

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-0111660

Owner: Keith & Michelle Goewert
Address: 2294 Highway TT, St. Clair, MO 63077

Continuing Authority: Same as above
Address: Same as above

Facility Name: Wedding Bells Banquet Hall
Facility Address: 7127 Highway JJ, Stanton, MO 63080

Legal Description: NW¼, SE¼, SE¼, Sec. 23, T41N, R2W, Franklin County
UTM Coordinates: X=665325; Y=4237872

Receiving Stream: Wet weather tributary to Lollar Branch (U) (losing)
First Classified Stream and ID: Spring Creek (P) (02071)
USGS Basin & Sub-watershed No.: 07140103-0402

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

FACILITY DESCRIPTION

Outfall #001 - Restaurant - SIC #4952

Extended aeration/ filtration/year round chlorination/ aerated sludge holding tank/ sludge disposal by contract hauler.

Design population equivalent is 42.

Design flow is 4,000 gallons per day.

Actual flow is about 500 gallons per day.

Design sludge production is 0.8 dry tons/year.

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.

February 24, 2012

Effective Date


Sara Parker Pauley, Director, Department of Natural Resources

February 23, 2017

Expiration Date


Mike Struckhoff, Director, St. Louis Regional Office

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 2 of 5	
					PERMIT NUMBER MO-0111660	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The Interim effluent limitations shall become effective upon issuance and remain in effect until December 31, 2013 . Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u>						
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Biochemical Oxygen Demand ₅	mg/L		15	10	once/quarter***	24 hr. composite
Total Suspended Solids	mg/L		20	15	once/quarter***	24 hr. composite
pH – Units	SU	**		**	once/quarter***	grab
Ammonia as N	mg/L	*		*	once/quarter***	grab
E Coli (Note 1)	#/100mls	126		126	once/quarter***	grab
Total Residual Chlorine (Note 2)	mg/L	1.0 (0.13ML)		1.0 (0.13ML)	once/quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>July 28, 2012</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
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.
- ** 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 - Disinfection is required year-round since the facility discharges into a losing stream.

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

- (a) Disinfection is required year-round unless the permit specifically states that “Final limitations and monitoring requirements for Fecal Coliform are applicable only during the recreational season from April 1 through October 31.” If your permit does not require disinfection during the non-recreational months, do not chlorinate in those months.
- (b) Do not chemically dechlorinate **if it is not needed to meet the limits in your permit**.
- (c) If no chlorine was used in a given sampling period, an actual analysis is not necessary. Simply report as “0 mg/L” TRC.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 3 of 5	
PERMIT NUMBER MO-0111660						
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 January 1, 2014 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
<u>Outfall #001</u>						
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Biochemical Oxygen Demand ₅	mg/L		15	10	once/quarter***	24 hr. composite
Total Suspended Solids	mg/L		20	15	once/quarter***	24 hr. composite
pH – Units	SU	**		**	once/quarter***	grab
Ammonia as N	mg/L	*		*	once/quarter***	grab
E Coli (Note 1)	#/100mls	126		126	once/quarter***	grab
Total Residual Chlorine (Note 2)	mg/L	0.017 (0.13ML)		0.008 (0.13ML)	once/quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>April 28, 2014</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
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.
- ** 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 required year around because the facility discharges to a losing stream.

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 0.13 mg/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 0.13 mg/L will be considered violations of the permit and values less than the minimum quantification level of 0.13 mg/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 Fecal Coliform are applicable only during the recreational season from April 1 through October 31." If your permit does not require disinfection during the non-recreational months, do not chlorinate in those months.
- (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 mg/L" TRC.

C. SPECIAL CONDITIONS

- 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:
 - (3) 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;
 - (4) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
 - (5) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
 - (6) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
 - (7) There shall be no significant human health hazard from incidental contact with the water;
 - (8) There shall be no acute toxicity to livestock or wildlife watering;
 - (9) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
 - (10) 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. 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);

C. SPECIAL CONDITIONS (continued)

- (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 St. Louis Regional Office.
10. 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.
11. 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.

D. SCHEDULE OF COMPLIANCE:

1. Wedding Bells Banquet Hall shall upgrade its treatment facility to meet the dechlorination requirement final limits as specified by the following schedule or eliminate the discharge.
 - (a) By **September 30, 2012**, submit an engineering report identifying the steps to upgrade the existing treatment facility to provide dechlorination of the effluent or to eliminate the discharge.
 - (b) By **December 31, 2012**, submit plans and specifications and an application with appropriate fees for a construction permit to improve the existing system or eliminate the discharge.
 - (c) By **June 30, 2013**, the permittee shall submit a construction progress report on either the status of the upgrade to provide disinfection or to eliminate the discharge.
 - (d) By **December 31, 2013**, this project must be completed according to the approved plans and specifications and be in compliance with the final effluent limitations.

