

STATE OF MISSOURI  
**DEPARTMENT OF NATURAL RESOURCES**

MISSOURI CLEAN WATER COMMISSION



**MISSOURI STATE OPERATING PERMIT**

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

Permit No. MO-0114464

Owner: River Downs West Homeowners Association Inc.  
Address: P.O. Box 110, Nixa, MO 65714

Continuing Authority: Same as above  
Address: Same as above

Facility Name: River Downs West Subdivision WWTF  
Facility Address: Lot 11 Preakness Drive, Nixa MO 65714

Legal Description: NW¼, SW¼, NW¼, Sec. 34, T28N, R22W, Christian County  
UTM Coordinates: X=470389 , Y=4104985

Receiving Stream: Tributary to James River (C) (3960) (losing)  
First Classified Stream and ID: James River (P) (02362)  
USGS Basin & Sub-watershed No.: (11010002-0304)

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 - Subdivision / Sewerage Works - SIC #8641

The use or operation of this facility shall be by or under the supervision of a Certified "C" Operator.

Bar screen / flow equalization / baffled bioreactor (BBR) / clarifier / ultraviolet disinfection / sludge holding / sludge is hauled.

Design organic population equivalent is 255

Design flow is 0.019000 MGD.

Actual flow is 0.016337 MGD.

Design sludge production is 4.6 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 621.250 RSMo, Section 640.013 RSMo and Section 644.051.6 of the Law.

March 1, 2015

Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

February 28, 2020

Expiration Date

John Madras, Director, Water Protection Program

|                     |                                                                            |                          |
|---------------------|----------------------------------------------------------------------------|--------------------------|
| <b>OUTFALL #001</b> | <b>TABLE A.<br/>FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b> | PAGE NUMBER 2 of 4       |
|                     |                                                                            | PERMIT NUMBER MO-0114464 |

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 issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

| EFFLUENT PARAMETER(S)                                | UNITS   | FINAL EFFLUENT LIMITATIONS |                |                 | MONITORING REQUIREMENTS |                 |
|------------------------------------------------------|---------|----------------------------|----------------|-----------------|-------------------------|-----------------|
|                                                      |         | DAILY MAXIMUM              | WEEKLY AVERAGE | MONTHLY AVERAGE | MEASUREMENT FREQUENCY   | SAMPLE TYPE     |
| Flow                                                 | MGD     | *                          |                | *               | once/month              | 24 hr. estimate |
| Biochemical Oxygen Demand <sub>5</sub>               | mg/L    |                            | 15             | 10              | once/month              | composite**     |
| Total Suspended Solids                               | mg/L    |                            | 20             | 15              | once/month              | composite**     |
| <i>E. coli</i> (Note 1)                              | #/100mL | 126                        |                | 126             | once/month              | grab            |
| Ammonia as N<br>(Apr 1 – Sep 30)<br>(Oct 1 – Mar 31) | mg/L    | 3.4<br>7.5                 |                | 1.3<br>2.9      | once/month              | grab            |

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE APRIL 28, 2015. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

|                  |      |   |  |   |            |      |
|------------------|------|---|--|---|------------|------|
| Total Phosphorus | mg/L | * |  | * | once/month | grab |
| Total Nitrogen   | mg/L | * |  | * | once/month | grab |

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE JULY 28, 2015. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

| EFFLUENT PARAMETER(S) | UNITS | MINIMUM |  | MAXIMUM | MEASUREMENT FREQUENCY | SAMPLE TYPE |
|-----------------------|-------|---------|--|---------|-----------------------|-------------|
| pH – Units ***        | SU    | 6.5     |  | 9.0     | once/month            | grab        |

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

\* Monitoring requirement only.

\*\* A 24-hour composite sample is composed of 48 aliquots (subsamples) collected at 30 minute intervals by an automatic sampling device. / A composite sample made up from a minimum of four grab samples collected within a 24 hour period with a minimum of two hours between each grab sample.

\*\*\* pH is measured in pH units and is not to be averaged.

Note 1 – Effluent limits of 126 #/100 mL daily maximum and monthly average for *E. coli* are applicable year round due to losing stream designation. No more than 10% of samples shall exceed 126 #/100 mL daily maximum.

#### B. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Parts I & III standard conditions dated October 1, 1980 and August 15, 1994, and hereby incorporated as though fully set forth herein.

C. SPECIAL CONDITIONS

1. This permit establishes final ammonia limitations based on Missouri's current Water Quality Standard. On August 22, 2013, the U.S. Environmental Protection Agency (EPA) published a notice in the Federal Register announcing of the final national recommended ambient water quality criteria for protection of aquatic life from the effects of ammonia in freshwater. The EPA's guidance, Final Aquatic Life Ambient Water Quality Criteria for Ammonia – Fresh Water 2013, is not a rule, nor automatically part of a state's water quality standards. States must adopt new ammonia criteria consistent with EPA's published ammonia criteria into their water quality standards that protect the designated uses of the water bodies. The Department of Natural Resources has initiated stakeholder discussions on how to best incorporate these new criteria into the State's rules. A date for when this rule change will occur has not been determined. Also, refer to Section VI of this permit's factsheet for further information including estimated future effluent limits for this facility. It is recommended the permittee view the Department's 2013 EPA criteria Factsheet located at <http://dnr.mo.gov/pubs/pub2481.htm>.
2. This permit may be reopened and modified, or alternatively revoked and reissued, to:
  - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
    - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
    - (2) controls any pollutant not limited in the permit.
  - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
  - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.
  - (d) Incorporate the requirement to develop a pretreatment program pursuant to 40 CFR 403.8(a) when the Director of the Water Protection Program determines that a pretreatment program is necessary due to any new introduction of pollutants into the Publically Owned Treatment Works or any substantial change in the volume or character of pollutants being introduced.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.
3. All outfalls must be clearly marked in the field.
4. 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.
5. Water Quality Standards
  - (a) To the extent required by law, discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
  - (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
    - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
    - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
    - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
    - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
    - (5) There shall be no significant human health hazard from incidental contact with the water;
    - (6) There shall be no acute toxicity to livestock or wildlife watering;
    - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
    - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

C. SPECIAL CONDITIONS (continued)

6. Report as no-discharge when a discharge does not occur during the report period.
7. Reporting of Non-Detects:
  - (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way that the precision and accuracy of the analyzed result can be enumerated.
  - (b) The permittee shall not report a sample result as "Non-Detect" without also reporting the detection limit of the test. Reporting as "Non Detect" without also including the detection limit will be considered failure to report, which is a violation of this permit.
  - (c) The permittee shall provide the "Non-Detect" sample result using the less than sign and the minimum detection limit (e.g. <10).
  - (d) The permittee shall use one-half of the detection limit for the non-detect result when calculating monthly averages.
  - (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.
8. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).
9. Bypasses are not authorized at this facility unless they meet the criteria in 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 Southwest Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. Blending, which is the practice of combining a partially-treated wastewater process stream with a fully-treated wastewater process stream prior to discharge, is not considered a form of bypass. If the permittee wishes to utilize blending, the permittee shall file an application to modify this permit to facilitate the inclusion of appropriate monitoring conditions.
10. The facility must be sufficiently secured to restrict entry by children, livestock and unauthorized persons as well as to protect the facility from vandalism.
11. At least one gate must be provided to access the wastewater treatment facility and provide for maintenance and mowing. The gate shall remain locked except when opened by the permittee to perform operational monitoring, sampling, maintenance, mowing, or for inspections by the Department.
12. At least one (1) warning sign shall be placed on each side of the facility enclosure in such positions as to be clearly visible from all directions of approach. There shall also be one (1) sign placed for every five hundred feet (500') (150 m) of the perimeter fence. A sign shall also be placed on each gate. Minimum wording shall be SEWAGE TREATMENT FACILITY—KEEP OUT. Signs shall be made of durable materials with characters at least two inches (2") high and shall be securely fastened to the fence, equipment or other suitable locations.
13. 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.
14. An all-weather access road shall be provided to the treatment facility.
15. The discharge from the wastewater treatment facility shall be conveyed to the receiving stream via a closed pipe or a paved or rip-rapped open channel. Sheet or meandering drainage is not acceptable. The outfall sewer shall be protected against the effects of floodwater, ice or other hazards as to reasonably insure its structural stability and freedom from stoppage. The outfall shall be maintained so that a sample of the effluent can be obtained at a point after the final treatment process and before the discharge mixes with the receiving waters.

**Missouri Department of Natural Resources  
Statement of Basis  
River Downs West Subdivision WWTF  
MSOP #: MO-0114464  
Christian County**

A Statement of Basis (Statement) gives pertinent information regarding the applicable regulations and rationale 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.

Plans and specifications for this facility are being reviewed under construction permit number CP0001213 by the Department of Natural Resources.

**Part I – Facility Information**

Facility Type: (NON-POTW)  
Subdivision- SIC #8641

Facility Description:  
Bar screen / flow equalization / baffled biological reactor (BBR) / clarifier / ultraviolet disinfection / sludge holding / sludge is hauled.

