mg/L
Fecal coliform bacteria	2.00	2.00	0.278	2.00	41.60	cfu/100 mL
Ammonia as nitrogen	2.02	0.258	0.258	0.202	0.200	mg/L
Carbaryl	0.00100	0.00100	N/A ^a	0.00229	0.00100	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	2.00	2.00	2.00	6.60	3.00	mg/L
Chemical oxygen demand (COD)	25.60	25.60	17.33	20.40	19.00	mg/L
Chloride	87.20	87.20	N/A	92.00	92.20	mg/L
Dissolved biochemical oxygen demand	2.00	2.00	1.26	4.80	3.00	mg/L
Dissolved phosphorus	0.378	0.378	0.00737	0.0500	0.0960	mg/L
Nitrate-nitrite	25.42	27.18	2.51	0.626	0.714	mg/L
Total nitrogen	28.74	28.74	3.68	1.82	2.00	mg/L
Orthophosphate	0.108	0.108	0.0723	0.0180	0.0100	mg/L
Total dissolved solids (TDS)	822.4	822.4	N/A	600.0	618.8	mg/L
Total Kjeldahl nitrogen (TKN)	3.32	1.56	1.56	1.19	1.29	mg/L
Total organic carbon (TOC)	5.86	5.86	5.86	3.52	3.77	mg/L
Total phosphorus	0.722	0.722	0.220	0.472	0.410	mg/L
Total residual chlorine	— ^b	—	—	—	—	
Volatile Residue	178.8	178.8	48.42	122.4	124.0	mg/L
Barium	0.00444	0.00444	0.00019	0.02132	0.02108	mg/L
Copper	0.00876	0.00876	0.00876	0.00456	0.00100	mg/L
Chromium	—	—	—	—	—	
Manganese	0.00740	0.00740	0.00740	0.07432	0.05514	mg/L
Molybdenum	—	—	—	—	—	
Nickel	0.00104	0.00104	0.00104	0.00288	0.00238	mg/L
Titanium	—	—	—	—	—	
Vanadium	—	—	—	—	—	
Zinc	0.07694	0.07694	0.03246	0.05004	0.00624	mg/L
<i>Aeromonas</i>	1,550	1,550	8.16	468.6	3.40	cfu/100 mL
<i>Cryptosporidium</i>	—	—	—	—	—	
<i>E. Coli</i>	2.00	2.00	0.03418	2.00	41.60	cfu/100 mL
Fecal streptococci	34.00	34.00	N/A	2.00	2.00	cfu/100 mL
<i>Salmonella</i>	2.00	2.00	1.82	2.00	2.00	cfu/100 mL
Total coliform	621.0	621.0	41.19	3.80	81.60	cfu/100 mL
<i>cis</i> -Permethrin	—	—	—	—	—	
<i>trans</i> -Permethrin	—	—	—	—	—	

^a not available^b not applicable

Table C-60. Average Technology Option Concentrations for Poultry First/Further Processing (P12)^a Direct Dischargers

Pollutant of Concern	BAT 1	BAT 2	BAT 3	BAT 4	BAT 5	Units
5-Day biochemical oxygen demand (BOD ₅)	3.01	3.01	2.99	19.26	6.72	mg/L
Total suspended solids (TSS)	81.46	81.46	23.49	60.10	42.93	mg/L
Hexane extractable material (HEM)	25.12	25.12	23.30	4.62	4.65	mg/L
Fecal coliform bacteria	1.52	1.52	0.208	1.66	34.50	cfu/100 mL
Ammonia as nitrogen	1.63	0.387	0.387	0.347	0.344	mg/L
Carbaryl	0.00074	0.00074	N/A ^b	0.00170	0.00074	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	2.96	2.96	2.96	12.34	5.61	mg/L
Chemical oxygen demand (COD)	34.04	34.04	27.91	35.81	33.36	mg/L
Chloride	141.6	141.6	N/A	144.9	145.2	mg/L
Dissolved biochemical oxygen demand	2.62	2.62	1.55	6.92	4.33	mg/L
Dissolved phosphorus	1.09	1.09	0.288	0.311	0.597	mg/L
Nitrate-nitrite	20.52	20.38	2.03	0.495	0.565	mg/L
Total nitrogen	50.00	50.00	6.97	4.82	5.32	mg/L
Orthophosphate	0.131	0.131	0.0684	0.0269	0.0149	mg/L
Total dissolved solids (TDS)	1,052	1,052	N/A	886.8	900.8	mg/L
Total Kjeldahl nitrogen (TKN)	2.68	2.82	1.45	3.91	4.24	mg/L
Total organic carbon (TOC)	8.14	8.14	6.79	7.07	7.56	mg/L
Total phosphorus	3.71	3.71	1.41	4.67	4.06	mg/L
Total residual chlorine	— ^c	—	—	—	—	
Volatile Residue	579.0	579.0	368.6	557.6	564.9	mg/L
Barium	0.00592	0.00592	0.00134	0.02108	0.02084	mg/L
Copper	0.00715	0.00715	0.00669	0.00400	0.00088	mg/L
Chromium	—	—	—	—	—	
Manganese	0.00645	0.00645	0.00645	0.06069	0.04502	mg/L
Molybdenum	—	—	—	—	—	
Nickel	0.00196	0.00196	0.00196	0.00519	0.00429	mg/L
Titanium	—	—	—	—	—	
Vanadium	—	—	—	—	—	
Zinc	0.128	0.128	0.0484	0.0823	0.0103	mg/L
<i>Aeromonas</i>	1,222	1,222	6.06	438.5	3.18	cfu/100 mL
<i>Cryptosporidium</i>	—	—	—	—	—	
<i>E. Coli</i>	1.52	1.52	0.0257	1.66	34.62	cfu/100 mL
Fecal streptococci	25.64	25.64	N/A	2.25	2.25	cfu/100 mL
<i>Salmonella</i>	2.00	2.00	1.86	1.48	1.48	cfu/100 mL
Total coliform	494.2	494.2	32.82	3.65	78.41	cfu/100 mL
<i>cis</i> -Permethrin	—	—	—	—	—	
<i>trans</i> -Permethrin	—	—	—	—	—	

^a Data for this category were derived using methods described in Section 9.2.3^b not available^c not applicable

Table C-61. Average Technology Option Concentrations for Poultry First Processing and Rendering (P13)^a Direct Dischargers