Missouri Department of Natural Resources
Statement of Basis
Wedding Bells Banquet Hall
NPDES #: MO-0111660
Franklin County

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. Permits in Missouri 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). NPDES operating permits are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR § 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.

Part I – Facility Information

NPDES #: MO-0111660
Facility Name: Wedding Bells Banquet Hall
Facility Address: 7127 Highway JJ, Stanton, MO 63080
Owner's Name: Keith & Michelle Goewert
Owner's Address: 2294 Highway TT, St. Clair, MO 63080

Facility Region: St. Louis Region
Facility County: Franklin County

Facility Type: Restaurant
Facility SIC Code(s): 4952

Facility Description: Extended aeration/filtration/Chlorination/ aerated sludge holding tank/ sludge disposal by contract hauler.

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

☐ - Yes; (please provide simple description or reference appropriate location in the Fact Sheet.

☐ - No.

Application Date: 07/21/2010
Expiration Date: 01/26/2011
Last Inspection: 8/3/02 In Compliance ☒; Non-Compliance ☐

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
# 001	0.0062	Advanced	Domestic	6.6 miles

Outfall #001

Legal Description: NW¼, SE¼, SE¼, Sec. 23, T41N, R2W, Franklin County
UTM Coordinates: X=665325; Y=4237872
Receiving Stream: Wet weather tributary to Lollar Branch (U) (losing)
First Classified Stream and ID: Spring Creek (P) (02071)
USGS Basin & Sub-watershed No.: 07140103-0402

Water Quality History: Two year DMRs was reviewed. The facility violated BOD effluent limits in August 2009 and November 2010. The facility also violated TRC effluent limits in February 2010, May 2010 and August 2010. There was no TRC result submitted in November 2009.

Comments: A Water Quality Review Sheet was completed by the Water Pollution Control Program on 12-18-2006.

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.

NotApplicable ☒; This facility is not required to have a certified operator.

Part III – Receiving Stream Information

Please mark the correct designated waters of the state categories of the receiving stream.

Missouri or Mississippi River [10 CSR 20-7.015(2)]:	Yes <input type="checkbox"/> ; No <input checked="" type="checkbox"/>
Lake or Reservoir [10 CSR 20-7.015(3)]:	Yes <input type="checkbox"/> ; No <input checked="" type="checkbox"/>
Losing [10 CSR 20-7.015(4)]:	Yes <input checked="" type="checkbox"/> ; No <input type="checkbox"/>
Metropolitan No-Discharge [10 CSR 20-7.015(5)]:	Yes <input type="checkbox"/> ; No <input checked="" type="checkbox"/>
Special Stream [10 CSR 20-7.015(6)]:	Yes <input type="checkbox"/> ; No <input checked="" type="checkbox"/>
Subsurface Water [10 CSR 20-7.015(7)]:	Yes <input type="checkbox"/> ; No <input checked="" type="checkbox"/>
All Other Waters [10 CSR 20-7.015(8)]:	Yes <input type="checkbox"/> ; No <input checked="" type="checkbox"/>

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*	8-DIGIT HUC	EDU**
Wet weather tributary to Lollar Branch(losing)	U		General Criteria	07140103	Ozark/Meramec
Spring Creek	P	02071	AQL,LWW		

* - 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).

** - Ecological Drainage Unit

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Wet weather tributary to Lollar Branch (U)(losing)	0	0	0

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

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

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements recommended at this time.

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 ☒; This existing facility discharges to a Losing Stream, as defined by [10 CSR 20-2.010(36)] & [10 CSR 20-7.031(1)(N)], and had submitted alternative evaluations when the facility was originally evaluated for permitting in 2001. Conditions have not changed since 2001 that would enable connection to the City of Pevely or use of a no-discharge system.

ANTI-BACKSLIDING:

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

☒ - All limits in this Factsheet are at least as protective as those previously established; therefore, backsliding does not apply.

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.

APPLICABLE PERMIT PARAMETERS:

Effluent parameters contained in Factsheets and Missouri State Operating Permits are obtained from Technology Based Effluent Limit (TBEL), Missouri's Effluent Regulations [10 CSR 20-7.015], Missouri's Water Quality Standards [10 CSR 20-7.031], previous Missouri State Operating Permits, and from Operating Permit Applications.

BIO-SOLIDS, SLUDGE, & SEWAGE SLUDGE:

The facility hauls sludge from this facility to another treatment facility.

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.

PRETREATMENT PROGRAM:

The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a Publicly Owned Treatment Works [40 CFR §403.3(q)].

Not Applicable ☒; At this time, the permittee is not required to implement and enforce a Pretreatment Program for this facility.

REASONABLE POTENTIAL ANALYSIS (RPA):

Limitations must control all pollutants or pollutant parameters that are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above the Missouri Water Quality Standards.

Not Applicable ☒; A RPA was not conducted for this facility.