**OUTFALL(S) TABLE:**

| OUTFALL | DESIGN FLOW (CFS) | TREATMENT LEVEL | EFFLUENT TYPE | DISTANCE TO CLASSIFIED SEGMENT (MI) |
|---------|-------------------|-----------------|---------------|-------------------------------------|
| 001     | 0.03              | Secondary       | Domestic      | 1.02                                |

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

A review of the discharge monitoring Reports (DMRs) submitted to this office from December 2005 to December 2011 showed that the permittee failed to submit DMRs for the following quarters: Fourth Quarter of 2005, First and Third Quarters of 2006, First and Second Quarters of 2010, and the Third Quarter of 2011. The facility exceeded TSS limits during the: First Quarter of 2007, Fourth Quarter of 2009, Fourth Quarter of 2010, and the First Quarter of 2011. The facility exceeded BOD limits for the following quarters: First and Second Quarters of 2008, Fourth Quarter of 2009, Third and Fourth Quarters of 2010, and the First Quarter of 2011. Fecal coliform limits were exceeded during the First and Second Quarters of 2008 and First Quarter of 2009. Total Residual Chlorine limits were also exceeded during the Second Quarter of 2006, Fourth Quarter of 2009, Third Quarter of 2010 and the Fourth Quarter of 2011.

This is for a modification. This modification is to include a new wastewater treatment facility (baffled bioreactor) with ultraviolet disinfection and abandon the existing wastewater treatment facility.

Comments: This facility had numerous violations and is currently in enforcement.

**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.

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

**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 20-9.010(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;

- Population Equivalent greater than two hundred (200):
- Fifty (50) or more service connections:
  
- 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:
  
- Department required: 
  - The Department requires this facility to retain the services of a certified operator due to: history of noncompliance.

This facility currently requires an operator with a C Certification Level. Please see **Appendix A - Classification Worksheet**. Modifications made to the wastewater treatment facility may cause the classification to be modified.

Operator's Name: Bruce Hinkston  
Certification Number: 7743  
Certification Level: A

The listing of the operator above only signifies that staff drafting this operating permit have reviewed appropriate Department records and determined that the name listed on the operating permit application has the correct and applicable Certification Level.

**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 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 HUC | EDU**         |
|------------------------------|-------|-------|---------------------------------------------|-------------|---------------|
| Tributary to the James River | C     | 3960  | General Criteria, AQL, IRR, LWW, SCR, WBCB  | 11010002    | Ozark / White |
| James River                  | P     | 02362 | General Criteria, AQL, IRR, SCR, WBC-A, CLF |             |               |

\* - 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 |
| Unnamed Tributary to the James River | 0                     | 0    | 0     |

**MIXING CONSIDERATIONS**

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)].

**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.

Applicable :

This facility discharges to a Losing Stream, as defined by [10 CSR 20-2.010(36)] & [10 CSR 20-7.031(1)(N)].

**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.

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

As per [10 CSR 20-6.010(8)(A)10.], when a Continuing Authority under paragraph 10 CSR 20-6.010(3)(B)1. or 2. is expected to be available for connection within the next five (5) years, any operating permit issued to a permittee under this paragraph, located within the service area of the paragraph (3)(B)1. or 2. facility, shall contain the following special condition... This language is contained in Special Condition #3 of this operating permit.

**ANTIDegradation:**

Policies which ensure protection of water quality for a particular water body where the water quality exceeds levels necessary to protect fish and wildlife propagation and recreation on and in the water. This also includes special protection of waters designated as outstanding natural resource waters. Antidegradation requirements are consistent with 40 CFR 131.12 that outlines methods used to assess activities that may impact the integrity of a water and protect existing uses. This policy may compel the state to maintain a level of water quality above those mandated by criteria.

Applicable ; Please see the file for the completed antidegradation waiver signed by the engineer of record and owner.

**APPLICABLE PERMIT PARAMETERS:**

Effluent parameters for conventional, non-conventional, and toxic pollutants have been obtained from the technology based effluent limits, water quality based limits, and from appropriate sections of the application.

**Bio-solids, 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: <http://dnr.mo.gov/env/wpp/pub/index.html>, items WQ422 through WQ449.

- Sludge/biosolids are removed by contract hauler or 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.

Applicable ;

The permittee/facility is currently under enforcement action due to the failure to comply with effluent limits, failure to submit timely discharge monitoring reports, failure to operate and maintain facilities, and for causing pollution of the James River, waters of the state.

**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.**

**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)].

Pretreatment programs are required at any POTW (or combination of POTW operated by the same authority) and/or municipality with a total design flow greater than 5.0 MGD and receiving industrial wastes that interfere with or pass through the treatment works or are otherwise subject to the pretreatment standards. Pretreatment programs can also be required at POTWs/municipals with a design flow less than 5.0 MGD if needed to prevent interference with operations or pass through.

Several special conditions pertaining to the permittee's pretreatment program may be included in the permit, and are as follows:

- Implementation and enforcement of the program,
- Annual pretreatment report submittal,
- Submittal of list of industrial users,
- Technical evaluation of need to establish local limitations, and
- Submittal of the results of the evaluation

Not Applicable ;

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](http://www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-04/w18866.htm)

Not Applicable ;

This wastewater treatment facility is not a POTW. Influent monitoring is not being required to determine percent removal.

**SANITARY SEWER OVERFLOWS (SSOs), BYPASSES, INFLOW & INFILTRATION (I&I) – PREVENTION/REDUCTION:**

Sanitary Sewer Overflows (SSOs) are defined as an untreated or partially treated sewage release are considered bypassing under state regulation [10 CSR 20-2.010(11)] and should not be confused with the federal definition of bypass. SSO's have a variety of causes including blockages, line breaks, and sewer defects that allow excess storm water and ground water to (1) enter and overload the collection system, and (2) overload the treatment facility. Additionally, SSO's can be also be caused by lapses in sewer system operation and maintenance, inadequate sewer design and construction, power failures, and vandalism. SSOs also include overflows out of manholes and onto city streets, sidewalks, and other terrestrial locations.

Additionally, Missouri RSMo §644.026.1 mandates that the Department require proper maintenance and operation of treatment facilities and sewer systems and proper disposal of residual waste from all such facilities.

- 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.

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 *Storm Water Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices* [EPA 832-R-92-006] (Storm Water Management), 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.

Not Applicable ;

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.

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  
C<sub>s</sub> = upstream concentration  
Q<sub>s</sub> = upstream flow  
C<sub>e</sub> = effluent concentration  
Q<sub>e</sub> = 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:**

Not Applicable ;

A WLA study was either not submitted or determined not applicable by Department staff.

**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.

Not Applicable ;

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

**40 CFR 122.41(m) - Bypasses:**

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

- Not Applicable, this facility does not bypass.

**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.

**Adjusted Design Flow:**

10 CSR 20-6.011(1)(B)1. provides for an Adjusted Design Flow when calculating permit fees on human sewage treatment facilities. If the average flow is sixty percent (60%) or less than the system's design flow, the average flow may be substituted for the design flow when calculating the permit fee on human sewage treatment facilities. If the facility's actual average flow is consistently 60% or less than the permitted design flow, the facility may qualify for a reduction in your fee when:

- The facility has a valid permit, or has applied for re-issuance, is in compliance with the terms, conditions and effluent limitations of the permit, and the facility has a good compliance history; and
- Flow is not expected to exceed 60% of design flow for the remaining term of the existing operating permit.

Not Applicable ;

At this time, the permittee has not requested an Adjusted Design Flow modification.

**Outfall #001 – Main Facility Outfall**

**EFFLUENT LIMITATIONS TABLE:**

| PARAMETER                            | UNIT                                                                                                             | BASIS FOR LIMITS | DAILY MAXIMUM | WEEKLY AVERAGE | MONTHLY AVERAGE | MODIFIED | PREVIOUS PERMIT LIMITATIONS |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------|------------------|---------------|----------------|-----------------|----------|-----------------------------|
| FLOW                                 | MGD                                                                                                              | 1                | *             |                | *               | NO       | S                           |
| BOD <sub>5</sub>                     | MG/L                                                                                                             | 1                |               | 15             | 10              | NO       | S                           |
| TSS                                  | MG/L                                                                                                             | 1                |               | 20             | 15              | NO       | S                           |
| PH (S.U.)                            | SU                                                                                                               | 1                | 6.5-9.0       |                | 6.5-9.0         | YES      | 6.0 – 9.0                   |
| AMMONIA AS N (OCTOBER - MARCH)       | MG/L                                                                                                             | 5                | 7.5           |                | 2.9             | YES      | NONE                        |
| AMMONIA AS N (APRIL - SEPTEMBER)     | MG/L                                                                                                             | 5                | 3.4           |                | 1.3             | YES      | NONE                        |
| E. COLI                              | ***                                                                                                              | REMOVED          | --            |                | --              | YES      | 1000/400                    |
| ESCHERICHIA COLI                     | ***                                                                                                              | 1,2,3            | 126           |                | 126             | YES      | NONE                        |
| CHLORINE, TOTAL RESIDUAL             | MG/L                                                                                                             | REMOVED          | --            |                | --              | YES      | 0.01 / 0.01                 |
| NITRATE, TOTAL (AS NO <sub>3</sub> ) | MG/L                                                                                                             | 8                | *             |                | *               | YES      | NONE                        |
| TOTAL PHOSPHORUS                     | MG/L                                                                                                             | 1, 8             | *             |                | *               | NO       | S                           |
| MONITORING FREQUENCY                 | Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below. |                  |               |                |                 |          |                             |

\*\*\* - # 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 Judgment     |
| 4. Lagoon Policy                         | 9. TMDL or Permit in lieu of TMDL |
| 5. Ammonia Policy                        | 10. WET test Policy               |
|                                          | 11. Dissolved Oxygen 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 (BOD<sub>5</sub>).**

– Effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.**

**Total Suspended Solids (TSS).**

– Effluent limitations 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.**

– pH is limited to the range of 6.5 – 9.0 pH units, as per [10 CSR 20-7.031(4)(E)]. pH is measured in pH units and is not to be averaged.

