

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, 92nd Congress) as amended,

Permit No. MO-0115487

Owner: Farmland Foods, Inc.
Address: 11500 NW Ambassador Drive, Kansas City MO 64153

Continuing Authority: Same as Above
Address: Same as Above

Facility Name: Farmland Foods – Milan Processing Plant
Facility Address: 22123 Highway 5, Milan MO 63556

Legal Description: SW¹/₄, NW¹/₄, Sec. 35, T63N, R20W, Sullivan County
UTM Coordinates: X = 489835, Y = 4452201

Receiving Stream: Unnamed Tributary to Elmwood Branch (U)
First Classified Stream and ID: East Fork Locust Creek (C) (0610)
USGS Basin & Sub-watershed No.: (102801030601)

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

FACILITY DESCRIPTION Continued on Page 2

This permit authorizes wastewater and stormwater 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.

June 12, 2012
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

June 11, 2017
Expiration Date

John Madras, Director, Water Protection Program

FACILITY DESCRIPTION (continued):

Outfall #001 Meat Processing Plant -- SIC 2011

Facility operations include Evisceration, Scalding, Meat Washing, Rendering, Cutting, Clean up, Viscera Processing, and Refrigeration. Wastewater and stormwater is treated utilizing screening, floatation, anaerobic digestion, activated sludge, nitrification, denitrification, disinfection via chlorine, disinfection via ultraviolet, and dechlorination.

Design population equivalent is 90,879

Design flow is 1.08 MGD.

Design sludge production 1,908 dry tons/year.

Storm water associated with industrial activity in the vicinity of the animal load out area is collected and conveyed to the wastewater treatment plant. This permit authorizes the discharge of storm water associated with industrial activity relating to Food and Kindred Products (SIC #2011)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 3 of 8	
					PERMIT NUMBER MO-0115487	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Flow	MGD	*		*	once/day	24 hr. estimate
Carbonaceous Biochemical Oxygen Demand ₅	mg/L	30		25	once/weekday**	24 hr. comp***
Total Suspended Solids	mg/L	36		30	once/weekday**	24 hr. comp***
<i>E. coli</i> (Note 1)	#/100 ml	1,030		206	once/week	grab
pH – Units	SU	****		****	once/ weekday**	grab
Ammonia as N (April 1 – Sept 30) (Oct 1 – March 31)	mg/L	5.4 12.1		1.3 2.4	once/week	grab
Total Residual Chlorine (Note 2)	µg/L	17.0 ML 130		8.0 ML 130	once/week	grab
Temperature	°C	*		*	once/ weekday**	grab
Chloride	mg/L	*		*	once/month	grab
Sulfate	mg/L	*		*	once/month	grab
Hardness	mg/L	*		*	once/month	grab
Total Phosphorus	mg/L	*		*	once/month	grab
Total Nitrogen (Note 3)	mg/L	*		*	once/month	grab
Oil & Grease	mg/L	15		10	once/week	grab
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	DAILY MINIMUM	WEEKLY AVERAGE MINIMUM	MONTHLY AVERAGE MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001 Dissolved Oxygen	mg/L	5.0		5.0	once/ weekday**	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>August 28, 2012</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM, OR WATER WITH A VISIBLE SHEEN. THERE SHALL BE NO DISCHARGE OF WATER THAT CAUSES A DISCERNABLE COLOR CHANGE IN THE RECEIVING STREAM.						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Fecal Coliform	#/100 ml	400		400	once/ quarter*****	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>October 28, 2012</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM, OR WATER WITH A VISIBLE SHEEN. THERE SHALL BE NO DISCHARGE OF WATER THAT CAUSES A DISCERNABLE COLOR CHANGE IN THE RECEIVING STREAM.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS				PAGE NUMBER 4 of 8		
				PERMIT NUMBER MO-0115487		
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Whole Effluent Toxicity (WET) test	% Survival	See Special Conditions			once/year	24 hr. composite***
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>August 28, 2013</u> .						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I & III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- * Monitoring requirement only.
- ** Once each weekday means: Monday, Tuesday, Wednesday, Thursday & Friday.
- *** A 24-hour composite sample is composed of 48 aliquots (subsamples) collected at 30 minute intervals by an automatic sampling device.
- **** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.
- ***** See table below for quarterly sampling.

Sample discharge at least once for the months of:	Report is due:
January, February, March (1st Quarter)	April 28
April, May, June (2nd Quarter)	July 28
July, August, September (3rd Quarter)	October 28
October, November, December (4th Quarter)	January 28

Note 1 - 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. The Weekly Average for *E. coli* will be expressed as a geometric mean if more than one (1) sample is collected during a calendar week (Sunday through Saturday).

E. SPECIAL CONDITIONS

Note 2 - This permit contains a Total Residual Chlorine (TRC) limit.

