

STATE OF MISSOURI  
**DEPARTMENT OF NATURAL RESOURCES**

MISSOURI CLEAN WATER COMMISSION



**MISSOURI STATE OPERATING PERMIT**

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92<sup>nd</sup> Congress) as amended,

Permit No. MO-0108952

Owner: Simmons Foods, Inc.  
Address: 601 N. Hico, Siloam Springs, AR 72761

Continuing Authority: Same as above  
Address: Same as above

Facility Name: Simmons Foods-Jane Hatchery  
Facility Address: 653 Rains Road, Pineville, MO 64856

Legal Description: See Page 2  
UTM Coordinates: See Page 2

Receiving Stream: See Page 2  
First Classified Stream and ID: See Page 2  
USGS Basin & Sub-watershed No.: See Page 2

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

**FACILITY DESCRIPTION**

All permitted features – SIC #0254  
See Page 2

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

January 1, 2015  
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

December 31, 2019  
Expiration Date

John Madras, Director, Water Protection Program

**FACILITY DESCRIPTION** (continued)

**Facility Type:**

Industrial no-discharge land application irrigation system for annual flows into gaining stream.

**Permitted Feature #001** – Non-contact cooling water

Legal Description: NW¼, NW ¼, Sec. 07, T21N, R31W, McDonald County  
UTM Coordinates: X=380706, Y=4047408  
Receiving Stream: Tributary to Little Sugar Creek (U)  
First Classified Stream and ID: Little Sugar Creek (P) (3249) 303(d) List  
USGS Basin & Sub-watershed No.: (11070208-0206)  
Design flow is 9,000 gallons per day.  
Actual flow is 1,800 gallons per day.

**Permitted Feature #002** – Stormwater runoff for East part of the site, located at the NE corner of the property.

Legal Description: NE ¼, NW ¼, Sec. 07, T21N, R31W, McDonald County  
UTM Coordinates: X=380878, Y=4047479  
Receiving Stream: Tributary to Little Sugar Creek (U)  
First Classified Stream and ID: Little Sugar Creek (P) (3249) 303(d) List  
USGS Basin & Sub-watershed No.: (11070208-0206)

**Permitted Feature #003**– Single cell storage basin/wastewater irrigation/sludge removed by contract hauler.

Legal Description: NW ¼, NW ¼, Sec. 07, T21N, R31W, McDonald County  
UTM Coordinates: X=380828, Y=4047511  
Receiving Stream: Tributary to Little Sugar Creek (U)  
First Classified Stream and ID: Little Sugar Creek (P) (3249) 303(d) List  
USGS Basin & Sub-watershed No.: (11070208-0206)  
Average design flow is 9,250 gallons per day (1-in-10 year design including net rainfall minus evaporation).  
Average design flow is 7,900 gallons per day (dry weather flows).  
Design sludge production is 1.3 dry tons per year.  
Upper operating level is 1 foot below emergency spillway or overflow.

**Permitted Feature #004**– Stormwater runoff for west part of the site, located at the NW corner of the property.

Legal Description: NW ¼, NW ¼, Sec. 07, T21N, R31W, McDonald County  
UTM Coordinates: X=380670, Y=4047488  
Receiving Stream: Tributary to Little Sugar Creek (U)  
First Classified Stream and ID: Little Sugar Creek (P) (3249) 303(d) List  
USGS Basin & Sub-watershed No.: (11070208-0206)

**Permitted Feature #005**–Land application field, 20 acres.

Legal Description: NE ¼, NW ¼, Sec. 07, T21N, R31W, McDonald County  
UTM Coordinates: X=381037, Y= 4047425  
Receiving Stream: Tributary to Little Sugar Creek (U)  
First Classified Stream and ID: Little Sugar Creek (P) (3249) 303(d) List  
USGS Basin & Sub-watershed No.: (11070208-0206)  
Irrigation Volume/year: 10,000,000 gallons at design loading (including 1-in-10 year flows)  
Irrigation areas: 20 acres at design loading (20 acres total available)  
Application rates: 0.2 inch/hour; 1.0 inch/day; 3.0 inches/week; 24.0 inches/year  
Equipment type: Fixed stand pipe sprinkler irrigation.  
Vegetation: Cool season grass.  
Application rate is based on Hydraulic loading rate.

<b>PERMITTED FEATURE #001</b>	<b>TABLE A-1. NON-COOLING WATER LIMITATIONS AND MONITORING REQUIREMENTS</b>
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The permittee is authorized to conduct land application of wastewater as specified in the application for this permit. The final limitations shall become effective **January 1, 2015**, and remain in effect until expiration of the permit. The land application of wastewater shall be controlled, limited and monitored by the permittee as specified below:

EFFLUENT PARAMETER(S) (See Special Condition 6)	UNITS	FINAL LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Non-contact cooling water						
Flow	cfs	*		*	once/quarter*****	24 hr. estimate
pH	SU	**		**	once/quarter*****	grab
Temperature (Effluent)	°F	*		*	once/quarter*****	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE APRIL 28, 2015.

<b>PERMITTED FEATURE #002, #004</b>	<b>TABLE A-2. STORMWATER LIMITATIONS AND MONITORING REQUIREMENTS</b>
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The permittee is authorized to conduct land application of wastewater as specified in the application for this permit. The final limitations shall become effective **January 1, 2015**, and remain in effect until expiration of the permit. The land application of wastewater shall be controlled, limited and monitored by the permittee as specified below:

EFFLUENT PARAMETER(S) (See Special Condition 6)	UNITS	FINAL LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	MGD	*		*	once/quarter*****	24 hr. estimate***
Biochemical Oxygen Demand <sub>5</sub>	mg/L	60		45	once/quarter*****	grab***
Total Suspended Solids	mg/L	*		*	once/quarter*****	grab***
Total Phosphorus	mg/L	*		*	once/quarter*****	grab***
Total Nitrogen	mg/L	*		*	once/quarter*****	grab***
Oil & Grease	mg/L	15		10	once/quarter*****	grab***
pH	SU	**		*	once/quarter*****	grab***
E. coli (Note 4)	#/100mL	*		*	once/quarter*****	grab***

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE APRIL 28, 2015.

PERMITTED FEATURE #003	TABLE A-3. IRRIGATION SYSTEM LIMITATIONS AND MONITORING REQUIREMENTS					
	The permittee is authorized to conduct land application of wastewater as specified in the application for this permit. The final limitations shall become effective <b>January 1, 2015</b> , and remain in effect until expiration of the permit. The land application of wastewater shall be controlled, limited and monitored by the permittee as specified below:					
EFFLUENT PARAMETER(S)	UNITS	FINAL LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Storage Basin Operational Monitoring						
Storage Basin Freeboard (Note 1)	feet	*			once/month	measured
Precipitation	inches	*			daily	total
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>APRIL 28, 2015</u> .						
Wastewater Land Applied (Note 2)						
Total Kjeldahl Nitrogen as N (Note 3)	mg/L	*			twice/year****	grab
Ammonia Nitrogen as N	mg/L	*			twice/year****	grab
Nitrate Nitrogen as N (Note 3)	mg/L	*			twice/year****	grab
Total Phosphorus as P	mg/L	*			twice/year****	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>JANUARY 28, 2016</u> .						

PERMITTED FEATURE #005	TABLE A-4. LAND APPLICATION LIMITATIONS AND MONITORING REQUIREMENTS					
	The permittee is authorized to conduct land application of wastewater as specified in the application for this permit. The final limitations shall become effective <b>January 1, 2015</b> , and remain in effect until expiration of the permit. The land application of wastewater shall be controlled, limited and monitored by the permittee as specified below:					
EFFLUENT PARAMETER(S)	UNITS	FINAL LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Wastewater Land Application Operational Monitoring						
Irrigation Period	hours	*			daily	total
Volume Irrigated	gallons	*			daily	total
Application Area	acres	*			daily	total
Application Rate	gal/acre	*			daily	total
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>APRIL 28, 2015</u> .						

\* Monitoring requirement only.

\*\* pH is measured in pH units and is not to be averaged. The pH is limited to the range on 6.5-9.0 pH units.

\*\*\* All samples shall be collected from a discharge resulting from a precipitation event greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable precipitation event. If a precipitation event does not occur within the reporting period, report as **no discharge**.

\*\*\*\* Monitor twice per year during the months of April and October.

\*\*\*\*\* See table below for quarterly sampling.

Minimum Sampling Requirements			
Quarter	Months	Parameters	Report is Due
First	January, February, March	Sample at least once during any month of the quarter	April 28 <sup>th</sup>
Second	April, May, June	Sample at least once during any month of the quarter	July 28 <sup>th</sup>
Third	July, August, September	Sample at least once during any month of the quarter	October 28 <sup>th</sup>
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28 <sup>th</sup>

Note 1 - Storage Basin freeboard shall be reported as Storage Basin water level in feet below the overflow level.

Note 2 - Wastewater that is applied shall be sampled at the irrigation pump, wet well, or application vehicle. If no land application occurred during the report period, report as "No Application."

Note 3 - Wastewater irrigation rates shall not exceed a nitrogen application rate of 150 pounds total nitrogen per acre per year, and the applied wastewater shall not exceed ten (10) mg/l of nitrate nitrogen as N. If the nitrogen application exceeds a rate of 150 pounds total nitrogen per acre per year, and/or the applied wastewater exceeds ten (10) mg/l of nitrate nitrogen as N, see Special Condition #20 for additional requirements.

Note 4 - Final limitations and monitoring requirements for *E. coli* are applicable only during the recreational season from April 1 through October 31. The Monthly Average Limit for *E. coli* is expressed as a geometric mean.

**B. STANDARD CONDITIONS**

In addition to specified conditions stated herein, this permit is subject to the attached Part I standard conditions dated August 1, 2014, and hereby incorporated as though fully set forth herein.

**C. SPECIAL CONDITIONS**

1. **Emergency Discharge.** Wastewater/sludge shall be stored and land applied during suitable conditions so that there is no discharge from the storage structure(s) or land application site. An emergency discharge from wastewater storage structure(s) may only occur if rainfall exceeds the 1 in 10 year (Data taken from the Missouri Climate Atlas) or the 24 hour, 25 year (Data taken from NRCS Urban Hydrology for Small Watersheds) rainfall events. **Discharge for any other reason or from land application sites shall constitute a permit violation and shall be reported in accordance with Standard Conditions, Part 1, Section B.2.b.** Monitoring shall take place once per day while discharging. Test results are due on the 28<sup>th</sup> day of the following month after the cessation of the discharge. Permittee shall monitor for the following constituents:

Constituent	Units
Flow	MGD
Biochemical Oxygen Demand <sub>5</sub>	mg/L
Total Suspended Solids	mg/l
Ammonia as N	mg/L
pH – Units	SU
Oil & Grease	mg/L
<i>E. coli</i>	#/100mL
Total Nitrogen	mg/l
Total Phosphorus	mg/l

2. This permit may be reopened and modified, or alternatively revoked and reissued, to:
  - a. Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
    - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
    - (2) controls any pollutant not limited in the permit.
  - b. Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri’s Water Quality Standards.
  - c. Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri’s list of waters of the state not fully achieving the state’s water quality standards, also called the 303(d) list.
  - d. Incorporate the requirement to develop a pretreatment program pursuant to 40 CFR 403.8(a) when the Director of the Water Protection Program determines that a pretreatment program is necessary due to any new introduction of pollutants into the Publicly Owned Treatment Works or any substantial change in the volume or character of pollutants being introduced.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

3. All permitted features s must be clearly marked in the field.

C. SPECIAL CONDITIONS cont'd

4. Water Quality Standards

- a. To the extent required by law, discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
  - b. General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
    - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
    - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
    - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
    - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
    - (5) There shall be no significant human health hazard from incidental contact with the water;
    - (6) There shall be no acute toxicity to livestock or wildlife watering;
    - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
    - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.
5. Public access to storage areas and land application sites must be controlled by either positive barriers or remoteness of site.
6. Reporting of Non-Detects:
- a. An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way that the precision and accuracy of the analyzed result can be enumerated.
  - b. The permittee shall not report a sample result as "Non-Detect" without also reporting the detection limit of the test. Reporting as "Non Detect" without also including the detection limit will be considered failure to report, which is a violation of this permit.
  - c. The permittee shall provide the "Non-Detect" sample result using the less than sign and the minimum detection limit (e.g. <10).
  - d. Where the permit contains a Minimum Level (ML) and the permittee is granted authority in the permit to report zero in lieu of the < ML for a specified parameter (conventional, priority pollutants, metals, etc.), then zero (0) is to be reported for that parameter.
  - e. See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.
7. The permittee shall develop, maintain and implement an Operation and Maintenance (O&M) Manual that includes all necessary items to ensure the operation and integrity of the waste handling and land application systems, including key operating procedures, an aerial or topographic site map with the permitted features, land application fields, and irrigation buffer zones marked, and a brief summary of the operation of the facility. The O & M manual shall be made available to the operator and available to the department upon request. The O&M Manual shall be reviewed and updated at least every five years.
8. The berms of the storage basin(s) shall be mowed and kept free of any deep-rooted vegetation, animal dens, or other potential sources of damage to the berms.
9. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).
10. Hazardous waste regulated under the Missouri Hazardous Waste Law and regulations shall not be land applied under this permit.
11. Any pesticide discharge from any point source shall comply with the requirements of Federal Insecticide, Fungicide and Rodenticide Act, as amended (7 U.S.C. 136 et. seq.) and the use of such pesticides shall be in a manner consistent with its label.

C. SPECIAL CONDITIONS cont'd

12. The permittee shall implement a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must be prepared and implemented upon permit issuance and kept on-site and should not be sent to the department unless specifically requested. The SWPPP must be reviewed and updated, if needed, every five (5) years or as site conditions change. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following document:  
  
Developing Your Stormwater Pollution Prevention Plan. A Guide for Industrial Operators, (Document number EPA 833-B-09-002) published by the United States Environmental Protection Agency (USEPA) in February 2009. The SWPPP must include the following:
  - a. A listing of specific Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter stormwater.
  - b. The SWPPP must include a schedule for monthly site inspection of BMP effectiveness and brief written reports. Deficiencies must be corrected within seven (7) days and the actions taken to correct the deficiencies shall be included with the written report, including photographs. Any corrective measure that necessitates major construction may also need a construction permit. Inspection reports must be kept on site with the SWPPP and maintained for a period of five (5) years. These must be made available to department personnel upon request.
  - c. A provision for designating an individual to be responsible for environmental matters.
  - d. A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted on request of the department.
13. Permittee shall adhere to the following minimum Best Management Practices (BMPs):
  - a. Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of storm water from these substances.
  - b. Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
  - c. Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to storm water or provide other prescribed BMPs such as plastic lids and/or portable spill pans to prevent the commingling of storm water with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
  - d. Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
  - e. Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property. This could include the use of straw bales, silt fences, or sediment basins, if needed, to comply with effluent limits.
14. The purpose of the SWPPP and the BMPs listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was not effective in preventing pollution [10 CSR 20-2.010(56)] of waters of the state, and corrective actions means the facility took steps to eliminate the deficiency.
15. Release of a hazardous substance must be reported to the department in accordance with 10 CSR 24-3.010. A record of each reportable spill shall be retained with the SWPPP and made available to the department upon request.
16. The facility shall ensure that adequate provisions are provided to prevent surface water intrusion into the storage basin(s) and to divert stormwater runoff around the storage basin(s) and protect embankments from erosion.
17. Land Application System.
  - a. This special condition does not apply to fertilizer products that are exempted under the Missouri Clean Water Law and regulations, 10 CSR 20-6.015(3)(B)8.
  - b. Permitted Sites. This permit authorizes land application of wastewater by the permittee to those sites listed in the "Facility Description" of this permit. Land application of wastewater by a contract hauler to sites owned, rented, or leased by the permittee must also be listed in the "Facility Description" unless, the contract hauler is permitted. Land application by contract hauler to sites that are not owned, rented, or leased by the permitted are not required to be listed in this permit. Only those pollutants listed in the permit application may be land applied. Permittee requests for additional sites must follow permit modification procedures prior to land application. Additionally, the O&M Manual shall include all additional land application site(s) listed in this permit.

C. SPECIAL CONDITIONS cont'd

- c. Storage Basin Operating Levels. The minimum and maximum operating water levels for the storage basin(s) shall be clearly marked. Each storage basin shall be operated so that the maximum water elevation does not exceed upper operating level. Storage basins shall be lowered to the minimum operating level prior to November 30 each year.
- d. Public Access Restrictions. This permit does not authorize application of sludge to areas to public use areas.

18. Land Application Requirements.

- a. Wastewater land applications shall not exceed agronomic rates to ensure agricultural use of nutrients and prevent contamination of surface and groundwater. The agronomic rate is the amount of wastewater and/or sludge applied to a field to supply the amount of nutrients to meet the fertilizer recommendation.
- b. No land application shall occur during frozen, snow covered, or saturated soil conditions. There shall be no application during a precipitation event or if a precipitation event that is likely to create runoff is forecasted to occur within 24 hours of a planned application.
- c. Land application shall occur only during daylight hours.
- d. Land application fields shall be checked daily during land application to check for runoff. Sites that utilize spray irrigation shall monitor for the drifting of spray across property lines.
- e. Setback distances from sensitive features. There shall be no land application within:
  - (1) 300 feet of any well, sinkhole, losing stream, wetland, or cave entrance, water supply impoundment or stream intake;
  - (2) 150 feet of an occupied residence, public building, or public use area;
  - (3) 50 feet of gaining perennial or intermittent stream, public or privately owned pond or lake;
  - (4) 50 feet of property line or public road.
- f. Wastewater application on slopes exceeding 10% the hourly application rate shall not exceed one-half (1/2) the design sustained permeability and in no case shall exceed one-half (1/2) inch per hour.
- g. Application Equipment. The land application equipment shall be visually inspected daily during land application to check for equipment malfunctions and leaks. The application system shall be operated so as to provide uniform distribution of wastes over the entire land application site and shall be capable of applying the annual design flow during an application period of less than 100 days or 800 hours per year. Land application equipment shall be calibrated at least once annually.