**Ammonia as N.** Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(4)(B)7.C. & Table B3]. Background total ammonia nitrogen = 0.01 mg/L.

| Season             | Temp (°C) | pH (SU) | Total Ammonia Nitrogen CCC (mg N/L) | Total Ammonia Nitrogen CMC (mg N/L) |
|--------------------|-----------|---------|-------------------------------------|-------------------------------------|
| Oct. 1 – March 31  | 6         | 7.8     | 3.1                                 | 12.1                                |
| April 1 – Sept. 30 | 27        | 7.8     | 1.4                                 | 12.1                                |

Winter: Oct 1 – March 31, Summer: April 1 – Sept. 30

**Summer** – Chronic WLA = 1.4 mg N/L, Acute WLA = 12.1 mg N/L. No mixing zone is allowed. Discharges to Unclassified Stream.

LTA<sub>c</sub> = 1.4 mg/L (0.780) = 1.09 mg N/L [CV = 0.6, 99<sup>th</sup> Percentile, 30 day average]  
 LTA<sub>a</sub> = 12.1 mg/L (0.321) = 3.88 mg N/L [CV = 0.6, 99<sup>th</sup> Percentile]  
 MDL = 1.09 mg/L \* 3.114 = 3.4 mg N/L [CV = 0.6, 99<sup>th</sup> Percentile]  
 AML = 1.09 mg/L \* 1.19 = 1.3 mg N/L [CV = 0.6, 95<sup>th</sup> Percentile, n = 30]

**Winter** – Chronic WLA = 3.1 mg N/L, Acute WLA = 12.1 mg N/L. No mixing zone is allowed. Discharges to Unclassified Stream.

LTA<sub>c</sub> = 3.1 mg/L (0.780) = 2.4 mg N/L [CV = 0.6, 99<sup>th</sup> Percentile, 30 day average]  
 LTA<sub>a</sub> = 12.1 mg/L (0.321) = 3.9 mg N/L [CV = 0.6, 99<sup>th</sup> Percentile]  
 MDL = 2.4 mg/L \* 3.114 = 7.5 mg N/L [CV = 0.6, 99<sup>th</sup> Percentile]  
 AML = 2.2 mg/L \* 1.19 = 2.9 mg N/L [CV = 0.6, 95<sup>th</sup> Percentile, n = 30]

| Season            | Maximum Daily Limit (mg N/L) | Average Monthly Limit (mg N/L) |
|-------------------|------------------------------|--------------------------------|
| Oct 1 – March 31  | 7.5                          | 2.9                            |
| April 1 – Sept 30 | 3.4                          | 1.3                            |

**Fecal Coliform.** *E. coli* has replaced fecal coliform at the applicable bacteria criteria in Missouri’s water quality standards.

**Escherichia coli (E. coli).** Monthly average of 126 per 100 mL and a daily maximum of 126 per 100 mL. Per 10 CSR 20-7.031 (4)(C) the *E. coli* count shall not exceed 126 per 100 mL at any time in a losing stream.

**Total Residual Chlorine (TRC).** Was removed due to facility is no longer using chlorine for disinfection.

**Total Phosphorus**

Monitoring only. Facilities built prior to November 30, 1999 and have a design flow of less than 22,500 gpd that discharge to Table Rock Lake will have monitoring only as per 10 CSR 7.015.

**Nitrate.** Because this facility discharges to a losing stream a Nitrate discharge monitoring is needed. Nitrate can cause serious health risks to animals and humans. Because losing streams can recharge groundwater, it is important to include these parameters.

**Minimum Sampling and Reporting Frequency Requirements.**

| PARAMETER                            | SAMPLING FREQUENCY | REPORTING FREQUENCY |
|--------------------------------------|--------------------|---------------------|
| FLOW                                 | MONTHLY            | MONTHLY             |
| BOD <sub>5</sub>                     | MONTHLY            | MONTHLY             |
| TSS                                  | MONTHLY            | MONTHLY             |
| PH                                   | MONTHLY            | MONTHLY             |
| AMMONIA AS N                         | MONTHLY            | MONTHLY             |
| <i>E. COLI</i>                       | MONTHLY            | MONTHLY             |
| NITRATE, TOTAL (AS NO <sub>3</sub> ) | MONTHLY            | MONTHLY             |
| TOTAL PHOSPHORUS                     | MONTHLY            | MONTHLY             |

**Sampling Frequency Justification:**

This facility is a new treatment facility and using a new treatment method (baffled bioreactor). Monthly sampling is required to determine if the facility will be in compliance with the operating permit in accordance with Appendix U of Missouri’s Water Pollution Control Permit Manual.

The Clean Water Commission has directed the Department to proceed with amending 10 CSR 20-7.015 to reduce the sampling frequency required for E.coli to a lesser frequency, still protective of water quality standards, for smaller facilities, including those with discharges of 100,000 gallons per day or less.

**Sampling Type Justification**

Due to the small amount of flow sample type shall be modified composites for BOD and TSS and grab for other parameters.

**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:** April 3, 2012

**Appendix A**

**10 CSR 20-9.020**

All wastewater treatment systems serving a population equivalent greater than two hundred (200) or with fifty (50) or more service connections, owned or operated by or for municipalities, public sewer districts, counties, public water supply districts, private sewer companies regulated by the Public Service Commission and the state or federal agencies.

| Column A                                                                                                         |                                                               |                 | Column B                                                                                                       |        |                 |
|------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------|-----------------|----------------------------------------------------------------------------------------------------------------|--------|-----------------|
| Item                                                                                                             | Points                                                        | Points Assigned | Item                                                                                                           | Points | Points Assigned |
| Maximum population equivalent (P.E.) served, peak day                                                            | 1 pt. Per 10,000 PE or major fraction thereof                 |                 | <b>EFFLUENT DISCHARGE RECEIVING WATER SENSITIVITY</b>                                                          |        |                 |
| Design flow (avg. day) or peak month's flow, (avg. day) whichever is larger                                      | Maximum: 10 Points<br>1 pt. Per MGD or major fraction thereof |                 | Missouri or Mississippi River                                                                                  | 0      |                 |
| <b>REQUIRED LABORATORY CONTROL<br/>Performed by plant personnel (highest level only)</b>                         |                                                               |                 | All other stream discharges except to losing streams and stream reaches supporting whole body contact reaction | 1      |                 |
| Lab work done outside the plant                                                                                  | 0                                                             |                 | Discharge to lake or reservoir outside of designated whole body contact recreational area                      | 2      |                 |
| Push – button or visual methods for simple tests such as pH, settleable solids                                   | 3                                                             |                 | Discharge to losing stream, or stream, lake or reservoir area supporting whole body contact recreation         | 3      | 3               |
| <b>REQUIRED LABORATORY CONTROL<br/>Performed by plant personnel (highest level only)</b>                         |                                                               |                 | <b>HEADWORKS - PRELIMINARY TREATMENT</b>                                                                       |        |                 |
| Additional procedures such as DO, COD, BOD, titrations, solids, volatile content                                 | 5                                                             | 5               | Raw wastes subject to toxic waste discharges                                                                   | 6      |                 |
| More advanced determinations such as BOD seeding procedure, fecal coliform, nutrients, total oils, phenols, etc. | 7                                                             |                 | Screening and/or comminution                                                                                   | 3      | 3               |
|                                                                                                                  |                                                               |                 | Grit removal                                                                                                   | 3      |                 |
|                                                                                                                  |                                                               |                 | Plant pumping of main flow (If 51% or greater flow comes into plant)                                           | 3      |                 |
| <b>REQUIRED LABORATORY CONTROL<br/>Performed by plant personnel (highest level only)</b>                         |                                                               |                 | <b>PRIMARY TREATMENT</b>                                                                                       |        |                 |
| Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph                            | 10                                                            |                 | Primary clarifiers (Flow EQ basins)                                                                            | 5      | 5               |
|                                                                                                                  |                                                               |                 | Combined sedimentation/digestion (includes big septic tank or if cities clean out STEP system)                 | 5      |                 |
|                                                                                                                  |                                                               |                 | Chemical addition (except chlorine, enzymes)                                                                   | 4      |                 |
| <b>TOTAL Page 1 Column A</b>                                                                                     |                                                               | <b>5</b>        | <b>TOTAL Page 1 Column B</b>                                                                                   |        | <b>11</b>       |

