STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

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

Permit No.:	MO0094021
Owner:	Missouri Department of Transportation (MODOT)
Owner's Address:	PO Box 160, Sikeston, MO 63801
Continuing Authority:	Same as above
Continuing Authority's Address:	Same as above
Facility Name:	MODOT I-55 Rest Area - Fruitland
Facility Address:	I-55 Southbound Lanes, Fruitland, MO 63701
Legal Description:	SW ¼, NW ¼, Sec. 1, T32N, R12E, Cape Girardeau County
Latitude/Longitude:	+3729214/-08940255
Receiving Stream:	Unnamed Tributary to Horrell Creek (U)
First Classified Stream and ID:	Horrell Creek (C) (02212)
USGS Basin & Sub-watershed No.:	(07140107-050005)

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 – Rest Area - SIC #7299 **CERTIFIED OPERATOR NOT REQUIRED**
Three cell lagoon/sludge is retained in lagoon.
Design population equivalent is 190.
Design flow is 12,154 gallons per day.
Actual flow is 12,150 gallons per day.
Design sludge production is 2.9 dry tons/year.
This permit authorizes only wastewater, including storm water, 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 RSMo Section 644.051.6 and 621.250, 10 CSR 20-6.020, and 10 CSR 20-1.020.

January 30, 2009
Effective Date

Joseph P. Bindbeutel, Acting Director
Department of Natural Resources

January 29, 2014
Expiration Date

Gary L. Gaines, P.E., Director, Southeast Regional Office

MO 780-0041 (10-93)

A. INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

PERMIT NUMBER MO-0094021

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

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Flow	MGD	*		*	once/quarter**	24 hr. estimate
Biochemical Oxygen Demand$_5$	mg/L		65	45	once/quarter**	grab
Total Suspended Solids	mg/L		120	80	once/quarter**	grab
pH – Units	SU	***		***	once/quarter**	grab
Ammonia as N	mg/L	*		*	once/quarter**	grab
Temperature	°C	*		*	once/quarter**	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE April 28, 2009. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

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

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Flow	MGD	*		*	once/quarter**	24 hr. estimate
Biochemical Oxygen Demand$_5$	mg/L		65	45	once/quarter**	grab
Total Suspended Solids	mg/L		120	80	once/quarter**	grab
pH – Units	SU	***		***	once/quarter**	grab
Ammonia as N	mg/L	*		*	once/quarter**	grab
Temperature	°C	*		*	once/quarter**	grab
Fecal Coliform****	#/100mL	1000		400	once/quarter**	grab
Chlorine, Total Residual (Note 1)	mg/L	0.017 (.13ML)		0.008 (.13ML)	once/quarter**	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE April 28, 2012. 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 & 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)

* Monitor and report.

**

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

*** pH is measured in pH units and is not to be averaged. The pH is to be maintained at or above 6.0 pH units.

**** Monitoring requirements for Fecal Coliform are applicable only during the recreational season from April 1 through October 31. The Monthly Average Limit for Fecal Coliform is expressed as a geometric mean and not an average.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

Note 1 – This permit contains a Total Residual Chlorine (TRC) limit.

(a) This effluent limit is below the minimum quantification level (ML) of the most common and practical EPA approved CLTRC methods. The department has determined the current acceptable ML for total residual chlorine to be 0.13 mg/L when using the DPD Colorimetric Method #4500 – CL G. from Standard Methods for the Examination of Waters and Wastewater. The permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to the minimum quantification level of 0.13 mg/L will be considered violations of the permit and values less than the minimum quantification level of 0.13 mg/L will be considered to be in compliance with the permit limitation. The minimum quantification level does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit.

(b) Disinfection is required year-round unless the permit specifically states that "Final limitations and monitoring requirements for Fecal Coliform are applicable only during the recreational season from April 1 through October 31." If your permit does not require disinfection during the non-recreational months, do not chlorinate in those months.

(c) Do not chemically dechlorinate **if it is not needed to meet the limits in your permit.**

(d) If no chlorine was used in a given sampling period, an actual analysis is not necessary. Simply report as "0 mg/L" TRC.

C. SPECIAL CONDITIONS

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

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

2. All outfalls must be clearly marked in the field.

3. Permittee will cease discharge by connection to areawide wastewater treatment system within 90 days of notice of its availability.

4. Changes in Discharges of Toxic Substances

   The permittee shall notify the Director as soon as it knows or has reason to believe:
   (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
      (1) One hundred micrograms per liter (100 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.

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

C. SPECIAL CONDITIONS (continued)

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

7. 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.

D. SCHEDULE OF COMPLIANCE

The final daily maximum and monthly average Fecal Coliform limits of 1000/100 ml and 400/100 ml, respectively, shall become effective within three years of the issuance date of this permit in accordance with the conditions below, or December 31, 2013, whichever comes first.

1) Within nine months from the issuance of the permit, the permittee shall submit a preliminary engineering report prepared by a registered professional engineer in the State of Missouri. The preliminary engineering report shall make recommendations to upgrade the wastewater treatment facility to include effluent disinfection equipment. (If a facility utilizes disinfection by chlorine, it may be required to dechlorinate the effluent.)
2) Within 18 months from the issuance of the permit and after Department approval of the preliminary engineering report, the permittee shall submit a construction permit application. The application shall include applicable fees, construction activity schedule, plans, and specifications in accordance with the approved preliminary engineering report.
3) The facility shall submit an interim progress report within two years of the issuance of the operating permit.
4) Upon completion of construction, the permittee shall submit a letter of authorization or statement of work complete signed by the owner and a licensed professional engineer in the State of Missouri.
5) If the permittee fails to meet any of the interim dates above, the permittee shall notify the Department in writing of the reason for non-compliance no later than 14 days following each interim date.

