



**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective **upon issuance** and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u>						
Flow	GPD	*		*	once/quarter**	24 hr. estimate
Aluminum, Total	mg/L	*		*	once/quarter**	grab
Beryllium, Total	mg/L	*		*	once/quarter**	grab
Lead, Total	mg/L	*		*	once/quarter**	grab
Cadmium, Total	mg/L	*		*	once/quarter**	grab
Zinc, Total	mg/L	*		*	once/quarter**	grab
Setteable Solids	ml/L/hr	1.0		0.5	once/quarter**	grab
Total Suspended Solids	mg/L	110		70	once/quarter**	grab
Total Phosphorus as P	mg/L	1.0		1.0	once/quarter**	grab
Total Nitrogen	mg/L	*		*	once/quarter**	grab
Fluoride	mg/L	*		*	once/quarter**	grab
Nitrate-Nitrite (as N)	mg/L	*		*	once/quarter**	grab
Sulfate (as SO4)	mg/L	*		*	once/quarter**	grab
Barium, Total	mg/L	*		*	once/quarter**	grab
Iron, Total	mg/L	*		*	once/quarter**	grab
Magnesium, Total	mg/L	*		*	once/quarter**	grab
pH – Units	SU	***		***	once/quarter**	grab
Rainfall****	inches	*		*	daily	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE **January 28, 2010**. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

**B. STANDARD CONDITIONS**

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I, & II, III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

\* Monitoring requirement only.

\*\* **All samples shall be collected from a discharge resulting from a precipitation event greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable precipitation event. Sampling shall occur once per quarter in the periods of January through March, April through June, July through September, and October through December, please note that monitoring reports shall be submitted no later than the 28<sup>th</sup> day of the month following the monitoring period (April 28<sup>th</sup>, July 28<sup>th</sup>, October 28<sup>th</sup>, and January 28<sup>th</sup>, respectively). If a precipitation event does not occur within the reporting period, report as no discharge.** For tracking purposes samples taken anytime in the first quarter (January through March) will be recorded by the department as though they were taken in March, samples taken anytime in the second quarter (April through June) will be recorded by the department as though they were taken in June, samples taken anytime in the third quarter (July through September) will be recorded by the department as though they were taken in September, and samples taken in the fourth quarter (October through December) will be recorded by the department as though they were taken in December.

\*\*\* pH is measured in pH units and is not to be averaged. The pH for all facilities except lagoons is limited to the range of 6.5-9.0 pH units.

\*\*\*\* The total precipitation for the event sampled shall be reported.

C. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
  - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
    - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
    - (2) controls any pollutant not limited in the permit.
  - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
  - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

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

2. All outfalls must be clearly marked in the field.
3. Changes in Discharges of Toxic Substances

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

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
  - (1) One hundred micrograms per liter (100 µg/L);
  - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
  - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
  - (4) The level established in Part A of the permit by the Director.
- (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
- (c) Toxic pollutants shall consist of , but are not limited to, pollutants listed in 10CSR-20, Chapter 7, Table A, or 40 CFR 122, Appendix D.

4. Report as no-discharge when a discharge does not occur during the report period.

C. SPECIAL CONDITIONS (continued)

5. Water Quality Standards

- (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
  - (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
    - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
    - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
    - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
    - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
    - (5) There shall be no significant human health hazard from incidental contact with the water;
    - (6) There shall be no acute toxicity to livestock or wildlife watering;
    - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
    - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.
6. The SWPPP must be prepared and implemented within 30 days of permit issuance for the water treatment plant residuals disposal facility. The SWPPP must be kept on-site and should not be sent to DNR unless specifically requested. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following document:

Storm Water Management For Industrial Activities, Developing Pollution Prevention Plans and Best Management Activities, (Document number EPA 832-R-92-006) published by the United States Environmental Protection Agency (USEPA) in September 1992.

The SWPPP must include the following:

- (a) An assessment of all storm water discharges associated with vehicle maintenance (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning, and chemical deicing/anti-icing activities. This must include a list of potential contaminants and an annual estimate of amounts that will be used in the described activities.
  - (b) A listing of specific Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter storm water. Minimum BMPs are listed in SPECIAL CONDITIONS #7 below.
  - (c) The SWPPP must include a schedule for a bi-monthly site inspection and a brief written report. The inspections must include observation and evaluation of BMP effectiveness, deficiencies, and corrective measures that will be taken. Deficiencies must be corrected within seven days. Inspection reports must be kept on site with the SWPPP. These must be made available to DNR personnel upon request.
  - (d) A provision for designating an individual to be responsible for environmental matters.
  - (e) A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted on request of DNR.
7. Permittee shall adhere to the following minimum Best Management Practices:
- (a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of storm water from these substances.
  - (b) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.