Pollutant of Concern	BAT 1	BAT 2	BAT 3	BAT 4	BAT 5	Units
5-Day biochemical oxygen demand (BOD ₅)	2.04	2.04	2.02	11.56	4.03	mg/L
Total suspended solids (TSS)	16.41	16.41	6.25	11.85	8.46	mg/L
Hexane extractable material (HEM)	111.0	111.0	88.41	10.87	10.94	mg/L
Fecal coliform bacteria	2.11	2.11	0.248	4.96	103.1	cfu/100 mL
Ammonia as nitrogen	2.14	1.50	1.50	1.47	1.46	mg/L
Carbaryl	0.00073	0.00073	N/A ^b	0.00157	0.00069	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	2.23	2.23	2.23	8.84	4.02	mg/L
Chemical oxygen demand (COD)	65.79	65.79	60.12	80.25	74.74	mg/L
Chloride	91.66	91.66	N/A	94.82	95.02	mg/L
Dissolved biochemical oxygen demand	4.67	4.67	2.66	13.10	8.18	mg/L
Dissolved phosphorus	0.647	0.647	0.140	0.165	0.317	mg/L
Nitrate-nitrite	26.94	26.82	7.55	1.49	1.69	mg/L
Total nitrogen	70.14	70.14	9.97	3.00	3.32	mg/L
Orthophosphate	0.216	0.216	0.0907	0.0499	0.0277	mg/L
Total dissolved solids (TDS)	1,027	1,027	N/A	874.1	887.0	mg/L
Total Kjeldahl nitrogen (TKN)	3.52	3.64	1.53	5.49	5.95	mg/L
Total organic carbon (TOC)	11.84	11.84	9.06	11.59	12.40	mg/L
Total phosphorus	1.25	1.25	0.446	1.35	1.17	mg/L
Total residual chlorine	— ^c	—	—	—	—	
Volatile Residue	302.3	302.3	167.1	271.9	275.5	mg/L
Barium	0.0050	0.0050	0.0010	0.0186	0.0184	mg/L
Copper	0.0098	0.0098	0.0072	0.0067	0.0015	mg/L
Chromium	—	—	—	—	—	
Manganese	0.0103	0.0103	0.0103	0.0815	0.0604	mg/L
Molybdenum	—	—	—	—	—	
Nickel	0.0024	0.0024	0.0024	0.0063	0.0052	mg/L
Titanium	—	—	—	—	—	
Vanadium	—	—	—	—	—	
Zinc	0.103	0.103	0.0395	0.0663	0.0083	mg/L
<i>Aeromonas</i>	1,088	1,088	5.60	352.7	2.56	cfu/100 mL
<i>Cryptosporidium</i>	—	—	—	—	—	
<i>E. Coli</i>	2.18	2.18	0.0312	5.49	114.26	cfu/100 mL
Fecal streptococci	36.88	36.88	N/A	24.55	24.55	cfu/100 mL
<i>Salmonella</i>	2.00	2.00	1.87	1.37	1.37	cfu/100 mL
Total coliform	675.7	675.7	45.10	8.73	187.5	cfu/100 mL
<i>cis</i> -Permethrin	—	—	—	—	—	
<i>trans</i> -Permethrin	—	—	—	—	—	

^a Data for this category were derived using methods described in Section 9.2.3^b not available^c not applicable

Table C-62. Average Technology Option Concentrations for Poultry First/Further Processing and Rendering (P123)^a Direct Dischargers

Pollutant of Concern	BAT 1	BAT 2	BAT 3	BAT 4	BAT 5	Units
5-Day biochemical oxygen demand (BOD ₅)	2.79	2.79	2.77	18.94	6.61	mg/L
Total suspended solids (TSS)	69.48	69.48	19.81	51.30	36.65	mg/L
Hexane extractable material (HEM)	95.26	95.26	75.65	9.20	9.26	mg/L
Fecal coliform bacteria	1.73	1.73	0.202	4.13	85.90	cfu/100 mL
Ammonia as nitrogen	1.83	1.36	1.36	1.34	1.32	mg/L
Carbaryl	0.00059	0.00059	N/A ^b	0.00127	0.00055	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	2.90	2.90	2.90	12.69	5.77	mg/L
Chemical oxygen demand (COD)	64.31	64.31	59.73	80.17	74.67	mg/L
Chloride	131.4	131.4	N/A	133.7	134.0	mg/L
Dissolved biochemical oxygen demand	4.62	4.62	2.61	13.07	8.17	mg/L
Dissolved phosphorus	1.13	1.13	0.323	0.337	0.648	mg/L
Nitrate-nitrite	22.98	21.81	6.22	1.22	1.39	mg/L
Total nitrogen	77.99	77.99	11.21	5.02	5.54	mg/L
Orthophosphate	0.213	0.213	0.0842	0.0503	0.0280	mg/L
Total dissolved solids (TDS)	1,158	1,158	N/A	1,035	1,045	mg/L
Total Kjeldahl nitrogen (TKN)	3.01	4.18	1.45	6.69	7.25	mg/L
Total organic carbon (TOC)	12.38	12.38	9.14	12.68	13.56	mg/L
Total phosphorus	3.37	3.37	1.29	4.31	3.75	mg/L
Total residual chlorine	— ^c	—	—	—	—	
Volatile Residue	577.0	577.0	383.0	567.7	575.1	mg/L
Barium	0.00600	0.00600	0.0017	0.0189	0.0187	mg/L
Copper	0.00841	0.00841	0.00595	0.00587	0.00129	mg/L
Chromium	—	—	—	—	—	
Manganese	0.00907	0.00907	0.00907	0.06990	0.05186	mg/L
Molybdenum	—	—	—	—	—	
Nickel	0.00282	0.00282	0.00282	0.00733	0.00606	mg/L
Titanium	—	—	—	—	—	
Vanadium	—	—	—	—	—	
Zinc	0.136	0.136	0.0501	0.0872	0.0109	mg/L
<i>Aeromonas</i>	933.0	933.0	4.53	352.6	2.56	cfu/100 mL
<i>Cryptosporidium</i>	—	—	—	—	—	
<i>E. Coli</i>	1.78	1.78	0.0254	4.57	95.00	cfu/100 mL
Fecal streptococci	30.08	30.08	N/A	20.37	20.37	cfu/100 mL
<i>Salmonella</i>	2.00	2.00	1.90	1.11	1.11	cfu/100 mL
Total coliform	570.4	570.4	38.09	7.67	164.6	cfu/100 mL
<i>cis</i> -Permethrin	—	—	—	—	—	
<i>trans</i> -Permethrin	—	—	—	—	—	

^a Data for this category were derived using methods described in Section 9.2.3^b not available^c not applicable

Table C-63. Average Technology Option Concentrations for Poultry Further Processing (P2)
Direct Dischargers