| Column A                                                                                                                          |          |          |                 | Column B                                                                                                                                                                                                       |        |                 |
|-----------------------------------------------------------------------------------------------------------------------------------|----------|----------|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-----------------|
| Item                                                                                                                              |          | Points   | Points Assigned | Item                                                                                                                                                                                                           | Points | Points Assigned |
| Direct reuse or recycle of effluent                                                                                               |          | 6        |                 | <b>SECONDARY TREATMENT</b>                                                                                                                                                                                     |        |                 |
| Land Disposal – Low rate (Irrigation) < 24” year                                                                                  |          | 3        |                 | Trickling filter and other fixed film media with secondary clarifiers (recirculating sand filters)                                                                                                             | 10     |                 |
| Land Disposal – High rate (Irrigation) > 24” year                                                                                 |          | 5        |                 | Activated sludge with secondary clarifiers (including extended aeration and oxidation ditches)                                                                                                                 | 15     | 15              |
| Overland flow                                                                                                                     |          | 4        |                 | Stabilization ponds without aeration                                                                                                                                                                           | 5      |                 |
| <b>Variation in Raw Wastes (highest level only) (DMR exceedances &amp; Design Flow exceedances)</b>                               |          |          |                 | Aerated lagoon (Lemna)                                                                                                                                                                                         | 8      |                 |
| Variations do not exceed those normally or typically expected                                                                     |          | 0        |                 | Advanced Waste Treatment Polishing pond (Lemna)                                                                                                                                                                | 2      |                 |
| Recurring deviations or excessive variations of 100 to 200 % in strength and/or flow (use design flow for determination)          |          | 2        |                 | Chemical/physical – without secondary (carbon filters such as at Wilson’s Creek WWTF)                                                                                                                          | 15     |                 |
| Recurring deviations or excessive variations of more than 200 percent in strength and/or flow (use design flow for determination) |          | 4        |                 | Chemical/physical – following secondary (adding alum if not at headworks, tertiary filters)                                                                                                                    | 10     |                 |
| <b>SOLIDS HANDLING - SLUDGE</b>                                                                                                   |          |          |                 | Biological or chemical biological (multi stage biological treatment, SBR and 3-phase biological treatment)                                                                                                     | 12     |                 |
| Thickening (Lagoon sludge holding basin)                                                                                          |          | 5        |                 | Carbon Regeneration                                                                                                                                                                                            | 4      |                 |
| Anaerobic digestion                                                                                                               |          | 10       |                 | <b>DISINFECTION</b>                                                                                                                                                                                            |        |                 |
| Aerobic digestion                                                                                                                 |          | 6        |                 | Chlorination or comparable                                                                                                                                                                                     | 5      |                 |
| Evaporative sludge drying                                                                                                         |          | 2        |                 | Dechlorination                                                                                                                                                                                                 | 2      |                 |
| Mechanical dewatering (belt thickeners)                                                                                           |          | 8        |                 | On-site generation of disinfectant (ozone)                                                                                                                                                                     | 5      |                 |
| Solids reduction (incineration, wet oxidation, composting)                                                                        |          | 12       |                 | Ultraviolet light                                                                                                                                                                                              | 4      | 4               |
| Land application                                                                                                                  |          | 6        |                 | <b>TOTAL Page 2 Column B</b>                                                                                                                                                                                   |        | <b>35</b>       |
| <b>TOTAL Page 2 Column A</b>                                                                                                      |          |          |                 | <b>PREPARED BY:</b>                                                                                                                                                                                            |        |                 |
| <b>Grand Total</b>                                                                                                                |          |          | <b>35</b>       | <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <u>Sieu T. Dang</u><br/>(Name) </div> <div style="text-align: center;"> <u>4/9/2012</u><br/>(Date) </div> </div> |        |                 |
| <b>Level of Certification Required</b>                                                                                            |          |          |                 |                                                                                                                                                                                                                |        |                 |
| <b>D</b>                                                                                                                          | <b>C</b> | <b>B</b> | <b>A</b>        |                                                                                                                                                                                                                |        |                 |
| ≤ 25                                                                                                                              | 26 – 50  | 51 – 70  | ≥ 71            |                                                                                                                                                                                                                |        |                 |



**STANDARD CONDITIONS FOR NPDES PERMITS  
ISSUED BY  
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES  
MISSOURI CLEAN WATER COMMISSION**

**Revised  
October 1, 1980**

**PART I - GENERAL CONDITIONS  
SECTION A - MONITORING AND REPORTING**

1. **Representative Sampling**
  - a. Samples and measurements taken as required herein shall be representative of the nature and volume, respectively, of the monitored discharge. All samples shall be taken at the outfall(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.
  - b. Monitoring results shall be recorded and reported on forms provided by the Department, postmarked no later than the 28th day of the month following the completed reporting period. Signed copies of these, and all other reports required herein, shall be submitted to the respective Department Regional Office, the Regional Office address is indicated in the cover letter transmitting the permit.
2. **Schedule of Compliance**

No later than fourteen (14) calendar days following each date identified in the "Schedule of Compliance", the permittee shall submit to the respective Department Regional Office as required therein, either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements, or if there are no more scheduled requirements, when such noncompliance will be corrected. The Regional Office address is indicated in the cover letter transmitting the permit.
3. **Definitions**

Definitions as set forth in the Missouri Clean Water Law and Missouri Clean Water Commission Definition Regulation 10 CSR 20-2.010 shall apply to terms used herein.
4. **Test Procedures**

Test procedures for the analysis of pollutant shall be in accordance with the Missouri Clean Water Commission Effluent Regulation 10 CSR 20-7015.
5. **Recording of Results**
  - a. For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:
    - (i) the date, exact place, and time of sampling or measurements;
    - (ii) the individual(s) who performed the sampling or measurements;
    - (iii) the date(s) analyses were performed;
    - (iv) the individual(s) who performed the analyses;
    - (v) the analytical techniques or methods used; and
    - (vi) the results of such analyses.
  - b. The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or both.
  - c. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.
6. **Additional Monitoring by Permittee**

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Monitoring Report Form. Such increased frequency shall also be indicated.

7. **Records Retention**

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recording for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

**SECTION B - MANAGEMENT REQUIREMENTS**

1. **Change in Discharge**
  - a. All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant not authorized by this permit or any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit.
  - b. Any facility expansions, production increases, or process modifications which will result in new, different, or increased discharges of pollutants shall be reported by submission of a new NPDES application at least sixty (60) days before each such change, or, if they will not violate the effluent limitations specified in the permit, by notice to the Department at least thirty (30) days before such changes.
2. **Noncompliance Notification**
  - a. If, for any reason, the permittee does not comply with or will be unable to comply with any daily maximum effluent limitation specified in this permit, the permittee shall provide the Department with the following information, in writing within five (5) days of becoming aware of such conditions:
    - (i) a description of the discharge and cause of noncompliance, and
    - (ii) the period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.
  - b. Twenty-four hour reporting. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally with 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided with five (5) days of the time the permittee becomes aware of the circumstances. The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.
3. **Facilities Operation**

Permittees shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions. Operators or supervisors of operations at publicly owned or publicly regulated wastewater treatment facilities shall be certified in accordance with 10 CSR 209.020(2) and any other applicable law or regulation. Operators of other wastewater treatment facilities, water contaminant source or point sources, shall, upon request by the Department, demonstrate that wastewater treatment equipment and facilities are effectively operated and maintained by competent personnel.
4. **Adverse Impact**

The permittee shall take all necessary steps to minimize any adverse impact to waters of the state resulting from noncompliance with any effluent limitations specified in this permit or set forth in the Missouri Clean Water Law and Regulations (hereinafter the Law and Regulations), including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