Missouri Department of Natural Resources
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO0094021
MODOT I-55 REST AREA - FRUITLAND

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a Factsheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (operating permit) listed below.

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

This Factsheet is for a Major ☐, Minor ☒, Industrial Facility ☐; Variance ☐;
Master General Permit ☐; General Permit Covered Facility ☐; and/or permit with widespread public interest ☐.

Part I – Facility Information

Facility Type: NON-POTW
Facility SIC Code(s): 4952

Facility Description:
Three cell lagoon/sludge is retained in lagoon

Application Date: 7/14/2008
Expiration Date: 1/22/2009
Last Inspection: 10/15/2002 In Compliance ☒; Non-Compliance ☐

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	0.018	Eq. to Sec.	Domestic	0.97

Legal Description: SW ¼, NW ¼, Sec. 1, T32N, R12E, Cape Girardeau County
Latitude/Longitude: +3729214/-08940255

Receiving Stream: Unnamed Tributary to Horrell Creek (U)
First Classified Stream and ID: Horrell Creek (C) (02212)
USGS Basin & Sub-watershed No.: (07140107-050005)

Water Quality History:
None.

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 1st classified receiving stream's beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Unnamed Trib to Horrell Creek	U	-	General	07140107	OUSFC
Horrell Creek	C	2212	LWW, AQL, WBC(B)***		

* - Irrigation (IRR), Livestock & Wildlife Watering (LWW), Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cool Water Fishery(CLF), Cold Water Fishery (CDF), Whole Body Contact Recreation (WBC), Secondary Contact Recreation (SCR), Drinking Water Supply (DWS), Industrial (IND), Groundwater (GRW).
** - Ecological Drainage Unit
*** - UAA has not been conducted.

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Unnamed Tributary to Horrell Creek (U)	0	0	0

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

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements recommended at this time.

Part IV – Rationale and Derivation of Effluent Limitations & Permit Conditions

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:

As per [10 CSR 20-7.015(4)(A)], discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

Not Applicable ☒;
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(l)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

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

ANTIDEGRADATION:
In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(2)], the department is to document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

☒ - Renewal no degradation proposed and no further review necessary.

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

BIO-SOLIDS, SLUDGE, & SEWAGE SLUDGE:
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.

Applicable (renewal and modifications to existing operating permits) ☒;
This facility has been approved to land apply as per Permit Standard Conditions III and a department approved bio-solids management plan.

COMPLIANCE AND ENFORCEMENT:
Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.

Not Applicable ☒;
The permittee/facility is not currently under Water Protection Program enforcement action.

PRETREATMENT PROGRAM:
The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a Publicly Owned Treatment Works [40 CFR 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_5) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs). Please see the United States Environmental Protection Agency's (EPA) website for interpretation of percent removal requirements for National Pollutant Discharge Elimination System Permit Application Requirements for Publicly Owned Treatment Works and Other Treatment Works Treating Domestic Sewage @ www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-04/w18866.htm

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

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

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

SCHEDULE OF COMPLIANCE (SOC):
A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit.

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

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

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

VARIANCE:
As per the Missouri Clean Water Law § 644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

Not Applicable ☒;
This operating permit is not drafted under premises of a petition for variance.

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:
As per [10 CSR 20-2.010(78)], the amount of pollutant each discharger is allowed by the department to release into a given stream after the department has determined 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.

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.

Part V – Effluent Limits Determination

Outfall #001 – Main Facility Outfall
EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	NO	S
BOD_5	MG/L	1		65	45	NO	S
TSS	MG/L	1		120	80	NO	S
pH	SU	1	6+		6+	NO	S
TEMPERATURE	°C	1/8	*		*	YES	***
AMMONIA AS N	MG/L	2/3/5	*		*	YES	***
ESCHERICHIA COLI	**	1/2	Please see Escherichia Coli (E. coli) in the Derivation and Discussion Section below.				
FECAL COLIFORM	**	1/2	1000		400**	YES	***
CHLORINE, TOTAL RESIDUAL	MG/L	1/2	0.017		0.008	YES	***
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

Basis for Limitations Codes:

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

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_5)**. 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**. 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.**

- **Temperature.** Monitoring requirement due to the toxicity of Ammonia varies by temperature, (or give appropriate reason/justification – **remove this reminder.)**

- **Total Ammonia Nitrogen, Temperature.** Monitoring requirement only. Monitoring for temperature and ammonia are included to determine whether "reasonable potential" to exceed water quality standards exists after the discharge begins.

- ***Escherichia coli (E. coli)***. This facility may be required to have *E. coli* effluent limitations when Missouri adopts the implementation of the *E. coli* standards, as per [10 CSR 20-7.031(4)(A)].

- **Fecal Coliform**. Discharge shall not contain more than a monthly geometric mean of 400 colonies/100 mL and a daily maximum of 1000 colonies/100 mL during the recreational season (April 1 – October 31), please see the APPLICABLE DESIGNATION OF WATERS OF THE STATE sub-section of the **Receiving Stream Information.** Future renewals of the facility operating permit will contain effluent limitations for E. coli, which will replace fecal coliform as the applicable bacteria criteria in Missouri's water quality standards.