Pollutant of Concern	BAT 1	BAT 2	BAT 3	BAT 4	BAT 5	Units
5-Day biochemical oxygen demand (BOD ₅)	5.91	5.91	5.91	49.73	17.35	mg/L
Total suspended solids (TSS)	290.8	290.8	76.39	215.9	154.2	mg/L
Hexane extractable material (HEM)	29.48	29.48	22.45	2.21	2.23	mg/L
Fecal coliform bacteria	0.140	0.140	0.0110	0.684	14.22	cfu/100 mL
Ammonia as nitrogen	0.518	0.757	0.757	0.763	0.755	mg/L
Carbaryl	N/A ^a	N/A	N/A	N/A	N/A	
Carbonaceous biochemical oxygen demand (CBOD)	5.71	5.71	5.71	28.75	13.07	mg/L
Chemical oxygen demand (COD)	58.14	58.14	58.14	79.87	74.39	mg/L
Chloride	297.3	297.3	297.3	296.0	296.6	mg/L
Dissolved biochemical oxygen demand	4.38	4.38	2.38	12.99	8.12	mg/L
Dissolved phosphorus	3.13	3.13	1.09	1.06	2.03	mg/L
Nitrate-nitrite	6.51	0.938	0.668	0.121	0.138	mg/L
Total nitrogen	110.8	110.8	16.36	13.41	14.80	mg/L
Orthophosphate	0.198	0.198	0.057	0.052	0.029	mg/L
Total dissolved solids (TDS)	1,707	1,707	1,707	1,707	1,707	mg/L
Total Kjeldahl nitrogen (TKN)	0.852	6.42	1.14	11.68	12.66	mg/L
Total organic carbon (TOC)	14.65	14.65	9.44	17.20	18.40	mg/L
Total phosphorus	12.23	12.23	4.81	16.68	14.49	mg/L
Total residual chlorine	— ^b	—	—	—	—	
Volatile Residue	1,723	1,723	1,284	1,802	1,825	mg/L
Barium	0.0101	0.0101	0.0046	0.0204	0.0202	mg/L
Copper	0.0026	0.0026	0.0008	0.0024	0.0005	mg/L
Chromium	—	—	—	—	—	
Manganese	0.0038	0.0038	0.0038	0.0217	0.0161	mg/L
Molybdenum	—	—	—	—	—	
Nickel	0.0046	0.0046	0.0046	0.0118	0.0097	mg/L
Titanium	—	—	—	—	—	
Vanadium	—	—	—	—	—	
Zinc	0.275	0.275	0.094	0.175	0.0218	mg/L
<i>Aeromonas</i>	285.9	285.9	0.068	352.4	2.56	cfu/100 mL
<i>Cryptosporidium</i>	—	—	—	—	—	
<i>E. Coli</i>	0.138	0.138	0.0013	0.706	14.69	cfu/100 mL
Fecal streptococci	1.73	1.73	0.386	2.95	2.95	cfu/100 mL
<i>Salmonella</i>	2.00	2.00	2.00	0.0071	0.0071	cfu/100 mL
Total coliform	131.7	131.7	8.88	3.23	69.31	cfu/100 mL
<i>cis</i> -Permethrin	—	—	—	—	—	
<i>trans</i> -Permethrin	—	—	—	—	—	

^a not available^b not applicable

Table C-64. Average Technology Option Concentrations for Poultry Further Processing and Rendering (P23)^a Direct Dischargers

Pollutant of Concern	BAT 1	BAT 2	BAT 3	BAT 4	BAT 5	Units
5-Day biochemical oxygen demand (BOD ₅)	3.77	3.77	3.77	31.73	11.07	mg/L
Total suspended solids (TSS)	145.3	145.3	38.17	107.9	77.06	mg/L
Hexane extractable material (HEM)	183.9	183.9	140.1	13.82	13.90	mg/L
Fecal coliform bacteria	1.39	1.39	0.11	6.77	140.7	cfu/100 mL
Ammonia as nitrogen	1.59	2.72	2.72	2.74	2.71	mg/L
Carbaryl	0.00008	0.00008	N/A ^b	0.000004	0.000002	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	4.02	4.02	4.02	20.22	9.19	mg/L
Chemical oxygen demand (COD)	112.2	112.2	112.2	154.1	143.6	mg/L
Chloride	186.2	186.2	186.2	185.4	185.8	mg/L
Dissolved biochemical oxygen demand	7.86	7.86	4.28	23.31	14.57	mg/L
Dissolved phosphorus	2.06	2.06	0.715	0.693	1.33	mg/L
Nitrate-nitrite	19.97	15.16	10.80	1.96	2.23	mg/L
Total nitrogen	138.94	138.94	20.53	8.98	9.91	mg/L
Orthophosphate	0.342	0.342	0.099	0.0903	0.0502	mg/L
Total dissolved solids (TDS)	1,574	1,574	1,574	1,574	1,574	mg/L
Total Kjeldahl nitrogen (TKN)	2.61	7.42	1.32	13.49	14.62	mg/L
Total organic carbon (TOC)	20.45	20.45	13.18	24.01	25.69	mg/L
Total phosphorus	6.65	6.65	2.61	9.07	7.87	mg/L
Total residual chlorine	— ^c	—	—	—	—	
Volatile Residue	1,070	1,070	797.2	1,119	1,134	mg/L
Barium	0.0079	0.0079	0.0036	0.0159	0.0158	mg/L
Copper	0.0080	0.0080	0.0025	0.0075	0.0016	mg/L
Chromium	—	—	—	—	—	
Manganese	0.0111	0.0111	0.0111	0.0645	0.0478	mg/L
Molybdenum	—	—	—	—	—	
Nickel	0.0050	0.0050	0.0050	0.0128	0.0106	mg/L
Titanium	—	—	—	—	—	
Vanadium	—	—	—	—	—	
Zinc	0.210	0.210	0.0718	0.133	0.0166	mg/L
<i>Aeromonas</i>	169.7	169.7	0.0405	209.11	1.52	cfu/100 mL
<i>Cryptosporidium</i>	—	—	—	—	—	
<i>E. Coli</i>	1.51	1.51	0.0146	7.74	161.1	cfu/100 mL
Fecal streptococci	25.23	25.23	5.63	43.10	43.10	cfu/100 mL
<i>Salmonella</i>	2.00	2.00	2.00	0.0071	0.0071	cfu/100 mL
Total coliform	507.8	507.8	34.27	12.45	267.3	cfu/100 mL
<i>cis</i> -Permethrin	—	—	—	—	—	
<i>trans</i> -Permethrin	—	—	—	—	—	

^a Data for this category were derived using methods described in Section 9.2.3^b not available^c not applicable

Table C-65. Average Technology Option Concentrations for Poultry First Processing (P1) Indirect Dischargers