- (a) This effluent limit is below the minimum quantification level (ML) of the most common and practical EPA approved CLTRC methods. The Department has determined the current acceptable ML for total residual chlorine to be 130 µg/L when using the DPD Colorimetric Method #4500 – CL G. from Standard Methods for the Examination of Waters and Wastewater. The permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to the minimum quantification level of 130 µg/L will be considered violations of the permit and values less than the minimum quantification level of 130 µg/L will be considered to be in compliance with the permit limitation. The minimum quantification level does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit.
- (b) Disinfection is required year-round unless the permit specifically states that “Final limitations and monitoring requirements for *E. coli* are applicable only during the recreational season from April 1 through October 31.”
- (c) Do not chemically dechlorinate **if it is not needed to meet the limits in your permit.**
- (d) If no chlorine was used in a given sampling period, an actual analysis is not necessary. Simply report as “0 µg/L” TRC.

Note 3 – Total Nitrogen means the total of nitrate/nitrite and total Kjeldahl nitrogen

1. 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.

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

2. All outfalls must be clearly marked in the field.
3. Permittee will cease discharge by connection to a facility with an area-wide management plan per 10 CSR 20-6.010(3)(B) within 90 days of notice of its availability.
4. Water Quality Standards
 - (a) 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.

E. SPECIAL CONDITIONS (continued)

5. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
 - (4) The level established in Part A of the permit by the Director.
 - (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
6. Report as no-discharge when a discharge does not occur during the report period.
 7. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).
 8. The permittee shall comply with any applicable requirements listed in 10 CSR 20-9, unless the facility has received written notification that the Department has approved a modification to the requirements. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. If a modification of the monitoring frequencies listed in 10 CSR 20-9 is needed, the permittee shall submit a written request to the Department for review and, if deemed necessary, approval.
 9. Bypasses are not authorized at this facility and are subject to 40 CFR 122.41(m). If a bypass occurs, the permittee shall report in accordance to 40 CFR 122.41(m)(3)(i), and with Standard Condition Part I, Section B, subsection 2.b. Bypasses are to be reported to the Northeast Regional Office.
 10. A least one gate, constructed of materials comparable to the fence, must be provided to access the lagoon and provide for maintenance and mowing. The gate shall remain locked except when opened by the permittee to perform maintenance or mowing.
 11. At least one sign shall appear on the fence on each side of each facility. Minimum wording shall be "SEWAGE TREATMENT FACILITY – KEEP OUT", in letters at least 2 inches high.
 12. An Operation and Maintenance (O & M) manual shall be maintained by the permittee and made available to the operator. The O & M manual shall include key operating procedures and a brief summary of the operation of the facility.
 13. The inner and outer berm slopes shall not be steeper than three to one (3:1). Inner berm slopes shall not be flatter than four to one (4:1). Consideration may be given to steeper inner slopes provided special attention is given to stabilizing the slope with rip-rap, concrete, or other rigid materials.
 14. Maintenance of berms of storage basins shall include mowing and removal of any trees, muskrat dens, or other potential sources of damage to the berms.

E. SPECIAL CONDITIONS (continued)

15. Whole Effluent Toxicity (WET) Test shall be conducted as follows:

SUMMARY OF ACUTE WET TESTING FOR THIS PERMIT				
OUTFALL	AEC	FREQUENCY	SAMPLE TYPE	MONTH
001	100%	Once/year	24 hr. composite***	Any

Dilution Series							
AEC% 100	100% effluent	50% effluent	25% effluent	12.5% effluent	6.25% effluent	(Control) 100% upstream, if available	(Control) 100% Lab Water, also called synthetic water

(a) Test Schedule and Follow-Up Requirements

- (1) Perform a MULTIPLE-dilution acute WET test in the months and at the frequency specified above. For tests which are successfully passed, submit test results using the Department's WET test report form #MO-780-1899 along with complete copies of the test reports as received from the laboratory, including copies of chain-of-custody forms within 30 calendar days of availability to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102. If the effluent passes the test, do not repeat the test until the next test period.
 - (i) Chemical and physical analysis of the upstream control and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping.
 - (ii) Any and all chemical or physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% Effluent concentration in addition to analysis performed upon any other effluent concentration.
 - (iii) All chemical analyses included in the Missouri Department of Natural Resources WET test report form #MO-780-1899 shall be performed and results shall be recorded in the appropriate field of the report form.
- (2) The WET test will be considered a failure if mortality observed in effluent concentrations for either specie, equal to or less than the AEC, is significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the upstream receiving-water control sample. Where upstream receiving water is not available, synthetic laboratory control water may be used.
- (3) All failing test results along with complete copies of the test reports as received from the laboratory, INCLUDING THOSE TESTS CONDUCTED UNDER CONDITION (3) BELOW, shall be reported to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the availability of the results.
- (4) If the effluent fails the test for BOTH test species, a multiple dilution test shall be performed for BOTH test species within 30 calendar days and biweekly thereafter (for storm water, tests shall be performed on the next and subsequent storm water discharges as they occur, but not less than 7 days apart) until one of the following conditions are met: Note: Written request regarding single species multiple dilution accelerated testing will be address by THE WATER PROTECTION PROGRAM on a case by case basis.
 - (i) THREE CONSECUTIVE MULTIPLE-DILUTION TESTS PASS. No further tests need to be performed until next regularly scheduled test period.
 - (ii) A TOTAL OF THREE MULTIPLE-DILUTION TESTS FAIL.
- (5) Follow-up tests do not negate an initial failed test.
- (6) The permittee shall submit a summary of all test results for the test series along with complete copies of the test reports as received from the laboratory to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the third failed test.
- (7) Additionally, the following shall apply upon failure of the third follow up MULTIPLE DILUTION test The permittee should contact THE WATER PROTECTION PROGRAM within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. If the permittee does not contact THE WATER PROTECTION PROGRAM upon the third follow up test failure, a toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. The permittee shall submit a plan for conducting a TIE or TRE to the WATER PROTECTION PROGRAM within 60 calendar days of the date of the automatic trigger or DNR's direction to perform either a TIE or TRE. This plan must be approved by DNR before the TIE or TRE is begun. A schedule for completing the TIE or TRE shall be established in the plan approval.