- a. Any bypass or shut down of a wastewater treatment facility and tributary sewer system or any part of such a facility and sewer system that results in a violation of permit limits or conditions is prohibited except:
    - (i) where unavoidable to prevent loss of life, personal injury, or severe property damages; and
    - (ii) where unavoidable excessive storm drainage or runoff would catastrophically damage any facilities or processes necessary for compliance with the effluent limitations and conditions of this permit;
    - (iii) where maintenance is necessary to ensure efficient operation and alternative measures have been taken to maintain effluent quality during the period of maintenance.
  - b. The permittee shall notify the Department in writing of all bypasses or shut down that result in a violation of permit limits or conditions. This section does not excuse any person from liability, unless such relief is otherwise provided by the statute.
6. **Removed Substances**  
Solids, sludges, filter backwash, or any other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutants from entering waters of the state unless permitted by the Law, and a permanent record of the date and time, volume and methods of removal and disposal of such substances shall be maintained by the permittee.
  7. **Power Failures**  
In order to maintain compliance with the effluent limitations and other provisions of this permit, the permittee shall either:
    - a. in accordance with the "Schedule of Compliance", provide an alternative power source sufficient to operate the wastewater control facilities; or,
    - b. if such alternative power source is not in existence, and no date for its implementation appears in the Compliance Schedule, halt or otherwise control production and all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.
  8. **Right of Entry**  
For the purpose of inspecting, monitoring, or sampling the point source, water contaminant source, or wastewater treatment facility for compliance with the Clean Water Law and these regulations, authorized representatives of the Department, shall be allowed by the permittee, upon presentation of credentials and at reasonable times;
    - a. to enter upon permittee's premises in which a point source, water contaminant source, or wastewater treatment facility is located or in which any records are required to be kept under terms and conditions of the permit;
    - b. to have access to, or copy, any records required to be kept under terms and conditions of the permit;
    - c. to inspect any monitoring equipment or method required in the permit;
    - d. to inspect any collection, treatment, or discharge facility covered under the permit; and
    - e. to sample any wastewater at any point in the collection system or treatment process.
  9. **Permits Transferable**
    - a. Subject to Section (3) of 10 CSR 20-6.010 an operating permit may be transferred upon submission to the Department of an application to transfer signed by a new owner. Until such time as the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
    - b. The Department, within thirty (30) days of receipt of the application shall notify the new permittee of its intent to revoke and reissue or transfer the permit.
  10. **Availability of Reports**  
Except for data determined to be confidential under Section 308 of the Act, and the Law and Missouri Clean Water Commission Regulation for Public Participation, Hearings and Notice to Governmental Agencies 10 CSR 20-6.020, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. As required by statute, effluent data shall not be considered confidential. Knowingly making any false statement on any such report shall be subject to the imposition of criminal penalties as provided in Section 204.076 of the Law.
  - a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
    - (i) violation of any terms or conditions of this permit or the Law;
    - (ii) having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
    - (iii) a change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge, or
    - (iv) any reason set forth in the Law and Regulations.
  - b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
12. **Permit Modification - Less Stringent Requirements**  
If any permit provisions are based on legal requirements which are lessened or removed, and should no other basis exist for such permit provisions, the permit shall be modified after notice and opportunity for a hearing.
  13. **Civil and Criminal Liability**  
Except as authorized by statute and provided in permit conditions on "Bypassing" (Standard Condition B-5) and "Power Failures" (Standard Condition B-7) nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.
  14. **Oil and Hazardous Substance Liability**  
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act, and the Law and Regulations. Oil and hazardous materials discharges must be reported in compliance with the requirements of the Federal Clean Water Act.
  15. **State Laws**  
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state statute or regulations.
  16. **Property Rights**  
The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of or violation of federal, state or local laws or regulations.
  17. **Duty to Reapply**  
If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for a new permit 180 days prior to expiration of this permit.
  18. **Toxic Pollutants**  
If a toxic effluent standard, prohibition, or schedule of compliance is established, under Section 307(a) of the Federal Clean Water Act for a toxic pollutant in the discharge of permittee's facility and such standard is more stringent than the limitations in the permit, then the more stringent standard, prohibition, or schedule shall be incorporated into the permit as one of its conditions, upon notice to the permittee.
  19. **Signatory Requirement**  
All reports, or information submitted to the Director shall be signed (see 40 CFR-122.6).
  20. **Rights Not Affected**  
Nothing in this permit shall affect the permittee's right to appeal or seek a variance from applicable laws or regulations as allowed by law.
  21. **Severability**  
The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

**STANDARD CONDITIONS FOR NPDES PERMITS  
ISSUED BY  
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES  
MISSOURI CLEAN WATER COMMISSION  
AUGUST 15, 1994**

**PART III – SLUDGE & BIOSOLIDS FROM DOMESTIC WASTEWATER TREATMENT FACILITIES**

**SECTION A – GENERAL REQUIREMENTS**

1. This permit pertains to sludge requirements under the Missouri Clean Water Law and regulation and incorporates applicable federal sludge disposal requirements under 40 CFR 503. The Environmental Protection Agency (EPA) has principal authority for permitting and enforcement of the federal sludge regulations under 40 CFS 503 until such time as Missouri is delegated the new EPA sludge program. EPA has reviewed and accepted these standard sludge conditions. EPA may choose to issue a separate sludge addendum to this permit or a separate federal sludge permit at their discretion to further address federal requirements.
2. These PART III Standard Conditions apply only to sludge and biosolids generated at domestic wastewater treatment facilities, including public owned treatment works (POTW) and privately owned facilities.
3. Sludge and Biosolids Use and Disposal Practices.
  - a. Permittee is authorized to operate the sludge and biosolids treatment, storage, use, and disposal facilities listed in the facility description of this permit.
  - b. Permittee shall not exceed the design sludge volume listed in the facility description and shall not use sludge disposal methods that are not listed in the facility description, without prior approval of the permitting authority.
  - c. Permittee is authorized to operate the storage, treatment or generating sites listed in the Facility Description section of this permit.
  - d. A separate operating permit is required for each operating location where sludge or biosolids are generated, stored, treated, or disposed, unless specifically exempted in this permit or in 10 CSR 20, Chapter 6 regulations. For land application, see section H, subsection 3 of these standard conditions.
4. Sludge Received From Other Facilities
  - a. Permittees may accept domestic wastewater sludge from other facilities including septic tank pumpings from residential sources as long as the design sludge volume is not exceeded and the treatment facility performance is not impaired.
  - b. The permittee shall obtain a signed statement from the sludge generator or hauler that certifies the type and source of the sludge.
  - c. Sludge received from out-of-state generators shall receive prior approval of the permitting authority and shall be listed in the facility description or special conditions section of the permit.
5. These permit requirements do not supersede nor remove liability for compliance with county and other local ordinances.
6. These permit requirements do not supersede nor remove liability for compliance with other environmental regulations such as odor emissions under the Missouri Air Pollution Control Law and regulations.
7. This permit may (after du process) be modified, or alternatively revoked and reissued, to comply with any applicable sludge disposal standard or limitation issued or approved under Section 405(d) of the Clean Water Act or under Chapter 644 RsMo.
8. In addition to the STANDARD CONDITIONS, the department may include sludge limitations in the special conditions portion or other sections of this permit.
9. Alternate Limits in Site Specific Permit.

Where deemed appropriate, the department may require an individual site specific permit in order to authorize alternate limitations:

  - a. An individual permit must be obtained for each operating location, including application sites.
  - b. To request a site specific permit, an individual permit application, permit fees, and supporting documents shall be submitted for each operating location. This shall include a detailed sludge/biosolids management plan or engineering report.
10. Exceptions to these Standard Conditions may be authorized on a case-by-case basis by the department, as follows:
  - a. The department will prepare a permit modification and follow permit public notice provisions as applicable under 10 CSR 20-6.020, 40 CFR 124.10, and 40 CFR 501.15(a)(2)(ix)(E). This includes notification of the owners of property located adjacent to each land application site, where appropriate.
  - b. Exceptions cannot be granted where prohibited by the federal sludge regulations under 40 CFR 503.
11. Compliance Period  
Compliance shall be achieved as expeditiously as possible but no later than the compliance dates under 40 CFR 503.2.

## **SECTION B – DEFINITIONS**

1. Biosolids means an organic fertilizer or soil amendment produced by the treatment of domestic wastewater sludge. Untreated sludge or sludge that does not conform to the pollutants and pathogen treatment requirements in this permit is not considered biosolids.
2. Biosolids land application facility is a facility where biosolids are spread onto the land at agronomic rates for production of food or fiber. The facility includes any structures necessary to store the biosolids until soil, weather, and crop conditions are favorable for land application.
3. Class A biosolids means a material that has met the Class A pathogen reduction requirements or equivalent treatment by a Process to Further Reduce Pathogens (PFRP) in accordance with 40 CFR 503.
4. Class B biosolids means a material that has met the Class B pathogen reduction requirements or equivalent treatment by a Process to Significantly Reduce Pathogens (PFRP) in accordance with 40 CFR 503.
5. Domestic wastewater means wastewater originating from the sanitary conveniences of residences, commercial buildings, factories and institutions; or co-mingled sanitary and industrial wastewater processed by a public owned treatment works (POTW) or privately owned facility.
6. Mechanical treatment plants are wastewater treatment facilities that use mechanical devices to treat wastewater, including septic tanks, extended aeration, activated sludge, contact stabilization, trickling filters, rotating biological discs, and other similar facilities. It does not include un aerated wastewater treatment lagoons and constructed wetlands for wastewater treatment.
7. Operating location as defined in 10 CSR 20-2.010 is all contiguous lands owned, operated or controlled by one (1) person or by two (2) or more persons jointly or as tenants in common.
8. Plant Available Nitrogen (PAN) is the nitrogen that will be available to plants during the next growing season after biosolids application.
9. Sinkhole is a depression in the land surface into which surface water flows to join an underground drainage system.
10. Site Specific Permit is a permit that has alternate limits developed to address specific site conditions for each land application site or storage site.
11. Sludge is the solid, semisolid, or liquid residue removed during the treatment of wastewater. Sludge includes septage removed from septic tanks.
12. Sludge lagoon is an earthen basin that receives sludge that has been removed from a wastewater treatment facility. It does not include a wastewater treatment lagoon or sludge treatment units that are not a part of a mechanical wastewater treatment facility.
13. Wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamp, marshes, bogs, and similar areas. Wetlands do not include constructed wetlands used for wastewater treatment.