Pollutant of Concern	PSES 1	PSES 2	PSES 3	PSES 4	Units
5-Day biochemical oxygen demand (BOD ₅)	152.4	2.00	1.96	8.60	mg/L
Total suspended solids (TSS)	N/A ^a	8.20	4.98	5.60	mg/L
Hexane extractable material (HEM)	24.36	23.60	23.60	5.47	mg/L
Fecal coliform bacteria	1,341,534	79,280	801,150	801,150	cfu/100 mL
Ammonia as nitrogen	7.52	0.258	0.258	0.202	mg/L
Carbaryl	N/A	0.0010	N/A	0.0023	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	193.4	2.00	2.00	6.60	mg/L
Chemical oxygen demand (COD)	355.8	25.60	17.33	20.40	mg/L
Chloride	53.95	87.20	N/A	92.00	mg/L
Dissolved biochemical oxygen demand	55.53	2.00	1.26	4.80	mg/L
Dissolved phosphorus	0.0928	0.38	0.0074	0.0500	mg/L
Nitrate-nitrite	0.273	27.18	2.51	0.63	mg/L
Total nitrogen	30.61	28.74	3.68	1.82	mg/L
Orthophosphate	2.76	0.108	0.0723	0.0180	mg/L
Total dissolved solids (TDS)	458.5	822.4	N/A	600.0	mg/L
Total Kjeldahl nitrogen (TKN)	30.24	1.56	1.56	1.19	mg/L
Total organic carbon (TOC)	87.86	5.86	5.86	3.52	mg/L
Total phosphorus	6.96	0.722	0.220	0.472	mg/L
Total residual chlorine	— ^b	—	—	—	
Volatile Residue	68.76	178.8	48.42	122.40	mg/L
Barium	0.0108	0.0044	0.0002	0.0213	mg/L
Copper	0.0285	0.0088	0.0088	0.0046	mg/L
Chromium	—	—	—	—	
Manganese	0.1065	0.0074	0.0074	0.0743	mg/L
Molybdenum	—	—	—	—	
Nickel	0.0040	0.0010	0.0010	0.0029	mg/L
Titanium	—	—	—	—	
Vanadium	—	—	—	—	
Zinc	0.0291	0.0769	0.0325	0.0500	mg/L
<i>Aeromonas</i>	190,767	65,085	192,500	192,500	cfu/100 mL
<i>Cryptosporidium</i>	—	—	—	—	
<i>E. Coli</i>	1,331,004	66,480	801,150	801,150	cfu/100 mL
Fecal streptococci	5,867	1,980	3,650	3,650	cfu/100 mL
<i>Salmonella</i>	1.60	111.2	2.00	2.00	cfu/100 mL
Total coliform	1,259,454	163,280	801,150	801,150	cfu/100 mL
<i>cis</i> -Permethrin	—	—	—	—	
<i>trans</i> -Permethrin	—	—	—	—	

^a not available^b not applicable

Table C-66. Average Technology Option Concentrations for Poultry First/Further Processing (P12)^a Indirect Dischargers

Pollutant of Concern	PSES 1	PSES 2	PSES 3	PSES 4	Units
5-Day biochemical oxygen demand (BOD ₅)	258.5	3.01	2.99	19.26	mg/L
Total suspended solids (TSS)	612.2	81.46	23.49	60.10	mg/L
Hexane extractable material (HEM)	34.02	25.12	23.30	4.62	mg/L
Fecal coliform bacteria	1,005,165	79,280	801,150	801,150	cfu/100 mL
Ammonia as nitrogen	10.55	0.387	0.387	0.347	mg/L
Carbaryl	N/A ^b	0.00074	N/A	0.0017	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	260.5	2.96	2.96	12.34	mg/L
Chemical oxygen demand (COD)	436.2	34.04	27.91	35.81	mg/L
Chloride	117.0	141.6	N/A	144.9	mg/L
Dissolved biochemical oxygen demand	64.83	2.62	1.55	6.92	mg/L
Dissolved phosphorus	5.28	1.09	0.288	0.311	mg/L
Nitrate-nitrite	0.445	20.38	2.03	0.495	mg/L
Total nitrogen	32.98	50.00	6.97	4.82	mg/L
Orthophosphate	3.52	0.131	0.0684	0.0269	mg/L
Total dissolved solids (TDS)	667.1	1,052	N/A	886.8	mg/L
Total Kjeldahl nitrogen (TKN)	32.25	2.82	1.45	3.91	mg/L
Total organic carbon (TOC)	85.71	8.14	6.79	7.07	mg/L
Total phosphorus	21.77	3.71	1.41	4.67	mg/L
Total residual chlorine	— ^c	—	—	—	
Volatile Residue	798.4	579.0	368.6	557.6	mg/L
Barium	0.0114	0.0059	0.0013	0.0211	mg/L
Copper	0.0229	0.0072	0.0067	0.0040	mg/L
Chromium	—	—	—	—	
Manganese	0.0814	0.0065	0.0065	0.0607	mg/L
Molybdenum	—	—	—	—	
Nickel	0.0052	0.0020	0.0020	0.0052	mg/L
Titanium	—	—	—	—	
Vanadium	—	—	—	—	
Zinc	0.141	0.128	0.0484	0.0823	mg/L
<i>Aeromonas</i>	180,978	65,085	192,500	192,500	cfu/100 mL
<i>Cryptosporidium</i>	—	—	—	—	
<i>E. Coli</i>	1,000,319	66,480	801,150	801,150	cfu/100 mL
Fecal streptococci	4,467	1,980	3,650	3,650	cfu/100 mL
<i>Salmonella</i>	1.71	111.2	2.00	2.00	cfu/100 mL
Total coliform	967,397	163,280	801,150	801,150	cfu/100 mL
<i>cis</i> -Permethrin	—	—	—	—	
<i>trans</i> -Permethrin	—	—	—	—	

^a Data for this category were derived using methods described in Section 9.2.3^b not available^c not applicable

Table C-67. Average Technology Option Concentrations for Poultry First Processing and Rendering (P13)^a Indirect Dischargers