E. SPECIAL CONDITIONS (continued)

- (8) Upon DNR's approval, the TIE/TRE schedule may be modified if toxicity is intermittent during the TIE/TRE investigations. A revised WET test schedule may be established by DNR for this period.
- (9) If a previously completed TIE has clearly identified the cause of toxicity, additional TIEs will not be required as long as effluent characteristics remain essentially unchanged and the permittee is proceeding according to a DNR approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the permit, without the follow-up requirements, will be required during this period.
- (10) When WET test sampling is required to run over one DMR period, each DMR report shall contain a copy of the Department's WET test report form that was generated during the reporting period.
- (11) Submit a concise summary in tabular format of all WET test results with the annual report.

(b) Test Conditions

- (1) Test Type: Acute Static non-renewal
- (2) All tests, including repeat tests for previous failures, shall include both test species listed below unless approved by the Department on a case by case basis.
- (3) Test species: *Ceriodaphnia dubia* and *Pimephales promelas* (fathead minnow). Organisms used in WET testing shall come from cultures reared for the purpose of conducting toxicity tests and cultured in a manner consistent with the most current USEPA guidelines. All test animals shall be cultured as described in the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.
- (4) Test period: 48 hours at the "Allowable Effluent Concentration" (AEC) specified above.
- (5) Upstream receiving stream water shall be used as dilution water. If upstream water is unavailable or if mortality in the upstream water exceeds 10%, "reconstituted" water will be used as dilution water. Procedures for generating reconstituted water will be supplied by the MDNR upon request.
- (6) Tests will be run with 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent, and reconstituted water.
- (7) If reconstituted-water control mortality for a test species exceeds 10%, the entire test will be rerun.
- (8) If upstream control mortality exceeds 10%, the entire test will be rerun using reconstituted water as the dilutant.
- (9) Whole-effluent-toxicity test shall be consistent with the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms

Missouri Department of Natural Resources
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-0115487
FARMLAND FOODS INC.

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 a Industrial Facility

Part I – Facility Information

Facility Type: INDUSTRIAL
Facility SIC Code(s): 2011

Facility Description:

The Farmland Foods Facility in Milan Missouri is a pork slaughter and processing facility. This facility is subject to federal effluent limit guidelines 40 CFR § 432 Subpart B – Complex Slaughterhouses. A complex slaughterhouse usually includes at least three processing operations such as rendering, paunch and viscera handling, or the processing of blood, hide or hair. The Farmland Foods facility operations include Evisceration, Scalding, Meat Washing, Rendering, Cutting, Clean up, Viscera Processing, and Refrigeration. Wastewater and stormwater is treated utilizing screening, floatation, anaerobic digestion, activated sludge, nitrification, denitrification, disinfection via chlorine, disinfection via ultraviolet, and dechlorination. The effluent from this treatment chain is then discharged via outfall 001 to an unnamed tributary to Elmwood Branch. This outfall is 1.0 mile upstream from East Fork Locust Creek which is a classified "C" stream.

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

- No.

Application Date: 9/7/2011
Expiration Date: 3/15/2012
Last Inspection: 2/1/20102 In Compliance ; Non-Compliance

During the 2/1/2012 inspection, the facility was found to be in compliance with the Missouri Clean Water Law, the Clean Water Commission Regulations and Missouri State Operating Permit # MO-0115487, based upon the findings from the investigation.

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	1.6	Advanced Secondary	Industrial	1.0

Outfall #001

Legal Description: SW¼, NW¼, Sec. 35, T63N, R20W, Sullivan County
UTM Coordinates: X = 489835, Y = 4452201
Receiving Stream: Unnamed Tributary to Elmwood Branch (U)
First Classified Stream and ID: East Fork Locust Creek (C) (0610)
USGS Basin & Sub-watershed No.: (102801030601)

Receiving Water Body's Water Quality & Facility Performance History:

- DMR reports submitted by the facility on 2/28/2011 stated that dissolved oxygen levels in the effluent were 2.49 mg/L which was below the permit limit of 5.0 mg/L. Based on a review of the DMR data as a whole, this appears to be an anomaly.