19. Nutrient Management

- a. Nitrogen Loading Rates. Wastewater application rates should not exceed a nitrogen application rate of 150 pounds total nitrogen per acre per year, and the applied wastewater should not exceed ten (10) mg/l of nitrate nitrogen as N. Hydraulic application rates exceeding 60 inches per acre per year shall calculate nitrogen loading rates and include results in the annual report. The calculation procedures are as follows:  $(\text{Total N}) \times (0.226) \times (\text{inches per acre irrigated}) = \text{pounds total N per acre}$ . Where  $\text{Total N} = [\text{Total Kjeldahl Nitrogen (TKN) as N}] + [\text{Nitrate Nitrogen as N}]$ .
- b. If the applied wastewater is expected to provide more than 150 pounds total nitrogen per acre/year or if the applied wastewater exceeds 10 mg/l of nitrate nitrogen as N, the permittee must reduce the application rates or use the Plant Available Nitrogen (PAN) method. The calculations to show the amount of plant-available nitrogen provided and the wastewater and amount of nitrogen that will be utilized by the vegetation shall be submitted with the annual report.

$$\text{PAN} = [\text{Ammonia Nitrogen} \times \text{volatilization factor}^*] + [\text{Organic Nitrogen} \times 0.2] + [\text{Nitrate Nitrogen}]$$

\*Volatilization factor is 0.7 for surface application and 1 for subsurface application

20. Record Keeping

- a. A daily land application log shall be prepared and kept on file at the permittee office location for each application site showing dates of application, weather condition (sunny, overcast, raining, below freezing etc...), soil moisture condition, application method.
- b. A record of monthly visual storage structure inspections shall be maintained.
- c. A record of land application equipment inspections and calibrations as well as field perimeter inspections shall be maintained.
- d. A record of all PAN calculations.
- e. All records and monitoring results shall be maintained for at least five years and shall be made available to the department upon request.

C. SPECIAL CONDITIONS cont'd

21. Annual Report on Land Application.

An annual report is required in addition to other reporting requirements under Section A of this permit. The annual report shall be submitted by January 28 of each year. The report shall include, but is not limited to, a summary of the following:

- a. Record of maintenance and repairs during the year, average number of times per month the facility is checked to see if it is operating properly, and description of any unusual operating conditions encountered during the year.
- b. The number of days the storage structure discharged during the year, the discharge flow, reason the discharge occurred and effluent analysis performed.
- c. A summary for each field used for land application showing number of acres used number of days application occurred, crop grown and yield, and total amount of wastewater applied (gal. or tons/acre)
- d. For fields where the total nitrogen application exceeds 150 lbs./acre, submit PAN calculations to document that the applied nitrogen will be utilized.
- e. Narrative summary of any problems or deficiencies identified, corrective action taken and improvements planned.

**MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FACT SHEET  
FOR THE PURPOSE OF RENEWAL OF  
MO-0180952  
SIMMONS FOOD-JANE HATCHERY**

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a Factsheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (operating permit) listed below.

A Factsheet is not an enforceable part of an operating permit.

This Factsheet is for Industrial Land Application and stormwater discharge.

**Part I – Facility Information**

Facility Type: Industrial no-discharge, land application of wastewater, solids are removed by contract hauler – SIC #0254

Facility Description:

The facility is a hatchery for broiler chickens for placement in contract and company owned grower farms. The facility uses well water to wash down the hatchery. Wash water goes to a separation pit to where solids are collected and screened. Wastewater goes to the lagoon. Solis are removed by contract hauler. Domestic wastewater goes to septic tank drain field.

Have any changes occurred at this facility or in the receiving water body that effects effluent limit derivation?

- No.

Application Date: 05/13/14  
Expiration Date: 12/31/14

**PERMITTED FEATURE(S) TABLE:**

PERMITTED FEATURE	TREATMENT LEVEL	EFFLUENT TYPE
#001	None	Non-contact cooling water
#002, #004	BMP	Stormwater
#003	Land Application	Industrial sludge/wastewater
#005	Land Application	Industrial sludge/wastewater

Facility Performance History:

The facility was last inspected on June 24, 2014 and was found to be in compliance. A previous inspection on January 21, 2004 in response to an environmental concern found the facility to be in non-compliance for land applying at night due to a pump that had not been turned off. There were no environmental impacts due to the night time application.

**Part II – Receiving Stream Information**

**APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:**

As per Missouri's Effluent Regulations [10 CSR 20-7.015], the waters of the state are divided into the below listed seven (7) categories. Each category lists effluent limitations for specific parameters, which are presented in each outfall's Effluent Limitation Table and further discussed in the Derivation & Discussion of Limits section.

Missouri or Mississippi River [10 CSR 20-7.015(2)]:

- Lake or Reservoir [10 CSR 20-7.015(3)]:
- Losing [10 CSR 20-7.015(4)]:
- Metropolitan No-Discharge [10 CSR 20-7.015(5)]:
- Special Stream [10 CSR 20-7.015(6)]:
- Subsurface Water [10 CSR 20-7.015(7)]:
- All Other Waters [10 CSR 20-7.015(8)]:

10 CSR 20-7.031 Missouri Water Quality Standards, the Department defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and 1<sup>st</sup> classified receiving stream's beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

**RECEIVING STREAM(S) TABLE:**

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	DISTANCE TO CLASSIFIED SEGMENT	12-DIGIT HUC**
Tributary to Little Sugar Creek	U		General Criteria	0.1	11070208-0206
Little Sugar Creek	P	03249	AQL, CLF, IRR, LWW, SCR, WBC-A		

\* - Irrigation (IRR), Livestock & Wildlife Watering (LWW), Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cool Water Fishery (CLF), Cold Water Fishery (CDF), Whole Body Contact Recreation (WBC), Secondary Contact Recreation (SCR), Drinking Water Supply (DWS), Industrial (IND), Groundwater (GRW). \*\* - Hydrologic Unit Code

**RECEIVING STREAM MONITORING REQUIREMENTS:**

No receiving water monitoring requirements recommended at this time.

**Part III – Rationale and Derivation of Effluent Limitations & Permit Conditions**

**ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:**

As per [10 CSR 20-7.015(4)(A)], discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

Not Applicable; The facility does not discharge to a Losing Stream as defined by [10 CSR 20-2.010(36)] & [10 CSR 20-7.031(1)(N)], or is an existing facility.

**ANTI-BACKSLIDING:**

A provision in the Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(I)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

- The Department determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b). This facility applies wastewater based on the hydraulic loading rate rather than Plant Available Nitrogen (PAN) method. Many of the Nutrient Management Requirements in the previous permit pertained only to the PAN method. In addition, many of those requirements are specifically for Concentrated Animal Feeding Operations.

**ANTIDegradation:**

In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(2)], the Department is to document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

- No degradation proposed and no further review necessary. Facility did not apply for authorization to increase pollutant loading or to add additional pollutants to their discharge.

**AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:**

As per [10 CSR 20-6.010(3)(B)], ...An applicant may utilize a lower preference continuing authority by submitting, as part of the application, a statement waiving preferential status from each existing higher preference authority, providing the waiver does not conflict with any area-wide management plan approved under section 208 of the Federal Clean Water Act or any other regional sewage service and treatment plan approved for higher preference authority by the Department.

**BIOSOLIDS & SEWAGE SLUDGE:**

Biosolids are solid materials resulting from domestic wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information regarding biosolids and sludge is located at the following web address: <http://extension.missouri.edu/main/DisplayCategory.aspx?C=74>, items WQ422 through WQ449.

- Permittee is not authorized to land apply biosolids. Sludge/biosolids are removed by contract hauler.

**COMPLIANCE AND ENFORCEMENT:**

Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.

Not Applicable; The permittee/facility is not currently under Water Protection Program enforcement action.

**NUTRIENT MANAGEMENT AND LAND APPLICATION**

Land applications by a contract hauler on fields that the permittee has a spreading agreement on are not required to be in this permit. A spreading agreement does not constitute the field being rented or leased by the permittee as they do not have any control over management of the field.

The agronomic rate is the amount of wastewater applied to a field to supply the amount of nutrients to meet the fertilizer recommendation. For more information on nutrient management, PAN calculations, and land application best management practices, consult the following University of Missouri Extension Guides:

- WQ430 Crop/Nutrient Considerations for Biosolids.
- WQ426 Best Management Practices for Biosolids Land Application.
- WQ429 Interpretation of Laboratory Analysis of Biosolids Samples.

Conversion Factors for laboratory testing results: [mg/L or mg/kg or ppm] x [conversion factor] = [pounds per Unit Volume]

<u>Unit Volume</u>	<u>Conversion Factors</u>
lbs./acre inch	0.226
lbs./1,000 gallons	0.0083
lbs./100 cubic feet	0.0062
lbs./ton (wet weight)	0.002

**SCHEDULE OF COMPLIANCE (SOC):**

Per 644.051.4 RSMo, a permit may be issued with a Schedule of Compliance (SOC) to provide time for a facility to come into compliance with new state or federal effluent regulations, water quality standards, or other requirements. Such a schedule is not allowed if the facility is already in compliance with the new requirement, or if prohibited by other statute or regulation. A SOC includes an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit. *See also* Section 502(17) of the Clean Water Act, and 40 CFR §122.2. For new effluent limitations, the permit includes interim monitoring for the specific parameter to demonstrate the facility is not already in compliance with the new requirement. Per 40 CFR § 122.47(a)(1) and 10 CSR 20-7.031(10), compliance must occur as soon as possible. If the permit provides a schedule for meeting new water quality based effluent limits, a SOC must include an enforceable, final effluent limitation in the permit even if the SOC extends beyond the life of the permit.

A SOC is not allowed:

- For effluent limitations based on technology-based standards established in accordance with federal requirements, if the deadline for compliance established in federal regulations has passed. 40 CFR § 125.3.

For a newly constructed facility in most cases. Newly constructed facilities must meet applicable effluent limitations when discharge begins, because the facility has installed the appropriate control technology as specified in a permit or

- antidegradation review. A SOC is allowed for a new water quality based effluent limit that was not included in a previously public noticed permit or antidegradation review, which may occur if a regulation changes during construction.
- To develop a TMDL, UAA, or other study associated with development of a site specific criterion. A facility is not prohibited from conducting these activities, but a SOC may not be granted for conducting these activities.

In order to provide guidance to Permit Writers in developing SOCs, and attain a greater level of consistency, on October 25, 2012 the department issued a policy on development of SOCs. This policy provides guidance to Permit Writers on the standard time frames for schedules for common activities, and guidance on factors that may modify the length of the schedule such as an affordability analysis.

Not Applicable ; This permit does not contain a SOC.

**SPILL REPORTING:**

Per 10 CSR 24-3.010, any emergency involving a hazardous substance must be reported to the department's 24 hour Environmental Emergency Response hotline at (573) 634-2436 at the earliest practicable moment after discovery. The department may require the submittal of a written report detailing measures taken to clean up a spill. These reporting requirements apply whether or not the spill results in chemicals or materials leaving the permitted property or reaching waters of the state. This requirement is in addition to the Noncompliance Reporting requirement found in Standard Conditions Part I.

**STORMWATER POLLUTION PREVENTION PLAN (SWPPP):**

In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; (2) Authorized under section 402(p) of the CWA for the control of storm water discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (Document number EPA 833-B-09-002) [published by the United States Environmental Protection Agency (USEPA) in February 2009], BMPs are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure.

Additionally in accordance with the Storm Water Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of storm water discharges.

Applicable ; A SWPPP shall be developed and implemented for each site and shall incorporate required practices identified by the Department with jurisdiction, incorporate erosion control practices specific to site conditions, and provide for maintenance and adherence to the plan.

**VARIANCE:**

As per the Missouri Clean Water Law § 644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

; This operating permit is not drafted under premises of a petition for variance.

**WATER QUALITY STANDARDS:**

Per [10 CSR 20-7.031(3)], General Criteria shall be applicable to all waters of the state at all times including mixing zones. Additionally, [40 CFR 122.44(d)(1)] directs the Department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including State narrative criteria for water quality.

**40 CFR 122.41(M) - BYPASSES:**

The federal Clean Water Act (CWA), Section 402 prohibits wastewater dischargers from "bypassing" untreated or partially treated sewage (wastewater) beyond the headworks. A bypass is defined as an intentional diversion of waste streams from any portion of a treatment facility, [40 CFR 122.41(m)(1)(i)]. Additionally, Missouri regulation 10 CSR 20-2.010(11) defines a bypass as the diversion of wastewater from any portion of wastewater treatment facility or sewer system to waters of the state. Only under exceptional and specified limitations do the federal regulations allow for a facility to bypass some or all of the flow from its treatment process. Bypasses are prohibited by the CWA unless a permittee can meet all of the criteria listed in 40 CFR 122.41(m)(4)(i)(A), (B), & (C). Any bypasses from this facility are subject to the reporting required in 40 CFR 122.41(l)(6) and per Missouri's Standard Conditions I, Section B, part 2.b. Additionally, Anticipated Bypasses include bypasses from peak flow basins or similar devices designed for peak wet weather flows.

Not Applicable ; This facility does not anticipate bypassing.

**303(d) LIST & TOTAL MAXIMUM DAILY LOAD (TMDL):**

Section 303(d) of the federal Clean Water Act requires that each state identify waters that are not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock and wildlife. The 303(d) list helps state and federal agencies keep track of waters that are impaired but not addressed by normal water pollution control programs.

A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed that shall include the TMDL calculation

Applicable ; Elk River and its tributaries including Little Sugar Creek, was listed on the 1998 Missouri 303(d) List for phosphorus and nitrogen nutrient impairment. A TMDL was approved in 2004 and requires all permits to have monitoring requirements for Total Nitrogen and Total Phosphorus.

**Part IV – Permit Limits Determination**

**Permitted Feature #001 – Non-contact Cooling Water**

The following is required for seasonal discharge of non-contact cooling water. Monitoring requirement only based on best professional judgment.

**NON-CONTACT COOLING WATER MONITORING TABLE:**

PARAMETER	UNIT	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Flow	MGD	*			NO	*
pH	SU	*			NO	*
Temperature (Effluent)	°F	*			NO	*
Monitoring Frequency	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.					

\* - Monitoring requirement only

**PERMITTED FEATURE #001 – DERIVATION AND DISCUSSION OF LIMITS:**

- **Flow.** In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.
- **pH.** – 6.5-9.0 SU. pH is addressed in two main sections of the Missouri Clean Water Law that influence permit parameters. In accordance with 10 CSR 20-7.015(8)(A)2., pH shall be maintained in the range of 6.0-9.0 standard pH units. In accordance with 10 CSR 20-7.031(5)(E), water contaminants shall not cause pH to be outside of the range of 6.5 -9.0 standard pH units. However, 40 CFR 122.44(b)(1) and 40 CFR 122.44(d) require that the permit contain the most stringent requirement for a parameter. Therefore, the facility shall be required to maintain a range of 6.5-9.0 standard pH units.
- **Temperature (Effluent).** Effluent limitations from the previous state operating permit have been reassessed and verified that they are still protective of the receiving stream’s Water Quality. Effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.**

**Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	Once/quarter	Once/quarter
pH	Once/quarter	
Temperature (Effluent)	Once/quarter	

**Permitted Features #002 and #004 – Stormwater Discharge**

**STORMWATER DISCHARGE TABLE:**

PARAMETER	UNIT	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Flow	MGD	*			NO	*
Biochemical Oxygen Demand <sub>5</sub>	mg/L	60		45	NO	60/45
Total Suspended Solids	mg/L	*			NO	*
Total Phosphorus	mg/L	*			NO	*
Total Nitrogen	mg/L	*			YES	**
Oil & Grease	mg/L	15		10	NO	15/10
pH	SU	**			NO	*
E. coli	#/100 mL	*			NO	*
Monitoring Frequency	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.					

- \* - Monitoring requirement only
- \*\* - # of colonies/100mL; the Monthly Average for E. coli is a geometric mean.
- \*\*\* - Parameter not established in previous state operating permit.

**PERMITTED FEATURES #002 AND #004 – DERIVATION AND DISCUSSION OF LIMITS:**

- **Flow.** In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.
- **Biochemical Oxygen Demand (BOD<sub>5</sub>).** Effluent limitations from the previous state operating permit have been reassessed and verified that they are still protective of the receiving stream’s Water Quality. Effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.**
- **Total Suspended Solids (TSS).** Effluent limitations from the previous state operating permit have been reassessed and verified that they are still protective of the receiving stream’s Water Quality. Effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.**
- **Total Phosphorous.** Monitoring only for Total Phosphorus. The TMDL developed for the Elk River and its tributaries requires monitoring for Total Phosphorus.
- **Total Nitrogen.** Monitoring only for Total Nitrogen. The TMDL developed for the Elk River and its tributaries requires monitoring for Total Phosphorus.
- **Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.
- **pH.** Monitoring for pH is included as excessively acidic or alkaline discharges will adversely affect aquatic life in the receiving stream. The pH of the discharge should be within the range of six to nine (6.5-9.0) standard pH units.
- **Escherichia coli (E. coli).** Effluent limitations from the previous state operating permit have been reassessed and verified that they are still protective of the receiving stream’s Water Quality. Effluent limitations have been retained from previous state operating permit, please see the **Applicable Designation of Waters of the State** sub-section of the **Receiving Stream Information.**

• **Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	Once/quarter	Once/quarter
Biochemical Oxygen Demand <sub>5</sub>	Once/quarter	
Total Suspended Solids	Once/quarter	
Total Phosphorous	Once/quarter	
pH	Once/quarter	
Oil & Grease	Once/quarter	
E.coli	Once/quarter	
Total Nitrogen	Once/quarter	

**Permitted Feature #003 – Storage Basin Emergency Discharge**

There are no effluent limits associated with Permitted Feature #003 for the no-discharge facility. However, the following is required for an emergency discharge. Monitoring requirement only based on best professional judgment.

**EMERGENCY DISCHARGE TABLE:**

PARAMETER	UNIT	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Flow	MGD	*			YES	**
Biochemical Oxygen Demand <sub>5</sub>	mg/L	*			YES	**
Total Suspended Solids	mg/L	*			YES	**
Ammonia as N	mg/L	*			YES	**
pH	SU	*			YES	**
Oil & Grease	mg/L	*			YES	**
E.coli	**	*			YES	**
Total Nitrogen	mg/L	*			YES	**
Total Phosphorus	mg/L	*			YES	**
Monitoring Frequency	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.					

- \* - Monitoring requirement only
- \*\* - # of colonies/100mL; the Monthly Average for E. coli is a geometric mean.
- \*\*\* - Parameter not established in previous state operating permit.

• **Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/day while discharging	Test results are due on the 28 <sup>th</sup> day of the month after the cessation of the discharge
Biochemical Oxygen Demand <sub>5</sub>	once/day while discharging	
Total Suspended Solids	once/day while discharging	
Ammonia as N	once/day while discharging	
pH	once/day while discharging	
Oil & Grease	once/day while discharging	
E.coli	once/day while discharging	
Total Nitrogen	once/day while discharging	
Total Phosphorus	once/day while discharging	

**PERMITTED FEATURE #003– STORAGE BASIN OPERATIONAL MONITORING**

Operational monitoring requirements derived and established in the below Operational Monitoring Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supersede the terms and conditions, including effluent limitations, of this operating permit.