C. SPECIAL CONDITIONS (continued)

- (c) Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to storm water or provide other prescribed BMP's such as plastic lids and/or portable spill pans to prevent the commingling of storm water with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
  - (d) Provide good housekeeping practices on the site to keep trash from entry into waters of the state.
  - (e) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property. This could include the use of straw bales, silt fences, or sediment basins, if needed, to comply with effluent limits.
8. Land application of sludge shall not exceed the most restrictive of the following criteria:
- (a) Crop nitrogen fertilizer requirements
  - (b) Effective Neutralizing Material (ENM) amount to raise soil pH soil test recommendations for crop needs
  - (c) Metal limitations in University Extension publication WQ 425, Tables 3 & 4
  - (d) Pesticide amounts not to exceed 10 percent of the application rate on the pesticide label
9. Sludges land applied shall be tested at least once per year during land application periods for Total Kjeldahl Nitrogen, Arsenic, Aluminum, Cadmium, Chromium, Copper, Lead, Mercury, Molybdenum, Nickel, Selenium, and Zinc. Also, test for any pesticides or other significant contaminants present in the raw water supply. Report all results as mg/Kg on dry weight basis.
10. In addition, lime sludge that is land applied shall be tested at least once per year for Effective Neutralizing Material (ENM) per MU Guide G9102, Liming Missouri Soils and G9107, MO Limestone Quality: What is ENM?, published by the University of Missouri Extension Service.
11. Soil tests shall be conducted at least once per year before sludge application, during each year when water treatment plant sludge is to be land applied.
12. Sludge tests and soil tests shall be maintained by the permittee for at least five years.
13. Lime sludge shall not be land applied if the soil pH exceeds pH 7.5 (salt based test) or pH 8.0 (water based test).
14. Land application for sludges containing aluminum additives (alum sludge, lime/alum sludge, etc.) shall meet the following additional requirements:
- (a) During years that sludge is land applied, sludge and soil must be tested once per year for total aluminum concentration on a dry weight basis and for soil pH.
  - (b) Land application sites shall be maintained at a soil pH between pH 5.5 to 7.5 based on the salt based pH test or 6.0 to 8.0 for water based test.
  - (c) Land application of sludge shall not exceed cumulative aluminum loadings of 4,000 pounds aluminum per acres above soil background levels. Background soil levels of aluminum shall be based on soil testing of the site prior to sludge application or testing of similar soils in the immediate vicinity.
  - (d) Permittees do not need to keep records of cumulative aluminum loading, if the sludge contains less than 40,000 ppm total aluminum on a dry weight basis and sludge application rates do not exceed 2 dry tons per acres per year (320 cubic feet/acre at 20% solids content).
  - (e) Sludge that contains more than 40,000 ppm total aluminum on a dry weight basis may be applied to land with established vegetation or to land without established vegetation but with less than a 5% slope, or shall be incorporated into the ground by discing, plowing, or equivalent methods within two weeks after land application. Under no circumstances shall application result in sludge entering waters of the state.
15. Land application shall not occur within 300 feet of a well, sinkhole, or losing stream; 150 feet from dwellings; and 50 feet from the property line, drainage ditch, watercourse, or stream bank, including intermittently flowing streams.
16. A vegetative cover shall be maintained on the land application site. The vegetative cover will be replaced as soon as practicable following or placement of a new layer of residuals. Placement of residuals should coincide with appropriate seasons for reestablishment of the vegetative cover. If a vegetative cover cannot be maintained on the site the permit holder shall construct a sedimentation basin to provide primary treatment of the stormwater leaving the site. The basin shall be constructed within 180 days of notice by the department that a basin is necessary.