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

  Chronic WLA: $C_e = ((0.018 + 0.0)10 - (0.0 * 0.0))/0.018$
  $C_e = 10$ µg/L

  Acute WLA: $C_e = ((0.018 + 0.0)19 - (0.0 * 0.0))/0.018$
  $C_e = 19$ µg/L

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

  Use most protective number of LTA_c or LTA_a.

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

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

included in the permit.

- **Minimum Sampling and Reporting Frequency Requirements**. Sampling and reporting frequency requirements have been retained from previous state operating permit.

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
FLOW	ONCE/QUARTER	ONCE/QUARTER
BOD_5	ONCE/QUARTER	ONCE/QUARTER
TSS	ONCE/QUARTER	ONCE/QUARTER
pH	ONCE/QUARTER	ONCE/QUARTER
TEMPERATURE	ONCE/QUARTER	ONCE/QUARTER
AMMONIA AS N	ONCE/QUARTER	ONCE/QUARTER
FECAL COLIFORM	ONCE/QUARTER	ONCE/QUARTER
CHLORINE, TOTAL RESIDUAL	ONCE/QUARTER	ONCE/QUARTER

Part VI – Administrative Requirements

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

PUBLIC NOTICE:
As per the Missouri Clean Water Law, the Missouri Clean Water Commission, and the federal Clean Water Act, persons wishing to comment on Missouri State Operating Permits are directed to do so by a department approved Public Notice coversheet. This Public Notice coversheet is attached to a Missouri State Operating Permit during the Public Notice period.

☒ - The Public Notice period for this operating permit is tentatively schedule to begin on September 19, 2008 or is in process.

DATE OF FACT SHEET: AUGUST 29, 2008

COMPLETED BY:

TIM SOUTHARDS, P.E.
ENVIRONMENTAL ENGINEER
MISSOURI DEPARTMENT OF NATURAL RESOURCES
SOUTHEAST REGIONAL OFFICE
(573)840-9750

STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

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

Permit No.	MO-0035548
Owner:	Missouri Department of Transportation
Address:	3901 E. 32nd Street, Joplin, MO 64804
Continuing Authority:	Same as Above
Address:	Same as Above
Facility Name:	MODOT I-44 Rest Area **Class D operator needed.**
Facility Address:	I-44, Joplin MO 64804
Legal Description:	SW¼, NW¼, Sec. 06, T26N, R33W, Newton County
Lat/Long:	+3700202 / -09435044
Receiving Stream:	Unnamed Tributary to Shoal Creek (U)
First Classified Stream and ID:	Shoal Creek (P) (03322)
USGS Basin & Sub-watershed No.:	(11070207-170006)

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 – Rest area / Sewerage Works - SIC #9621 / 4952

Three cell lagoon / sludge is retained in lagoon

Design organic population equivalent is 225.
Design average daily flow is 8,000 gallons per day.
Design sludge production is 3.4 dry tons/year.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

July 16, 2009
Effective Date

Mark N. Templeton, Director
Department of Natural Resources

July 15, 2014
Expiration Date

Cynthia S. Davies, Regional Director, Southwest Regional Office

A. EFFLUENT LIMITATIONS AND MONITORING	PAGE NUMBER 2 of 4
	PERMIT NUMBER MO-0035548

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

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Flow	GPD	*		*	once/quarter**	24 hr. estimate
Biochemical Oxygen Demand$_5$	mg/L		65	45	once/quarter**	grab
Total Suspended Solids	mg/L		120	80	once/quarter**	grab
pH – Units	SU	***		***	once/quarter**	grab
Fecal Coliform **(Note 1)**	#/100 ml	1000		400 **(Note 2)**	once/quarter**	grab
Ammonia as N	mg/L	*		*	once/quarter**	grab
Temperature	°C	*		*	once/quarter**	grab

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	DAILY MINIMUM	WEEKLY AVERAGE MINIMUM	MONTHLY AVERAGE MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Dissolved Oxygen	mg/L	*		*	once/quarter**	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE **October 28, 2009**. 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.

MO 780-0010 (8/91)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.

** **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 28th day of the month following the monitoring period (April 28th, July 28th, October 28th, and January 28th, respectively).** 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 forth 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 lagoons is to be maintained at or above 6.0 pH units.

Note 1 - Final limitations and monitoring requirements for Fecal Coliform are applicable only during the recreational season from April 1 through October 31.

Note 2 - Monthly average limit for Fecal Coliform is expressed as a geometric mean. Geometric mean for n samples = $[a_1 \times a_2 \times a_3 \ldots \times a_n]^{1/n}$

C. INFLUENT MONITORING REQUIREMENTS	PAGE NUMBER 3 of 4 PERMIT NUMBER MO-0035548

The facility is required to meet a removal efficiency of 65% or more. The monitoring requirements shall become effective upon issuance and remain in effect until expiration of the permit. To determine removal efficiencies, the influent wastewater shall be monitored by the permittee as specified below:

SAMPLING LOCATION AND PARAMETER(S)	UNITS	MONITORING REQUIREMENTS	
		MEASUREMENT FREQUENCY	SAMPLE TYPE
Influent			
Biochemical Oxygen Demand$_5$	mg/L	once / quarter**	grab
Total Suspended Solids	mg/L	once /quarter**	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE **October 28, 2009** .

D. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:

   (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:

   (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

   (2) controls any pollutant not limited in the permit.

   (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.

   (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

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

2. All outfalls must be clearly marked in the field.

3. Permittee will cease discharge by connection to areawide wastewater treatment system within 90 days of notice of its availability.

4. Changes in Discharges of Toxic Substances

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

   (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"

   (1) One hundred micrograms per liter (100 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.

D SPECIAL CONDITIONS (continued)

(b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

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

6. Water Quality Standards

(a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.

(b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:

(1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;

(2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;

(3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;

(4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;

(5) There shall be no significant human health hazard from incidental contact with the water;

(6) There shall be no acute toxicity to livestock or wildlife watering;

(7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;

(8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

7. The permittee shall comply with any applicable requirements listed in 10 CSR 20-8 and 10 CSR 20-9. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. If a modification of the monitoring frequencies listed in 10 CSR 20-9 is needed, the permittee shall submit a written request to the department for review and, if deemed necessary, approval.

E. SCHEDULE OF COMPLIANCE

For new operator:

The facility shall obtain a Class D operator within 180 days from the issuance of the permit. This facility is classified as a public owned treatment works (POTW) and therefore an operator is required.

Missouri Department of Natural Resources
Statement of Basis
MODOT I-44 Rest Area WWTF
NPDES #: MO-MO-0035548
Newton County

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

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

Part I – Facility Information

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

Facility Description: Three cell lagoon / sludge is retained in lagoon

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	0.01	Secondary	Domestic	2.62

Receiving Water Body's Water Quality & Facility Performance History:
Failed to submit discharge monitoring reports (DMR's) December 2007 and March 2008.

Comments: The facility was last inspected on June 18, 2008. The facility was considered to be in compliance during the inspection

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:

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

☒ - This facility does not currently retain an operator with the correct level of certification required to operate the wastewater treatment facility. Missouri Clean Water Law and its implementing regulation 10 CSR 20-9.020(2)(F) allows the department to develop a schedule of activities including the date by which compliance shall be obtained. This schedule of activities shall be established in this operating permit as a Schedule of Compliance.

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 1st classified receiving stream's beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Unnamed Tributary to Shoal Creek	U		General Criteria,	11070207	Ozark / Neosho
Shoal Creek	P	03222	General Criteria, IRR, LWW, AQL, CLF, WBC-A, SCR, DWS, IND		

* - 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
*** - UAA conducted on DATE and approved on DATE or disapproved on DATE.
*** - UAA has not been conducted.

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Unnamed Tributary to Shoal Creek	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_5) 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

Applicable ☒;
Equivalent to Secondary Treatment is 65% removal [40 CFR Part 105(a)(3) & (b)(3)].

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.

Applicable ☒;
The time given for effluent limitations of this permit listed under Part E Schedule of Compliance to obtain a Class D operator within 180 days from the issuance of 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.

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:

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

Where C = downstream concentration
C_s = upstream concentration
Q_s = upstream flow

C_e = effluent concentration
Q_e = effluent flow

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

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

WLA MODELING:

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

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
BOD_5 **	MG/L	1		65	45	NO	S
TSS **	MG/L	1		120	80	NO	S
pH (S.U.)	SU	1	6 - 9		6 - 9	NO	S
AMMONIA AS N	MG/L	5	*		*	YES	NONE
FECAL COLIFORM	***	1	1000		400	NO	S
TEMPERATURE	°C	5	*		*	YES	NONE
DISSOLVED OXYGEN	MG/L	11	*		*	NO	N/A
TOTAL PHOSPHORUS	MG/L	1				YES	*
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
2. Water Quality Standard (includes RPA)
3. Water Quality Based Effluent Limits
4. Lagoon Policy
5. Ammonia Policy
6. Antidegradation Policy
7. Water Quality Model
8. Best Professional Judgment
9. TMDL or Permit in lieu of TMDL
10. WET test Policy
11. Dissolved Oxygen Policy

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

Biochemical Oxygen Demand (BOD_5).
☒ – 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.
☒ – 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.**

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

Total Ammonia Nitrogen. Monitoring requirement only. Monitoring for ammonia is included to determine whether a "reasonable potential" exists to exceed water quality standards after the discharge begins.

Fecal Coliform. Discharge shall not contain more than a monthly geometric mean of 400 colonies/100 mL and a daily maximum of 1000 colonies/100 mL, [10 CSR 20-7.015.]. Future renewals of the facility operating permit will contain effluent limitations for E. coli, which will replace fecal coliform as the applicable bacteria criteria in Missouri's water quality standards

Total Phosphorus No longer needed. The facility does not discharge to a nutrient impaired stream. There currently are not water quality standard for phosphorus in streams.

Dissolved Oxygen. Monitoring requirement only. Monitoring for dissolved oxygen are included to determine whether "reasonable potential" to exceed water quality standards exists after the discharge begins.

Minimum Sampling and Reporting Frequency Requirements.