**OPERATIONAL MONITORING TABLE:**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Freeboard	feet	1	*				
Precipitation	inches	1	*				
Total Kjeldahl Nitrogen	mg/L	1	*				
Nitrate Nitrogen as N	mg/L	1	*				
Total Phosphorus	mg/L	1	*				
Monitoring Frequency	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

\* - Monitoring requirement only.

\*\* - Parameter not previously established in previous state operating permit.

**Basis for Limitations Codes:**

- |  |                                    |
|--|------------------------------------|
| 1. State or Federal Regulation/Law       | 7. Antidegradation Policy          |
| 2. Water Quality Standard (includes RPA) | 8. Water Quality Model             |
| 3. Water Quality Based Effluent Limits   | 9. Best Professional Judgment      |
| 4. Lagoon Policy                         | 10. TMDL or Permit in lieu of TMDL |
| 5. Ammonia Policy                        | 11. WET Test Policy                |
| 6. Antidegradation Review                |                                    |

**PERMITTED FEATURE #003 – DERIVATION AND DISCUSSION OF LIMITS:**

- **Freeboard.** Monitoring requirement only.
- **Precipitation.** Monitoring requirement only.
- **Total Kjeldahl Nitrogen.** Monitoring requirement only. Monitoring for Total Kjeldahl Nitrogen as N is included to determine nutrient loading rates on the land application fields. [10 CSR 20-8.020(15)(F)7.]
- **Nitrate Nitrogen as N.** Monitoring requirement only. Monitoring for Nitrate Nitrogen as N is included to determine nutrient loading rates on the land application fields. [10 CSR 20-8.020(15)(F)7.]
- **Total Phosphorus.** Monitoring requirement only. Monitoring for Total Phosphorus is included to determine nutrient loading rates on the land application fields. [10 CSR 20-8.020(15)(F)7.]

**Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Freeboard	once/month	once/year
Precipitation	once/day	once/year
Total Kjeldahl Nitrogen	twice/year	twice/year
Nitrate Nitrogen as N	twice/year	twice/year
Fecal Coliform	twice/year	twice/year

**PERMITTED FEATURE #005– IRRIGATED WASTEWATER**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Irrigation Period	hours	1	*				
Volume Irrigated	gallons	1	*				
Application Area	acres	1	*				
Application Rate	inches	1	*				
Monitoring Frequency	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

\* - Monitoring requirement only.  
 \*\* - Parameter not previously established in previous state operating permit.  
 \*\*\* - # of colonies/100mL; the Monthly Average for Fecal Coliform is a geometric mean.

**Basis for Limitations Codes:**

- |  |                                    |
|--|------------------------------------|
| 1. State or Federal Regulation/Law       | 7. Antidegradation Policy          |
| 2. Water Quality Standard (includes RPA) | 8. Water Quality Model             |
| 3. Water Quality Based Effluent Limits   | 9. Best Professional Judgment      |
| 4. Lagoon Policy                         | 10. TMDL or Permit in lieu of TMDL |
| 5. Ammonia Policy                        | 11. WET Test Policy                |
| 6. Antidegradation Review                |                                    |

**PERMITTED FEATURE #005 – DERIVATION AND DISCUSSION OF LIMITS:**

- **Irrigation Period.** Monitoring requirement only. Monitoring for the Irrigation Period is included to determine if proper application is occurring on the land application fields.
- **Volume Irrigated.** Monitoring requirement only. Monitoring for the Volume Irrigated is included to determine if proper application is occurring on the land application fields.
- **Application Area.** Monitoring requirement only. Monitoring for the Application Area is included to determine if proper application is occurring on the land application fields.
- **Application Rate.** Monitoring requirement only. Monitoring for the Application Rate is included to determine if proper application is occurring on the land application fields.

**Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Irrigation Period	once/day	once/year
Volume Irrigated	once/day	once/year
Application Area	once/day	once/year
Application Rate	once/day	once/year

**Part V – Finding of Affordability**

Pursuant to Section 644.145, RSMo., the Department is required to determine whether a permit or decision is affordable and makes a finding of affordability for certain permitting and enforcement decisions. This requirement applies to discharges from combined or separate sanitary sewer systems or publically-owned treatment works.

Not Applicable; The Department is not required to determine findings of affordability because the permit contains no new conditions or requirements that convey a new cost to the facility.

## **Part VI – Administrative Requirements**

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

### **PERMIT SYNCHRONIZATION:**

The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also allow the department to explore a watershed based permitting effort at some point in the future. Renewal applications must continue to be submitted within 180 days of expiration, however, in instances where effluent data from the previous renewal is less than 4 years old, that data may be re-submitted to meet the requirements of the renewal application. If the permit provides a schedule of compliance for meeting new water quality based effluent limits beyond the expiration date of the permit, the time remaining in the schedule of compliance will be allotted in the renewed permit.

### **PUBLIC NOTICE:**

The Department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing.

The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit.

For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

- The Public Notice period for this operating permit was from September 5, 2014 to October 6, 2014. No responses were received.

**DATE OF FACT SHEET:** OCTOBER 9, 2014

### **COMPLETED BY:**

**GREG CALDWELL, ENVIRONMENTAL SPECIALIST  
MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM  
OPERATING PERMITS SECTION – INDUSTRIAL PERMITS UNIT  
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STANDARD CONDITIONS FOR NPDES PERMITS  
ISSUED BY  
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES  
MISSOURI CLEAN WATER COMMISSION  
REVISED  
AUGUST 1, 2014

These Standard Conditions incorporate permit conditions as required by 40 CFR 122.41 or other applicable state statutes or regulations. These minimum conditions apply unless superseded by requirements specified in the permit.

## Part I – General Conditions

### Section A – Sampling, Monitoring, and Recording

1. **Sampling Requirements.**
  - a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
  - b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.
2. **Monitoring Requirements.**
  - a. Records of monitoring information shall include:
    - i. The date, exact place, and time of sampling or measurements;
    - ii. The individual(s) who performed the sampling or measurements;
    - iii. The date(s) analyses were performed;
    - iv. The individual(s) who performed the analyses;
    - v. The analytical techniques or methods used; and
    - vi. The results of such analyses.
  - b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.
3. **Sample and Monitoring Calculations.** Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.
4. **Test Procedures.** The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is “sufficiently sensitive” when; 1) the method minimum level is at or below the level of the applicable water quality criterion for the pollutant or, 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility’s discharge is high enough that the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.
5. **Record Retention.** Except for records of monitoring information required by the permit related to the permittee’s sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

6. **Illegal Activities.**
  - a. The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under the permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two (2) years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four (4) years, or both.
  - b. The Missouri Clean Water Law provides that any person or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than six (6) months, or by both. Second and successive convictions for violation under this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

### Section B – Reporting Requirements

1. **Planned Changes.**
  - a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
    - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
    - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1);
    - iii. The alteration or addition results in a significant change in the permittee’s sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
    - iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.
2. **Non-compliance Reporting.**
  - a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.



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- b. The following shall be included as information which must be reported within 24 hours under this paragraph.
    - i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
    - ii. Any upset which exceeds any effluent limitation in the permit.
    - iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.
  - c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.
3. **Anticipated Noncompliance.** The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.
  4. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.
  5. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, and 6 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.
  6. **Other Information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
  7. **Discharge Monitoring Reports.**
    - a. Monitoring results shall be reported at the intervals specified in the permit.
    - b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
    - c. Monitoring results shall be reported to the Department no later than the 28<sup>th</sup> day of the month following the end of the reporting period.
- b. Notice.
    - i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
    - ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).
  - c. Prohibition of bypass.
    - i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
      1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
      2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
      3. The permittee submitted notices as required under paragraph 2. b. of this section.
    - ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.
3. **Upset Requirements.**
    - a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
    - b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
      - i. An upset occurred and that the permittee can identify the cause(s) of the upset;
      - ii. The permitted facility was at the time being properly operated; and
      - iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
      - iv. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
    - c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

## Section C – Bypass/Upset Requirements

1. **Definitions.**
  - a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending.
  - b. *Severe Property Damage*: substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
  - c. *Upset*: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
2. **Bypass Requirements.**
  - a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. b. and 2. c. of this section.

## Section D – Administrative Requirements

1. **Duty to Comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and Federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
  - a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
  - b. The Federal Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The Federal Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement



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- imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
- c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.
- d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed \$10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.
2. **Duty to Reapply.**
- a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
- b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
- c. A permittees with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
6. **Permit Actions.**
- a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
- i. Violations of any terms or conditions of this permit or the law;
- ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
- iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- iv. Any reason set forth in the Law or Regulations.
- b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
7. **Permit Transfer.**
- a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
- b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
- c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.
8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.



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MISSOURI CLEAN WATER COMMISSION  
REVISED  
AUGUST 1, 2014

10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.
11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
  - a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
  - d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.
12. **Closure of Treatment Facilities.**
  - a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
  - b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.
13. **Signatory Requirement.**
  - a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
  - b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
  - c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.
14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.

RECEIVED

MAY 13 2014

DEO ADMIN



P.O. BOX 430  
SILOAM SPRINGS, ARKANSAS 72761  
TELEPHONE: 479/524-8151  
FAX: 479/215-2772

May 7, 2014

**ATTN: AMANDA SAPPINGTON**

Missouri Department of Natural Resources  
Division of Environmental Quality  
1101 Riverside Drive  
Jefferson City, Missouri 65011

**RE: Submittal of a Renewal Application for the Simmons Foods, Jane-Missouri Hatchery – Permit No. MO-0108952, which will expire on December 31, 2014.**

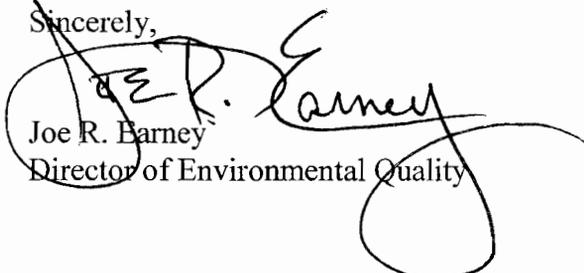
Dear Ms. Sappington:

Enclosed for your review is the Renewal Application for the Simmons Foods, Jane-Missouri Hatchery – Permit No. MO-0108952. This is inclusive of Form's A, C, and I.

- Do note that this permit became effective October 1, 2012, and with an expiration date of December 31, 2014 will have only been effective for approximately 27 months due to MDNR synchronizing permits as to the watershed it is within. With this renewal, it is our understanding that this renewal when it becomes effective will have an expiration period of 5 years.
- Please note that this is a no discharge facility permit with no discharge from either the holding lagoon or from the land application site.
- As per the directions for a site-specific permit, no permit fees are included with this submission, with our understanding that your department will invoice us separately for any appropriate fees.

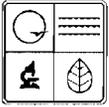
Should you have additional questions or comments, please call me at 1-479-215-2415 or by email at [joe.earney@simfoods.com](mailto:joe.earney@simfoods.com), or Dennis Spears, Hatchery Manager at 417-226-4415 ext. 164 or by email at [dennis.spears@simfoods.com](mailto:dennis.spears@simfoods.com).

Sincerely,

  
Joe R. Earney  
Director of Environmental Quality

cc: Dennis Spears  
Wes McClure  
Gary Murphy  
Frank Myers





MISSOURI DEPARTMENT OF NATURAL RESOURCES  
 WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH  
**FORM A – APPLICATION FOR CONSTRUCTION OR OPERATING PERMIT  
 UNDER MISSOURI CLEAN WATER LAW**

11/18

**FOR AGENCY USE ONLY**

CHECK NUMBER

DATE RECEIVED

FEE SUBMITTED

**Note** ▶ PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM.

1. This application is for:
- An operating permit and antidegradation review public notice
  - A construction permit following an appropriate operating permit and antidegradation review public notice
  - A construction permit and concurrent operating permit and antidegradation review public notice
  - A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required)
  - An operating permit for a new or unpermitted facility Construction Permit # \_\_\_\_\_
  - An operating permit renewal: permit # MO- 0108952 Expiration Date DECEMBER 31, 2014
  - An operating permit modification: permit # MO- \_\_\_\_\_ Reason: \_\_\_\_\_

1.1 Is the appropriate fee included with the application? (See instructions for appropriate fee)  YES  NO

**2. FACILITY**

NAME SIMMONS FOODS, INC. - JANE HATCHERY		TELEPHONE WITH AREA CODE (417) 226-4415	
ADDRESS (PHYSICAL) 653 RAINS ROAD		CITY PINEVILLE	FAX
		STATE MO	ZIP CODE 64856-9518

**3. OWNER**

NAME SIMMONS FOODS, INC.		E-MAIL ADDRESS joe.earney@simfoods.com	TELEPHONE WITH AREA CODE (479) 215-2415
ADDRESS (MAILING) 601 North Hico		CITY SILOAM SPRINGS	FAX (479) 549-1356
		STATE AR	ZIP CODE 72761

3.1 Request review of draft permit prior to public notice?  YES  NO

**4. CONTINUING AUTHORITY**

NAME N/A		TELEPHONE WITH AREA CODE	
ADDRESS (MAILING)		CITY	FAX
		STATE	ZIP CODE

**5. OPERATOR**

NAME SAME AS OWNER ABOVE		CERTIFICATE NUMBER	TELEPHONE WITH AREA CODE
ADDRESS (MAILING)		CITY	FAX
		STATE	ZIP CODE

**6. FACILITY CONTACT**

NAME DENNIS SPEARS		TITLE HATCHERY MANAGER	TELEPHONE WITH AREA CODE (417) 226-4415
			FAX (417) 226-4419

**7. ADDITIONAL FACILITY INFORMATION**

7.1 Legal Description of Outfalls. (Attach additional sheets if necessary.)

001 NW 1/4 NW 1/4 Sec 7 T 21N R 32W \_\_\_\_\_ County  
 UTM Coordinates Easting (X): 380720 Northing (Y): 4047411  
*For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)*

002 \_\_\_\_\_ County  
 UTM Coordinates Easting (X): 380883 Northing (Y): 4047480

003 \_\_\_\_\_ County  
 UTM Coordinates Easting (X): 380827 Northing (Y): 4047497

004 \_\_\_\_\_ County  
 UTM Coordinates Easting (X): 380682 Northing (Y): 4047492

7.2 Primary Standard Industrial Classification (SIC) and Facility North American Industrial Classification System (NAICS) Codes.

001 – SIC 0254 and NAICS 112340      002 – SIC \_\_\_\_\_ and NAICS \_\_\_\_\_  
 003 – SIC \_\_\_\_\_ and NAICS \_\_\_\_\_      004 – SIC \_\_\_\_\_ and NAICS \_\_\_\_\_

01/18

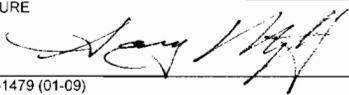
**8. ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE THIS APPLICATION**  
**(Complete all forms that are applicable.)**

A.	Is your facility a manufacturing, commercial, mining or silviculture waste treatment facility? If yes, complete Form C (unless storm water only, then complete U.S. Environmental Protection Agency Form 2F per Item C below).	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
B.	Is your facility considered a "Primary Industry" under EPA guidelines? If yes, complete Forms C and D.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
C.	Is application for storm water discharges only? If yes, complete EPA Form 2F.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>
D.	Attach a map showing all outfalls and the receiving stream at 1" = 2,000' scale.		
E.	Is wastewater land applied? If yes, complete Form I.	YES <input checked="" type="checkbox"/>	NO <input type="checkbox"/>
F.	Is sludge, biosolids, ash or residuals generated, treated, stored or land applied? If yes, complete Form R.	YES <input type="checkbox"/>	NO <input checked="" type="checkbox"/>

**9. DOWNSTREAM LANDOWNER(S)** Attach additional sheets as necessary. See Instructions.  
**(PLEASE SHOW LOCATION ON MAP. SEE 8.D ABOVE).**

NAME John Wabaunsee			
ADDRESS RAINS ROAD	CITY PINEVILLE	STATE MO.	ZIP CODE 64856

**10.** I certify that I am familiar with the information contained in the application, that to the best of my knowledge and belief such information is true, complete and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions, subject to any legitimate appeal available to applicant under the Missouri Clean Water Law to the Missouri Clean Water Commission.

NAME AND OFFICIAL TITLE (TYPE OR PRINT) GARY MURPHY (President and C.O.O. Simmons Poultry Group)	TELEPHONE WITH AREA CODE (479) 215-2290
SIGNATURE 	DATE SIGNED 5-7-14

MO 780-1479 (01-09)

**BEFORE MAILING, PLEASE ENSURE ALL SECTIONS ARE COMPLETED AND ADDITIONAL FORMS, IF APPLICABLE, ARE INCLUDED.**

Submittal of an incomplete application may result in the application being returned.

HAVE YOU INCLUDED:

- Appropriate Fees?
- Map at 1" = 2000' scale?
- Signature?
- Form C, if applicable?
- Form D, if applicable?
- Form 2F, if applicable?
- Form I (Irrigation), if applicable?
- Form R (Sludge), if applicable?

**INSTRUCTIONS FOR COMPLETING FORM A  
APPLICATION FOR CONSTRUCTION OR OPERATING PERMIT**

1. Check which option is applicable. **Do not check more than one item.** Construction and operating permit refer to permits issued by the Department of Natural Resources' Water Protection Program, Water Pollution Control Branch. Effective Sept. 1, 2008, a facility will be required to use *MISSOURI'S ANTI-DEGRADATION RULE AND IMPLEMENTATION PROCEDURE*. For more information, this document can be reviewed at [www.dnr.mo.gov/env/wpp/docs/aip-cwc-appr-050708.pdf](http://www.dnr.mo.gov/env/wpp/docs/aip-cwc-appr-050708.pdf). This procedure will be applicable to new and expanded wastewater facilities and requires the proposed discharge to a water body to undergo a level of Antidegradation Review, which documents that the use of a water body's available assimilative capacity is justified.

- 1.1 An operating permit and antidegradation review public notice requires a Water Quality/Antidegradation Review Sheet to be submitted with the application (No fee required).