Pollutant of Concern	PSES 1	PSES 2	PSES 3	PSES 4	Units
5-Day biochemical oxygen demand (BOD ₅)	105.2	2.04	2.02	11.56	mg/L
Total suspended solids (TSS)	6.74	16.41	6.25	11.85	mg/L
Hexane extractable material (HEM)	111.6	111.0	88.41	10.87	mg/L
Fecal coliform bacteria	944,808	79,280	801,150	801,150	cfu/100 mL
Ammonia as nitrogen	6.48	1.50	1.50	1.47	mg/L
Carbaryl	N/A ^b	0.00073	N/A	0.0016	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	133.4	2.23	2.23	8.84	mg/L
Chemical oxygen demand (COD)	292.2	65.79	60.12	80.25	mg/L
Chloride	68.86	91.66	N/A	94.82	mg/L
Dissolved biochemical oxygen demand	41.38	4.67	2.66	13.10	mg/L
Dissolved phosphorus	0.451	0.647	0.140	0.165	mg/L
Nitrate-nitrite	8.37	26.82	7.55	1.49	mg/L
Total nitrogen	71.42	70.14	9.97	3.00	mg/L
Orthophosphate	2.04	0.22	0.0907	0.0499	mg/L
Total dissolved solids (TDS)	777.0	1026.57	N/A	874.1	mg/L
Total Kjeldahl nitrogen (TKN)	23.31	3.64	1.53	5.49	mg/L
Total organic carbon (TOC)	68.06	11.84	9.06	11.59	mg/L
Total phosphorus	5.52	1.25	0.446	1.35	mg/L
Total residual chlorine	— ^c	—	—	—	
Volatile Residue	226.9	302.3	167.1	271.9	mg/L
Barium	0.0094	0.0050	0.0010	0.0186	mg/L
Copper	0.0234	0.0098	0.0072	0.0067	mg/L
Chromium	—	—	—	—	
Manganese	0.0783	0.0103	0.0103	0.0815	mg/L
Molybdenum	—	—	—	—	
Nickel	0.0044	0.0024	0.0024	0.0063	mg/L
Titanium	—	—	—	—	
Vanadium	—	—	—	—	
Zinc	0.0703	0.103	0.0395	0.0663	mg/L
<i>Aeromonas</i>	151,265	65,085	192,500	192,500	cfu/100 mL
<i>Cryptosporidium</i>	—	—	—	—	
<i>E. Coli</i>	933,564	66,480	801,150	801,150	cfu/100 mL
Fecal streptococci	4,645	1,980	3,650	3,650	cfu/100 mL
<i>Salmonella</i>	36.05	111.2	2.00	2.00	cfu/100 mL
Total coliform	914,926	163,280	801,150	801,150	cfu/100 mL
<i>cis</i> -Permethrin	—	—	—	—	
<i>trans</i> -Permethrin	—	—	—	—	

^a Data for this category were derived using methods described in Section 9.2.3

^b not available

^c not applicable

Table C-68. Average Technology Option Concentrations for Poultry First/Further Processing and Rendering (P123)^a Indirect Dischargers

Pollutant of Concern	PSES 1	PSES 2	PSES 3	PSES 4	Units
5-Day biochemical oxygen demand (BOD ₅)	193.4	2.79	2.77	18.94	mg/L
Total suspended solids (TSS)	465.5	69.48	19.81	51.30	mg/L
Hexane extractable material (HEM)	101.9	95.26	75.65	9.20	mg/L
Fecal coliform bacteria	770,439	79,272	801,070	801,070	cfu/100 mL
Ammonia as nitrogen	8.95	1.36	1.36	1.34	mg/L
Carbaryl	N/A ^b	0.00059	N/A	0.0013	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	195.1	2.90	2.90	12.69	mg/L
Chemical oxygen demand (COD)	364.4	64.31	59.73	80.17	mg/L
Chloride	113.0	131.4	N/A	133.7	mg/L
Dissolved biochemical oxygen demand	51.05	4.62	2.61	13.07	mg/L
Dissolved phosphorus	4.25	1.13	0.323	0.337	mg/L
Nitrate-nitrite	6.93	21.81	6.22	1.22	mg/L
Total nitrogen	65.29	77.99	11.21	5.02	mg/L
Orthophosphate	2.74	0.213	0.0842	0.0503	mg/L
Total dissolved solids (TDS)	871.0	1,158	N/A	1,035	mg/L
Total Kjeldahl nitrogen (TKN)	26.14	4.18	1.45	6.69	mg/L
Total organic carbon (TOC)	70.28	12.38	9.14	12.68	mg/L
Total phosphorus	16.85	3.37	1.29	4.31	mg/L
Total residual chlorine	— ^c	—	—	—	
Volatile Residue	740.7	577.0	383.0	567.7	mg/L
Barium	0.0101	0.0060	0.0017	0.0189	mg/L
Copper	0.0202	0.0084	0.0059	0.0059	mg/L
Chromium	—	—	—	—	
Manganese	0.0650	0.0091	0.0091	0.0699	mg/L
Molybdenum	—	—	—	—	
Nickel	0.0052	0.0028	0.0028	0.0073	mg/L
Titanium	—	—	—	—	
Vanadium	—	—	—	—	
Zinc	0.146	0.136	0.0501	0.0872	mg/L
<i>Aeromonas</i>	151,584	65,079	192,481	192,481	cfu/100 mL
<i>Cryptosporidium</i>	—	—	—	—	
<i>E. Coli</i>	763,576	66,473	801,070	801,070	cfu/100 mL
Fecal streptococci	3,836	1,980	3,650	3,650	cfu/100 mL
<i>Salmonella</i>	29.46	111.2	2.00	2.00	cfu/100 mL
Total coliform	763,532	163,264	801,070	801,070	cfu/100 mL
<i>cis</i> -Permethrin	—	—	—	—	
<i>trans</i> -Permethrin	—	—	—	—	

^a Data for this category were derived using methods described in Section 9.2.3^b not available^c not applicable

Table C-69. Average Technology Option Concentrations for Poultry Further Processing (P2) Indirect Dischargers

Pollutant of Concern	PSES 1	PSES 2	PSES 3	PSES 4	Units
5-Day biochemical oxygen demand (BOD ₅)	561.6	5.91	5.91	49.73	mg/L
Total suspended solids (TSS)	2,379	290.8	76.39	215.9	mg/L
Hexane extractable material (HEM)	61.62	29.48	22.45	2.21	mg/L
Fecal coliform bacteria	43,813	79,280	801,150	801,150	cfu/100 mL
Ammonia as nitrogen	19.23	0.757	0.757	0.763	mg/L
Carbaryl	N/A ^a	N/A	N/A	N/A	
Carbonaceous biochemical oxygen demand (CBOD)	452.3	5.71	5.71	28.75	mg/L
Chemical oxygen demand (COD)	665.9	58.14	58.14	79.87	mg/L
Chloride	297.3	297.3	297.3	296.0	mg/L
Dissolved biochemical oxygen demand	91.38	4.38	2.38	12.99	mg/L
Dissolved phosphorus	20.10	3.13	1.09	1.06	mg/L
Nitrate-nitrite	0.938	0.938	0.668	0.121	mg/L
Total nitrogen	39.75	110.76	16.36	13.41	mg/L
Orthophosphate	5.67	0.198	0.0572	0.0522	mg/L
Total dissolved solids (TDS)	1,263	1,707	1,707	1,707	mg/L
Total Kjeldahl nitrogen (TKN)	37.97	6.42	1.14	11.68	mg/L
Total organic carbon (TOC)	79.57	14.65	9.44	17.20	mg/L
Total phosphorus	64.10	12.23	4.81	16.68	mg/L
Total residual chlorine	— ^b	—	—	—	
Volatile Residue	2,884	1,723	1,284	1,802	mg/L
Barium	0.0131	0.0101	0.0046	0.0204	mg/L
Copper	0.0068	0.0026	0.0008	0.0024	mg/L
Chromium	—	—	—	—	
Manganese	0.0098	0.0038	0.0038	0.0217	mg/L
Molybdenum	—	—	—	—	
Nickel	0.0085	0.0046	0.0046	0.0118	mg/L
Titanium	—	—	—	—	
Vanadium	—	—	—	—	
Zinc	0.460	0.275	0.0941	0.175	mg/L
<i>Aeromonas</i>	153,000	65,085	192,500	192,500	cfu/100 mL
<i>Cryptosporidium</i>	—	—	—	—	
<i>E. Coli</i>	55,215	66,480	801,150	801,150	cfu/100 mL
Fecal streptococci	464.7	1,980	3,650	3,650	cfu/100 mL
<i>Salmonella</i>	2.00	111.2	2.00	2.00	cfu/100 mL
Total coliform	132,690	163,280	801,150	801,150	cfu/100 mL
<i>cis</i> -Permethrin	—	—	—	—	
<i>trans</i> -Permethrin	—	—	—	—	