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
FLOW	ONCE/QUARTER	QUARTERLY
BOD_5	ONCE/QUARTER	QUARTERLY
TSS	ONCE/QUARTER	QUARTERLY
pH	ONCE/QUARTER	QUARTERLY
TEMPERATURE	ONCE/QUARTER	QUARTERLY
AMMONIA AS N	ONCE/QUARTER	QUARTERLY
FECAL COLIFORM	ONCE/QUARTER	QUARTERLY
DISSOLVED OXYGEN	ONCE/QUARTER	QUARTERLY
Nitrates plus Nitrites	ONCE/QUARTER	QUARTERLY
TOTAL PHOSPHORUS	ONCE/QUARTER	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: April 16, 2009

Chris Ray
WP Permitting and Assistance Unit
(417) 891-4300
chris.ray@dnr.mo.gov

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

Item	Points	Points Assigned
Maximum population equivalent (P.E.) served, peak day	1 pt. Per 10,000 PE or major fraction thereof	
Design flow (avg. day) or peak month's flow, (avg. day) whichever is larger	Maximum: 10 Points 1 pt. Per MGD or major fraction thereof	
REQUIRED LABORATORY CONTROL Performed by plant personnel (highest level only)		
Lab work done outside the plant	0	
Push – button or visual methods for simple tests such as pH, settleable solids	3	3
Additional procedures such as DO, COD, BOD, titrations, solids, volatile content	5	
More advanced determinations such as BOD seeding procedure, fecal coliform, nutrients, total oils, phenols, etc.	7	
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph	10	
TOTAL Page 1 Column A		**3**

Column B

Item	Points	Points Assigned
EFFLUENT DISCHARGE RECEIVING WATER SENSITIVITY		
Missouri or Mississippi River	0	
All other stream discharges except to losing streams and stream reaches supporting whole body contact reaction	1	1
Discharge to lake or reservoir outside of designated whole body contact recreational area	2	
Discharge to losing stream, or stream, lake or reservoir area supporting whole body contact recreation	3	
HEADWORKS - PRELIMINARY TREATMENT		
Raw wastes subject to toxic waste discharges	6	
Screening and/or comminution	3	
Grit removal	3	
Plant pumping of main flow (If 51% or greater flow comes into plant)	3	
PRIMARY TREATMENT		
Primary clarifiers (Flow EQ basins)	5	
Combined sedimentation/digestion (includes big septic tank or if cities clean out STEP system)	5	
Chemical addition (except chlorine, enzymes)	4	
TOTAL Page 1 Column B		**1**

ATTACHMENT C

Column A

Item	Points	Points Assigned
Direct reuse or recycle of effluent	6	
Land Disposal – Low rate (Irrigation) < 24" year	3	
Land Disposal – High rate (Irrigation) > 24" year	5	
Overland flow	4	
Variation in Raw Wastes (highest level only) (DMR exceedances & Design Flow exceedances)		
Variations do not exceed those normally or typically expected	0	0
Recurring deviations or excessive variations of 100 to 200 % in strength and/or flow (use design flow for determination)	2	
Recurring deviations or excessive variations of more than 200 percent in strength and/or flow (use design flow for determination)	4	
SOLIDS HANDLING - SLUDGE		
Thickening (Lagoon sludge holding basin)	5	
Anaerobic digestion	10	
Aerobic digestion	6	
Evaporative sludge drying	2	
Mechanical dewatering (belt thickeners)	8	
Solids reduction (incineration, wet oxidation, composting)	12	
Land application	6	
TOTAL Page 2 Column A		**12**
Grand Total		

Level of Certification Required

D	C	B	A
≤25	26 – 50	51 – 70	≥71

Column B

Item	Points	Points Assigned
SECONDARY TREATMENT		
Trickling filter and other fixed film media with secondary clarifiers (recirculating sand filters)	10	
Activated sludge with secondary clarifiers (including extended aeration and oxidation ditches)	15	
Stabilization ponds without aeration	5	
Aerated lagoon (Lemna)	8	8
Advanced Waste Treatment Polishing pond (Lemna)	2	
Chemical/physical – without secondary (carbon filters such as at Wilson's Creek WWTF)	15	
Chemical/physical – following secondary (adding alum if not at headworks, tertiary filters)	10	
Biological or chemical biological (multi stage biological treatment, SBR and 3-phase biological treatment)	20	
Carbon Regeneration	4	
DISINFECTION		
Chlorination or comparable	5	
Dechlorination	2	
On-site generation of disinfectant (ozone)	5	
Ultraviolet light	4	
TOTAL Page 2 Column B		**8**

PREPARED BY:

Chris Ray (Name) 4/16/09 (Date)

ATTACHMENT C

STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

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

Permit No.	MO-0085961
Owner:	Missouri Department of Transportation
Address:	P.O. Box 868, Springfield, MO 65801
Continuing Authority:	Same as Above
Address:	Same as Above
Facility Name:	MoDOT, I-44 Rest Area Lawrence County WWTF **Class C Operator needed**
Facility Address:	I-44 at 55-mile Marker, Mount Vernon MO 65712
Legal Description:	NW¼, NE¼, Sec. 13, T28N, R26W, Lawrence County
Lat/Long:	+3708338 / -09343144
Receiving Stream:	Unnamed Tributary to Johnson Creek (U)
First Classified Stream and ID:	Johnson Creek (P) (01418)
USGS Basin & Sub-watershed No.:	(10290106-020001)

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 – Rest Area / Sewerage Works - SIC #4789/ 4952

Recirculating sand filter / ultraviolet disinfection / sludge disposal by contract hauler.