C. SPECIAL CONDITIONS (continued)

17. The department may require the submittal of a site-specific sludge management plan where deemed appropriate to protect the environment.
18. An annual report shall be submitted by **January 28<sup>th</sup>**, and shall be for the reporting period of January 1<sup>st</sup> to December 31<sup>st</sup> if there was no discharge of wastewater during the year, the annual report shall state “no-discharge”. The annual report shall also contain a summary of sludge disposal activities, including amount of sludge generated, amount stored, amount disposed and disposal method. If sludge is land applied, indicate the number of acres used the application rate in dry tons/acre, the soil pH, and the pounds of ENM per ton of sludge. If sludge containing aluminum, metals or pesticides is land applied, also indicate the concentration in sludge and soil in ppm dry weight for each field, including the background soil concentration.
19. Residuals from sources other than the Blackman Water Treatment Plant may not be disposed of at this facility.

D. TERMINATION

Before this permit may be terminated, a permanent vegetative cover shall be fully established over 100% of the area, absent rill erosion, slumping, and gullies, and slopes shall be no greater than 25 percent. The permit holder shall amend the residuals as necessary to facilitate establishment of vegetation as described above. The permit holder shall submit form J, “request for Termination of a State Operating Permit”. The permit may be terminated after the department has determined that there is no further potential for significant erosion on the site and that a permit is no longer needed.

**Missouri Department of Natural Resources  
Statement of Basis  
Blackman Water Treatment Plant  
MSOP #: MO-0130486  
Greene 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.

**Part I – Facility Information**

Facility Type: (IND)  
Facility SIC Code(s): 4941

Facility Description:

Water treatment plant residuals disposal facility.  
Storm water discharge only.

**OUTFALL(S) TABLE:**

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	Dependent upon precipitation	Primary	Water Treatment Plant	1.83

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

Misissng DMR – 5/31/05.

No Discharge – 11/30/04, 2/28/05, 8/31/05, 11/30/05, 2/28/06, 5/31/06, 8/31/06, 11/30/06, 2/28/07, 5/31/07, 8/31/07, 11/30/07, 2/29/08, 5/31/08, 8/31/08, 11/30/08, 2/28/09.

Comments: None.

**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:

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

**Part III – Receiving Stream Information**

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

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

- 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**
Unnamed Tributary to the James River	U		General Criteria, losing	11010002	Ozark / White
James River	P	02365	General Criteria, LWW, AQL, CLF, WBC-A, SCR		

\* - 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.

Not Applicable ;

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

**ANTI-BACKSLIDING:**

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

- 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.

Not Applicable ;

Renewal no degradation proposed and no further review necessary.

**APPLICABLE PERMIT PARAMETERS:**

Effluent parameters for conventional, non-conventional, and toxic pollutants have been obtained from the previous NPDES operating permit for this facility, technology based effluent limits, and from appropriate sections of the renewal 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.

Not Applicable

This condition is not applicable to the permittee for this specific facility.

**COMPLIANCE AND ENFORCEMENT:**

Action taken by the department to resolve violations of the Missouri Clean Water Law, its implementing regulations, and/or any terms and condition of an operating permit.

Not Applicable ;

The permittee/facility is not under enforcement action and is considered to be in compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and condition of an operating permit.

**PRETREATMENT PROGRAM:**

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

Not Applicable ;

At this time, the permittee is not required to implement and enforce a 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 ;

Influent monitoring is not being required to determine percent removal.

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

Sanitary Sewer Systems (SSSs) are municipal wastewater collection system that convey domestic, commercial, and industrial wastewater, and limited amounts of infiltrated groundwater and storm water (i.e. I&I), to a POTW. SSSs are not designed to collect large amounts of storm water runoff from precipitation events.

Untreated or partially treated discharges from SSSs are commonly referred to as SSOs. SSOs have a variety of causes including blockages, line breaks, sewer defects that allow excess storm water and ground water to overload the system, lapses in sewer system operation and maintenance, inadequate sewer design and construction, power failures, and vandalism. A SSOs is defined as an untreated or partially treated sewage release from a SSS. SSOs can occur at any point in an SSS, during dry weather or wet weather. SSOs include overflows that reach waters of the state. SSOs also include overflows out of manholes and onto city streets, sidewalks, and other terrestrial locations. SSSs can back up into buildings, including private residences. When sewage backups are caused by problems in the publicly-owned portion of an SSS, they are considered SSOs.

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 ;

There is no Schedule of Compliance in the permit.

**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.

Applicable ;

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

**WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:**

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

Not Applicable ;

Wasteload allocations were not calculated.

**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.

**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 ;

Municipalities, POTWs, and Industrials do not qualify for Adjusted Design flows.