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. Please see the United States Environmental Protection Agency's (EPA) website for interpretation of percent removal requirements for National Pollutant Discharge Elimination System Permit Application Requirements for Publicly Owned Treatment Works and Other Treatment Works Treating Domestic Sewage @ www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-04/w18866.htm

Not Applicable ☒; Influent monitoring is not being required to determine percent removal.

SANITARY SEWER OVERFLOWS (SSOs), AND INFLOW & INFILTRATION (I&I):

Collection systems are a critical element in the successful performance of the wastewater treatment process. Under certain conditions, poorly designed, built, managed, operated, and/or maintained systems can pose risks to public health, the environment, or both. Causes of SSOs include, but are not limited to, the following: high levels of I&I during wet weather; blockages; structural, mechanical, or electrical failures; collapsed or broken sewer pipes; insufficient conveyance capacity; and vandalism. Effective and continuous management, operation, and maintenance, as well as ensuring adequate capacity and rehabilitation when necessary are critical to maintaining collection system capacity and performance while extending the life of the system.

Not Applicable ☒; This facility is not required to develop or implement a program for maintenance and repair of the collection system; however, it is a violation of Missouri State Environmental Laws and Regulations to allow untreated wastewater to discharge to waters of the state.

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.

Applicable ☒; This permit does contain a SOC. The time given for effluent limitations of this permit listed under Interim Effluent Limitation and Final Effluent Limitations where established in accordance with [10 CSR 20-7.031(10)].

STORM WATER POLLUTION PREVENTION PLAN (SWPPP):

A plan to schedule activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. The plan may include, but is not limited to, treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Not Applicable ☒; At this time, the permittee is not required to develop and implement a SWPPP for this facility.

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 to 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).

WLA MODELING:

Not Applicable ☒; A WLA study was either not submitted or determined not applicable by department staff.

WHOLE EFFLUENT TOXICITY (WET) TEST:

As per [10 CSR 20-7.031(1)(CC)], a toxicity test conducted under specified laboratory conditions on specific indicator organism; and as per [40 CFR §122.2], the aggregate toxic effect of an effluent measured directly by a toxicity test.

Not Applicable ☐; At this time, the permittee is not required to conduct WET test for this facility.

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.

Outfall #001 – Main Facility Outfall**EFFLUENT LIMITATIONS TABLE:**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	NO	S
BOD ₅	MG/L	1		15	10	NO	S
TSS	MG/L	1		20	15	NO	S
pH (S.U.)	SU	1	6.5 – 9		6.5 – 9	NO	6-9
AMMONIA AS N	MG/L	2/3/5	*		*	YES	***
E COLI	**	1	126		126	NO	***
CHLORINE, TOTAL RESIDUAL	MG/L	1/2	0.017		0.008	YES	1.0
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 previously established in previous state operating permit.

N/A – Not applicable

S – Same as previous operating permit

Basis for Limitations Codes:

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

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, 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 (BOD₅).** Effluent limitations have been retained from previous state operating permit, [10 CSR 20-7.015(4)(B)1.].
- **Total Suspended Solids (TSS).** Effluent limitations have been retained from previous state operating permit, [10 CSR 20-7.015(4)(B)2.].
- **pH.** Effluent limitation has been retained from previous state operating permit, [10 CSR 20-7.015(8)(B)2.].
- **Total Ammonia Nitrogen.** Monitoring requirement only. Monitoring for temperature and ammonia are included to determine whether “reasonable potential” to exceed water quality standards exists after the discharge begins.

- **Escherichia coli (E. coli).** Discharges to losing streams shall not exceed 126 per 100 ml as a Daily Maximum and Monthly Average at any time, as per 10 CSR 20-7.031(4)(C).
- **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: $C_e = ((0.0062 + 0.0)10 - (0.0 * 0.0))/0.0062$
 $C_e = 10 \text{ µg/L}$

Acute WLA: $C_e = ((0.0062 + 0.0)19 - (0.0 * 0.0))/0.0062$
 $C_e = 19 \text{ µg/L}$

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

Use most protective number of LTA_c or LTA_a .

$MDL = 5.3 (3.11) = 16.5 \text{ µg/L}$ [CV = 0.6, 99th Percentile]
 $AML = 5.3 (1.55) = 8.2 \text{ µg/L}$ [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. The expanded facility will use ultraviolet disinfection. Chlorine will not be used in the treatment process therefore TRC will not be included in the permit.

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

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
FLOW	ONCE/QUARTER	ONCE/QUARTER
BOD ₅	ONCE/QUARTER	ONCE/QUARTER
TSS	ONCE/QUARTER	ONCE/QUARTER
pH	ONCE/QUARTER	ONCE/QUARTER
AMMONIA AS N	ONCE/QUARTER	ONCE/QUARTER
E COLI	ONCE/QUARTER	ONCE/QUARTER
TRC	ONCE/QUARTER	ONCE/QUARTER

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.

Date of Factsheet: January 3, 2012

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