Design organic population equivalent is 200.
Design average daily flow is 20,000 gallons per day.
Design sludge production is 1.4 dry tons/year.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

September 26, 2008
Effective Date

Doyle Childers, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

September 25, 2013
Expiration Date

Cynthia S. Davies, Regional Director, Southwest Regional Office

MO 780-0041 (10-93)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)	PAGE NUMBER 2 of 4
	PERMIT NUMBER MO-0085961

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

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Flow	GPD	*		*	once/quarter**	24 hr. estimate
Biochemical Oxygen Demand$_5$	mg/L		15	10	once/quarter**	grab
Total Suspended Solids	mg/L		20	15	once/quarter**	grab
pH – Units	SU	***		***	once/quarter**	grab
Fecal Coliform	#/100 ml	1000		400 (Note 1)	once/quarter**	grab
Ammonia as N	mg/L	*		*	once/quarter**	grab
Temperature	°C	*		*	once/quarter**	grab
Dissolved Oxygen	mg/L	*		*	once/quarter**	grab
Nitrates +Nitrites	mg/L	*		*	once/quarter**	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE **January 28, 2009**. 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, & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

MO 780-0010 (8/91)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.

** **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 28th day of the month following the monitoring period (April 28th, July 28th, October 28th, and January 28th, respectively).** 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 forth 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 6.0-9.0 pH units.

Note 1 - Monthly average limit for Fecal Coliform is expressed as a geometric mean. Geometric mean for n samples = $[a_1 \times a_2 \times a_3 \ldots \times a_n]^{1/n}$

C. INFLUENT MONITORING REQUIREMENTS	PAGE NUMBER 3 of 4 PERMIT NUMBER MO-0085961

The facility is required to meet a removal efficiency of 85% or more. The monitoring requirements shall become effective upon issuance and remain in effect until expiration of the permit. To determine removal efficiencies, the influent wastewater shall be monitored by the permittee as specified below:

SAMPLING LOCATION AND PARAMETER(S)	UNITS	MONITORING REQUIREMENTS	
		MEASUREMENT FREQUENCY	SAMPLE TYPE
Influent			
Biochemical Oxygen Demand$_5$	mg/L	once / quarter**	grab
Total Suspended Solids	mg/L	once /quarter**	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE **January 28, 2009.**

MO 780-0010 (8-91)

C. INFLUENT MONITORING REQUIREMENTS (continued)

** **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 28th day of the month following the monitoring period (April 28th, July 28th, October 28th, and January 28th, respectively).** 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 forth quarter (October through December) will be recorded by the department as though they were taken in December.

D. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:

   (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:

      (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

      (2) controls any pollutant not limited in the permit.

   (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.

   (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

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

2. All outfalls must be clearly marked in the field.

3. Permittee will cease discharge by connection to areawide wastewater treatment system within 90 days of notice of its availability.

4. Changes in Discharges of Toxic Substances

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

   (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"

      (1) One hundred micrograms per liter (100 μg/L);

D. SPECIAL CONDITIONS (continued)

(2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;

(3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;

(4) The level established in Part A of the permit by the Director.

(b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

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

6. Water Quality Standards

(a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.

(b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:

(1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;

(2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;

(3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;

(4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;

(5) There shall be no significant human health hazard from incidental contact with the water;

(6) There shall be no acute toxicity to livestock or wildlife watering;

(7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;

(8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

7. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities

(a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.

(b) If sludge is not removed by a contract hauler, permittee is authorized to land apply biosolids. Permit Standard Conditions, Part III shall apply to the land application of biosolids. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.

8. The permittee shall comply with any applicable requirements listed in 10 CSR 20-8 and 10 CSR 20-9. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. If a modification of the monitoring frequencies listed in 10 CSR 20-9 is needed, the permittee shall submit a written request to the department for review and, if deemed necessary, approval.

Missouri Department of Natural Resources
Statement of Basis
MoDOT I-44 Rest Area Lawrence County WWTF
NPDES #: MO-0085961
Lawrence County

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

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

Part I – Facility Information

Facility Type: Rest Area/ Sewerage Works
Facility SIC Code(s): #4789/ 4952

Facility Description: Recirculating sand filter / ultraviolet disinfection / sludge disposal by contract hauler.

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	0.031	Secondary	Domestic Waste	2.64

Water Quality History: No Flow, Missing DMR, Exceedance of Limits

Comments: No Flow- 1/31/02, 4/30/02, 7/31/02, 10/31/02, 1/31/03, 4/30/03, 7/31/03, 10/31/03, 1/31/04, 4/30/04, 4/31/04, 10/31/04. Missing DMR – 4/30/05. BOD Excedance – 7/31/06, and 4/30/07.

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: population Equivalent greater than two hundred (200)

This facility currently requires an operator with a(n) 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: Ron Greenwood
Certification Number: 2114
Certification Level: A

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 1st classified receiving stream's beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Unnamed Tributary to Johnson Creek	U		General Criteria, Losing	10290106	Ozark/ Osage
Johnson Creek	P	01418	General Criteria, LWW, AQL, CDF, WBC-A	10290106	Ozark/ Osage

* - 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 Johnson Creek	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); CFR §122.44(l)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

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

ANTIDEGRADATION:
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 of permit for existing facility.

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.

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_5) 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

Applicable ☒;
Secondary Treatment is 85% removal [40 CFR Part 133.102(a)(3) & (b)(3)].