**CONSTRUCTION PERMIT FEES**

- A. \$750 for a sewage treatment facility with a design flow of less than 500,000 gallons per day.  
B. \$2,200 for a sewage treatment facility with a design flow of 500,000 gallons per day or more.  
Different application and construction fees are applicable if only sewer and/or lift stations are to be constructed.

**OPERATING PERMIT FEES**

**If the application is for a site-specific permit re-issuance, send no fees..** You will be invoiced separately by the department.

Discharges covered by section 644.052.4 RSMo. (Primary or Categorical Facilities)

- \$3,500 for a design flow under 1 mgd  
\$5,000 for a design flow of 1 mgd or more

- A. Discharges covered by section 644.052.5 RSMo. (Secondary or Non-Categorical Facilities).

- \$1,500 for a design flow under 1 million gallons per day (mpg)  
\$2,500 for a design flow of 1 mgd or more

**SITE-SPECIFIC STORM WATER DISCHARGE FEES**

- A. \$1,350 for a design flow under 1 mgd.  
B. \$2,350 for a design flow of 1 mgd or more.

OPERATING PERMIT MODIFICATIONS, including transfers, are subject to the following fees:

- A. Municipals - \$200 each.  
B. All others - 25 percent of annual fee.

Note: Facility name and address changes where owner, operator and continuing authority remain the same are not considered transfers.

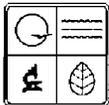
Incomplete permit applications and/or related engineering documents will be returned by the department if they are not completed in the time frame established in a comment letter from the department to the owner. Permit fees for returned applications shall be forfeited. Permit fees for applications being processed by the department that are withdrawn by the applicant shall be forfeited.

2. Facility - Provide the name by which this facility is known locally. Example: Southwest Sewage Treatment Plant, Country Club Mobile Home Park, etc. Also include the street address or location of the facility. If the facility lacks a street name or route number, give the names of the closest intersection, highway, county road, etc.
3. Owner - Provide the legal name and address of owner.
- 3.1 Prior to submitting a permit to public notice, the department shall provide the permit applicant 10 days to review the draft permit for nonsubstantive drafting errors. In the interest of expediting permit issuance, permit applicants may waive the opportunity to review draft permits prior to public notice. Check YES to review the draft permit prior to public notice. Check NO to waive the process and expedite the permit.
4. Continuing Authority - Permanent organization that will serve as the continuing authority for the operation, maintenance and modernization of the facility. The regulatory requirement regarding continuing authority is available at [www.sos.mo.gov/adrules/csr/current/10csr/10c20-6a.pdf](http://www.sos.mo.gov/adrules/csr/current/10csr/10c20-6a.pdf) or contact the appropriate Department of Natural Resources Regional Office.
5. Operator - Provide the name, certificate number and telephone number of the person operating the facility.
6. Provide the name, title and work telephone number of a person who is thoroughly familiar with the operation of the facility and with the facts reported in this application and who can be contacted by the department, if necessary.
- 7.1 An outfall is the point at which wastewater is discharged. Outfalls should be given in terms of the legal description of the facility. Global Positioning System, or GPS, is a satellite-based navigation system. The department prefers that a GPS receiver is used at the outfall pipe and the displayed coordinates submitted. If access to a GPS receiver is not available, please use a mapping system to approximate the coordinates; the department's mapping system is available at [www.dnr.mo.gov/internetmapviewer/](http://www.dnr.mo.gov/internetmapviewer/).
- 7.2 List only your primary Standard Industrial Classification, or SIC, and North American Industry Classification System code for each outfall. The SIC system was devised by the U.S. Office of Management and Budget to cover all economic activities. To find the correct SIC code, an applicant may check his or her unemployment insurance forms or contact the Missouri Division of Employment Security, 573-751-3215. The primary SIC code is that of the operation that generates the most revenue. If this information is not available, the number of employees or, secondly, production rate may be used to determine your SIC code. Additional information is on the Web for Standard Industrial Codes at [www.osha.gov/pls/imis/sicsearch.html](http://www.osha.gov/pls/imis/sicsearch.html) and for the North American Industry Classification System at [www.census.gov/naics](http://www.census.gov/naics) or contact the appropriate Department of Natural Resources Regional Office.

**INSTRUCTIONS FOR COMPLETING FORM A  
APPLICATION FOR CONSTRUCTION OR OPERATING PERMIT  
(CONTINUED)**

8. If you answer yes to A, B, C, D, E or F, then you must complete and file the supplementary form(s) indicated. A U.S. Geological Survey 1" = 2,000' scale map must be submitted with the permit application showing all outfalls, the receiving stream and the location of the downstream property owners. This type of map is available on the Web at [www.dnr.mo.gov/internetmapviewer/](http://www.dnr.mo.gov/internetmapviewer/) or from the Missouri Department of Natural Resources' Division of Geology and Land Survey in Rolla at 573-368-2125.
9. Please provide the name and address of the first downstream landowner, different from that of the permitted facility, through whose property the discharge will flow. Also, please indicate the location on the map. For discharges that leave the permitted facility and flow under a road or highway, or along the right-of-way, the downstream property owner is the landowner that the discharge flows to after leaving the right-of-way. For no discharge facilities, provide this information for the location where discharge would flow if there was one. For land application sites, include the owners of the land application sites and all adjacent landowners.
10. **Signature - All applications must be signed as follows and the signature must be original:**
  - A. For a corporation, by an officer having responsibility for the overall operation of the regulated facility or activity or for environmental matters.
  - B. For a partnership or sole proprietorship, by a general partner or the proprietor.
  - C. For a municipal, state, federal or other public facility, by either a principal executive officer or by an individual having overall responsibility for environmental matters at the facility.

This completed form, along with the applicable permit fees, should be submitted to the appropriate Regional Office. Submittal of an incomplete application may result in the application being returned. A map of the department's regional offices with addresses and phone numbers can be viewed on the Web at [www.dnr.mo.gov/regions/ro-map.pdf](http://www.dnr.mo.gov/regions/ro-map.pdf). If there are any questions concerning this form, contact the appropriate Regional Office or the Department of Natural Resources' Water Protection Program, Water Pollution Control Branch, Permits and Engineering Section at 573-751-6825.



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
 WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH  
**FORM C – APPLICATION FOR DISCHARGE PERMIT –**  
**MANUFACTURING, COMMERCIAL, MINING,**  
**SILVICULTURE OPERATIONS, PROCESS AND STORMWATER**

**FOR AGENCY USE ONLY**

CHECK NO.

DATE RECEIVED

FEE SUBMITTED

**NOTE: DO NOT ATTEMPT TO COMPLETE THIS FORM BEFORE READING THE ACCOMPANYING INSTRUCTIONS**

1.00 NAME OF FACILITY

SIMMONS FOODS, INC. - JANE HATCHERY

1.10 THIS FACILITY IS NOW IN OPERATION UNDER MISSOURI OPERATING PERMIT NUMBER

MO-0108952

1.20 THIS IS A NEW FACILITY AND WAS CONSTRUCTED UNDER MISSOURI CONSTRUCTION PERMIT NUMBER (COMPLETE ONLY IF THIS FACILITY DOES NOT HAVE AN OPERATING PERMIT).

2.00 LIST THE STANDARD INDUSTRIAL CLASSIFICATION (SIC) CODES APPLICABLE TO YOUR FACILITY (FOUR DIGIT CODE)

A. FIRST 0254 B. SECOND \_\_\_\_\_  
 C. THIRD \_\_\_\_\_ D. FOURTH \_\_\_\_\_

2.10 FOR EACH OUTFALL GIVE THE LEGAL DESCRIPTION.

OUTFALL NUMBER (LIST) NW 1/4 NW 1/4 SEC 7 T 21 R 32 MCDONALD COUNTY

*\*NOTE: All outfalls in above legal description, namely OF001, 002, 004, + OF003.*

2.20 FOR EACH OUTFALL LIST THE NAME OF THE RECEIVING WATER

OUTFALL NUMBER (LIST)	RECEIVING WATER
OF001	LITTLE SUGAR CREEK
OF(S) (002 & 004 -STORMWATER	LITTLE SUGAR CREEK
OF003 - SINGLE CELL (LINED) LAGOON FOR LAND APPLICATION	LITTLE SUGAR CREEK

2.30 BRIEFLY DESCRIBE THE NATURE OF YOUR BUSINESS

A HATCHERY FOR BROILER CHICKS FOR PLACEMENT IN BOTH CONTRACT GROWER FARMS AND COMPANY MANAGED FARMS.



**2.40 CONTINUED**

C. EXCEPT FOR STORM RUNOFF, LEAKS OR SPILLS, ARE ANY OF THE DISCHARGES DESCRIBED IN ITEMS A OR B INTERMITTENT OR SEASONAL?

**YES (COMPLETE THE FOLLOWING TABLE)**       **NO (GO TO SECTION 2.50)**

1. OUTFALL NUMBER <i>(list)</i>	2. OPERATION(S) CONTRIBUTING FLOW <i>(list)</i>	3. FREQUENCY		4. FLOW				C. DURATION <i>(in days)</i>
		A. DAYS PER WEEK <i>(specify average)</i>	B. MONTHS PER YEAR <i>(specify average)</i>	A. FLOW RATE <i>(in mgd)</i>		B. TOTAL VOLUME <i>(specify with units)</i>		
				1. LONG TERM AVERAGE	2. MAXIMUM DAILY	4. LONG TERM DAILY	3. MAXIMUM AVERAGE	
OF001	NON-CONTACT COOLING WATER  NOTE: VERY INTERMITTENT AND TYPICALLY WEDNESDAY, AND SUNDAY AFTERNOONS AT APPROXIMATELY 90 GPH.	WED & SUNDAY TYPICAL	APPROX 5 MONTHS					

*\* NOTE: Very Intermittent and typically Wednesday and Sunday afternoons @ approx. 90gph.*

**2.50 MAXIMUM PRODUCTION**

A. DOES AN EFFLUENT GUIDELINE LIMITATION PROMULGATED BY EPA UNDER SECTION 304 OF THE CLEAN WATER ACT APPLY TO YOUR FACILITY?

**YES (COMPLETE B.)**       **NO (GO TO SECTION 2.60)**

B. ARE THE LIMITATIONS IN THE APPLICABLE EFFLUENT GUIDELINES EXPRESSED IN TERMS OF PRODUCTION (OF OTHER MEASURE OF OPERATION)?

**YES (COMPLETE c.)**       **NO (GO TO SECTION 2.60)**

C. IF YOU ANSWERED "YES" TO B. LIST THE QUANTITY THAT REPRESENTS AN ACTUAL MEASUREMENT OF YOUR MAXIMUM LEVEL OF PRODUCTION, EXPRESSED IN THE TERMS AND UNITS USED IN THE APPLICABLE EFFLUENT GUIDELINE AND INDICATE THE AFFECTED OUTFALLS.

1. MAXIMUM QUANTITY			2. AFFECTED OUTFALLS <i>(list outfall numbers)</i>
A. QUANTITY PER DAY	B. UNITS OF MEASURE	C. OPERATION, PRODUCT, MATERIAL, ETC. <i>(specify)</i>	

**2.60 IMPROVEMENTS**

A. ARE YOU NOW REQUIRED BY ANY FEDERAL, STATE OR LOCAL AUTHORITY TO MEET, ANY IMPLEMENTATION SCHEDULE FOR THE CONSTRUCTION, UPGRADING OR OPERATION OF WASTEWATER TREATMENT EQUIPMENT OR PRACTICES OR ANY OTHER ENVIRONMENTAL PROGRAMS THAT MAY AFFECT THE DISCHARGES DESCRIBED IN THIS APPLICATION? THIS INCLUDES, BUT IS NOT LIMITED TO, PERMIT CONDITIONS, ADMINISTRATIVE OR ENFORCEMENT ORDERS, ENFORCEMENT COMPLIANCE SCHEDULE LETTERS, STIPULATIONS, COURT ORDERS AND GRANT OR LOAN CONDITIONS.

**YES (COMPLETE THE FOLLOWING TABLE)**       **NO (GO TO 3.00)**

1. IDENTIFICATION OF CONDITION AGREEMENT, ETC.	2. AFFECTED OUTFALLS		3. BRIEF DESCRIPTION OF PROJECT <i>(specify)</i>	4. FINAL COMPLIANCE DATE	
				A. REQUIRED	B. PROJECTED

B. OPTIONAL: YOU MAY ATTACH ADDITIONAL SHEETS DESCRIBING ANY ADDITIONAL WATER POLLUTION CONTROL PROGRAMS (OR OTHER ENVIRONMENTAL PROJECTS WHICH MAY AFFECT YOUR DISCHARGES) YOU NOW HAVE UNDER WAY OR WHICH YOU PLAN. INDICATE WHETHER EACH PROGRAM IS NOW UNDER WAY OR PLANNED, AND INDICATE YOUR ACTUAL OR PLANNED SCHEDULES FOR CONSTRUCTION.

**MARK "X" IF DESCRIPTION OF ADDITIONAL CONTROL PROGRAMS IS ATTACHED.**





PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet (Use the same format) instead of completing these pages.  
SEE INSTRUCTIONS

FORM C  
TABLE 1 FOR 3.00 ITEM A AND B

INTAKE AND EFFLUENT CHARACTERISTICS  
 \* Non-Contact Cooling Water  
 OUTFALL NO. 001 - 1 of 3

1. POLLUTANT	2. EFFLUENT				3. UNITS (Specify if blank)				4. INTAKE (optional)		B. NO. OF ANALYSES	
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION		(2) MASS
A. Biochemical Oxygen Demand (BOD)												
B. Chemical Oxygen Demand (COD)												
C. Total organic Carbon (TOC)												
D. Total Suspended Solids (TSS)												
E. Ammonia (as N)												
F. Flow (gph)	VALUE	-90	VALUE		VALUE			GPH			VALUE	
G. Temperature (winter)	VALUE	73.4	VALUE		VALUE			°C			VALUE	
H. Temperature (summer)	VALUE	79.3	VALUE		VALUE			°C			VALUE	
I. pH	MINIMUM	7.1	MAXIMUM	7.4	MINIMUM	7.1	MAXIMUM	7.4				

PART B - Mark "X" in column 2A for each pollutant you know or have reason to believe is present. Mark "X" in column 2B for each pollutant you believe to be absent. If you mark column 2A for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND GAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS				5. INTAKE (optional)		B. NO. OF ANALYSES	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION		(2) MASS

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS													
A. Bromide (24959-67-9)	<input checked="" type="checkbox"/>												
B. Chlorine, Total Residual	<input checked="" type="checkbox"/>												
C. Color	<input checked="" type="checkbox"/>												
D. Fecal Coliform	<input checked="" type="checkbox"/>												
E. Fluoride (16984-48-8)	<input checked="" type="checkbox"/>												
F. Nitrate - Nitrate (as N)	<input checked="" type="checkbox"/>												

\* Note: Flow very Intermittent with Wednesday and Sunday afternoons with greatest chance for flow. Do note again this is Non-Contact Cooling Water from a well with NO potential contaminants and NO added treatment chemicals.

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT						4. UNITS			5. INTAKE <i>(optional)</i>		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE <i>(if available)</i>		C. LONG TERM AVRG. VALUE <i>(if available)</i>		D. NO. OF ANALYSES	A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS						
G. Nitrogen, Total Organic <i>(as N)</i>		<input checked="" type="checkbox"/>												
H. Oil and Grease		<input checked="" type="checkbox"/>												
I. Phosphorus (as P), Total (7723-14-0)		<input checked="" type="checkbox"/>												
J. Sulfate (as SO <sub>4</sub> ) (14808-79-8)		<input checked="" type="checkbox"/>												
K. Sulfide (as S)		<input checked="" type="checkbox"/>												
L. Sulfite (as SO <sub>3</sub> ) (14265-45-3)		<input checked="" type="checkbox"/>												
M. Surfactants		<input checked="" type="checkbox"/>												
N. Aluminum, Total (7429-90-5)		<input checked="" type="checkbox"/>												
O. Barium, Total (7440-39-3)		<input checked="" type="checkbox"/>												
P. Boron, Total (7440-42-8)		<input checked="" type="checkbox"/>												
Q. Cobalt, Total (7440-48-4)		<input checked="" type="checkbox"/>												
R. Iron, Total (7439-89-6)		<input checked="" type="checkbox"/>												
S. Magnesium, Total (7439-95-4)		<input checked="" type="checkbox"/>												
T. Molybdenum, Total (7439-98-7)		<input checked="" type="checkbox"/>												
U. Manganese, Total (7439-96-5)		<input checked="" type="checkbox"/>												
V. Tin, Total (7440-31-5)		<input checked="" type="checkbox"/>												
W. Titanium, Total (7440-32-6)		<input checked="" type="checkbox"/>												

0F001-3 of 3

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE <i>(optional)</i>			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE <i>(if available)</i>		B. MAXIMUM 30 DAY VALUE <i>(if available)</i>		C. LONG TERM AVRG. VALUE <i>(if available)</i>		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS
<b>METALS, AND TOTAL PHENOLS</b>														
1M. Antimony, Total (7440-36-9)		✓												
2M. Arsenic, Total (7440-38-2)		✓												
3M. Beryllium, Total (7440-41-7)		✓												
4M. Cadmium, Total (7440-43-9)		✓												
5M. Chromium III (16055-83-1)		✓												
6M. Chromium VI (18540-29-9)		✓												
7M. Copper, Total (7440-50-8)		✓												
8M. Lead, Total (7439-92-1)		✓												
9M. Mercury, Total (7439-97-6)		✓												
10M. Nickel, Total (7440-02-0)		✓												
11M. Selenium, Total (7782-49-2)		✓												
12M. Silver, Total (7440-22-4)		✓												
13M. Thallium, Total (7440-28-0)		✓												
14M. Zinc, Total (7440-66-6)		✓												
15M. Cyanide, Amenable to Chlorination		✓												
16M. Phenols, Total		✓												
<b>RADIOACTIVITY</b>														
(1) Alpha Total		✓												
(2) Beta Total		✓												
(3) Radium Total		✓												
(4) Radium 226 Total		✓												

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet (Use the same format) instead of completing these pages.  
SEE INSTRUCTIONS