Comments:

Effluent Limit Guidelines (ELG) have been promulgated for this industry category (Meat Products Point Source Category – 40 CFR 432, Subpart B). Effluent limits derived using the ELGs have been determined based on a 2006 Water Quality Review Sheet (WQRS) to not be protective of water quality and water quality based effluent limitations were established. The WQRS and associated water quality based effluent limits were developed to reflect results of waste load allocation surveys and water quality modeling conducted by MEC Water Resources and Limno Tech, Inc. A use attainability analysis was conducted for East Fork Locust Creek in July 2005 and the whole body contact recreation designated use was retained.

Part II – Operator Certification Requirements

As per [10 CSR 20-6.010(8) Terms and Conditions of a Permit], permittees shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions and regulations. Operators or supervisors of operations at regulated wastewater treatment facilities shall be certified in accordance with [10 CSR 20-9.020(2)] and any other applicable state law or regulation. As per [10 CSR 20-9.020(2)(A)], requirements for operation by certified personnel shall apply to all wastewater treatment systems, if applicable, as listed below:

Check boxes below that are applicable to the facility;

Owned or operated by or for:

- Municipalities
- Public Sewer District:
- County
- Public Water Supply Districts:
- Private sewer company regulated by the Public Service Commission:
- State or Federal agencies:

Not Applicable ; This facility is not required to have a certified operator.

Part III – 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/or 1st 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*	12-DIGIT HUC	EDU**
Tributary to Elmwood Branch	U	NA	General Criteria	102801030601	Central Plains/ Grand/Chariton
Elmwood Branch	U	NA	General Criteria		
East Fork Locust Creek	C	0610	AQL, LWW, WBC-B		

* - 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).

** - Ecological Drainage Unit

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Tributary to Elmwood Branch	0.0	0.0	0.0
Elmwood Branch	0.0	0.0	0.0
East Fork Locust Creek	0.0	0.0	0.1

MIXING CONSIDERATIONS TABLE:

Mixing Zone: Not Allowed [10 CSR 20-7.031(8)(A)4.B.(I)(a)].

Zone of Initial Dilution: Not Allowed [10 CSR 20-7.031(8)(A)4.B.(I)(b)].

Part IV – 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.

- Limitations in this operating permit for the reissuance of this permit conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44.

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.

- Renewal no degradation proposed and no further review necessary.

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://dnr.mo.gov/env/wpp/pub/index.html>, items WQ422 through WQ449.

- Permittee recycles sludge as a feed additive.

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.

REASONABLE POTENTIAL ANALYSIS (RPA):

Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard.

In accordance with [40 CFR Part 122.44(d)(iii)] if the permit writer determines that any give pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant.

Applicable .

A RPA was conducted on appropriate parameters. Please see **APPENDIX # A – RPA RESULTS**.

REMOVAL EFFICIENCY:

Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD₅) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals. This facility as stated in the 2006 Water Quality Review Sheet is required to meet a removal efficiency of 85% or more for CBOD5 and TSS.

Not Applicable .

SCHEDULE OF COMPLIANCE (SOC):

A schedule of remedial measures included in a permit, including 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.

Not Applicable .

This permit does not contain a SOC.

STORM WATER 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.

Not Applicable ;

At this time, the permittee is not required to develop and implement a SWPPP.

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.

Not Applicable ;

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

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

As per [10 CSR 20-2.010(78)], the amount of pollutant each discharger is allowed by the Department to release into a given stream after the Department has determined total amount of pollutant that may be discharged into that stream without endangering its water quality.

Applicable ;

Wasteload allocations were calculated where applicable using water quality criteria or water quality model results and the dilution equation below:

$$C = \frac{(C_s \times Q_s) + (C_e \times Q_e)}{(Q_e + Q_s)} \quad (\text{EPA/505/2-90-001, Section 4.5.5})$$

Where C = downstream concentration
Cs = upstream concentration
Qs = upstream flow
Ce = effluent concentration
Qe = effluent flow

Chronic wasteload allocations were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ). Acute wasteload allocations were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID).

Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA's "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).

Number of Samples “n”:

Additionally, in accordance with the TSD for water quality-based permitting, effluent quality is determined by the underlying distribution of daily values, which is determined by the Long Term Average (LTA) associated with a particular Wasteload Allocation (WLA) and by the Coefficient of Variation (CV) of the effluent concentrations. Increasing or decreasing the monitoring frequency does not affect this underlying distribution or treatment performance, which should be, at a minimum, be targeted to comply with the values dictated by the WLA. Therefore, it is recommended that the actual planned frequency of monitoring normally be used to determine the value of “n” for calculating the AML. However, in situations where monitoring frequency is once per month or less, a higher value for “n” must be assumed for AML derivation purposes. Thus, the statistical procedure being employed using an assumed number of samples is “n = 4” at a minimum. For Total Ammonia as Nitrogen, “n = 30” is used.