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

Not Applicable ☒;

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

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

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:

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

Where C = downstream concentration
C_s = upstream concentration
Q_s = upstream flow
C_e = effluent concentration
Q_e = effluent flow

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

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

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

WHOLE EFFLUENT TOXICITY (WET) TEST:
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 ☒;
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	GPD	1	*		*	NO	S
BOD_5 **	MG/L	1		15	10	NO	S
TSS **	MG/L	1		20	15	NO	S
pH (S.U.)	SU	1	6 - 9		6 – 9	NO	S
AMMONIA AS N	MG/L	5	*		*	YES	NONE
FECAL COLIFORM	***	3	1000		400	NO	S
TEMPERATURE	°C	5	*		*	YES	NONE
DISSOLVED OXYGEN	MG/L	11	*		*	YES	NONE
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
2. Water Quality Standard (includes RPA)
3. Water Quality Based Effluent Limits
4. Lagoon Policy
5. Ammonia Policy
6. Antidegradation Policy
7. Water Quality Model
8. Best Professional Judgment
9. TMDL or Permit in lieu of TMDL
10. WET test Policy
11. Dissolved Oxygen Policy

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

Biochemical Oxygen Demand (BOD_5).
☒ – 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.

☒ – 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.**

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

Total Ammonia Nitrogen. Monitoring requirement only. Monitoring for ammonia is included to determine whether a "reasonable potential" exists to exceed water quality standards after the discharge begins.

Fecal Coliform. Discharge shall not contain more than a monthly geometric mean of 400 colonies/100 mL and a daily maximum of 1000 colonies/100 mL, [10 CSR 20-7.015.]. Future renewals of the facility operating permit will contain effluent limitations for E. coli, which will replace fecal coliform as the applicable bacteria criteria in Missouri's water quality standards

Nitrates plus Nitrites Because this facility discharges to a losing stream Nitrates plus Nitrites is needed. Both of these compounds can cause serious health risks to animals and humans. Because losing streams can recharge groundwater, it is important to include these parameters. 10 CSR 20-7 Table A list the Water Quality Standard for Groundwater as 10 mg/L. Nitrite is including in the groundwater criteria because it is a very small part of this number, and it is easier to run the test for both compounds. If the applicant requests, these compounds can be separated out.

Monitoring requirement only. Monitoring for ammonia is included to determine whether a "reasonable potential" exists to exceed water quality standards after the discharge begins.

Dissolved Oxygen. Monitoring requirement only. Monitoring for dissolved oxygen are included to determine whether "reasonable potential" to exceed water quality standards exists after the discharge begins.

Minimum Sampling and Reporting Frequency Requirements.

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
FLOW	ONCE/QUARTER	QUARTERLY
BOD_5	ONCE/QUARTER	QUARTERLY
TSS	ONCE/QUARTER	QUARTERLY
pH	ONCE/QUARTER	QUARTERLY
TEMPERATURE	ONCE/QUARTER	QUARTERLY
AMMONIA AS N	ONCE/QUARTER	QUARTERLY
FECAL COLIFORM	ONCE/QUARTER	QUARTERLY
DISSOLVED OXYGEN	ONCE/QUARTER	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 01, 2008

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

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

Item	Points Possible	Points Assigned
Maximum population equivalent (P.E.) served, peak day	1 pt. Per 10,000 PE or major fraction thereof	0
Design flow (avg. day) or peak month's flow, (avg. day) whichever is larger	Maximum: 10 Points 1 pt. Per MGD or major fraction thereof	0
REQUIRED LABORATORY CONTROL Performed by plant personnel (highest level only)		
Lab work done outside the plant	0	
Push – button or visual methods for simple tests such as pH, settleable solids	3	
Additional procedures such as DO, COD, BOD, titrations, solids, volatile content	5	
More advanced determinations such as BOD seeding procedure, fecal coliform, nutrients, total oils, phenols, etc.	7	7
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph	10	
TOTAL Page 1 Column A		7

Column B

Item	Points Possible	Points Assigned
EFFLUENT DISCHARGE RECEIVING WATER SENSITIVITY		
Missouri or Mississippi River	0	
All other stream discharges except to losing streams and stream reaches supporting whole body contact reaction	1	
Discharge to lake or reservoir outside of designated whole body contact recreational area	2	
Discharge to losing stream, or stream, lake or reservoir area supporting whole body contact recreation	3	3
HEADWORKS - PRELIMINARY TREATMENT		
Raw wastes subject to toxic waste discharges	6	
Screening and/or comminution	3	3
Grit removal	3	
Plant pumping of main flow (If 51% or greater flow comes into plant)	3	
PRIMARY TREATMENT		
Primary clarifiers (Flow EQ basins)	5	
Combined sedimentation/digestion (includes big septic tank or if cities clean out STEP system)	5	
Chemical addition (except chlorine, enzymes)	4	
TOTAL Page 1 Column B		6

ATTACHMENT C

ATTACHMENT C

Column A		
Item	**Points Possible**	**Points Assigned**
Direct reuse or recycle of effluent	6	
Land Disposal – Low rate (Irrigation) < 24" year	3	
Land Disposal – High rate (Irrigation) > 24" year	5	
Overland flow	4	
Variation in Raw Wastes (highest level only) (DMR exceedances & Design Flow exceedances)		
Variations do not exceed those normally or typically expected	0	
Recurring deviations or excessive variations of 100 to 200 % in strength and/or flow (use design flow for determination)	2	2
Recurring deviations or excessive variations of more than 200 percent in strength and/or flow (use design flow for determination)	4	
SOLIDS HANDLING - SLUDGE		
Thickening (Lagoon sludge holding basin)	5	
Anaerobic digestion	10	
Aerobic digestion	6	
Evaporative sludge drying	2	
Mechanical dewatering (belt thickeners)	8	
Solids reduction (incineration, wet oxidation, composting)	12	
Land application	6	
TOTAL Page 2 Column A		**2**
Grand Total		**29**