FORM C  
TABLE 1 FOR 3.00 ITEM A AND B

1 of 3

INTAKE AND EFFLUENT CHARACTERISTICS - Stormwater East Side

OUTFALL NO.  
002-EAST

1. POLLUTANT	2. EFFLUENT				3. UNITS (Specify if blank)				4. INTAKE (optional)			
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)	6.0	0.5	6.0	0.5	6.0	0.5	3	mg/l	pounds			
B. Chemical Oxygen Demand (COD)	NO DATA AVAILABLE - WAIVER REQUESTED											
C. Total organic Carbon (TOC)	10	0.83	10	0.83	10	0.83	3	mg/l	pounds			
D. Total Suspended Solids (TSS)	10	0.83	10	0.83	10	0.83	3	mg/l	pounds			
E. Ammonia (as N)	NO DATA AVAILABLE - WAIVER REQUESTED											
F. Flow	0.01		0.01		0.01		3	mg/l	pounds	VALUE		
G. Temperature (winter)	6.7		6.7		6.7					VALUE		
H. Temperature (summer)	8.7		8.7		8.7					VALUE		
I. pH	MINIMUM 6.7	MAXIMUM 8.7	MINIMUM 6.7	MAXIMUM 8.7			3	STANDARD UNITS				

PART B - Mark "X" in column 2A for each pollutant you know or have reason to believe is present. Mark "X" in column 2B for each pollutant you believe to be absent. If you mark column 2A for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS				5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS						
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS														
A. Bromide (24959-67-9)		✓												
B. Chlorine, Total Residual		✓												
C. Color		✓												
D. Fecal Coliform		✓												
E. Fluoride (16984-48-8)		✓												
F. Nitrate - Nitrate (as N)	✓		NO DATA AVAILABLE - WAIVER REQUESTED											

OFOOZ 2 of 3

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS		5. INTAKE (optional)		B. NO. OF ANALYSES	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE (if available)		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE			
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS		
G. Nitrogen, Total Organic (as N)	✓		No DATA AVAILABLE - WAINIER	0.266	0.266	3.2	0.266	3.2	0.266	3	REQUESTED			
H. Oil and Grease	✓		3.2	0.033	0.4	0.033	0.4	0.033	0.4	3	mg/l	pounds		
I. Phosphorus (as P), Total (7723-14-0)	✓		0.4	0.033	0.4	0.033	0.4	0.033	0.4	3	mg/l	pounds		
J. Sulfate (as SO <sub>4</sub> ) (14808-79-8)		✓												
K. Sulfide (as S)		✓												
L. Sulfite (as SO <sub>3</sub> ) (14285-45-3)		✓												
M. Surfactants		✓												
N. Aluminum, Total (7429-90-5)		✓												
O. Barium, Total (7440-39-3)		✓												
P. Boron, Total (7440-42-8)		✓												
Q. Cobalt, Total (7440-48-4)		✓												
R. Iron, Total (7439-89-6)		✓												
S. Magnesium, Total (7439-95-4)		✓												
T. Molybdenum, Total (7439-98-7)		✓												
U. Manganese, Total (7439-96-5)		✓												
V. Tin, Total (7440-31-5)		✓												
W. Titanium, Total (7440-32-6)		✓												

OFO02 3 of 3

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS			5. INTAKE (optional)			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVRG. VALUE		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES	
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(if available)	(1) CONCENTRATION				(2) MASS	(1) CONCENTRATION		(2) MASS
<b>METALS, AND TOTAL PHENOLS</b>															
1M. Antimony, Total (7440-36-9)		<input checked="" type="checkbox"/>													
2M. Arsenic, Total (7440-38-2)		<input checked="" type="checkbox"/>													
3M. Beryllium, Total (7440-41-7)		<input checked="" type="checkbox"/>													
4M. Cadmium, Total (7440-43-9)		<input checked="" type="checkbox"/>													
5M. Chromium III (16065-83-1)		<input checked="" type="checkbox"/>													
6M. Chromium VI (18540-29-9)		<input checked="" type="checkbox"/>													
7M. Copper, Total (7440-50-8)		<input checked="" type="checkbox"/>													
8M. Lead, Total (7439-92-1)		<input checked="" type="checkbox"/>													
9M. Mercury, Total (7439-97-6)		<input checked="" type="checkbox"/>													
10M. Nickel, Total (7440-02-0)		<input checked="" type="checkbox"/>													
11M. Selenium, Total (7782-49-2)		<input checked="" type="checkbox"/>													
12M. Silver, Total (7440-22-4)		<input checked="" type="checkbox"/>													
13M. Thallium, Total (7440-28-0)		<input checked="" type="checkbox"/>													
14M. Zinc, Total (7440-66-6)		<input checked="" type="checkbox"/>													
15M. Cyanide, Amenable to Chlorination		<input checked="" type="checkbox"/>													
16M. Phenols, Total		<input checked="" type="checkbox"/>													
<b>RADIOACTIVITY</b>															
(1) Alpha Total		<input checked="" type="checkbox"/>													
(2) Beta Total		<input checked="" type="checkbox"/>													
(3) Radium Total		<input checked="" type="checkbox"/>													
(4) Radium 226 Total		<input checked="" type="checkbox"/>													

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet (Use the same format) instead of completing these pages.  
SEE INSTRUCTIONS

FORM C  
TABLE 1 FOR 3.00 ITEM A AND B  
0F004  
1053

INTAKE AND EFFLUENT CHARACTERISTICS  
 STORM WATER (West Side)  
 OUTFALL NO. 004-WEST

PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.

1. POLLUTANT	2. EFFLUENT				3. UNITS (specify if blank)				4. INTAKE (optional)		B. NO. OF ANALYSES	
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION		(2) MASS
A. Biochemical Oxygen Demand (BOD)	6.0	0.35	6.0	0.35	6.0	0.35	3	mg/l	pounds			
B. Chemical Oxygen Demand (COD)	NO DATA AVAILABLE - WANNER REQUESTED											
C. Total organic Carbon (TOC)	NO DATA AVAILABLE - WANNER REQUESTED											
D. Total Suspended Solids (TSS)	12	0.70	12	0.70	12	0.70	3	mg/l	pounds			
E. Ammonia (as N)	NO DATA AVAILABLE - WANNER REQUESTED											
F. Flow	VALUE 0.007		VALUE 0.007		VALUE 0.007		3			VALUE		
G. Temperature (winter)	VALUE		VALUE		VALUE			°C		VALUE		
H. Temperature (summer)	VALUE		VALUE		VALUE			°C		VALUE		
I. pH	MINIMUM 6.7	MAXIMUM 8.6	MINIMUM 6.7	MAXIMUM 8.6			3	STANDARD UNITS				

PART B - Mark "X" in column 2A for each pollutant you know or have reason to believe is present. Mark "X" in column 2B for each pollutant you believe to be absent. If you mark column 2A for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS				5. INTAKE (optional)		B. NO. OF ANALYSES	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION		(2) MASS
CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS														
A. Bromide (24959-67-9)		✓												
B. Chlorine, Total Residual		✓												
C. Color		✓												
D. Fecal Coliform		✓												
E. Fluoride (16984-48-8)		✓												
F. Nitrate - Nitrate (as N)	✓		NO DATA AVAILABLE - WANNER REQUESTED											

OF004 - 2 of 3

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS			5. INTAKE (optional)		
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS						
G. Nitrogen, Total Organic (as N)	✓		NO DATA AVAILABLE		NO DATA AVAILABLE		WAIVER REQUESTED							
H. Oil and Grease	✓		5.0	0.29	5.0	0.29	5.0	0.29	3	mg/l	pounds			
I. Phosphorus (as P), Total (7723-14-0)	✓		0.3	0.017	0.3	0.017	0.3	0.017	3	mg/l	pounds			
J. Sulfate (as SO <sub>4</sub> ) (14808-79-8)		✓												
K. Sulfide (as S)		✓												
L. Sulfite (as SO <sub>3</sub> ) (14285-45-3)		✓												
M. Surfactants		✓												
N. Aluminum, Total (7429-90-5)		✓												
O. Barium, Total (7440-39-3)		✓												
P. Boron, Total (7440-42-8)		✓												
Q. Cobalt, Total (7440-48-4)		✓												
R. Iron, Total (7439-89-6)		✓												
S. Magnesium, Total (7439-95-4)		✓												
T. Molybdenum, Total (7439-98-7)		✓												
U. Manganese, Total (7439-96-5)		✓												
V. Tin, Total (7440-31-5)		✓												
W. Titanium, Total (7440-32-6)		✓												

OF004-3 of 3

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS			5. INTAKE (optional)			B. NO. OF ANALYSES
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		A. CONCEN- TRATION	B. MASS	A. LONG TERM AVRG. VALUE		D. NO. OF ANALYSES		
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			(1) CONCENTRATION	(2) MASS			
<b>METALS AND TOTAL PHENOLS</b>															
1M. Antimony, Total (7440-36-9)		✓													
2M. Arsenic, Total (7440-38-2)		✓													
3M. Beryllium, Total (7440-41-7)		✓													
4M. Cadmium, Total (7440-43-9)		✓													
5M. Chromium III (16065-83-1)		✓													
6M. Chromium VI (18540-29-9)		✓													
7M. Copper, Total (7440-50-8)		✓													
8M. Lead, Total (7439-92-1)		✓													
9M. Mercury, Total (7439-97-6)		✓													
10M. Nickel, Total (7440-02-0)		✓													
11M. Selenium, Total (7782-49-2)		✓													
12M. Silver, Total (7440-22-4)		✓													
13M. Thallium, Total (7440-28-0)		✓													
14M. Zinc, Total (7440-66-6)		✓													
15M. Cyanide, Amenable to Chlorination		✓													
16M. Phenols, Total		✓													
<b>RADIOACTIVITY</b>															
(1) Alpha Total		✓													
(2) Beta Total		✓													
(3) Radium Total		✓													
(4) Radium 226 Total		✓													

PLEASE PRINT OR TYPE. You may report some or all of this information on separate sheet (Use the same format) instead of completing these pages.  
SEE INSTRUCTIONS

FORM C  
TABLE 1 FOR 3.00 ITEM A AND B

1 of 3

INTAKE AND EFFLUENT CHARACTERISTICS											
PART A - You must provide the results of at least one analysis for every pollutant in this table. Complete one table for each outfall. See instructions for additional details.											

OUTFALL NO.  
003

1. POLLUTANT	2. EFFLUENT						3. UNITS (specify if blank)			4. INTAKE (optional)		B. NO. OF ANALYSES
	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE		
	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS	
A. Biochemical Oxygen Demand (BOD)												
B. Chemical Oxygen Demand (COD)												
C. Total organic Carbon (TOC)												
D. Total Suspended Solids (TSS)												
E. Ammonia (as N)	13.4	14.15	13.4	14.15	13.4	14.5	2	mg/l	pounds			
F. Flow (MOD)	VALUE 0.1267		VALUE 0.1267		VALUE 0.1267		3			VALUE		
G. Temperature (winter)	VALUE		VALUE		VALUE			°C		VALUE		
H. Temperature (summer)	VALUE		VALUE		VALUE			°C		VALUE		
I. pH	MINIMUM 8.2	MAXIMUM 8.3	MINIMUM 8.2	MAXIMUM 8.3			3	STANDARD UNITS				

PART B - Mark "X" in column 2A for each pollutant you know or have reason to believe is present. Mark "X" in column 2B for each pollutant you believe to be absent. If you mark column 2A for any pollutant, you must provide the results for at least one analysis for that pollutant. Complete one table for each outfall. See the instructions for additional details and requirements.

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT				4. UNITS		5. INTAKE (optional)		B. NO. OF ANALYSES
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		A. CONCENTRATION	B. MASS	
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS			

CONVENTIONAL AND NONCONVENTIONAL POLLUTANTS

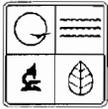
A. Bromide (24959-67-9)	✓											
B. Chlorine, Total Residual	✓											
C. Color	✓											
D. Fecal Coliform	✓											
E. Fluoride (16984-48-8)	✓											
F. Nitrate - Nitrate (as N)	✓	<0.5	0.528	<0.5	0.528	<0.5	0.528					

OF003 - 2 of 3

1. POLLUTANT AND CAS NUMBER (if available)	2. MARK "X"		3. EFFLUENT						4. UNITS			5. INTAKE (optional)	
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE (if available)		C. LONG TERM AVRG. VALUE (if available)		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE	B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS				(1) CONCENTRATION	(2) MASS
G. Nitrogen, Total Organic (as N)	✓		No DATA AVAILABLE - ANALYSES REQUESTED										
H. Oil and Grease	✓												
I. Phosphorus (as P), Total (7723-14-0)	✓		2.4	2.54	2.4	2.54	2.4	2.54		mg/l	pounds		
J. Sulfate (as SO <sub>4</sub> ) (14808-79-8)		✓											
K. Sulfide (as S)		✓											
L. Sulfite (as SO <sub>3</sub> ) (14265-45-3)		✓											
M. Surfactants		✓											
N. Aluminum, Total (7429-90-5)		✓											
O. Barium, Total (7440-39-3)		✓											
P. Boron, Total (7440-42-8)		✓											
Q. Cobalt, Total (7440-48-4)		✓											
R. Iron, Total (7439-89-6)		✓											
S. Magnesium, Total (7439-95-4)		✓											
T. Molybdenum, Total (7439-98-7)		✓											
U. Manganese, Total (7439-96-5)		✓											
V. Tin, Total (7440-31-5)		✓											
W. Titanium, Total (7440-32-6)		✓											

0F003 - 3 of 3

1. POLLUTANT AND CAS NUMBER <i>(if available)</i>	2. MARK "X"		3. EFFLUENT				4. UNITS			5. INTAKE <i>(optional)</i>			
	A. BELIEVED PRESENT	B. BELIEVED ABSENT	A. MAXIMUM DAILY VALUE		B. MAXIMUM 30 DAY VALUE		C. LONG TERM AVRG. VALUE		D. NO. OF ANALYSES	A. CONCENTRATION	B. MASS	A. LONG TERM AVRG. VALUE	B. NO. OF ANALYSES
			(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	(1) CONCENTRATION	(2) MASS	
<b>METALS, AND TOTAL PHENOLS</b>													
1M. Antimony, Total (7440-36-9)		✓											
2M. Arsenic, Total (7440-38-2)		✓											
3M. Beryllium, Total (7440-41-7)		✓											
4M. Cadmium, Total (7440-43-9)		✓											
5M. Chromium III (16065-83-1)		✓											
6M. Chromium VI (18540-29-9)		✓											
7M. Copper, Total (7440-50-8)		✓											
8M. Lead, Total (7439-92-1)		✓											
9M. Mercury, Total (7439-97-6)		✓											
10M. Nickel, Total (7440-02-0)		✓											
11M. Selenium, Total (7782-49-2)		✓											
12M. Silver, Total (7440-22-4)		✓											
13M. Thallium, Total (7440-28-0)		✓											
14M. Zinc, Total (7440-66-6)		✓											
15M. Cyanide, Amenable to Chlorination		✓											
16M. Phenols, Total		✓											
<b>RADIOACTIVITY</b>													
(1) Alpha Total		✓											
(2) Beta Total		✓											
(3) Radium Total		✓											
(4) Radium 226 Total		✓											



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
 WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH  
 (SEE MAP FOR APPROPRIATE REGIONAL OFFICE)

**FORM I – PERMIT APPLICATION FOR CONSTRUCTION AND  
 OPERATION OF WASTEWATER IRRIGATION SYSTEMS**

**FOR AGENCY USE ONLY**

PERMIT NUMBER

MO -

DATE RECEIVED

**INSTRUCTIONS: The following forms must be submitted with Form I: FORM B for domestic wastewater. Submit FORMS E and G for land disturbance permit if construction areas total one acre or more.**

**1.00 FACILITY INFORMATION**

1.10 Facility Name

SIMMONS FOODS, INC - JANE HATCHERY

1.20 Application for:  Construction Permit (attach Engineering report, Plans and Specifications per 10 CSR 20-8)

Operating Permit (if no construction permit, attach engineering documents)

Date Irrigation System Began Operation: \_\_\_\_\_

Operating Permit Renewal

1.30 Type of wastewater to be irrigated:  Domestic  Municipal  State/National Park  Seasonal business

Municipal with Pretreatment Program or Significant Industrial Users  Other (explain) \_\_\_\_\_

SIC Codes (list all that apply, in order of importance) 0254

1.40 Months when the business or enterprise will operate or generate wastewater:

12 months per year  Part of year (list Months): \_\_\_\_\_

1.50 This system is designed for:

No-discharge  Partial irrigation when feasible and discharge rest of time.

Irrigation during recreation season (April – October) and discharge during November – March.

Other (explain) \_\_\_\_\_

1.60 List the Facility outfalls which will be applicable to the irrigation system from outfalls listed on Form B.

Outfall Nos. 003 \_ \_ \_ \_ \_

**2.00 STORAGE BASINS**

2.10 Number of storage basins: 1 Type of basin:  Steel  Concrete  Fiberglass  Earthen

Earthen with membrane liner

2.20 Storage basin dimensions at inside top of berm (feet): Report freeboard as feet from top of berm to emergency spillway or overflow pipe.

(Complete Attachment A: Profile Sketch)

Basin #1: Length 430' Width 140' Depth 7.5' Freeboard 1' Berm Width \_\_\_\_\_ % Slope \_\_\_\_\_

Basin #2: Length \_\_\_\_\_ Width \_\_\_\_\_ Depth \_\_\_\_\_ Freeboard \_\_\_\_\_ Berm Width \_\_\_\_\_ % Slope \_\_\_\_\_

2.30 Storage Basin operating levels (report as feet below emergency overflow level)

Basin #1: Maximum water level 1.0 ft. Minimum operating water level 6.5 ft.

Basin #2: Maximum water level \_\_\_\_\_ ft. Minimum operating water level \_\_\_\_\_ ft.

2.40 Depth of sludge in lagoons and storage basins \_\_\_\_\_ ft.

Total sludge stored \_\_\_\_\_ dry tons \_\_\_\_\_ cu. ft.

**3.00 LAND APPLICATION SYSTEM**

3.10 Number of irrigation sites 1 Total Acres 20 Maximum % field slopes <3

Location: 1/4, NW 1/4, NW 1/4, 7 Sec. 21 T 31 R X County 20 Acres

Location: 1/4, 1/4, 1/4, 1/4 Sec. \_\_\_\_\_ T \_\_\_\_\_ R \_\_\_\_\_ County \_\_\_\_\_ Acres

*\* McDonald County*

3.11 Type of vegetation:  Grass hay  Pasture  Timber  Row crops  Other (describe) \_\_\_\_\_

3.20 Wastewater flow (dry weather) gallons/day:  
Average annual: \_\_\_\_\_ Seasonal \_\_\_\_\_ Off-season \_\_\_\_\_  
Months of seasonal flow: \_\_\_\_\_  
Human Population Equivalent: \_\_\_\_\_

3.21 Land Application rate per acre (design flow including 1 in 10 year storm water flows):  
Design: \_\_\_\_\_ inches/year \_\_\_\_\_ inches/hour \_\_\_\_\_ inches/day \_\_\_\_\_ inches/week  
Actual: \_\_\_\_\_ inches/year \_\_\_\_\_ inches/hour \_\_\_\_\_ inches/day \_\_\_\_\_ inches/week  
Total Irrigation per year (gallons): \_\_\_\_\_ Design \_\_\_\_\_ Actual  
Actual months used for Irrigation (check):  Jan  Feb  Mar  Apr  May  Jun  Jul  Aug  Sep  
 Oct  Nov  Dec

3.22 Land Application Rate is based on:  
 Nutrient Management Plan (N&P)  
 Hydraulic Loading  
 Other (describe) INTERMITTENT...to seasonal dependent of rainfall amounts and temperatures.