WLA MODELING:

There are two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBEL must be used.

Applicable ;

A WLA study including model was submitted to the Department by MEC Water Resources and Limno Tech Inc. The WLA study determined a maximum daily CBOD5 WLA of 30 mg/L is protective of water quality in East Fork Locust Creek. Additionally the results of the QUAL2E water quality model indicated a Dissolved Oxygen minimum concentration of 5.0 mg/L is required at the CBOD5 WLA to ensure maintenance of water quality criteria in East Fork Locust Creek.

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.

WHOLE EFFLUENT TOXICITY (WET) TEST:

A WET test is a quantifiable method of determining if a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with or through synergistic responses when mixed with receiving stream water.

Applicable ;

Under the federal Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). WET testing is also required by 40 CFR 122.44(d)(1). WET testing ensures that the provisions in the 10 CSR 20-6.010(8)(A)7. and the Water Quality Standards 10 CSR 20-7.031(3)(D),(F),(G),(I)2.A & B are being met. Under [10 CSR 20-6.010(8)(A)4], the Department may require other terms and conditions that it deems necessary to assure compliance with the Clean Water Act and related regulations of the Missouri Clean Water Commission. In addition the following MCWL apply: §§644.051.3 requires the Department to set permit conditions that comply with the MCWL and CWA; 644.051.4 specifically references toxicity as an item we must consider in writing permits (along with water quality-based effluent limits, pretreatment, etc...); and 644.051.5 is the basic authority to require testing conditions. WET test will be required by all facilities meeting the following criteria:

- Facility is a designated Major.
- Facility continuously or routinely exceeds its design flow.
- Facility (industrial) that alters its production process throughout the year.
- Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.
- Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH₃)
- Facility is a municipality or domestic discharger with a Design Flow ≥ 22,500 gpd.
- Other – please justify.

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

Not Applicable ;

This facility does not discharge to a 303(d) listed stream.

Part V – Effluent Limits Determination

Outfall #001 – Main Facility Outfall

Effluent limitations derived and established in the below Effluent Limitations 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.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	NO	
CBOD ₅	MG/L	8	30		25	NO	
TSS	MG/L	8	36		30	NO	
pH	SU	1	6.5-9.0		6.5-9.0	YES	6.0-9.0
AMMONIA AS N (APRIL 1 – SEPT 30)	MG/L	2	5.4		1.3	YES	5.0/2.5
AMMONIA AS N (OCT 1 – MARCH 31)	MG/L	2	12.1		2.4	YES	7.2/3.6
DISSOLVED OXYGEN (DO)	MG/L	3	5.0 **		5.0 **	NO	
ESCHERICHIA COLI	***	3	1030		206	****	
CHLORINE, TOTAL RESIDUAL	UG/L	3	17.0		8.0	NO	
OIL & GREASE (MG/L)	MG/L	1	15		10	YES	20/15
CHLORIDE	MG/L	1	*		*	NO	*/*
SULFATE	MG/L	1	*		*	YES	****
HARDNESS	MG/L	1	*		*	YES	****
FECAL COLIFORM	***	1	400		400	NO	400/400
TOTAL PHOSPHORUS	MG/L	9	*		*	NO	*/*
TOTAL NITROGEN	MG/L	9	*		*	YES	194/134
TEMPERATURE	°C	1	*		*	NO	*
WHOLE EFFLUENT TOXICITY (WET) TEST	% Survival	11	Please see WET Test in the Derivation and Discussion Section below.				

* - Monitoring requirement only.

** - For DO the Daily Maximum is a Daily Minimum and the Monthly Average is a Monthly Average Minimum.

*** - # of colonies/100mL; the Monthly Average for Fecal Coliform and *E. coli* is a geometric mean.

**** - 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 | |

OUTFALL #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 as per the sample type and measurement frequency in Table A of the operating permit, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.
- **Carbonaceous Biochemical Oxygen Demand (CBOD₅).** Effluent Limit Guidelines (ELG) have been promulgated for this industrial category (40 CFR 432, Subpart B). Effluent limits derived using the ELGs are not protective of water quality and water quality based effluent limits are required.

Staff have reviewed and approved a water quality model and CBOD₅ wasteload allocation (WLA) for the PSF – Milan Processing Plant submitted by MEC Water Resources and LimnoTech, Inc. The CBOD₅ WLA protective of water quality in East Fork Locust Creek is 30 mg/L. Effluent limitations for the facility are as follows:

$$\text{Maximum Daily Limit (MDL)} = \text{WLA} = 30 \text{ mg/L}$$

$$\text{Average Monthly Limit (AML)} = 25 \text{ mg/L}$$

The maximum daily limit (MDL) shall be equal to the wasteload allocation from the water quality model. The average monthly limit (AML) will be set at 25 mg/L as proposed by Premium Standard Farms. The proposed AML is more stringent than the existing AML and should account for effluent variability at the facility.