## **SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES**

1. Sludge shall be routinely removed from the wastewater treatment facilities and handled according to the permit facility description and sludge conditions in this permit.
2. The permittee shall operate the facility so that there is no sludge loss into the discharged effluent in excess of permit limits, no sludge bypassing, and no discharge of sludge to waters of the state.
3. Mechanical treatment plants shall have separate sludge storage compartments in accordance with 10 CSR 20, Chapter 8. Failure to remove sludge from these storage compartments on the required design schedule is a violation of this permit.

## **SECTION D – SLUDGE DISPOSED AT OTHER TREATMENT FACILITY OR CONTRACT HAULER**

1. This section applies to permittees that haul sludge to another treatment facility for disposal or use contract haulers to remove and dispose of sludge.
2. Permittees that use contract haulers are responsible for compliance with all the terms of this permit including final disposal, unless the hauler has a separate permit for sludge or biosolids disposal issued by the department; or the hauler transports the sludge to another permitted treatment facility.
3. The permittee shall require documentation from the contractor of the disposal methods used and permits obtained by the contractor.
4. Testing of sludge, other than total solids content, is not required if sludge is hauled to a municipal wastewater treatment facility or other permitted wastewater treatment facility.

## **SECTION E – WASTEWATER TREATMENT LAGOONS AND STORMWATER RETENTION BASINS**

1. Sludge that is retained within a wastewater treatment lagoon is subject to sludge disposal requirements when the sludge is removed from the lagoon or when the lagoon ceases to receive and treat wastewater.
2. If sludge is removed during the year, an annual sludge report must be submitted.
3. Storm water retention basins or other earthen basins, which have been used as sludge storage for a mechanical treatment system is considered a sludge lagoon and must comply with Section G of this permit.

## **SECTION F – INCINERATION OF SLUDGE**

1. Sludge incineration facilities shall comply with the requirements of 40 CFR 503 Subpart E; air pollution control regulations under 10 CSR 10; and solid waste management regulations under 10 CSR 80.
2. Permittee may be authorized under the facility description of this permit to store incineration ash in lagoons or ash ponds. This permit does not authorize the disposal of incineration ash. Incineration ash shall be disposed in accordance with 10 CSR 80; or if the ash is determined to be hazardous waste, shall be disposed in accordance with 10 CSR 25.
3. In addition to normal sludge monitoring, incineration facilities shall report the following as part of the annual report, quantity of sludge incinerated, quantity of ash generated, quantity of ash stored; and ash use or disposal method, quantity, and location. Permittee shall also provide the name of the disposal facility and the applicable permit number.
4. Additional limitations, monitoring, and reporting requirements may be addressed in the Special Conditions sections of this permit.

## **SECTION G – SURFACE DISPOSAL SITES AND SLUDGE LAGOONS**

1. Surface disposal sites shall comply with the requirements in 40 CFR 503 Subpart C, and solid waste disposal regulations under 10 CSR 80.
2. Additional limitations, monitoring, and reporting requirements may be addressed in the Special Conditions section of this permit.
3. Effective February 19, 1995, a sludge lagoon that has been in use for more than two years without removal of accumulated sludge, or that has not been properly closed shall comply with one of the following options:
  - a. Permittee shall obtain a site specific permit to address surface disposal requirements under 40 CFR 503, ground water quality regulations under 10 CSR 20, Chapter 7 and 8, and solid waste management regulations under 10 CSR 80;
  - b. Permittee shall clean out the sludge lagoon to remove any sludge over two years old and shall continue to remove accumulated sludge at least every two years or an alternate schedule approved under 40 CFR 503.20(b). In order to avoid damage to the lagoon seal during cleaning, the permittee may leave a layer of sludge on the bottom of the lagoon, upon prior approval of the department; or
  - c. Permittee shall close the lagoon in accordance with Section 1.

## **SECTION H – LAND APPLICATION**

1. The permittee shall not land apply sludge or biosolids unless land application is authorized in the Facility Description or special conditions section of the permit.
2. This permit replaces and terminates all previous sludge management plan approvals by the department for land application of sludge or biosolids.
3. Land application sites within a 20 mile radius of the wastewater treatment facility are authorized under this permit when biosolids are applied for beneficial use in accordance with these standard conditions unless a site specific permit is required under Section A, Subsection 9.
4. Biosolids shall not be applied unless authorized in this permit or exempted under 10 CSR 20, Chapter 6.
  - a. This permit does not authorize the land application of sludge except when sludge meets the definition of biosolids.
  - b. This permit authorizes “Class A or B” biosolids derived from domestic wastewater sludges to be land applied onto grass land, crop land, timber land or other similar agricultural or silviculture lands at rates suitable for beneficial use as organic fertilizer and soil conditioner.
5. Public Contact Sites.

Permittees who wish to apply Class A biosolids to public contact sites must obtain approval from the department. Applications for approval shall be in the form of an engineering report and shall address priority pollutants and dioxin concentrations. Authorization for land applications must be provided in the special conditions section of this permit or in a separate site-specific permit.

6. Agricultural and Silvicultural Sites.

In addition to specified conditions herein, this permit is subject to the attached Water Quality Guides numbers WQ 422 through 426 published by the University of Missouri, and hereby incorporated as though fully set forth herein. The guide topics are as follows:

|        |                                                           |
|--------|-----------------------------------------------------------|
| WQ 422 | Land Application of Septage                               |
| WQ 423 | Monitoring Requirements for Biosolids Land Application    |
| WQ 424 | Biosolids Standards for Pathogens and Vectors             |
| WQ 425 | Biosolids Standards for Metals and Other Trace Substances |
| WQ 426 | Best Management Practices for Biosolids Land Applications |

### SECTION I – CLOSURE REQUIREMENTS

1. This section applies to all wastewater treatment facilities (mechanical and lagoons) and sludge or biosolids storage and treatment facilities and incineration ash ponds. It does not apply to land application sites.
2. Permittees who plan to cease operation must obtain department approval of a closure plan which addresses proper removal and disposal of all residues, including sludge, biosolids, and ash. Permittee must maintain this permit until the facility is properly closed per 10 CSR 20-6.010 and 10 CSR 20-6.015.
3. Residuals that are left in place during closure of a lagoon or earthen structure shall not exceed the agricultural loading rates as follows:
  - a. Residuals shall meet the monitoring and land application limits for agricultural rates as referenced in Section H of these standard conditions.
  - b. If a wastewater treatment lagoon has been in operation for 15 years or more, the sludge in the lagoon qualifies for Class B with respect to pathogens (see WQ 424, Table 3), and testing for fecal coliform is not required. For other lagoons, testing for fecal coliform is required to show compliance with Class B limitations. See WQ 423 and 424.
  - c. The allowable nitrogen loading that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. See WQ 426 for calculation procedures. For a grass cover crop, the allowable PAN is 300 pounds/acre.
4. When closing a wastewater treatment lagoon with a design treatment capacity equal or less than 150 persons, the residuals are considered “septage” under the similar treatment works” definition. See WQ 422. Under the septage category, residuals may be left in place as follows:
  - a. Testing for metals or fecal coliform is not required.
  - b. If the wastewater treatment lagoon has been in use for less than 15 years, mix lime with the sludge at the rate of 50 pounds of hydrated lime per 1000 gallons (134 cubic feet) of sludge.
  - c. The amount of sludge that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. 100 dry tons/acre of sludge may be left in the basin without testing for nitrogen. If more than 100 dry tons/acre will be left in the lagoon, test for nitrogen and determine the PAN in accordance with WQ 426. Allowable PAN loading is 300 pounds/acre.
5. Residuals left within the lagoon shall be mixed with soil on at least a 1 to 1 ratio, the lagoon berms shall be demolished, and the site shall be graded and vegetated so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
6. Lagoon closure activities shall obtain a storm water permit for land disturbance activities that equal or exceed five acres in accordance with 10 CSR 20-6.200.
7. If sludge exceeds agricultural loading rates under Section H or I, a landfill permit or solid waste disposal permit shall be obtained to authorize on-site sludge disposal under the Missouri Solid Waste Management Law and regulations per 10 CSR 80, and the permittee must comply with the surface disposal requirements under 40 CFR 503, Subpart C.

### SECTION J – MONITORING FREQUENCY

1. At a minimum, sludge or biosolids shall be tested for volume and percent total solids on a frequency that will accurately represent sludge quantities produced and disposed.
2. Testing for land application is listed under Section H, Subsection 6 of these standard conditions (see WQ 423). Once per year is the minimum test frequency. Additional testing shall be performed for each 100 dry tons of sludge generated or stored during the year.
3. Additional testing may be required in the special conditions or other sections of the permit. Permittees receiving industrial wastewater may be required to conduct additional testing upon request from the department.
4. Monitoring requirements shall be performed in accordance with, “POTW Sludge Sampling and Analysis Guidance Document”, United States Environmental Protection Agency, August 1989, and subsequent revisions.