3.30 Equipment type:  Sprinklers  Gated pipe  Center pivot  Traveling gun  Other (describe) \_\_\_\_\_  
Equipment Flow Capacity: \_\_\_\_\_ Gallons per hour 750 Total hours of operation per year

3.40 Public Access Restrictions for irrigation sites:  Site is Fenced  Wastewater disinfection prior to irrigation  
 Other (describe): \_\_\_\_\_

3.50 Separation distance (in feet) from the outside edge of the wetted irrigation area to down gradient features:  
500 Permanent flowing stream N/A Losing Stream N/A Intermittent (wet weather) stream NA Lake or pond  
\_\_\_\_\_ Property boundary \_\_\_\_\_ Dwellings N/A Water supply well 300 Other (describe) \_\_\_\_\_

3.60 SOILS INFORMATION: Use information from the County Soil Survey, NRCS, or professional soil scientist.  
Soil Series Name \* Depth of bedrock \* Feet Depth of water table \* Feet *\*NOTE: SEE Engineering's SITE/SOILS REPORT ATTACHED*  
Soil Infiltration rate in inches/hour (in/hr) for most restrictive layer within the following soil depth ranges:  
\* In/hr for 0-12 in soil depth \* In/hr for 12-24 inch soil depth \* In/hr for 24-60 inch soil depth

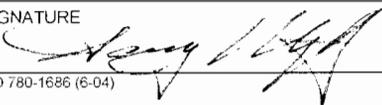
3.70 Include a recent Geologic Report by the Department's Geological Survey and Resource Assessment Division with your construction permit.

3.80 Attach a current copy of the Operation and Maintenance (O&M) Plan for the irrigation system. Date of O&M Plan: Reviewed/Revised 5/2/14

3.81 Attach a site map showing topography, storage basins, irrigation sites, property boundary, streams, wells, roads, dwellings and other pertinent features.

3.82 Attach a facility sketch showing treatment units, storage basins, pipelines, irrigation equipment, application sites and other features.

**4.00 CERTIFICATION**  
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine or imprisonment.

CONSULTING ENGINEER – Name, Official Title and Engineering Firm (TYPE OR PRINT)	TELEPHONE NUMBER (area code and number)
SIGNATURE	DATE SIGNED
OWNER OR AUTHORIZED REPRESENTATIVE – Name and Official Title (TYPE OR PRINT)	TELEPHONE NUMBER (area code and number)
GARY MURPHY - PRESIDENT AND C.O.O. OF POULTRY GROUP	(479) 215-2415
SIGNATURE	DATE SIGNED
	<u>5-7-14</u>

OPERATING INSTRUCTIONS FOR JANE HATCHERY IRRIGATION SYSTEM \*

PUMPS ARE LOCATED IN THE SMALL BUILDING AT THE EAST END OF THE LAGOON.

1. VERIFY THE ENDING PUMP READING WITH THE PREVIOUS DAYS RUN.AND WRITE DOWN THAT NUMBER FOR THE BEGINNING OF THAT DAYS RUN.
2. OPERATE PUMP 1 OR PUMP 2 . NEVER OPERATE BOTH AT THE SAME TIME
3. OPEN BALL VALVE AT PUMP 1 OR PUMP 2
4. TURN ON THE POWER SWITCH LOCATED TO THE LEFT OF THE ENTRANCE .THE CONTROL BOXES ARE LABLED 1 AND 2 . CORRISPONDING TO THE PUMPS.ALWAYS WRITE THE BEGINNING TIME DOWN ON THE SHEET PROVIDED.
5. WHEN PUMP IS PRIMED . VERIFY THAT THE METER IS RUNNING.
6. GO OUTSIDE AND VERIFY THAT ALL NOZZLES ARE SPRAYING A CORRECT PATTERN.
7. ONCE THE ABOVE STEPS ARE DONE. TAKE THE ORANGE INDICATOR FLAG AND PLACE IN HOLDER OUT SIDE OF THE OFFICE DOOR, THIS IS TO LET EVERYONE KNOW THAT THE IRRIGATION IS RUNNIG AND HAS TO BE SHUT DOWN AT THE END OF THE DAY.
8. AT THE END OF THE RUN.SHUT DOWN PUMP AT THE POWER SWITCH LOCATED BY THE ENTRANCE.ONCE THE FLOW HAS STOPPED WRITE DOWN THE ENDING READING ON THE METER AND THE TIME STOPPED ON THE SHEET PROVIDED.

NOTES: A NEW LEDGER SHEET WILL BE PROVIDED EACH MONTH.

CONTACT A MAINTENANCE PERSON OR MANAGEMENT IF PROBLEMS ARISE.

NEVER OPERATE BOTH PUMPS AT THE SAME TIME.

ALTERNATE IRRIGATION LINES EVERY 2 WEEKS.

DO NOT OPERATE DURING ANY RAIN EVENT AND ALWAYS RECORD RAINFALL ON THE SHEET PROVIDED.

\* Reviewed and revised 5/2/14

INSTRUCTIONS FOR MAINTENANCE PERSONNEL

IF A PLUGGED NOZZLE IS FOUND . SHUT DOWN THE PUMP AND WAIT FOR THE WATER TO STOP RUNNING.  
REMOVE THE SPRAY HEAD AND FIX OR REPLACE . RESTART THE SYSTEM AND VERIFY SPRAY PATTERN.

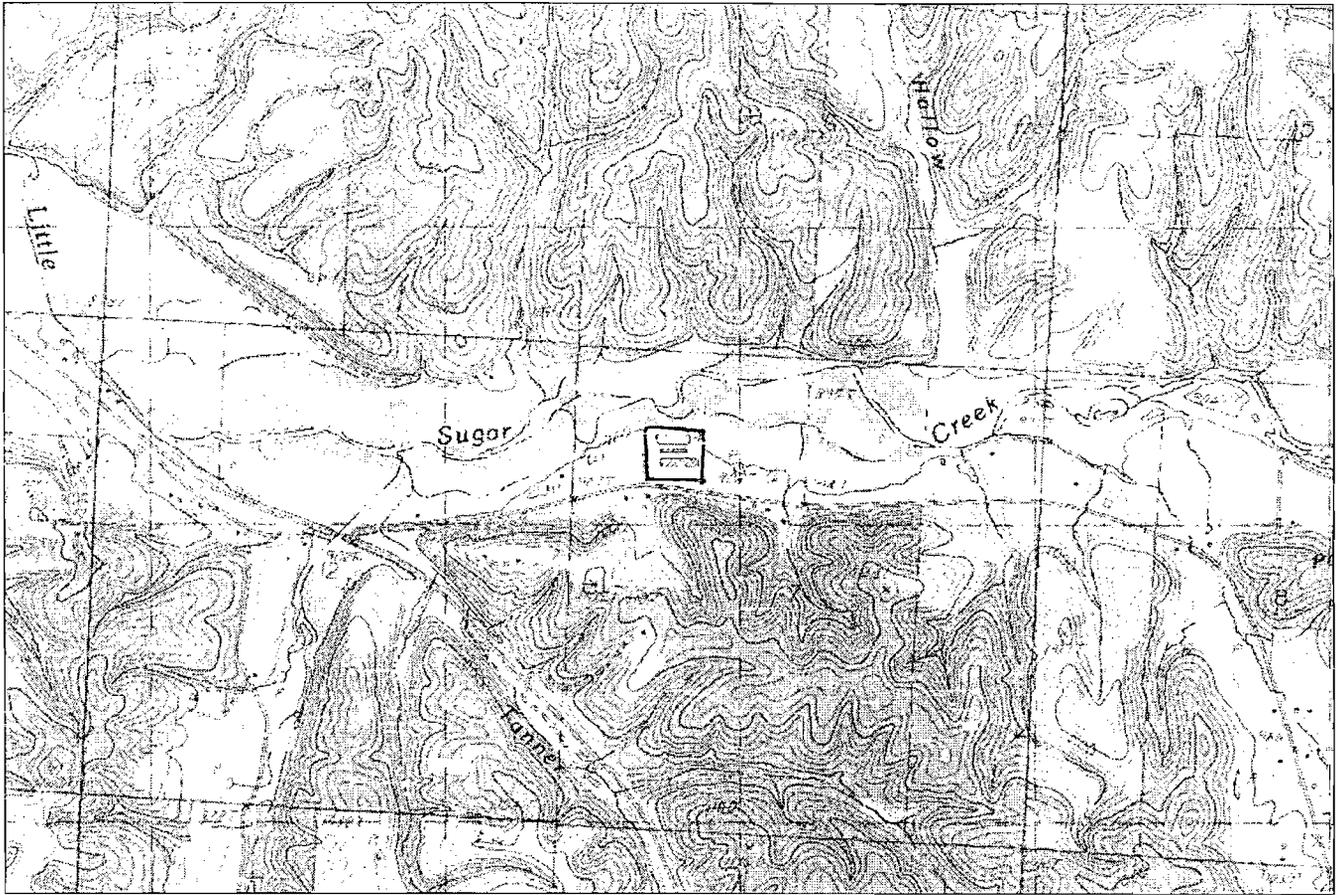
CHECK FOR LEAKING LINES OR NOZZLES DAILY.