^a not available^b not applicable

Table C-70. Average Technology Option Concentrations for Poultry Further Processing and Rendering (P23)^a Indirect Dischargers

Pollutant of Concern	PSES 1	PSES 2	PSES 3	PSES 4	Units
5-Day biochemical oxygen demand (BOD ₅)	244.3	3.77	3.77	31.73	mg/L
Total suspended solids (TSS)	1,049	145.3	38.17	107.9	mg/L
Hexane extractable material (HEM)	197.9	183.9	140.1	13.82	mg/L
Fecal coliform bacteria	63,930	79,280	801,150	801,150	cfu/100 mL
Ammonia as nitrogen	10.71	2.72	2.72	2.74	mg/L
Carbaryl	N/A ^b	0.000076	N/A	0.000004	mg/L
Carbonaceous biochemical oxygen demand (CBOD)	197.3	4.02	4.02	20.22	mg/L
Chemical oxygen demand (COD)	375.3	112.2	112.2	154.1	mg/L
Chloride	186.2	186.2	186.2	185.4	mg/L
Dissolved biochemical oxygen demand	45.51	7.86	4.28	23.31	mg/L
Dissolved phosphorus	9.40	2.06	0.715	0.693	mg/L
Nitrate-nitrite	15.16	15.16	10.80	1.96	mg/L
Total nitrogen	108.2	138.9	20.53	8.98	mg/L
Orthophosphate	2.71	0.342	0.0990	0.0903	mg/L
Total dissolved solids (TDS)	1,382	1,574	1,574	1,574	mg/L
Total Kjeldahl nitrogen (TKN)	21.07	7.42	1.32	13.49	mg/L
Total organic carbon (TOC)	48.55	20.45	13.18	24.01	mg/L
Total phosphorus	29.10	6.65	2.61	9.07	mg/L
Total residual chlorine	— ^c	—	—	—	
Volatile Residue	1,573	1,070	797.2	1,119	mg/L
Barium	0.0092	0.0079	0.0036	0.0159	mg/L
Copper	0.0098	0.0080	0.0025	0.0075	mg/L
Chromium	—	—	—	—	
Manganese	0.0137	0.0111	0.0111	0.0645	mg/L
Molybdenum	—	—	—	—	
Nickel	0.0067	0.0050	0.0050	0.0128	mg/L
Titanium	—	—	—	—	
Vanadium	—	—	—	—	
Zinc	0.290	0.210	0.0718	0.133	mg/L
<i>Aeromonas</i>	103,135	65,085	192,500	192,500	cfu/100 mL
<i>Cryptosporidium</i>	—	—	—	—	
<i>E. Coli</i>	61,605	66,480	801,150	801,150	cfu/100 mL
Fecal streptococci	1,324	1,980	3,650	3,650	cfu/100 mL
<i>Salmonella</i>	63.94	111.2	2.00	2.00	cfu/100 mL
Total coliform	150,041	163,280	801,150	801,150	cfu/100 mL
<i>cis</i> -Permethrin	—	—	—	—	
<i>trans</i> -Permethrin	—	—	—	—	

^a Data for this category were derived using methods described in Section 9.2.3^b not available^c not applicable

Table C-71. Average Technology Option Concentrations for Mixed Meat/Poultry Further Processing (M2)^a Direct Dischargers

Pollutant of Concern	BAT 1	BAT 2	BAT 3	BAT 4	Units
5-Day biochemical oxygen demand (BOD ₅)	4.40	4.40	4.51	26.42	mg/L
Total suspended solids (TSS)	147.2	147.2	38.65	108.4	mg/L
Hexane extractable material (HEM)	16.56	16.56	12.61	1.24	mg/L
Fecal coliform bacteria	81.25	81.25	6.39	6.73	cfu/100 mL
Ammonia as nitrogen	0.291	0.470	0.484	0.487	mg/L
Carbaryl	N/A ^b	N/A	N/A	N/A	
Carbonaceous biochemical oxygen demand (CBOD)	3.82	3.82	5.47	16.99	mg/L
Chemical oxygen demand (COD)	37.15	37.15	37.76	48.63	mg/L
Chloride	2,624	2,624	3,486	3,471	mg/L
Dissolved biochemical oxygen demand	5.48	5.48	2.99	8.29	mg/L
Dissolved phosphorus	15.14	15.14	5.26	5.11	mg/L
Nitrate-nitrite	4.78	1.53	1.09	N/A	mg/L
Total nitrogen	57.98	57.98	8.57	7.02	mg/L
Orthophosphate	4.68	4.68	1.35	1.24	mg/L
Total dissolved solids (TDS)	4,255	4,255	4,972	4,972	mg/L
Total Kjeldahl nitrogen (TKN)	0.471	3.72	0.663	5.93	mg/L
Total organic carbon (TOC)	16.86	16.86	10.87	14.74	mg/L
Total phosphorus	16.59	16.59	6.52	12.46	mg/L
Total residual chlorine	2.01	2.01	2.06	2.06	mg/L
Volatile Residue	963.3	963.3	717.8	976.8	mg/L
Barium	0.0106	0.0106	0.0048	0.0127	mg/L
Copper	0.0024	0.0024	0.00074	0.0015	mg/L
Chromium	0.0122	0.0122	0.0125	0.0075	mg/L
Manganese	0.0025	0.0025	0.0034	0.0124	mg/L
Molybdenum	0.0070	0.0070	0.0084	0.0086	mg/L
Nickel	0.0027	0.0027	0.0046	0.0082	mg/L
Titanium	0.00086	0.00086	0.00092	0.0013	mg/L
Vanadium	0.0011	0.0011	0.00050	0.00076	mg/L
Zinc	0.145	0.145	0.0496	0.0898	mg/L
<i>Aeromonas</i>	1,853	1,853	0.442	176.6	cfu/100 mL
<i>Cryptosporidium</i>	N/A	N/A	N/A	N/A	
<i>E. Coli</i>	75.81	75.81	0.730	1.08	cfu/100 mL
Fecal streptococci	19.81	19.81	4.42	5.70	cfu/100 mL
<i>Salmonella</i>	1.61	1.61	2.00	0.0071	cfu/100 mL
Total coliform	225.1	225.1	15.19	5.52	cfu/100 mL
<i>cis</i> -Permethrin	N/A	N/A	N/A	N/A	
<i>trans</i> -Permethrin	N/A	N/A	N/A	N/A	