## SECTION K – RECORD KEEPING AND REPORTING REQUIREMENTS

1. The permittee shall maintain records on file at the facility for at least five years for the items listed in these Standard Conditions and any additional items in the Special Conditions section of this permit. This shall include dates when the sludge facility is checked for proper operation, records of maintenance and repairs and other relevant information.
2. Reporting Period
  - a. By January 28<sup>th</sup> of each year, an annual report shall be submitted for the previous calendar year period for all mechanical wastewater treatment facilities, sludge lagoons, and sludge or biosolids disposal facilities.
  - b. Permittees with wastewater treatment lagoons shall submit the above annual report only when sludge or biosolids are removed from the lagoon during the report period or when the lagoon is closed.
3. Report Forms. The annual report shall be submitted on report forms provided by the department or equivalent forms approved by the department.
4. Report shall be submitted as follows:  
Major facilities (those serving 10,000 persons or 1 million gallons per day) shall report to both the department and EPA. Other facilities need to report only to the department. Reports shall be submitted to the addresses listed as follows:

DNR regional office listed in your permit  
(See cover letter of permit)

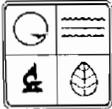
EPA Region VII  
Water Compliance Branch (WACM)  
Sludge Coordinator  
901 N 5<sup>th</sup> Street  
Kansas City, KS 66101

5. Annual Report Contents. The annual report shall include the following:
  - a. Sludge/biosolids testing performed. Include a copy or summary of all test results, even if not required by this permit.
  - b. Sludge or Biosolids quantity shall be reported as dry tons for quantity generated by the wastewater treatment facility, the quantity stored on site at end of year, and the quantity used or disposed.
  - c. Gallons and % solids data used to calculate the dry ton amounts.
  - d. Description of any unusual operating conditions.
  - e. Final disposal method, dates, and location, and person responsible for hauling and disposal.
    - (1) This must include the name, address and permit number for the hauler and the sludge facility. If hauled to a municipal wastewater treatment facility, sanitary landfill, or other approved treatment facility, give the name and permit number of that facility.
    - (2) Include a description of the type of hauling equipment used and the capacity in tons, gallons, or cubic feet.
  - f. Contract Hauler Activities.  
If contract hauler, provide a copy of a signed contract or billing receipts from the contractor. Permittee shall require the contractor to supply information required under this permit for which the contractor is responsible. The permittee shall submit a signed statement from the contractor that he has complied with the standards contained in this permit, unless the contract hauler has a separate sludge disposal or biosolids use permit.
  - g. Land Application Sites.
    - (1) Report the location of each application site, the annual and cumulative dry tons/acre for each site, and the landowners name and address. The location for each spreading site shall be given as legal description for nearest ¼, ¼, Section, Township, Range, and County, or as latitude and longitude.
    - (2) If biosolids application exceeds 2 dry tons/acre/year, report biosolids nitrogen results. Plant Available Nitrogen (PAN) in pounds/acre, crop nitrogen requirement, available nitrogen in the soil prior to biosolids application, and PAN calculations for each site.
    - (3) If the “Low Metals” criteria is exceeded, report the annual and cumulative pollutant loading rates in pounds per acre for each applicable pollutant, and report the percent of cumulative loading which has been reached at each site.
    - (4) Report the method used for compliance with pathogen and vector attraction requirements.
    - (5) Report soil test results for pH, CEC, and phosphorus. If none was tested during the year, report the last date when tested and results.

RECEIVED

MO 9/11/2011

11/2/2011



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM  
FORM B: APPLICATION FOR OPERATING PERMIT FOR FACILITIES THAT RECEIVE  
PRIMARILY DOMESTIC WASTE AND HAVE A DESIGN FLOW LESS THAN OR  
EQUAL TO 100,000 GALLONS PER DAY

| FOR AGENCY USE ONLY |           |
|---------------------|-----------|
| CHECK NUMBER        | 1788      |
| DATE RECEIVED       | 11/2/2011 |
| FEE SUBMITTED       | 12,000.00 |

PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM

1. THIS APPLICATION IS FOR:

- An operating permit for a new or unpermitted facility. Construction Permit # CP0001601  
(Please include completed antidegradation review or request for antidegradation review, see instructions)
- A site-specific operating permit renewal: Permit #MO- \_\_\_\_\_ Expiration Date \_\_\_\_\_
- A site-specific operating permit modification: Permit #MO- \_\_\_\_\_ Reason: \_\_\_\_\_
- General permit (MOGD - Non POTWs discharging < 50,000 GPD): Permit #MO- \_\_\_\_\_ Expiration Date \_\_\_\_\_

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

2. FACILITY

|                                                                                                                                                                                       |             |                                 |              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|---------------------------------|--------------|
| NAME                                                                                                                                                                                  |             | TELEPHONE NUMBER WITH AREA CODE |              |
| <u>River Downs West Homeowners Association</u>                                                                                                                                        |             | <u>417 725-3969</u>             |              |
| ADDRESS (PHYSICAL)                                                                                                                                                                    | CITY        | STATE                           | ZIP CODE     |
| <u>1507 W. Potterfield Lot 11</u>                                                                                                                                                     | <u>Nixa</u> | <u>Mo</u>                       | <u>65714</u> |
| 2.1 Legal description: <u>NW 1/4, SW 1/4, NW 3/4, Sec. 24, T 28, R 22W</u> County <u>Christian</u>                                                                                    |             |                                 |              |
| 2.2 UTM Coordinates Easting (X): <u>470388</u> Northing (Y): <u>4104985</u><br>For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83) |             |                                 |              |
| 2.3 Name of receiving stream: <u>unnamed tributary to James River</u>                                                                                                                 |             |                                 |              |
| 2.4 Number of outfalls: <u>001</u> Wastewater outfalls: <u>001</u> Stormwater outfalls: <u>0</u> Instream monitoring sites: <u>0</u>                                                  |             |                                 |              |

3. OWNER

|                                                                                                                                                                  |              |               |              |                                 |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|---------------|--------------|---------------------------------|--|
| NAME                                                                                                                                                             |              | EMAIL ADDRESS |              | TELEPHONE NUMBER WITH AREA CODE |  |
| <u>Christian County</u>                                                                                                                                          |              |               |              | <u>417 581-2112</u>             |  |
| ADDRESS                                                                                                                                                          | CITY         | STATE         | ZIP CODE     |                                 |  |
| <u>100 Church St. Room 100</u>                                                                                                                                   | <u>Ozark</u> | <u>Mo</u>     | <u>65721</u> |                                 |  |
| 3.1 Request review of draft permit prior to public notice? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>                                   |              |               |              |                                 |  |
| 3.2 Are you a publicly owned treatment works? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>                                                |              |               |              |                                 |  |
| 3.3 Are you a privately owned treatment works? YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>                                               |              |               |              |                                 |  |
| 3.4 Are you a privately owned treatment facility regulated by the Public Service Commission? YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> |              |               |              |                                 |  |

4. CONTINUING AUTHORITY: Permanent organization that will serve as the continuing authority for the operation, maintenance and modernization of the facility.

|                                          |             |               |              |                                 |  |
|------------------------------------------|-------------|---------------|--------------|---------------------------------|--|
| NAME                                     |             | EMAIL ADDRESS |              | TELEPHONE NUMBER WITH AREA CODE |  |
| <u>River Downs West Homeowners Assc.</u> |             |               |              | <u>417 725-3969</u>             |  |
| ADDRESS                                  | CITY        | STATE         | ZIP CODE     |                                 |  |
| <u>PO Box 110</u>                        | <u>Nixa</u> | <u>Mo</u>     | <u>65714</u> |                                 |  |

If the continuing authority is different than the owner, please include a copy of the contract agreement between the two parties and a description of the responsibilities of both parties within the agreement.

5. OPERATOR

|                            |  |                                 |  |                    |  |
|----------------------------|--|---------------------------------|--|--------------------|--|
| NAME                       |  | TITLE                           |  | CERTIFICATE NUMBER |  |
| <u>Michael C. Burros</u>   |  | <u>operator</u>                 |  | <u>12830</u>       |  |
| EMAIL ADDRESS              |  | TELEPHONE NUMBER WITH AREA CODE |  |                    |  |
| <u>MIKE B375@yahoo.com</u> |  | <u>417 837-9211</u>             |  |                    |  |

6. FACILITY CONTACT

|                            |             |                                 |              |  |  |
|----------------------------|-------------|---------------------------------|--------------|--|--|
| NAME                       |             | TITLE                           |              |  |  |
| <u>Michael C. Burros</u>   |             | <u>operator</u>                 |              |  |  |
| EMAIL ADDRESS              |             | TELEPHONE NUMBER WITH AREA CODE |              |  |  |
| <u>MIKE B375@yahoo.com</u> |             | <u>417 837-9211</u>             |              |  |  |
| ADDRESS                    | CITY        | STATE                           | ZIP CODE     |  |  |
| <u>2097 N. Preakness</u>   | <u>Nixa</u> | <u>Mo</u>                       | <u>65714</u> |  |  |

## **7. DESCRIPTION OF FACILITY**

**7.1 Process Flow Diagram or Schematic:** Provide a diagram showing the processes of the treatment plant. Show all of the treatment units, including disinfection (e.g. – chlorination and dechlorination), influents and outfalls. Indicate any treatment process changes in the routing of wastewater during dry weather and peak wet weather. Include a brief narrative description of the diagram. Attach sheets as necessary.