CHECK FOR AN EXCESS IN MOTOR OR PUMP VIBRATION, DAILY

CHECK AND FILL BEARING OILER LOCATED ON THE PUMP,DAILY

\*

Reviewed and revised 5/2/14



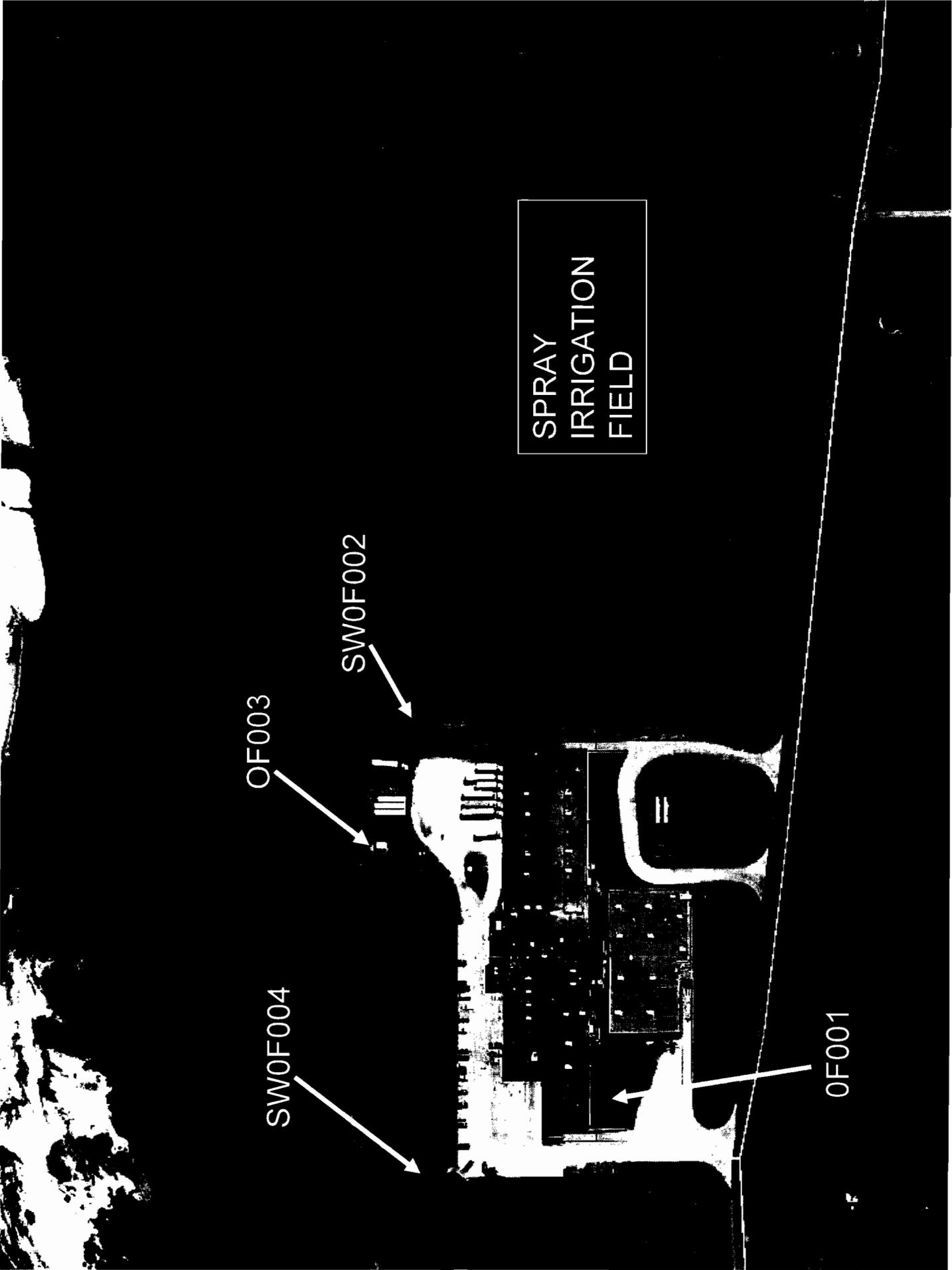
SPRAY  
IRRIGATION  
FIELD

OF003

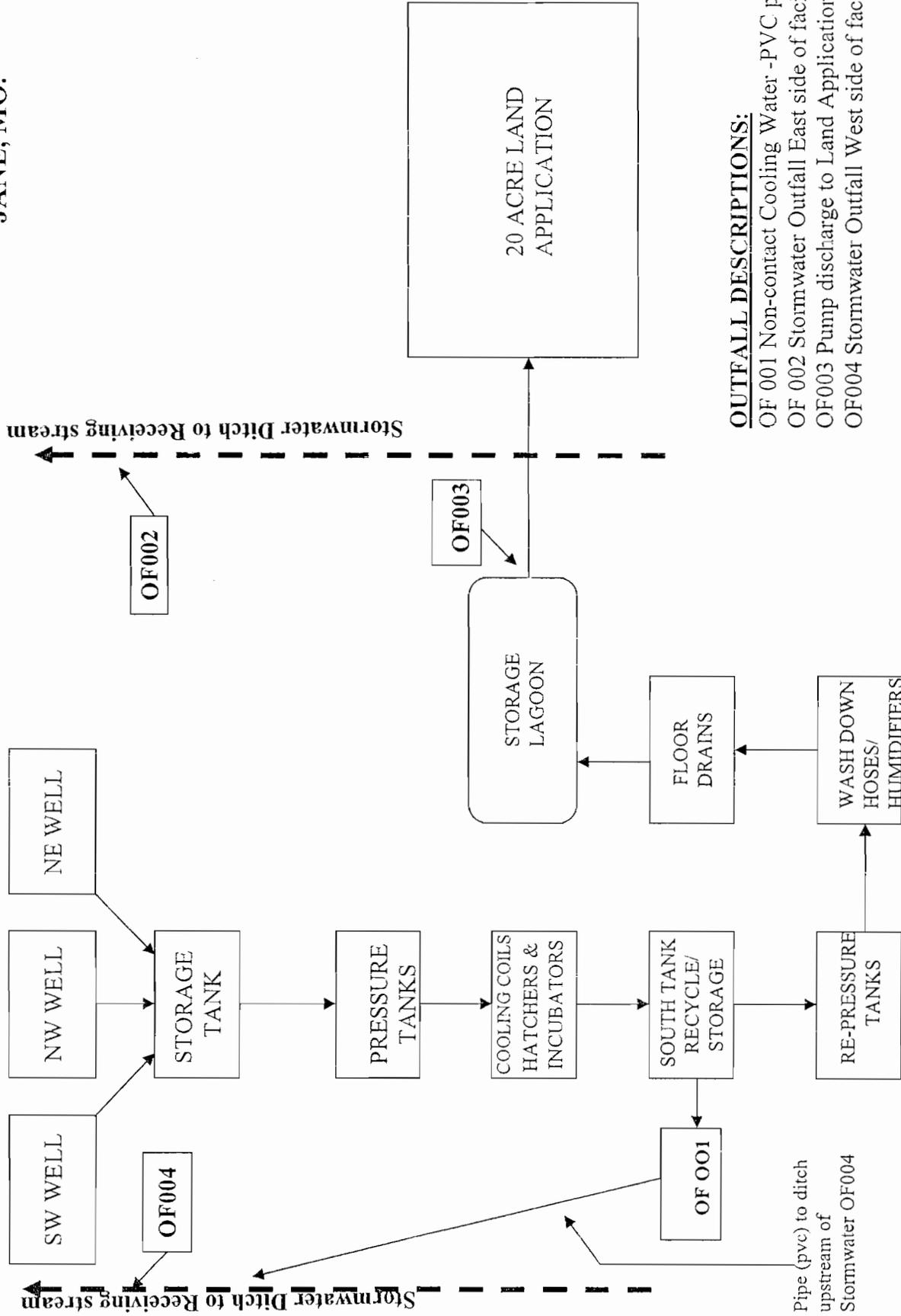
SW0F002

SW0F004

OF001



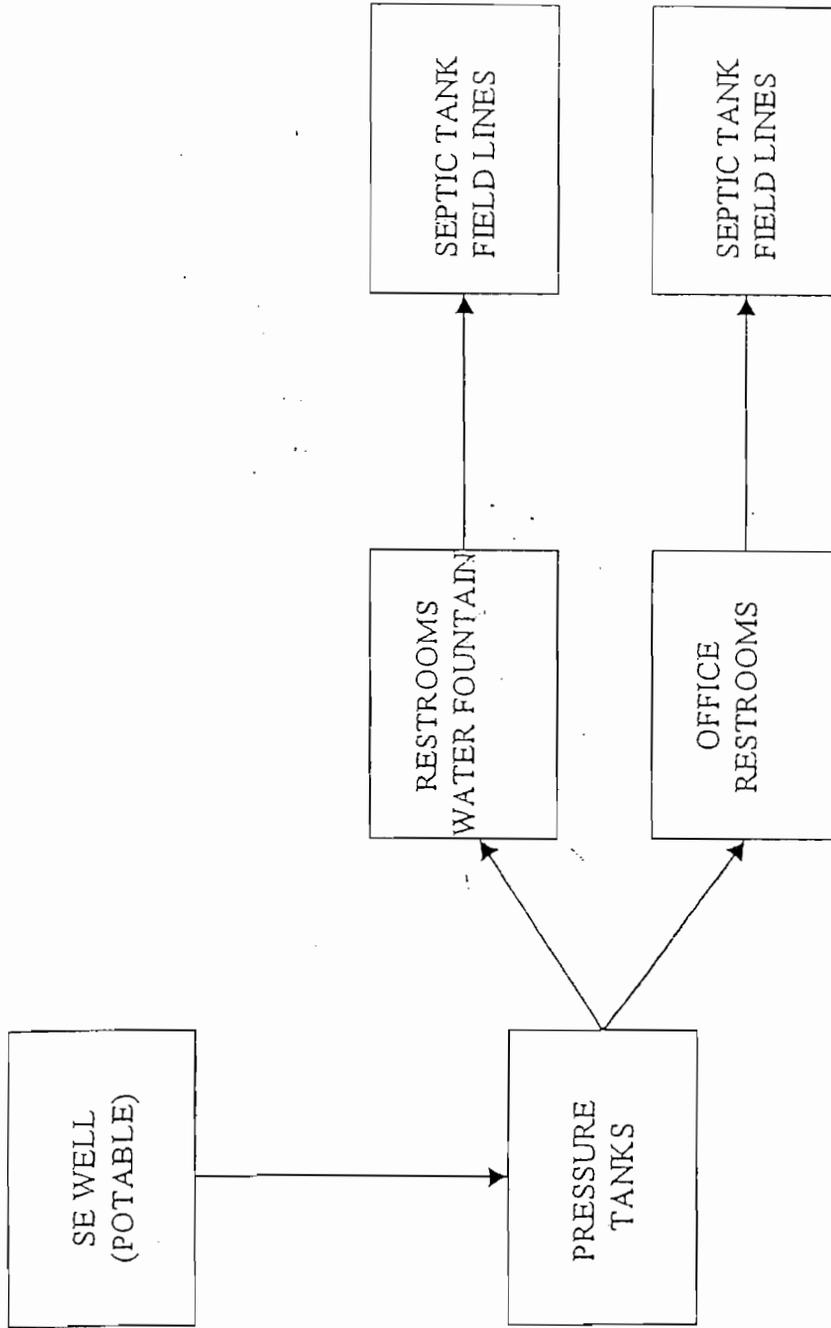
**SIMMONS FOODS HATCHERY  
JANE, MO.**



**OUTFALL DESCRIPTIONS:**

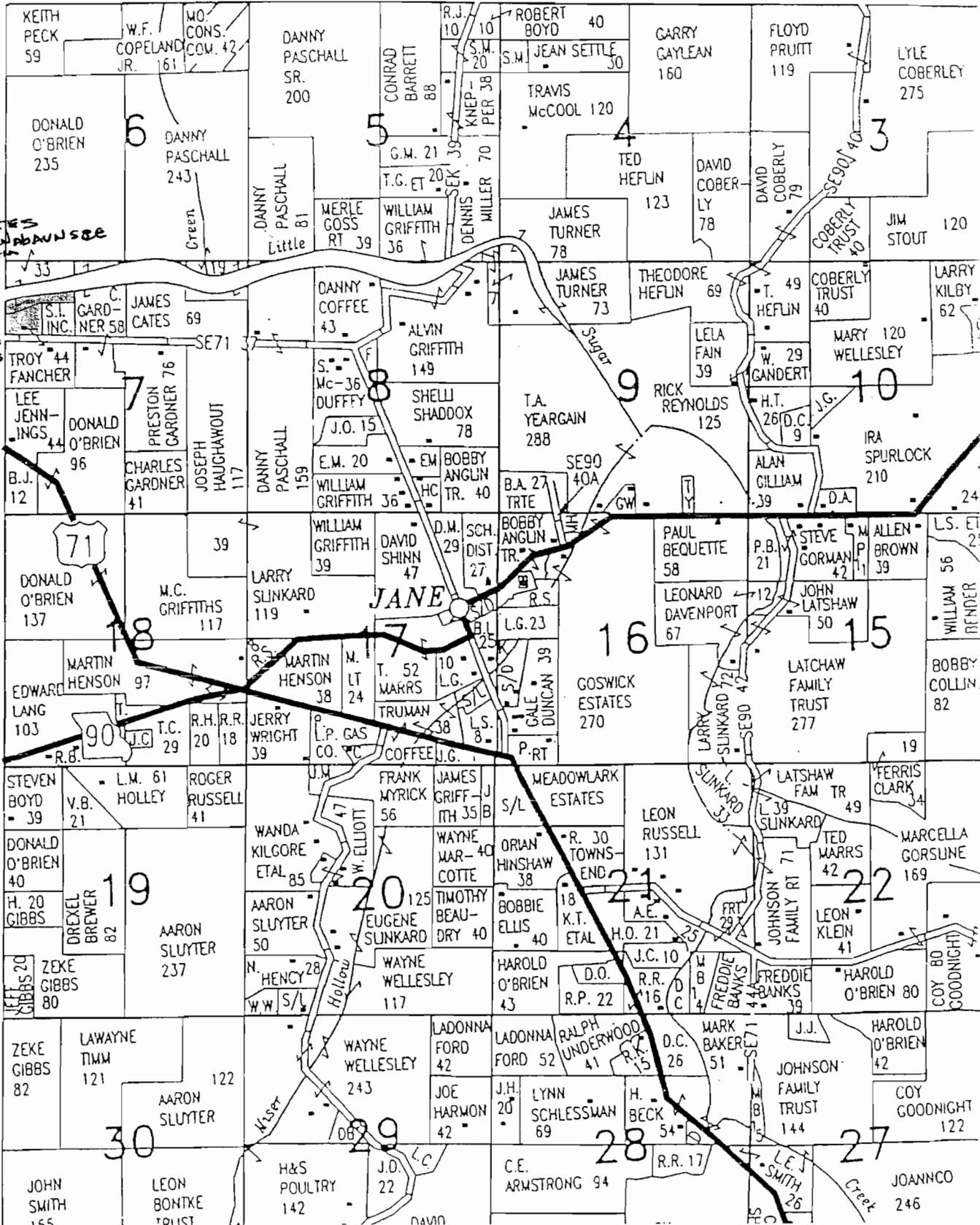
- OF 001 Non-contact Cooling Water -PVC pipe to ditch
- OF 002 Stormwater Outfall East side of facility
- OF003 Pump discharge to Land Application Field
- OF004 Stormwater Outfall West side of facility

SIMMONS FOODS HATCHERY  
JANE, MO.



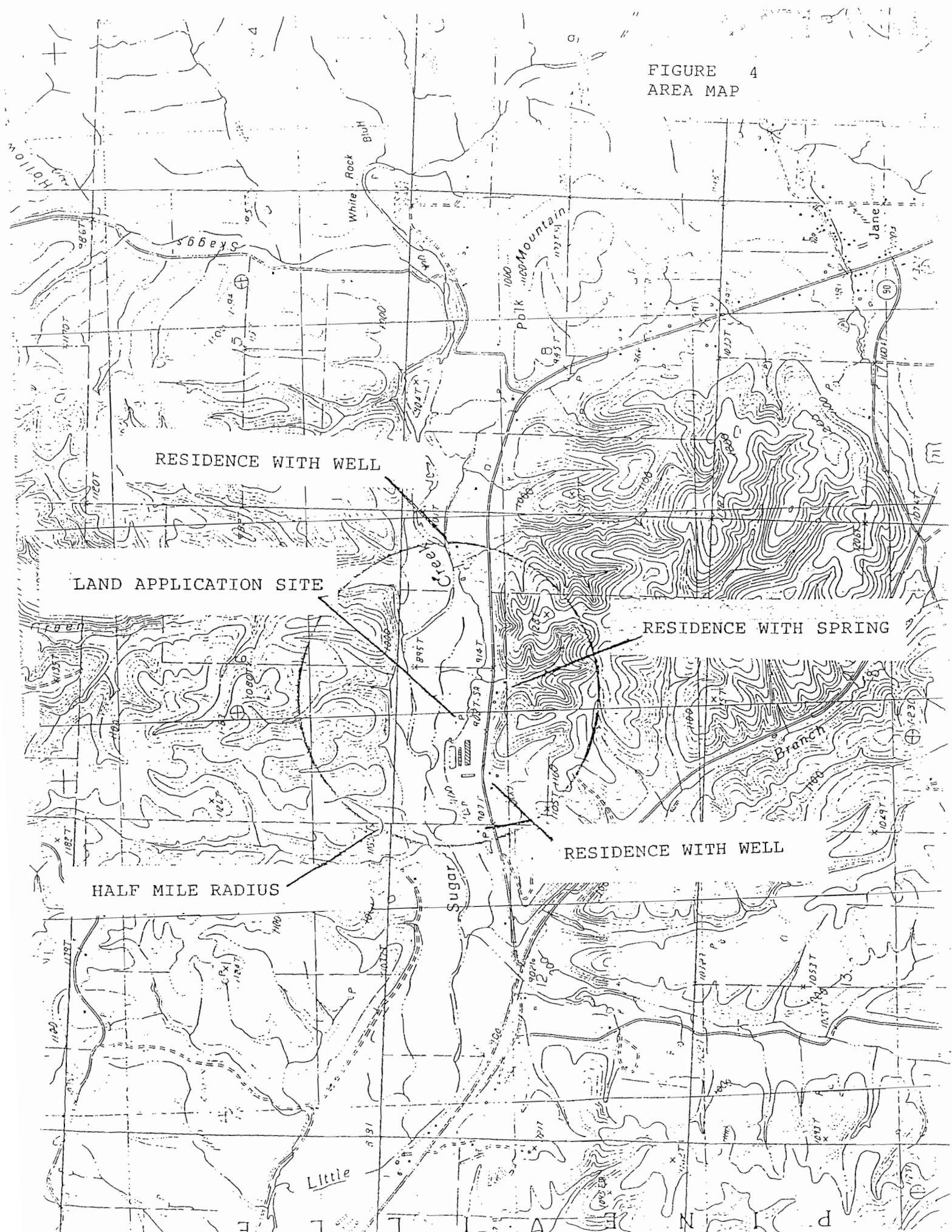
# TOWNSHIP 21N • RANC

SEE PAGE 19

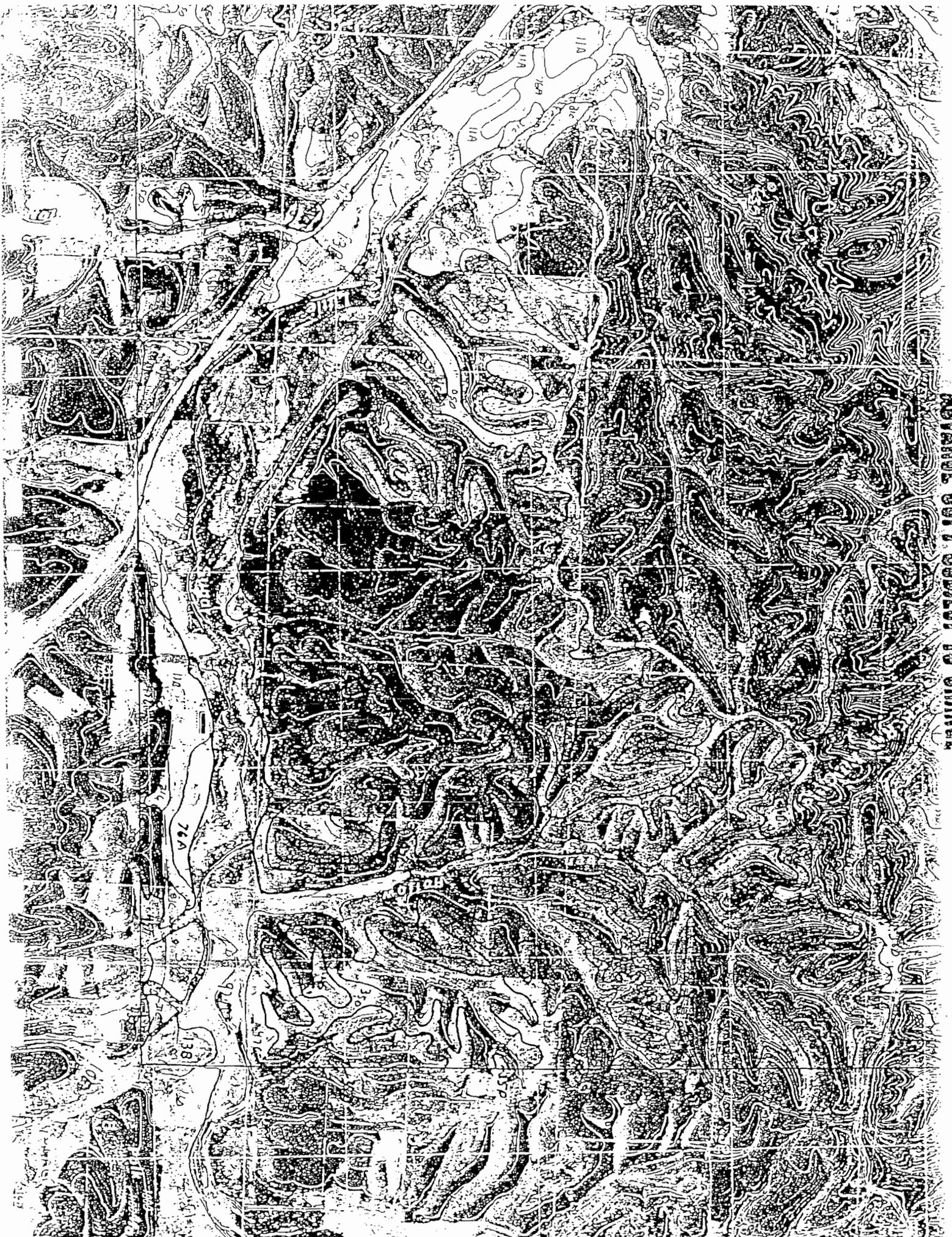


SEE PAGE 24

FIGURE 4  
AREA MAP



**APPENDIX II**  
**SITE SOILS INFORMATION**



MAP OF MEXICO AND SURROUNDING COUNTRIES

McDonald County  
Provisional Legend  
\* Identification Legend  
01-14-99

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- 2B PEMBROKE SILT LOAM, 1 TO 3 PERCENT SLOPES
- 10C ALSUP GRAVELLY SILTY CLAY LOAM, 3 TO 8 PERCENT SLOPES
- \*10E BOSKYDELL-WILBURTON COMPLEX 8 TO 20 PERCENT SLOPES
- 11A HOOTENTOWN SILT LOAM, 0 TO 3 PERCENT SLOPES, RARELY FLOODED
- ~~11B~~ CHEROKEE SILT LOAM, 0 TO 3 PERCENT SLOPES
- 15B BENDAVIS-JOLLYMILL-CRACKERNECK COMPLEX, 1 TO 3 PERCENT SLOPES, KARST
- \*15C JOLLYMILL-CRACKERNECK COMPLEX, 3 TO 8 PERCENT SLOPES, KARST
- \*15D CRACKERNECK-HAILEY COMPLEX, STONY, 3 TO 15 PERCENT SLOPES, KARST
- \*19B SOWCOON-HORNEYBUCK COMPLEX, 0 TO 3 PERCENT SLOPES, KARST
- 20B POMME SILT LOAM, 2 TO 5 PERCENT SLOPES
- \*21C TOWNHOLE-ASLINGER COMPLEX, 3 TO 8 PERCENT SLOPES
- 22C BRITWATER GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES
- 23B, 31B TOWNHOLE-ASLINGER COMPLEX, 1 TO 3 PERCENT SLOPES, KARST
- 23C UNKNOWN VERY GRAVELLY SILT LOAM, 3 TO 8 PERCENT SLOPES
- 24C SONSAC-GOBLER COMPLEX, ROCKY, 3 TO 8 PERCENT SLOPES
- 24D SONSAC-GOBLER COMPLEX, ROCKY, 8 TO 15 PERCENT SLOPES
- 24F SONSAC-GOBLER COMPLEX, ROCKY, 15 TO 35 PERCENT SLOPES
- 25A GERALD SILT LOAM, 0 TO 2 PERCENT SLOPES

69B WOODSON SILT LOAM, 0 TO 3 PERCENT SLOPES

~~76A~~ HEPLER SILT LOAM, 0 TO 2 PERCENT SLOPES,  
OCCASIONALLY FLOODED

82C GASCONADE GRAVELLY SILTY CLAY LOAM, 3 TO 8 PERCENT  
SLOPES, ROCKY

82D GASCONADE VERY GRAVELLY SILTY CLAY LOAM, 8 TO 15  
PERCENT SLOPES, VERY ROCKY

82F GASCONADE-ROCK OUTCROP COMPLEX, 15 TO 35 PERCENT  
SLOPES, VERY ROCKY

83G ROCK OUTCROP-GASCONADE-BRUSSELS COMPLEX, 35 TO 90  
PERCENT SLOPES

85D MOKO-ROCK OUTCROP-BLUEYE COMPLEX, 3 TO 15 PERCENT  
SLOPES

85G, 14G MOKO-ROCK OUTCROP COMPLEX, 15 TO 50 PERCENT SLOPES

87G MOKO-SNEAD-ROCK OUTCROP COMPLEX, 35 TO 50 PERCENT  
SLOPES

89C MANO-OCIE COMPLEX, 3 TO 8 PERCENT SLOPES

89D MANO-OCIE-SONSAC COMPLEX, 8 TO 15 PERCENT SLOPES

89F MANO-OCIE-SONSAC COMPLEX, 15 TO 35 PERCENT SLOPES

93B WABEN-CEDARGAP COMPLEX, 0 TO 5 PERCENT SLOPES

93A, 93A CEDARGAP-PINERUN COMPLEX, 0 TO 3 PERCENT  
94B SLOPES

95B PINERUN-WABEN COMPLEX, 0 TO 5 PERCENT SLOPES

98 WATER-RIVER WASH COMPLEX

99 PITS, DUMPS, AND QUARRIES

LOCATION CHEROKEE

KS+AR MO OK

Established Series

Rev. JMA-REM

5/84

13B

## CHEROKEE SERIES

The Cherokee Series is deep, somewhat poorly drained, very slowly permeable soils formed in fine textured sediments. Slopes range from 0 to 3 percent.