- **Total Suspended Solids (TSS).** Effluent Limit Guidelines promulgated for the Meat Products Point Source Category (40 CFR 432, Subpart B) maintain a ratio of 0.84:1 between BOD₅ and TSS. Effluent limitations for TSS have been calculated using the WQBELs calculated for CBOD₅ and this ratio.

$$\text{MDL} = 30.0 \text{ mg/L} / 0.84 = 35.7 \text{ mg/L}$$

$$\text{AML} = 25.0 \text{ mg/L} / 0.84 = 29.8 \text{ mg/L}$$

Therefore, TSS effluent limitations of 30 mg/L average monthly, 36 mg/L daily maximum are required for this facility.

- **pH.** pH shall be maintained in the range from 6.5 – 9.0 standard units [10 CSR 20-7.015 (8)(B)2.]

- **Total Ammonia Nitrogen.** Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(4)(B)7.C. & Table B3] default pH 7.8 SU No mixing considerations allowed; therefore, WLA = appropriate criterion.

Season	Temp (°C)	pH (SU)	Total Ammonia Nitrogen CCC (mg/L)	Total Ammonia Nitrogen CMC (mg/L)
Summer	26	7.8	1.5	12.1
Winter	6	7.8	3.1	12.1

Summer: April 1 – September 30

Chronic WLA: $C_e = ((1.6 + 0.0)1.5 - (0.0 * 0.01))/1.6$
 $C_e = 1.5 \text{ mg/L}$

Acute WLA: $C_e = ((1.6 + 0.0)12.1 - (0.0 * 0.01))/1.6$
 $C_e = 12.1 \text{ mg/L}$

$LTA_c = 1.5 \text{ mg/L} (0.613) = \mathbf{0.92 \text{ mg/L}}$

$LTA_a = 12.1 \text{ mg/L} (0.171) = 2.1 \text{ mg/L}$

[CV = 1.224265, 99th Percentile, 30 day avg.]

[CV = 1.224265, 99th Percentile]

MDL = $0.92 \text{ mg/L} (5.86) = 5.4 \text{ mg/L}$

AML = $0.92 \text{ mg/L} (1.40) = 1.3 \text{ mg/L}$

[CV = 1.224265, 99th Percentile]

[CV = 1.224265, 95th Percentile, n =30]

Winter: October 1 – March 31

Chronic WLA: $C_e = ((1.6 + 0.0)3.1 - (0.0 * 0.01))/1.6$
 $C_e = 3.1 \text{ mg/L}$

Acute WLA: $C_e = ((1.6 + 0.0)12.1 - (0.0 * 0.01))/1.6$
 $C_e = 12.1 \text{ mg/L}$

$LTA_c = 3.1 \text{ mg/L} (0.500) = \mathbf{1.55 \text{ mg/L}}$

$LTA_a = 12.1 \text{ mg/L} (0.126) = 1.52 \text{ mg/L}$

[CV = 1.79961, 99th Percentile, 30 day avg.]

[CV = 1.79961, 99th Percentile]

MDL = $1.52 \text{ mg/L} (7.95) = 12.1 \text{ mg/L}$

AML = $1.52 \text{ mg/L} (1.61) = 2.4 \text{ mg/L}$

[CV = 1.79961, 99th Percentile]

[CV = 1.79961, 95th Percentile, n =30]

- **Dissolved Oxygen.** Results of the QUAL2E water quality model indicate a dissolved oxygen minimum concentration of 5.0 mg/L is required at the CBOD₅ wasteload allocation to ensure maintenance of water quality criteria in East Fork Locust Creek.
- **Escherichia coli (E. coli).** Monthly average of 206 per 100 ml as a geometric mean and Daily Maximum 1030 during the recreational season (April 1 – October 31), to protect Whole Body Contact Recreation (B) designated use of the receiving stream, as per 10 CSR 20-7.031(4)(C). Daily Maximum effluent variability will be evaluated in development of a future effluent limit. An effluent limit for both monthly average and daily maximum is required by 40 CFR 122.45(d).

- **Total Residual Chlorine (TRC).** Warm-water Protection of Aquatic Life CCC = 10 µg/L, CMC = 19 µg/L [10 CSR 20-7.031, Table A]. Background TRC = 0.0 µg/L.

Chronic WLA: $C_e = ((1.674 + 0.0)10 - (0.0 * 0.0))/1.674$
 $C_e = 10 \mu\text{g/L}$

Acute WLA: $C_e = ((1.674 + 0.0)19 - (0.0 * 0.0))/1.674$
 $C_e = 19 \mu\text{g/L}$

$LTA_c = 10 (0.527) = 5.3 \mu\text{g/L}$ [CV = 0.6, 99th Percentile]
 $LTA_a = 19 (0.321) = 6.1 \mu\text{g/L}$ [CV = 0.6, 99th Percentile]

MDL = 5.3 (3.11) = 16.5 µg/L [CV = 0.6, 99th Percentile]
AML = 5.3 (1.55) = 8.2 µg/L [CV = 0.6, 95th Percentile, n = 4]

Total Residual Chlorine effluent limits of 0.017 mg/L daily maximum, 0.008 mg/L monthly average are recommended if chlorine is used as a disinfectant. Standard compliance language for TRC, including the minimum level (ML), should be included in the permit.