**7.2** Attach an aerial photograph or USGS topographic map showing the location of the facility and outfall.

**8. ADDITIONAL FACILITY INFORMATION**

8.1 Facility SIC code: 4952 Discharge SIC code: 4952

8.2 Number of people presently connected or population equivalent (P.E.) 255 Design P.E. 255

8.3 Connections to the facility:  
 Number of units presently connected:  
 Homes 67 Trailers 0 Apartments 0 Other (including industrial) None  
 Number of commercial establishments: 0

8.4 Design flow: 19,000 Gal. Actual flow: 11,000 Gal.

8.5 Will discharge be continuous through the year?  Yes  No (If yes, explain.)  
 Discharge will occur during the following months:

How many days of the week will discharge occur? 7 days

8.6 Is industrial waste discharged to the facility? Yes  No

8.7 Does the facility accept or process leachate from landfills? Yes  No

8.8 Is wastewater land applied? Yes  No   
 If yes, is Form I attached? Yes  No

8.9 Does the facility discharge to a losing stream or sinkhole? Yes  No

8.10 Has a wasteload allocation study been completed for this facility? Yes  No

**9. LABORATORY CONTROL INFORMATION**

## LABORATORY WORK CONDUCTED BY PLANT PERSONNEL

Lab work conducted outside of plant.  Yes  No

Push-button or visual methods for simple test such as pH, settleable solids.  Yes  No

Additional procedures such as dissolved oxygen, chemical oxygen demand, biological oxygen demand, titrations, solids, volatile content.  Yes  No

More advanced determinations such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc. Yes  No

Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph. Yes  No

**10. COLLECTION SYSTEM**

10.1 Length of pipe in the sewer collection system? \_\_\_\_\_ Feet, or 7 Miles (either unit is appropriate)

10.2 Does significant infiltration occur in the collection system? Yes  No   
 If yes, briefly explain any steps underway or planned to minimize inflow and infiltration:

**11. BYPASSING**

Does any bypassing occur in the collection system or at the treatment facility? Yes  No   
 If yes, explain:

| 12. SLUDGE HANDLING, USE AND DISPOSAL                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                                                   |                                                                                                         |                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| 12.1                                                                                                                                                                                                                                                                                                                                                                                                    | Is the sludge a hazardous waste as defined by 10 CSR 25? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No                                                                                                                                                      |                                                                                                         |                                                        |
| 12.2                                                                                                                                                                                                                                                                                                                                                                                                    | Sludge production, including sludge received from others: <input checked="" type="checkbox"/> Design dry tons/year <input type="checkbox"/> Actual dry tons/year                                                                                                                  |                                                                                                         |                                                        |
| 12.3                                                                                                                                                                                                                                                                                                                                                                                                    | Capacity of sludge holding structures:<br>Sludge storage provided: <u>yes</u> cubic feet; <u>2-4</u> days of storage; <u>4%</u> average percent solids of sludge;<br><input type="checkbox"/> No sludge storage is provided. <input type="checkbox"/> Sludge is stored in lagoon. |                                                                                                         |                                                        |
| 12.4                                                                                                                                                                                                                                                                                                                                                                                                    | Type of Storage:                                                                                                                                                                                                                                                                  | <input checked="" type="checkbox"/> Holding tank                                                        | <input type="checkbox"/> Building                      |
|                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                   | <input type="checkbox"/> Basin                                                                          | <input type="checkbox"/> Lagoon                        |
|                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                   | <input type="checkbox"/> Concrete Pad                                                                   | <input type="checkbox"/> Other (Please describe) _____ |
| 12.5                                                                                                                                                                                                                                                                                                                                                                                                    | Sludge Treatment:                                                                                                                                                                                                                                                                 | <input type="checkbox"/> Anaerobic Digester                                                             | <input type="checkbox"/> Lagoon                        |
|                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                   | <input checked="" type="checkbox"/> Storage Tank                                                        | <input type="checkbox"/> Aerobic Digester              |
|                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                   | <input type="checkbox"/> Lime Stabilization                                                             | <input type="checkbox"/> Air or Heat Drying            |
|                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                   |                                                                                                         | <input type="checkbox"/> Composting                    |
|                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                   |                                                                                                         | <input type="checkbox"/> Other (Attach description)    |
| 12.6                                                                                                                                                                                                                                                                                                                                                                                                    | Sludge Use or Disposal:                                                                                                                                                                                                                                                           |                                                                                                         |                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                         | <input type="checkbox"/> Land Application                                                                                                                                                                                                                                         | <input type="checkbox"/> Surface Disposal (Sludge Disposal Lagoon, Sludge held for more than two years) |                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                         | <input checked="" type="checkbox"/> Contract Hauler                                                                                                                                                                                                                               | <input type="checkbox"/> Hauled to Another treatment facility                                           |                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                         | <input type="checkbox"/> Incineration                                                                                                                                                                                                                                             | <input type="checkbox"/> Sludge Retained in Wastewater treatment lagoon                                 |                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                         | <input type="checkbox"/> Solid waste landfill                                                                                                                                                                                                                                     |                                                                                                         |                                                        |
| 12.7                                                                                                                                                                                                                                                                                                                                                                                                    | Person responsible for hauling sludge to disposal facility:                                                                                                                                                                                                                       |                                                                                                         |                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                         | <input type="checkbox"/> By applicant <input checked="" type="checkbox"/> By others (complete below)                                                                                                                                                                              |                                                                                                         |                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                         | NAME                                                                                                                                                                                                                                                                              | EMAIL ADDRESS                                                                                           |                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                         | <u>Greer's Pumping + Septic</u>                                                                                                                                                                                                                                                   | <u>gncbrown7@gmail.com</u>                                                                              |                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                         | ADDRESS                                                                                                                                                                                                                                                                           | CITY                                                                                                    | STATE ZIP CODE                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                         | <u>1241 S. Nicholas Rd.</u>                                                                                                                                                                                                                                                       | <u>Nixa</u>                                                                                             | <u>MO 65714</u>                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                         | CONTACT PERSON                                                                                                                                                                                                                                                                    | TELEPHONE NUMBER WITH AREA CODE                                                                         | PERMIT NO.                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                   | <u>417 732-6426</u>                                                                                     | MO-                                                    |
| 12.8                                                                                                                                                                                                                                                                                                                                                                                                    | Sludge use or disposal facility                                                                                                                                                                                                                                                   |                                                                                                         |                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                         | <input type="checkbox"/> By applicant <input checked="" type="checkbox"/> By others (Please complete below.)                                                                                                                                                                      |                                                                                                         |                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                         | NAME                                                                                                                                                                                                                                                                              | EMAIL ADDRESS                                                                                           |                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                         | <u>Greer's Pumping + Septic</u>                                                                                                                                                                                                                                                   | <u>gncbrown7@gmail.com</u>                                                                              |                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                         | ADDRESS                                                                                                                                                                                                                                                                           | CITY                                                                                                    | STATE ZIP CODE                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                         | <u>1241 S. Nicholas Rd.</u>                                                                                                                                                                                                                                                       | <u>Nixa</u>                                                                                             | <u>MO 65714</u>                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                         | CONTACT PERSON                                                                                                                                                                                                                                                                    | TELEPHONE NUMBER WITH AREA CODE                                                                         | PERMIT NO.                                             |
|                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                                                   | <u>417 732-6426</u>                                                                                     | MO-                                                    |
| 12.9                                                                                                                                                                                                                                                                                                                                                                                                    | Does the sludge or biosolids disposal comply with federal sludge regulations under 40 CFR 503?                                                                                                                                                                                    |                                                                                                         |                                                        |
|                                                                                                                                                                                                                                                                                                                                                                                                         | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Please explain)                                                                                                                                                                                              |                                                                                                         |                                                        |
| 13. CERTIFICATION                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                                                   |                                                                                                         |                                                        |
| I certify that I am familiar with the information contained in the application, that to the best of my knowledge and belief such information is true, complete and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions, subject to any legitimate appeal available to applicant under the Missouri Clean Water Law. |                                                                                                                                                                                                                                                                                   |                                                                                                         |                                                        |
| NAME (TYPE OR PRINT)                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                                   | OFFICIAL TITLE                                                                                          | TELEPHONE NUMBER WITH AREA CODE                        |
| <u>Richard Eddy</u>                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                   | <u>Pres.</u>                                                                                            | <u>417 725-3969</u>                                    |
| SIGNATURE                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                   | DATE SIGNED                                                                                             |                                                        |
| <u>Richard Eddy</u>                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                   | <u>1-7-15</u>                                                                                           |                                                        |