**TAXONOMIC CLASS:** Fine, mixed, thermic Typic Albaqualfs

**TYPICAL PEDON:** Cherokee silt loam cultivated. (Colors are for moist soils unless otherwise stated.)

**Ap--**0 to 8 inches; grayish brown (10YR 5/2) silt loam, light gray (10YR 7/2) dry; weak fine granular structure; slightly hard, friable; common fine roots; neutral; clear smooth boundary. (4 to 10 inches thick)

**Ag--**8 to 15 inches; light brownish gray (10YR 6/2) silt loam, white (10YR 8/2) dry; few fine distinct yellowish brown (10YR 5/4) mottles; weak fine and medium granular structure; slightly hard, friable; abundant fine roots; few small iron-manganese concretions; strongly acid; abrupt wavy boundary. (3 to 10 inches thick)

**Btg--**15 to 35 inches; very dark gray (10YR 3/1) clay, dark gray (10YR 4/1) dry; many medium distinct yellowish brown (10YR 5/4) mottles; weak medium blocky structure; extremely hard, very firm; few fine roots; strongly acid; gradual smooth boundary. (10 to 25 inches thick)

**BCg--**35 to 45 inches; dark gray (10YR 4/1) clay, gray (10YR 5/1) dry; many coarse prominent yellowish brown (10YR 5/6) and brown (7.5YR 5/4) mottles; weak coarse blocky structure; extremely hard, very firm; strongly acid; gradual smooth boundary. (0 to 20 inches thick)

**Cg--**45 to 60 inches; grayish brown (10YR 5/2) silty clay loam, light brownish gray (10YR 6/2) dry; many coarse distinct yellowish brown (10YR 5/6) and dark grayish brown (10YR 4/2) mottles; massive; extremely hard, very firm; slightly acid.

**TYPE LOCATION:** Crawford County, Kansas; about 1 mile east and 1 mile north of Monmouth; 2,300 feet north and 100 feet west of the southeast corner of sec. 6, T. 31 S., R. 23 E.

**RANGE IN CHARACTERISTICS:** Thickness of the solum ranges from 36 to more than 60 inches. Where the A and upper B horizons have moist values less than 3.5 the combined thickness is less than 10 inches, or they have less than 1 percent organic matter, or they have less than 50 percent base saturation in some part of the Bt horizon.

The A horizon has hue of 10YR, value of 3 to 5, and 4 to 7 dry, and chroma of 1 or 2. An A horizon having a moist value less than 3.5 is less than 4 inches thick. It is very strongly acid to medium acid.

Where limed it ranges to neutral.

The E horizon has hue of 10YR, value of 5 to 7, and 6 to 8 dry, and chroma of 1 or 2. This horizon is mottled with colors of lower value and higher chroma or contains iron-manganese concretions larger than 2 mm. in diameter or both. It is very strongly acid to medium acid.

The Bt horizon has hue of 10YR or 2.5Y, value of 3 to 5, and 4 to 6 dry, and chroma of 1 or 2. It is clay or silty clay and strongly acid or medium acid.

The C horizon has hue of 10YR or 2.5Y, value of 4 or 5, and 5 or 6 dry, and chroma of 1 or 2. It is silty clay loam, silty clay, or clay. Reaction is very strongly acid to neutral. In some pedons silty shale is at depths of 48 inches or more.

**COMPETING SERIES:** These are the Meggett series in the same family and the Alusa, Leanna, Lightning, Parsons, and Taloka series. Meggett soils have more sand and less silt throughout the solum. Alusa soils have montmorillonitic mineralogy. Leanna soils have a mollic epipedon. Lightning soils do not have an abrupt textural change between the E and Bt horizons. Parsons and Taloka soils have Ap, or A horizons that after mixing to a depth of 7 inches, have moist values of less than 3.5.

**GEOGRAPHIC SETTING:** Cherokee soils are on upland benches or terraces. The slope gradient ranges from 0 to 3 percent. They formed in fine textured sediments from shale or old alluvium that may contain a component of silty eolian sediments in the upper part. The mean annual precipitation ranges from 35 to 45 inches. The mean annual temperature ranges from 57 to 65 degrees F. Thornthwaite's Annual P.E. Index ranges from 64 to 80.

**GEOGRAPHICALLY ASSOCIATED SOILS:** These are the competing Parsons and Taloka soils and Barden, Dennis and Hepler soils. Parsons and Taloka soils occur on similar topography. Barden and Dennis soils occur on adjacent steeper slopes. Both have thicker, dark colored surface horizons and are better drained. Hepler soils are on flood plains and are commonly flooded. They have less clay in the argillic horizon and a thicker, darker colored A horizon.

**DRAINAGE AND PERMEABILITY:** Somewhat poorly drained. Permeability is very slow. Runoff is slow.

**USE AND VEGETATION:** Mostly cultivated with sorghum, wheat, and soybeans the principal crops. Native vegetation is tall prairie grasses with a few deciduous trees, especially in the eastern extent of the series.

**DISTRIBUTION AND EXTENT:** Southeastern Kansas, northwestern Arkansas, southwestern Missouri, and northeastern Oklahoma. The series is moderately extensive.

**MLRA OFFICE RESPONSIBLE:** Salina, Kansas

**SERIES ESTABLISHED:** Cherokee County, Kansas, 1912.

National Cooperative Soil Survey  
U.S.A.

**TYPE LOCATION:** Crawford County, Kansas; 2.5 miles south and 0.5 mile west of Walnut; 400 feet east and 2,440 feet north of the southwest corner, sec. 35, T. 28 S., R. 21 E.

**RANGE IN CHARACTERISTICS:** The thickness of the solum ranges from 40 to 72 inches. Below the solum, the soil commonly is silty clay loam, but some pedons have strata of silty clay.

The Ap or A horizon has hue of 10YR, value of 2 or 3 and 3 to 5 dry, and chroma of 1 or 2. It ranges from slightly acid to strongly acid.

The E horizon has hue of 10YR or 2.5Y, value of 4 or 5 and 5 to 7 dry, and chroma of 2 or 3. It ranges from moderately acid to very strongly acid.

The B horizon has hue of 10YR or 2.5Y, value of 3 to 5 and 4 to 6 dry, and chroma of 1 or 2. Where the value is less than 3.5, the base saturation is less than 50 percent by NH<sub>4</sub>OAc. This horizon has redoximorphic accumulations, mostly with colors having higher chroma than the soil matrix. It is slightly acid to very strongly acid.

**COMPETING SERIES:** There are no competing series. Similar soils are the Loreauville, Leanna, Lightning, McCune, and Moniteau series. Loreauville soils are neutral to moderately alkaline in the B horizon. Leanna and Lightning soils have fine textured control sections. McCune soils have a lighter colored A1 horizon. Moniteau soils are mesic.

**GEOGRAPHIC SETTING:** Hepler soils are on high flood plains. The slope gradient ranges from 0 to 3 percent. The soils formed in silty alluvial sediments. The mean annual temperature ranges from 57 to 60 degrees F, and the mean annual precipitation ranges from 40 to 45 inches. Thornthwaite's Annual P-E Index ranges from 64 to 78.

**GEOGRAPHICALLY ASSOCIATED SOILS:** These are the Lightning, Mason, Osage, Radley, Verdigris, and Wynona soils on nearly level flood plains and the Cherokee and Parsons soils on terraces. The Verdigris, Radley, Wynona, and clayey Osage soils have a mollic epipedon and do not have an argillic horizon. The Lightning, Parsons, and Cherokee soils have fine textured argillic horizons. Mason soils have a mollic epipedon.

**DRAINAGE AND PERMEABILITY:** Somewhat poorly drained. Runoff is slow or very slow. Permeability is moderately slow. These soils occasionally or frequently flood and are saturated with water during some season in most years.

**USE AND VEGETATION:** Mostly cultivated. Principal crops are winter wheat, soybeans, grain sorghum, and corn. Native vegetation is hardwood forest with an understory of tall prairie grasses.

**DISTRIBUTION AND EXTENT:** Southeastern Kansas and southwestern Missouri. The series is of large extent.

**MLRA OFFICE RESPONSIBLE:** Salina, Kansas

**SERIES ESTABLISHED:** Crawford County, Kansas, 1969.

**REMARKS:** Diagnostic horizons and features recognized in this pedon are: Ochric epipedon: the zone

Established Series

Rev: PRF

6/95

76A

# HEPLER SERIES

The Hepler series consists of very deep, somewhat poorly drained, moderately slowly permeable soils that formed in silty alluvial sediments. These nearly level to very gently sloping soils are on flood plains in the Cherokee Prairies (MLRA 112) and Ozark Highlands (MLRA 116A). Slope ranges from 0 to 3 percent. The mean annual precipitation is 43 inches, and the mean annual temperature is 59 degrees F.

**TAXONOMIC CLASS:** Fine-silty, mixed, thermic Mollic Endoaqualfs

**TYPICAL PEDON:** Hepler silt loam - in a cultivated field. (Colors are for moist soil unless otherwise stated.)

**Ap**--0 to 8 inches; very dark gray (10YR 3/1) silt loam, grayish brown (10YR 5/2) dry; weak fine and medium granular structure; slightly hard, friable; moderately acid; clear smooth boundary. (6 to 10 inches thick)

**E1**--8 to 16 inches; dark grayish brown (10YR 4/2) silt loam, light brownish gray (10YR 6/2) dry; weak fine and medium granular structure; hard, friable; strongly acid; gradual wavy boundary.

**E2**--16 to 27 inches; grayish brown (10YR 5/2) silt loam, light gray (10YR 7/2) dry; weak medium subangular blocky structure; hard, friable; few fine distinct yellowish brown (10YR 5/4) irregularly shaped masses of iron accumulation with diffuse boundaries throughout; few fine pores; strongly acid; gradual wavy boundary. (Combined thickness of the E horizon is 10 to 30 inches.)

**Bt**--27 to 32 inches; dark grayish brown (10YR 4/2) silty clay loam, grayish brown (10YR 5/2) dry; moderate medium and coarse subangular blocky structure; very hard, firm; few fine distinct yellowish brown (10YR 5/6) irregularly shaped masses of iron accumulation with diffuse boundaries throughout; common fine pores; ped surfaces coated with grayish brown (10YR 5/2) silt loam; very strongly acid; gradual wavy boundary.

**Btg**--32 to 38 inches; dark gray (10YR 4/1) silty clay loam, gray (10YR 5/1) dry; weak medium blocky structure; very hard, very firm; common medium distinct yellowish brown (10YR 5/6) irregularly shaped masses of iron accumulation with diffuse boundaries throughout; thin clay films on some faces of peds; few fine black (N 2/0) strongly cemented manganese concretions throughout; very strongly acid; gradual wavy boundary. (Combined thickness of the Bt horizon is 6 to 25 inches.)

**BCg**--38 to 62 inches; dark gray (10YR 4/1) silty clay loam, gray (10YR 5/1) dry; weak coarse subangular blocky structure; very hard, very firm; many medium and coarse distinct yellowish brown (10YR 5/6) irregularly shaped masses of iron accumulation with diffuse boundaries throughout; very strongly acid.

from the surface to 8 inches; Albic horizon: the zone from about 8 to 27 inches; Argillic horizon: the zone from about 27 to 38 inches; Aquic moisture conditions: redoximorphic features in the zone from about 16 to 27 inches; Endo: seasonal, apparent water table that fluctuates between 1 to 3 feet below the soil surface.

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National Cooperative Soil Survey  
U.S.A.

PLR(S): 112  
 12-94  
 ALBAQUALFS, FINE, MIXED, THERMIC

THE CHEROKEE SERIES CONSISTS OF DEEP, SOMEWHAT POORLY DRAINED SOILS FORMED IN FINE TEXTURED SEDIMENTS ON UPLANDS AND TERRACES. THE SURFACE LAYER IS GRAYISH BROWN SILT LOAM 8 INCHES THICK. THE SUBSURFACE LAYER IS LIGHT BROWNISH GRAY SILT LOAM 7 INCHES THICK. THE SUBSOIL IS VERY DARK GRAY AND DARK GRAY CLAY 30 INCHES THICK. THE SUBSTRATUM IS GRAYISH BROWN SILTY CLAY LOAM. SLOPES ARE 0 TO 3 PERCENT. CROPLAND IS THE MAIN USE.

LANDSCAPE AND CLIMATE PROPERTIES

ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
				SP	0-3

ESTIMATED SOIL PROPERTIES

DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.				CLAY (PCT)		
				>10 IN (PCT)	3-10IN (PCT)	4	10		40	200
0-15	SIL	ML,CL,CL-ML	A-4,A-6	0	0	100	100	90-100	80-95	10-27
1-45	C,SIC	CH,CL,MH	A-7	0	0	100	100	95-100	85-95	40-50
4-60	SICL,C,SIC	CH,CL	A-7,A-6	0	0	100	100	95-100	85-95	35-50

DEPTH (IN.)	LIQUID LIMIT	PLASTICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERMEABILITY (IN/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (ME/100G)	CACO3 (PCT)	GYP SUM (PCT)
0-5	20-35	5-15	1.25-1.35	0.6-2.0	0.22-0.24	4.5-7.3	0-0				
5-15	45-70	20-40	1.35-1.50	0.0-0.06	0.10-0.15	4.5-6.0	0-0				
15-60	35-70	15-40	1.35-1.45	0.0-0.2	0.09-0.18	5.1-7.3	0-0				

DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS			WIND EROSION		CORROSIVITY	
			K	Kf	T	GROUP	INDEX	STEEL	CONCRETE
0-5	.5-2	LOW	.43	.43	3	6	48	HIGH	MODERATE
5-15		HIGH	.32	.32					
15-60		HIGH	.32	.32					

FLOODING

HIGH WATER TABLE

CEMENTED PAN

BEDROCK

SUBSIDENCE

HYD POTENTIAL

FREQUENCY	DURATION	MONTHS	DEPTH (FT)		KIND	MONTHS		DEPTH (IN)		HARDNESS		INIT. (IN)		TOTAL (IN)	GRP	FROST ACTION
			0.5-1.5	PERCHED		DEC-JUN										
NONE			0.5-1.5	PERCHED	DEC-JUN										D	NONE

MLRA(S): 112, 116A

REV. PRF, HD, 3-94

ILLIC ENDOAQUALFS, FINE-SILTY, MIXED, THERMIC

THE HEPLER SERIES CONSISTS OF VERY DEEP, SOMEWHAT POORLY DRAINED SOILS FORMED IN ALLUVIUM ON FLOOD PLAINS IN THE EROKEE PRAIRIES AND OZARK HIGHLANDS. THE SURFACE LAYER IS VERY DARK GRAY SILT LOAM 8 INCHES THICK. THE SUBSURFACE LAYER IS DARK GRAYISH BROWN AND GRAYISH BROWN SILT LOAM 19 INCHES THICK. THE SUBSOIL IS DARK GRAYISH BROWN AND DARK GRAY SILTY CLAY LOAM. SLOPE RANGES FROM 0 TO 3 PERCENT. MOST AREAS ARE USED FOR CROPLAND.

LANDSCAPE AND CLIMATE PROPERTIES

ANNUAL AIR TEMPERATURE	FROST FREE DAYS	ANNUAL PRECIPITATION	ELEVATION (FT)	DRAINAGE CLASS	SLOPE (PCT)
57-60	190-235	40-45	1400-1500	SP	0-3

ESTIMATED SOIL PROPERTIES

DEPTH (IN.)	USDA TEXTURE	UNIFIED	AASHTO	FRACT. >10 IN (PCT)	FRACT. 3-10IN (PCT)	PERCENT OF MATERIAL LESS THAN 3" PASSING SIEVE NO.				CLAY (PCT)
						4	10	40	200	
0-8	SIL	CL,CL-ML	A-4,A-6	0	0	100	100	90-100	70-90	12-27
8-27	SIL	CL,CL-ML	A-4,A-6	0	0	100	100	90-100	70-90	12-27
27-38	SICL	CL	A-6,A-7	0	0	100	100	95-100	85-95	27-35
38-62	SICL,SIC	CL	A-6,A-7	0	0	100	100	95-100	85-95	27-42

DEPTH (IN.)	LIQUID LIMIT	PLASTICITY INDEX	MOIST BULK DENSITY (G/CM3)	PERMEABILITY (CM/HR)	AVAILABLE WATER CAPACITY (IN/IN)	SOIL REACTION (PH)	SALINITY (MMHOS/CM)	SAR	CEC (ME/100G)	CAC03 (PCT)	GYPSUM (PCT)
0-8	20-35	5-15	1.25-1.35	0.6-2.0	0.22-0.24	4.5-6.5	0-0	0-0	5-10	0-0	0-0
8-27	20-35	5-15	1.25-1.35	0.6-2.0	0.22-0.24	4.5-6.0	0-0	0-0	5-10	0-0	0-0
27-38	35-45	15-20	1.35-1.45	0.6-2.0	0.18-0.20	4.5-6.5	0-0	0-0	1-5	0-0	0-0
38-62	35-50	15-25	1.35-1.45	0.2-0.6	0.17-0.19	4.5-6.5	0-0	0-0	5-10	0-0	0-0

DEPTH (IN.)	ORGANIC MATTER (PCT)	SHRINK-SWELL POTENTIAL	EROSION FACTORS			WIND EROD. GROUP	WIND EROD. INDEX	CORROSIVITY	
			K	Kf	T			STEEL	CONCRETE
0-8	0-1	LOW	.37	.37	5	6	48	HIGH	MODERATE
8-27	0-1	LOW	.37	.37					
27-38	0-0	MODERATE	.37	.37					
38-62	0-0	MODERATE	.32	.32					

FLOODING

FREQUENCY	DURATION	MONTHS	HIGH WATER TABLE		CEMENTED PAN		BEDROCK		SUBSIDENCE		HYDROPHOBICITY	POTENTIAL FROST ACTION
			DEPTH (FT)	KIND	MONTHS	DEPTH (IN)	HARDNESS	DEPTH (IN)	HARDNESS	INIT. (IN)		
COMMON	BRIEF	MAR-JUL	1.0-3.0	APPARENT	NOV-MAR		>60				C	LOW

OF-004  
STORM WATER

OF-001  
COOLING WATER