**Outfall #001 – Main Facility Outfall**

**EFFLUENT LIMITATIONS TABLE:**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	NO	S
ALUMINUM, TOTAL	MG/L	1	*		*	NO	S
BERYLLIUM, TOTAL	MG/L	1	*		*	NO	S
LEAD, TOTAL	MG/L	1	*		*	NO	S
CADMIUM, TOTAL	MG/L	1	*		*	NO	S
ZINC, TOTAL	MG/L	1	*		*	NO	S
SETTLABLE SOLIDS	MG/L	1	1.0		0.5	NO	1.0 MONTHLY
TOTAL SUSPENDED SOLIDS	MG/L	1	110		70	NO	S
TOTAL PHOSPHORUS	MG/L	1	1.0		1.0	NO	S
TOTAL NITROGEN	MG/L	1	*		*	NO	S
FLUORIDE	MG/L	1	*		*	YES	NONE
NITRATE-NITRITE (AS N)	MG/L	1	*		*	YES	NONE
SULFATE (AS SO <sub>4</sub> )	MG/L	1	*		*	YES	NONE
BARIIUM, TOTAL	MG/L	1	*		*	YES	NONE
IRON, TOTAL	MG/L	1	*		*	YES	NONE
MAGNESIUM, TOTAL	MG/L	1	*		*	YES	NONE
PH (S.U.)	SU	1	6.5 – 9.0		6.5 – 9.0	YES	6.0 – 9.0
RAINFALL	INCHES	1	*		*	YES	NONE
WHOLE EFFLUENT TOXICITY (WET) TEST	Please see WET Test in the Derivation and Discussion Section below.						
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

**\* - Monitoring requirement only**

\*\*\* - # of colonies/100mL; the Monthly Average for Fecal Coliform 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.

**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.

**Settleable Solids.**

For discharges into losing streams the settleable solids are 0.5 mL/L/hr. This limit is the same for those discharges to losing streams in land disturbance permits. The daily limit is obtain by the following calculations:  $(0.5 \text{ AML})/(\text{LTAc}/1.5524 \text{ AML})(3.114/\text{LTAc}) = 1.0 \text{ mg/L}$  daily maximum. This method is outlined in SWRO-WP17-01

**Temperature.** Monitoring requirement due to the toxicity of Ammonia varies by temperature.

**Total Phosphorus**

TMDL for Phosphorus states discharges shall be at 1.0 mg/L

**Aluminum, Total Recoverable** Monitoring requirement only

**Cadmium, Total Recoverable** Monitoring requirement only

**Lead, Total Recoverable** Monitoring requirement only

**Zinc, Total Recoverable** Monitoring requirement only

**Fluoride** Monitoring requirement only

**Nitrate-Nitrite (as N)** Monitoring requirement only

**Sulfate (as SO4)** Monitoring requirement only

**Barium, Total** Monitoring requirement only

**Iron, Total** Monitoring requirement only

**Magnesium, Total** Monitoring requirement only

**Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
FLOW	ONCE/QUARTER	QUARTERLY
ALUMINUM, TOTAL	ONCE/QUARTER	QUARTERLY
BERYLLIUM, TOTAL	ONCE/QUARTER	QUARTERLY
LEAD, TOTAL	ONCE/QUARTER	QUARTERLY
CADMIUM, TOTAL	ONCE/QUARTER	QUARTERLY
ZINC, TOTAL	ONCE/QUARTER	QUARTERLY
SETTLABLE SOLIDS	ONCE/QUARTER	QUARTERLY
TOTAL SUSPENDED SOLIDS	ONCE/QUARTER	QUARTERLY
TOTAL PHOSPHORUS	ONCE/QUARTER	QUARTERLY
TOTAL NITROGEN	ONCE/QUARTER	QUARTERLY
FLUORIDE	ONCE/QUARTER	QUARTERLY
NITRATE – NITRITE (AS N)	ONCE/QUARTER	QUARTERLY
SULFATE (SO <sub>4</sub> )	ONCE/QUARTER	QUARTERLY
BARIUM, TOTAL	ONCE/QUARTER	QUARTERLY
IRON, TOTAL	ONCE/QUARTER	QUARTERLY
MAGNESIUM, TOTAL	ONCE/QUARTER	QUARTERLY
PH - UNITS	ONCE/QUARTER	QUARTERLY
RAINFALL	DAILY	QUARTERLY

**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:** August 21, 2009

Tara Massey  
WP Permitting and Assistance Unit  
(417) 891-4300  
tara.massey@dnr.mo.gov