^a Data for this category were derived using methods described in Section 9.2.3^b not available

Table C-72. Average Technology Option Concentrations for Mixed Meat/Poultry Further Processing (M2)^a Indirect Dischargers

Pollutant of Concern	PSES 1	PSES 2	PSES 3	PSES 4	Units
5-Day biochemical oxygen demand (BOD ₅)	708.1	4.40	4.51	26.42	mg/L
Total suspended solids (TSS)	1,219	147.2	38.65	108.4	mg/L
Hexane extractable material (HEM)	34.61	16.56	12.61	1.24	mg/L
Fecal coliform bacteria	361,375	379,108	404,239	404,239	cfu/100 mL
Ammonia as nitrogen	17.02	0.470	0.484	0.487	mg/L
Carbaryl	N/A ^b	N/A	N/A	N/A	
Carbonaceous biochemical oxygen demand (CBOD)	612.2	3.82	5.47	16.99	mg/L
Chemical oxygen demand (COD)	915.1	37.15	37.76	48.63	mg/L
Chloride	3,486	2,624	3,486	3,471	mg/L
Dissolved biochemical oxygen demand	543.3	5.48	2.99	8.29	mg/L
Dissolved phosphorus	31.06	15.14	5.26	5.11	mg/L
Nitrate-nitrite	N/A	N/A	N/A	N/A	
Total nitrogen	26.97	57.98	8.57	7.02	mg/L
Orthophosphate	6.91	4.68	1.35	1.24	mg/L
Total dissolved solids (TDS)	4,751	4,255	4,972	4,972	mg/L
Total Kjeldahl nitrogen (TKN)	25.71	3.72	0.663	5.93	mg/L
Total organic carbon (TOC)	293.4	16.86	10.87	14.74	mg/L
Total phosphorus	51.37	16.59	6.52	12.46	mg/L
Total residual chlorine	1.95	2.01	2.06	2.06	mg/L
Volatile Residue	1,757	963.3	717.8	976.8	mg/L
Barium	0.0111	0.0106	0.0048	0.0127	mg/L
Copper	0.0070	0.0024	0.00074	0.0015	mg/L
Chromium	0.0053	0.0122	0.0125	0.0075	mg/L
Manganese	0.0195	0.0025	0.0034	0.0124	mg/L
Molybdenum	0.0054	0.0070	0.0084	0.0086	mg/L
Nickel	0.0076	0.0027	0.0046	0.0082	mg/L
Titanium	0.0012	0.0009	0.00092	0.0013	mg/L
Vanadium	0.00082	0.0011	0.00050	0.00076	mg/L
Zinc	0.244	0.145	0.0496	0.0898	mg/L
<i>Aeromonas</i>	219,399	175,442	121,750	121,750	cfu/100 mL
<i>Cryptosporidium</i>	N/A	N/A	N/A	N/A	
<i>E. Coli</i>	418,076	423,709	403,744	403,744	cfu/100 mL
Fecal streptococci	632,184	632,941	1,828	1,828	cfu/100 mL
<i>Salmonella</i>	2.00	56.60	2.00	2.00	cfu/100 mL
Total coliform	647,345	662,640	404,239	404,239	cfu/100 mL
<i>cis-Permethrin</i>	N/A	N/A	N/A	N/A	
<i>trans-Permethrin</i>	N/A	N/A	N/A	N/A	

^a Data for this category were derived using methods described in Section 9.2.3

^b not available

Table C-73. Average Technology Option Concentrations for Mixed Meat/Poultry Further Processing and Rendering (M23)^a Indirect Dischargers

Pollutant of Concern	PSES 1	PSES 2	PSES 3	PSES 4	Units
5-Day biochemical oxygen demand (BOD ₅)	892.2	4.49	4.69	18.67	mg/L
Total suspended solids (TSS)	574.1	75.55	19.84	54.69	mg/L
Hexane extractable material (HEM)	105.1	94.92	72.27	7.13	mg/L
Fecal coliform bacteria	457,538	465,213	404,239	404,239	cfu/100 mL
Ammonia as nitrogen	33.94	1.71	1.77	1.78	mg/L
Carbaryl	N/A ^b	N/A	N/A	N/A	
Carbonaceous biochemical oxygen demand (CBOD)	721.9	3.57	6.23	14.34	mg/L
Chemical oxygen demand (COD)	1,138	69.31	70.30	91.27	mg/L
Chloride	1,819	1,373	1,819	1,811	mg/L
Dissolved biochemical oxygen demand	745.3	8.71	4.75	14.26	mg/L
Dissolved phosphorus	18.99	10.26	3.57	3.46	mg/L
Nitrate-nitrite	N/A	N/A	N/A	N/A	
Total nitrogen	77.22	77.95	11.52	4.90	mg/L
Orthophosphate	5.71	5.07	1.47	1.34	mg/L
Total dissolved solids (TDS)	3,354	2,987	3,450	3,450	mg/L
Total Kjeldahl nitrogen (TKN)	34.02	5.50	0.979	7.06	mg/L
Total organic carbon (TOC)	466.7	26.85	17.31	22.72	mg/L
Total phosphorus	27.97	10.60	4.17	7.39	mg/L
Total residual chlorine	0.912	1.00	1.06	1.06	mg/L
Volatile Residue	1,130	646.1	481.4	642.3	mg/L
Barium	0.0077	0.0077	0.0035	0.0097	mg/L
Copper	0.0093	0.0053	0.0017	0.0042	mg/L
Chromium	0.0047	0.0072	0.0075	0.0045	mg/L
Manganese	0.0599	0.0079	0.0111	0.0378	mg/L
Molybdenum	0.0041	0.0049	0.0057	0.0059	mg/L
Nickel	0.0064	0.0028	0.0046	0.0085	mg/L
Titanium	0.0061	0.0058	0.0059	0.0090	mg/L
Vanadium	0.0172	0.0174	0.0080	0.0149	mg/L
Zinc	0.159	0.112	0.0384	0.0691	mg/L
<i>Aeromonas</i>	154,796	135,772	121,750	121,750	cfu/100 mL
<i>Cryptosporidium</i>	N/A	N/A	N/A	N/A	
<i>E. Coli</i>	432,499	434,936	403,744	403,744	cfu/100 mL
Fecal streptococci	663,106	663,434	1,828	1,828	cfu/100 mL
<i>Salmonella</i>	32.97	56.60	2.00	2.00	cfu/100 mL
Total coliform	589,021	595,641	404,239	404,239	cfu/100 mL
<i>cis</i> -Permethrin	N/A	N/A	N/A	N/A	
<i>trans</i> -Permethrin	N/A	N/A	N/A	N/A	