- **Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.
- **Fecal Coliform.** Discharge shall not exceed a maximum of 400 colonies/100 mL at any time [40 CFR 432.22(a)(1)].
- **Chloride.** A monitoring requirement for chloride has been retained in this permit.
- **Sulfate.** A monitoring requirement for Sulfate has been included in this permit.
- **Hardness.** A monitoring requirement for hardness has been included in the permit.
- **Total Phosphorus.** Monitoring requirement only.
- **Total Nitrogen.** A monitoring only requirement has been established in this permit for total nitrogen. Total Nitrogen requirement shall include reporting of Total Kjehldahl Nitrogen (TKN), Nitrite + Nitrate (NO₂ + NO₃), and Ammonia (NH₃).
- **Temperature.** Temperature monitoring has been retained from the previous permit.
- **WET Test.** WET Testing schedules and intervals are established in accordance with the Department's Permit Manual; Section 5.2 *Effluent Limits / WET Testing for Compliance Bio-monitoring*. It is recommended that WET testing be conducted during the period of lowest stream flow

Acute

- No less than ONCE/PERMIT CYCLE:**
- Municipality or domestic facility with a design flow ≥ 22,500 gpd, but less than 1.0 MGD.
 - Other, please justify.

- No less than ONCE/YEAR:**
- Facility is designated as a Major facility or has a design flow ≥ 1.0 MGD.
 - Facility continuously or routinely exceeds their design flow.
 - Facility exceeds its design population equivalent (PE) for BOD₅ whether or not its design flow is being exceeded.
 - Facility has Water Quality-based effluent limitations for toxic substances (other than NH₃).

Acute and/or Chronic Allowable Effluent Concentrations (AECs) for facilities that discharge to unclassified, Class C, Class P (with default Mixing Considerations), or Lakes [10 CSR 20-7.031(4)(A)4.B.(IV)(b)] are 100%, 50%, 25%, 12.5%, & 6.25%.

Part VI: 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 facility is not a **combined or separate sanitary sewer system for a publically-owned treatment works**.

Part VII – 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.

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 is tentatively scheduled to begin in January 2012

DATE OF FACT SHEET: FEBRUARY 24, 2012

Part VIII – Public Notice Comments

The Department received comment regarding the public notice of this permit from Farmland Foods Inc. on May 7, 2012 (Appendix C). All requested changes resulting from the comment letter have been made in the permit as issued.

COMPLETED BY:

**CHRIS WIEBERG, ENVIRONMENTAL SPECIALIST
NPDES PERMITS UNIT
PERMITTING AND ENGINEERING SECTION
WATER PROTECTION PROGRAM
(573) 526-5781
CHRIS.WIEBERG@DNR.MO.GOV**

Appendices

APPENDIX # A – RPA RESULTS:

Symbol	Analyte	CMC*	RWC Acute*	CCC*	RWC Chronic*	Reasonable Potential	n	CV***	Range Max/Min
NH3	Total Ammonia as Nitrogen (Summer) in mg/L	12.10	1.61	1.50	1.59	YES	30	1.224265	0.49/0.02
NH3	Total Ammonia as Nitrogen (Winter) in mg/L	12.10	12.22	3.10	12.03	YES	24	1.79961	2.35/0.02

* - Units are (µg/L) unless otherwise noted.

** - If the number of samples is 10 or greater, then the CV value must be used in the WQBEL for the applicable constituent.

*** - Coefficient of Variation (CV) is calculated by dividing the Standard Deviation of the sample set by the Mean of the same sample set.

