# STATE OF MISSOURI

# DEPARTMENT OF NATURAL RESOURCES

## MISSOURI CLEAN WATER COMMISSION



# MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500,  $92^{nd}$  Congress) as amended,

| •  |   |
|--|---|
| Permit No.   | MO-0085782  |
| Owner:   | Edward Krehbiel   |
| Address:   | 1825 Ridgemont, Columbia, MO 65203  |
| Continuing Authority:  | Same as above   |
| Address:   | Same as above   |
| Facility Name:   | Gaslight Park Mobile Home Park  |
| Facility Address:  | 6120 Wagon Trail Road, Columbia, MO 65201   |
| Legal Description:   | SE 1/4, NW 1/4, NW 1/4, Sec. 19, T49N, R12W, Boone County   |
| UTM Coordinates:   | X=558979.368, Y=4319189.039   |
| Receiving Stream:  | Unnamed tributary to Rocky Fork (U)   |
| First Classified Stream and ID:                                | Rocky Fork (C) (01014)  |
| USGS Basin & Sub-watershed No.:                                | (10300102-110005)   |
| is authorized to discharge from the facilias set forth herein: | ity described herein, in accordance with the effluent limitations and monitoring requirements   |
| FACILITY DESCRIPTION   |   |
|  | C #6515 – No Certified Operator Required  |
| Single-cell aerated lagoon /sludge is reta                     |   |
| Design population equivalent is 66.                            |   |
| Design flow is 6,600 gallons per day.                          |   |
| Actual flow is 6,000 gallons per day.                          |   |
| Design sludge production is 1.0 dry tons                       | s/year.   |
|  | discharges under the Missouri Clean Water Law and the National Pollutant Discharge other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of |
| the Law.   |   |
|  | $\mathcal{O} \mathcal{D} \mathcal{I} \mathcal{D} \mathcal{A}$   |
| June 21, 2011  | Sara tarker tauley  |
| Effective Date   | Sara Parker Pauley, Director, Department of Natural Resources   |

Irene Crawford, Regional Director, Northeast Regional Office

June 20, 2016

**Expiration Date** 

## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

PAGE NUMBER 2 of 5

PERMIT NUMBER MO-0085782

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 through <u>December 30, 2013</u>. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

| OUTFALL NUMBER AND                     | UNITS   | INTERIM EF       | FLUENT LIM        | <b>HITATIONS</b>   | MONITORING REQUIREMENTS  |                 |
|--|---------|------------------|-------------------|--------------------|--------------------------|-----------------|
| EFFLUENT PARAMETER(S)                  | Civils  | DAILY<br>MAXIMUM | WEEKLY<br>AVERAGE | MONTHLY<br>AVERAGE | MEASUREMENT<br>FREQUENCY | SAMPLE<br>TYPE  |
| Outfall #001                           |         |                  |                   |                    |                          |                 |
| Flow                                   | MGD     | *                |                   | *                  | once/quarter***          | 24 hr. estimate |
| Biochemical Oxygen Demand <sub>5</sub> | mg/L    |                  | 65                | 45                 | once/quarter***          | grab            |
| Total Suspended Solids                 | mg/L    |                  | 120               | 70                 | once/quarter***          | grab            |
| pH – Units                             | SU      | **               |                   | **                 | once/quarter***          | grab            |
| Ammonia as N                           | mg/L    | *                |                   | *                  | once/quarter***          | grab            |
| Temperature                            | °C      | *                |                   | *                  | once/quarter***          | grab            |
| E. coli (Note 1)                       | #/100mL | *                |                   | *                  | once/quarter***          | grab            |
| i                                      | 1       |                  | 1                 | 1                  |                          |                 |

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE October 28, 2011. 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.

MO 780-0010 (8/91)

# 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 to be maintained at or above 6.5 pH units.
- \*\*\* See table below for quarterly sampling.

| Sample discharge at least once for | 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 - Interim 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.

## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

PAGE NUMBER 3 of 5

PERMIT NUMBER MO-0085782

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 on <u>December 31, 2013</u> 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                     | UNITS   | FINAL EFF        | LUENT LIMI        | TATIONS            | MONITORING REQUIREMENTS  |                 |
|--|---------|------------------|-------------------|--------------------|--------------------------|-----------------|
| EFFLUENT PARAMETER(S)                  | OTTIS   | DAILY<br>MAXIMUM | WEEKLY<br>AVERAGE | MONTHLY<br>AVERAGE | MEASUREMENT<br>FREQUENCY | SAMPLE<br>TYPE  |
| Outfall #001                           |         |                  |                   |                    |                          |                 |
| Flow                                   | MGD     | *                |                   | *                  | once/quarter***          | 24 hr. estimate |
| Biochemical Oxygen Demand <sub>5</sub> | mg/L    |                  | 65                | 45                 | once/quarter***          | grab            |
| Total Suspended Solids                 | mg/L    |                  | 120               | 70                 | once/quarter***          | grab            |
| pH – Units                             | SU      | **               |                   | **                 | once/quarter***          | grab            |
| Ammonia as N                           | mg/L    | *                |                   | *                  | once/quarter***          | grab            |
| Temperature                            | °C      | *                |                   | *                  | once/quarter***          | grab            |
| E. coli (Note 1)                       | #/100mL | 1030             |                   | 206                | once/quarter***          | grab            |

MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</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.

MO 780-0010 (8/91)

#### 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 to be maintained at or above 6.5 pH units.
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| Sample discharge at least once for | Report is due: |            |
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| 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.

#### 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)1. or 2. within 90 days of notice of its availability. The permittee shall obtain department approval for closure or alternate use of the facility.
- 4. 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  $\mu$ g/L);
  - (2) Two hundred micrograms per liter (200  $\mu$ g/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500  $\mu$ g/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.
- 5. Report as no-discharge when a discharge does not occur during the report period.

# 6. 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.

## C. SPECIAL CONDITIONS (continued)

- 7. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities
  - (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.
  - (b) If sludge is not removed by a contract hauler, permittee is authorized to land apply biosolids. Permit Standard Conditions, Part III shall apply to the land application of biosolids. Permittee shall notify the department at least 180 days prior to the planned removal of biosolids. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.
- 8. The permittee shall comply with any applicable requirements listed in 10 CSR 20-8 and 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.

#### D. SCHEDULE OF COMPLIANCE

The final limitations shall become effective within on December 31, 2013.

- 1. Within one year from the issuance of the permit, the permittee shall submit a construction permit application and an activity schedule toward meeting disinfection requirement.
- 2. The facility shall submit an interim progress report within twelve months if the construction completion and operation of the disinfection equipment will be more than 1 year.
- 3. If the permittee will fail to meet any of the interim dates above, the permittee shall notify the Department in writing of the reason for non compliance no later than 14 days following each interim date.
- 4. Upon completion of construction, the permittee shall submit a Statement of Work complete, signed by the owner and licensed professional engineer in the state of Missouri.

#### PERMIT TRANSFER

This permit may be transferred to a new owner by submitting an "Application for Transfer of Operating Permit" signed by the seller and buyer of the facility, along with the appropriate modification fee.

## PERMIT RENEWAL REQUIREMENTS

Unless this permit is terminated, the permittee shall submit an application for the renewal of this permit no later than six (6) months prior to the permit's expiration date. Failure to apply for renewal may result in termination of this permit and enforcement action to compel compliance with this condition and the Missouri Clean Water Law.

### **TERMINATION**

In order to terminate this permit, the permittee shall notify the department by submitting Form J, included with the State Operating Permit. The permittee shall complete Form J and mail it to the department at the address noted in the cover letter of this permit. Proper closure of any storage structure is required prior to permit termination. A closure plan shall be submitted to the department and approved prior to initiating closure activities.

# **DUTY OF COMPLIANCE**

The permittee shall comply with all conditions of this permit. Any noncompliance with this permit constitutes a violation of Chapter 644, Missouri Clean Water Law, and 10 CSR 20-6. Noncompliance may result in enforcement action, termination of this authorization, or denial of the permittee's request for renewal. This permit authorizes only the activities described in this permit.

# Missouri Department of Natural Resources Statement of Basis Gaslight Park Mobile Home Park NPDES #: MO-0085782

Boone County

A Statement of Basis (Statement) gives pertinent information regarding the applicable regulations and rational for the development of the NPDES Missouri State Operating Permit (operating permit). This Statement includes Wasteload Allocations, Water Quality Based Effluent Limitations, and Reasonable Potential Analysis calculations as well as any other calculations that effect the effluent limitations of this operating permit. This Statement does not pertain to operating permits that include sewage sludge land application plans and variance procedures, and does not include the public comment process for this operating permit.