^a Data for this category were derived using methods described in Section 9.2.3^b not available

**Table C-74. Average Technology Option Concentrations for Rendering (REND)^a
Direct Dischargers**

Pollutant of Concern	BAT 1	BAT 2	BAT 3	BAT 4	Units
5-Day biochemical oxygen demand (BOD5)	4.82	4.82	5.10	13.03	mg/L
Total suspended solids (TSS)	21.17	21.17	5.56	13.79	mg/L
Hexane extractable material (HEM)	155.0	155.0	118.0	11.64	mg/L
Fecal coliform bacteria	123.3	123.3	9.70	15.31	cfu/100 mL
Ammonia as nitrogen	1.27	2.72	2.81	2.83	mg/L
Carbaryl	N/A ^b	N/A	N/A	N/A	
Carbonaceous biochemical oxygen demand (CBOD)	3.51	3.51	7.18	12.67	mg/L
Chemical oxygen demand (COD)	94.99	94.99	96.37	125.0	mg/L
Chloride	150.5	150.5	185.2	184.4	mg/L
Dissolved biochemical oxygen demand	11.51	11.51	6.27	19.00	mg/L
Dissolved phosphorus	5.56	5.56	1.93	1.88	mg/L
Nitrate-nitrite	18.31	13.25	9.44	1.71	mg/L
Total nitrogen	94.51	94.51	13.96	3.30	mg/L
Orthophosphate	5.43	5.43	1.57	1.43	mg/L
Total dissolved solids (TDS)	1,749	1,749	1,963	1,963	mg/L
Total Kjeldahl nitrogen (TKN)	2.07	7.13	1.27	7.98	mg/L
Total organic carbon (TOC)	36.07	36.07	23.26	29.84	mg/L
Total phosphorus	5.32	5.32	2.09	3.25	mg/L
Total residual chlorine	0.230	0.230	0.300	0.300	mg/L
Volatile Residue	406.1	406.1	302.6	388.6	mg/L
Barium	0.0051	0.0051	0.0023	0.0072	mg/L
Copper	0.0076	0.0076	0.0024	0.0062	mg/L
Chromium	0.0034	0.0034	0.0036	0.0021	mg/L
Manganese	0.0123	0.0123	0.0179	0.0580	mg/L
Molybdenum	0.0031	0.0031	0.0033	0.0034	mg/L
Nickel	0.0030	0.0030	0.0046	0.0088	mg/L
Titanium	0.0096	0.0096	0.0098	0.0149	mg/L
Vanadium	0.0299	0.0299	0.0137	0.0257	mg/L
Zinc	0.0873	0.0873	0.0299	0.0534	mg/L
<i>Aeromonas</i>	806.9	806.9	0.193	50.08	cfu/100 mL
<i>Cryptosporidium</i>	N/A	N/A	N/A	N/A	
<i>E. Coli</i>	81.35	81.35	0.783	7.33	cfu/100 mL
Fecal streptococci	42.35	42.35	9.44	41.50	cfu/100 mL
<i>Salmonella</i>	1.61	1.61	2.00	0.0071	cfu/100 mL
Total coliform	520.2	520.2	35.10	12.75	cfu/100 mL
<i>cis</i> -Permethrin	N/A	N/A	N/A	N/A	
<i>trans</i> -Permethrin	N/A	N/A	N/A	N/A	

^a Data for this category were derived using methods described in Section 9.2.3^b not available

**Table C-75. Average Technology Option Concentrations for Rendering Only (REND)^a
Indirect Dischargers**

Pollutant of Concern	PSES 1	PSES 2	PSES 3	PSES 4	Units
5-Day biochemical oxygen demand (BOD ₅)	1,109	4.82	5.10	13.03	mg/L
Total suspended solids (TSS)	86.10	21.17	5.56	13.79	mg/L
Hexane extractable material (HEM)	159.3	155.0	118.0	11.64	mg/L
Fecal coliform bacteria	550,222	550,222	404,239	404,239	cfu/100 mL
Ammonia as nitrogen	51.60	2.72	2.81	2.83	mg/L
Carbaryl	N/A ^b	N/A	N/A	N/A	
Carbonaceous biochemical oxygen demand (CBOD)	858.9	3.51	7.18	12.67	mg/L
Chemical oxygen demand (COD)	1,391	94.99	96.37	125.0	mg/L
Chloride	185.2	150.5	185.2	184.4	mg/L
Dissolved biochemical oxygen demand	950.0	11.51	6.27	19.00	mg/L
Dissolved phosphorus	8.27	5.56	1.93	1.88	mg/L
Nitrate-nitrite	13.01	13.25	9.44	1.71	mg/L
Total nitrogen	119.2	94.51	13.96	3.30	mg/L
Orthophosphate	4.85	5.43	1.57	1.43	mg/L
Total dissolved solids (TDS)	1,963	1,749	1,963	1,963	mg/L
Total Kjeldahl nitrogen (TKN)	44.12	7.13	1.27	7.98	mg/L
Total organic carbon (TOC)	641.20	36.07	23.26	29.84	mg/L
Total phosphorus	8.80	5.32	2.09	3.25	mg/L
Total residual chlorine	0.124	0.230	0.300	0.300	mg/L
Volatile Residue	657.2	406.1	302.6	388.6	mg/L
Barium	0.0047	0.0051	0.0023	0.0072	mg/L
Copper	0.0112	0.0076	0.0024	0.0062	mg/L
Chromium	0.0041	0.0034	0.0036	0.0021	mg/L
Manganese	0.099	0.0123	0.0179	0.0580	mg/L
Molybdenum	0.0030	0.0031	0.0033	0.0034	mg/L
Nickel	0.0055	0.0030	0.0046	0.0088	mg/L
Titanium	0.0098	0.0096	0.0098	0.0149	mg/L
Vanadium	0.0296	0.0299	0.0137	0.0257	mg/L
Zinc	0.0937	0.0873	0.0299	0.0534	mg/L
<i>Aeromonas</i>	96,606	96,606	121,750	121,750	cfu/100 mL
<i>Cryptosporidium</i>	N/A	N/A	N/A	N/A	
<i>E. Coli</i>	446,021	446,021	403,744	403,744	cfu/100 mL
Fecal streptococci	693,540	693,540	1,828	1,828	cfu/100 mL
<i>Salmonella</i>	56.60	56.60	2.00	2.00	cfu/100 mL
Total coliform	529,494	529,494	404,239	404,239	cfu/100 mL
<i>cis</i> -Permethrin	N/A	N/A	N/A	N/A	
<i>trans</i> -Permethrin	N/A	N/A	N/A	N/A	

^a Data for this category were derived using methods described in Section 9.2.3^b not available