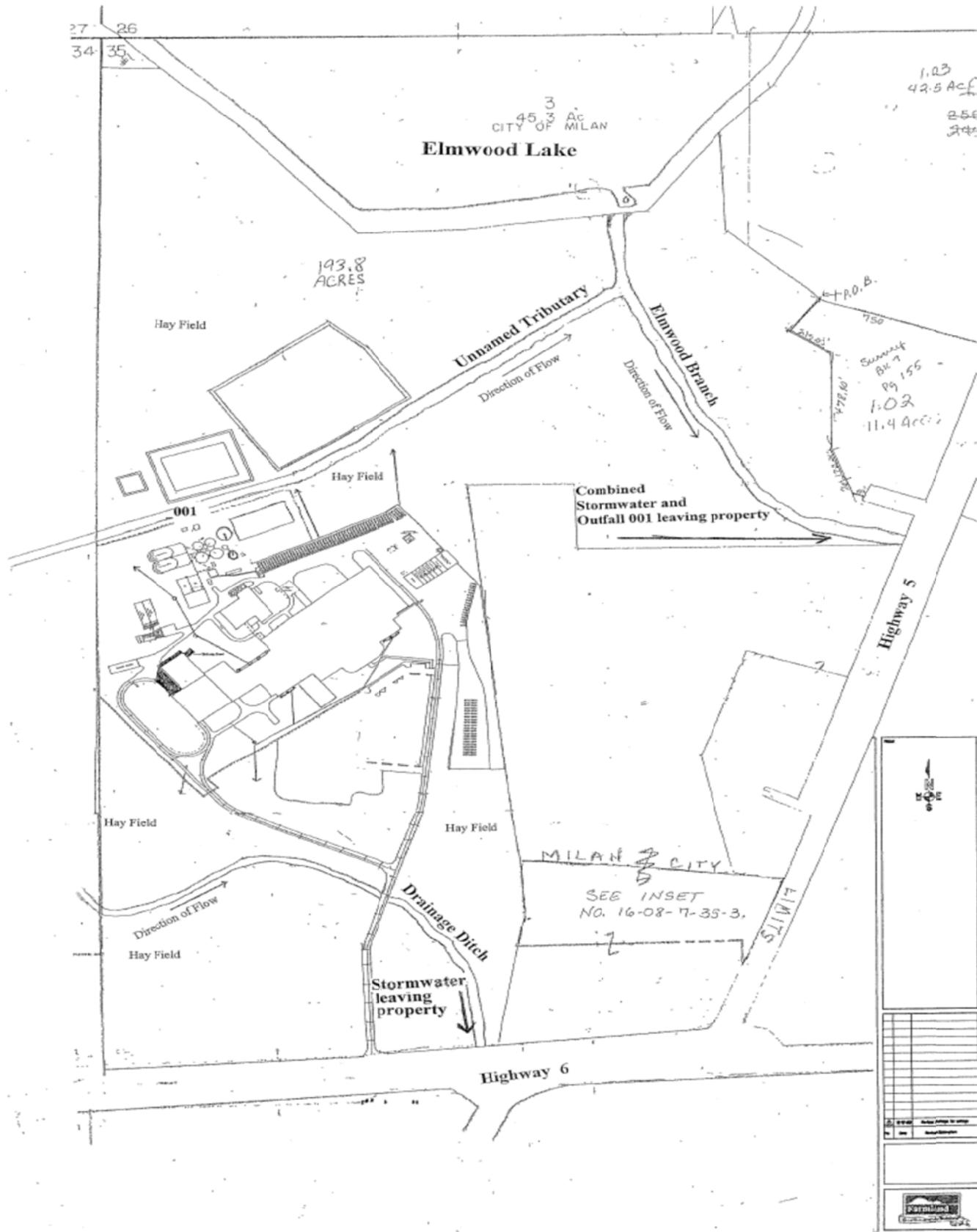
RWC – Receiving Water Concentration. It is the concentration of a toxicant or the parameter toxicity in the receiving water after mixing (if applicable).

n – Is the number of samples.

RP – Reasonable Potential. It is where an effluent is projected or calculated to cause an excursion above a water quality standard based on a number of factors including, as a minimum, the four factors listed in 40 CFR 122.44(d)(1)(ii).

Reasonable Potential Analysis is conducted as per (TSD, EPA/505/2-90-001, Section 3.3.2). A more detailed version including calculations of this RPA is available upon request.

APPENDIX # B – Site Map



Appendix C, Comment letter from the facility regarding public notice.



May 7, 2012

Via e-mail: publicnoticenpdes@dnr.mo.gov

Missouri Department of Natural Resources
Water Protection Program
P.O. Box 176
Jefferson City, MO 65102

Re: Farmland Foods, Inc. (MO-0115487) – April 6, 2012 Public Notice

ATTN: NPDES Permits and Engineering Section/Permit

I wish to submit the following three comments on the above referenced public notice of Farmland Foods' permit for its Milan processing plant's wastewater treatment facility.

On page 1 of the public notice permit the statement directly above the signatory authorization states that the permit authorizes only wastewater discharges, while the last sentence on page 2 states, "This permit authorizes the discharge of storm water associated with industrial activity related to Food and Kindred Products (SIC#2011)." We request that the wording on page one be changed to also authorize the discharge of storm water associated with SIC # 2011.

On page 5 of the public notice permit, Note 2,(b) addresses specific disinfection requirements associated with a limitation for *E. coli*, which Note 1 indicates our facility will only be required to meet this limitation during the recreational season. The last sentence of Note 2(b) instructs, "If your permit does not require disinfection during the non-recreational months, do not chlorinate in those months." However our facility is still required to meet a limitation for Fecal Coliform during the winter months. To eliminate any possible confusion regarding the use of chlorination; we request that the last sentence of Note 2(b) be removed.

On page 4 of the Fact Sheet in the section which addresses Removal Efficiency this fact sheet is marked as "Applicable". It is our opinion that this should be marked as Not Applicable. We request that this correction be made and thus eliminate any future confusion.

Thank you for the opportunity to comment.

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Keith". The signature is fluid and cursive, with the first name "Mike" being more prominent than the last name "Keith".

Mike Keith
Plant Environmental Manager

cc: Susan Murphy