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

# Part I – Facility Information

Facility Type: Mobile Home Park Facility SIC Code(s): 6515

#### Facility Description:

Single-cell aerated lagoon / sludge is retained in lagoon.

Design population equivalent is 66. Design flow is 6,600 gallons per day. Actual flow is 6,000 gallons per day.

Design sludge production is 1.0 dry tons/year.

#### **OUTFALL(S) TABLE:**

| OUTFALL | DESIGN FLOW<br>GPD | TREATMENT LEVEL         | EFFLUENT TYPE | DISTANCE TO<br>CLASSIFIED SEGMENT (MI) |
|---------|--------------------|-------------------------|---------------|--|
| #001    | 6,600              | Equivalent to Secondary | Domestic      | ~ 1.5                                  |

Water Quality History: No Low Flow Studies or Stream Surveys have been conducted for this facility.

Comments: During the permit cycle of the expiring permit, the facility reported the following exceedances on the quarterly Discharge Monitoring Reports: exceedance of the BOD limit in March and June 2005, June 2007, June 2008, December 2009, and December 2010 and exceedances of the TSS limit in March 2006. The most recent inspection was conducted on August 24, 2010. A Letter of Warning was issued for failing to provide an all weather access road from a public right-of-way to the treatment facility, failing to provide a minimum of two feet of freeboard above the wastewater level in the lagoon, failing to maintain the inner berm slopes of the lagoon to be less than three to one (3:1), and allowing deep-rooted vegetation to grow on the lagoon berms. On January 24, 2011, the Missouri Department of Natural Resources' Northeast Regional Office received the requested documentation in response to the September 2, 2010, Letter of Warning and inspection report, regarding the August 24, 2010 inspection of the Gaslight Mobile Home. The facility was returned to compliance.

## Part IIA – Operator Certification Requirements

As per [10 CSR 20-6.010(8) Terms and Conditions of a Permit], permittee's 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 20-9.010(2)(A)], requirements for operation by certified personnel shall apply to all wastewater treatment systems, if applicable, as listed below:

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

# Part IIB- Operational Monitoring

As per [10 CSR 20-9.010(4))], the facility is not required to conduct operational monitoring.

#### **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 list 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.

Please mark all appropriate designated waters of the state categories of the receiving stream.

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

terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1<sup>st</sup> classified receiving stream's beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

### **RECEIVING STREAM(S) TABLE:**

| WATERBODY NAME                  | CLASS | WBID  | Designated Uses* | 8-Digit<br>HUC | EDU**                |  |
|---------------------------------|-------|-------|------------------|----------------|----------------------|--|
| Unnamed tributary to Rocky Fork | U     | NA    | General Criteria | 10300102       | Osage/Moreau/Loutre  |  |
| Rocky Fork                      | С     | 01014 | LWW, AQL, WBC*** | 10300102       | Obago, Moread, Dodde |  |

<sup>\* -</sup> 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).

# 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  $\boxtimes$ ; 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.

☐ - All limits in this statement 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.

#### 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.

<sup>\*\* -</sup> Ecological Drainage Unit

<sup>\*\*\* -</sup> UAA was conducted and the stream was designated as WBC in 2005.

#### BIOSOLIDS, SLUDGE, & SEWAGE SLUDGE:

Bio-solids are solid materials resulting from wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sludge is any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect. 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: <a href="http://dnr.mo.gov/env/wpp/pub/index.html">http://dnr.mo.gov/env/wpp/pub/index.html</a>, items WQ422 through WQ449.

□ Sludge/biosolids are stored in the lagoon.

#### **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 \( \subseteq \); 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 Part 403.3(q)].

Not Applicable \( \subseteq \); The permittee, at this time, is not required to have a Pretreatment Program or does not have an approved pretreatment program.

## 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 (BOD<sub>5</sub>) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs). 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 \( \subseteq \); This wastewater treatment facility is not a POTW. 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  $\boxtimes$ ; 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 ⊠;

The time given for effluent limitations of this permit listed under Interim Effluent Limitation and Final Effluent Limitations were 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 \( \subseteq \); At this time, the permittee is not required to develop and implement a SWPPP.

## 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.

Not Applicable X: Wasteload allocations were not calculated.

#### WLA MODELING:

Not Applicable \( \subseteq \); A WLA study was either not submitted or determined not applicable by department staff.

#### 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.

Not Applicable \( \subseteq \); 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.

Not Applicable ⊠; This facility does not discharge to a 303(d) listed stream.

## 40 CFR 122.41(M) - BYPASSES:

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

## Part V – Effluent Limits Determination

Outfall #001 - Main Facility Outfall

#### **EFFLUENT LIMITATIONS TABLE:**

| PARAMETER                              | Unit   | Basis<br>for<br>Limits | Daily<br>Maximum | WEEKLY<br>AVERAGE | MONTHLY<br>AVERAGE | Modified | PREVIOUS PERMIT<br>LIMITATIONS |
|--|--|------------------------|------------------|-------------------|--------------------|----------|--------------------------------|
| Flow                                   | MGD  | 1                      | *                |                   | *                  | NO       | S                              |
| Biochemical Oxygen Demand <sub>5</sub> | mg/L   | 1/4                    |                  | 65                | 45                 | NO       | S                              |
| Total Suspended Solids                 | mg/L   | 1/4                    |                  | 120               | 70                 | NO       | S                              |
| pH                                     | SU   | 1/4                    | ≥ 6.5            |                   | ≥ 6.5              | YES      | ≥ 6                            |
| Temperature                            | °C   | 1/5/9                  | *                |                   | *                  | YES      | ***                            |
| Ammonia as N                           | mg/L   | 2/3/5                  | *                |                   | *                  | YES      | ***                            |
| E. coli - Interim                      | **   | 1/2                    | *                |                   | *                  | YES      | ***                            |
| E. coli - Final                        | **   | 1/2                    | 1030             |                   | 206                | YES      | *                              |
| Monitoring Frequency                   | Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below. |                        |                  |                   |                    |          |                                |

<sup>\* -</sup> Monitoring requirement only

N/A – Not applicable

S – Same as previous operating permit

## Basis for Limitations Codes:

- 1. State or Federal Regulation/Law
- 2. Water Quality Standard (includes RPA)
- 3. Water Quality Based Effluent Limits
- 4. Lagoon Policy
- 5. Ammonia Policy
- 6. Dissolved Oxygen Policy

- 7. Antidegradation Policy
- 8. Water Quality Model
- 9. Best Professional Judgment
- 10. TMDL or Permit in lieu of TMDL
- 11. WET Test Policy
- 12. Antidegradation Review

#### **QUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:**

- <u>Flow</u>. 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.
- <u>Biochemical Oxygen Demand (BOD</u><sub>5</sub>). Effluent limitations have been retained from previous state operating permit, please see the <u>APPLICABLE DESIGNATION OF WATERS OF THE STATE</u> sub-section of the <u>Receiving Stream Information</u>.
- <u>Total Suspended Solids (TSS)</u>. Effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information**.
- **pH**. Effluent limitation is  $\geq 6.5$  as per the applicable section of 10 CSR 20-7.015. pH is not to be averaged.
- <u>Total Ammonia Nitrogen.</u> 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.
- **Temperature.** Monitoring requirement due to the toxicity of Ammonia varies by temperature.
- Escherichia coli (E. coli). Monthly average of 206 per 100 ml as a geometric mean and Daily Maximum of 1030 during the recreational season (April 1 October 31), to protect Whole Body Contact Recreation (A) or (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).

<sup>\*\* - #</sup> of colonies/100mL; the Monthly Average for E.coli is a geometric mean.

<sup>\*\*\* -</sup> Parameter not previously established in previous state operating permit.

#### Minimum Sampling and Reporting Frequency Requirements.

| PARAMETER                              | SAMPLING FREQUENCY | REPORTING FREQUENCY |
|--|--------------------|---------------------|
| Flow                                   | once/quarter       | once/quarter        |
| Biochemical Oxygen Demand <sub>5</sub> | once/quarter       | once/quarter        |
| Total Suspended Solids                 | once/quarter       | once/quarter        |
| pH                                     | once/quarter       | once/quarter        |
| Temperature                            | once/quarter       | once/quarter        |
| Ammonia as N                           | once/quarter       | once/quarter        |
| E. coli                                | 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 Statement of Basis: December 30, 2008 Updated: June 21, 2011

**Date of Public Notice:** February 27, 2009

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