Column B		
Item	**Points Possible**	**Points Assigned**
SECONDARY TREATMENT		
Trickling filter and other fixed film media with secondary clarifiers (recirculating sand filters)	10	10
Activated sludge with secondary clarifiers (including extended aeration and oxidation ditches)	15	
Stabilization ponds without aeration	5	
Aerated lagoon (Lemna)	8	
Advanced Waste Treatment Polishing pond (Lemna)	2	
Chemical/physical – without secondary (carbon filters such as at Wilson's Creek WWTF)	15	
Chemical/physical – following secondary (adding alum if not at headworks, tertiary filters)	10	
Biological or chemical biological (multi stage biological treatment, SBR and 3-phase biological treatment)	20	
Carbon Regeneration	4	
DISINFECTION		
Chlorination or comparable	5	
Dechlorination	2	
On-site generation of disinfectant (ozone)	5	
Ultraviolet light	4	4
TOTAL Page 2 Column B		**14**

Level of Certification Required

D	C	B	A
≤ 25	26 – 50	51 – 70	≥71

PREPARED BY:

Tara Massey
(Name)

August 01, 2008
(Date)

STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

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

Permit No.	MO-0056227
Owner:	Missouri Department of Transportation
Address:	P.O. Box 868, Springfield, MO 65801
Continuing Authority:	Same as Above
Address:	Same as Above
Facility Name:	MODOT I-44 Conway Welcome Center WWTF **Class D operator needed**
Facility Address:	I-44, Conway, MO
Legal Description:	NE¼, SW¼, SE¼, Sec. 24, T32N, R18W, Webster County
Lat/Long:	+3728216 / -09251334
Receiving Stream:	Unnamed Tributary to Starvey Creek (U)
First Classified Stream and ID:	Starvey Creek (C) (01179)
USGS Basin & Sub-watershed No.:	(10290110-010004)

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 – State rest area / Sewerage Works - SIC #9621 / 4952

Septic tank / aerated fixed film biological reactor / recirculating sand filter / ultraviolet disinfection / reaeration / sludge disposal by contract hauler

Design organic population equivalent is 220.
Design average daily flow is 22,000 gallons per day.
Design sludge production is 1.54 dry tons/year.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

April 27, 2009
Effective Date

Mark N. Templeton, Director Department of Natural Resources

April 26, 2014
Expiration Date

Cynthia S. Davies, Regional Director, Southwest Regional Office

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS	PAGE NUMBER 2 of 6
	PERMIT NUMBER MO-0056227

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

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Flow	GPD	*		*	once/month**	24 hr. total
Biochemical Oxygen Demand$_5$	mg/L	20		10	once/month**	grab
Total Suspended Solids	mg/L	30		15	once/month**	grab
pH – Units	SU	***		***	once/month**	grab
Fecal Coliform	#/100 ml	1,000		400 **(Note 1)**	once/month**	grab
Nitrates plus Nitrites	mg/L	20.1		10.0	once/month**	grab
Ammonia as N	mg/L				once/month**	grab
{March-May}		6.8		2.6		
{June-August}		3.2		1.2		
{September-November}		6.8		2.6		
{December-February}		7.5		2.9		
Temperature	°C	*		*	once/month**	grab
Dissolved Oxygen	mg/L	*		*	once/month**	grab

MONITORING REPORTS SHALL BE SUBMITTED **MONTHLY**; THE FIRST REPORT IS DUE **June 28, 2009**. 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.

MO 780-0010 (8/91)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.

** Reports shall be submitted by the 28th day of the month following the reporting period, e.g. Reporting period is the month of March (samples collected monthly), report due by April 28th.

*** 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 6.0-9.0 pH units.

Note 1 - Monthly average limit for Fecal Coliform is expressed as a geometric mean. Geometric mean for n samples = $[a_1 \times a_2 \times a_3 \ldots \times a_n]^{1/n}$

C. INFLUENT MONITORING REQUIREMENTS	PAGE NUMBER 3 of 6 PERMIT NUMBER MO-0056227

The facility is required to meet a removal efficiency of **85%** or more. The monitoring requirements shall become effective upon issuance and remain in effect until expiration of the permit. To determine removal efficiencies, the influent wastewater shall be monitored by the permittee as specified below:

SAMPLING LOCATION AND PARAMETER(S)	UNITS	MONITORING REQUIREMENTS	
		MEASUREMENT FREQUENCY	SAMPLE TYPE
Influent			
Biochemical Oxygen Demand$_5$	mg/L	once / month**	grab
Total Suspended Solids	mg/L	once /month**	grab

MONITORING REPORTS SHALL BE SUBMITTED **MONTHLY**; THE FIRST REPORT IS DUE **June 28, 2009.**

MO 780-0010 (8/91)

C. INFLUENT MONITORING REQUIREMENTS (continued)

** Reports shall be submitted by the 28th day of the month following the reporting period, e.g. Reporting period is the month of March (samples collected monthly), report due by April 28th.

D. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:

   (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:

      (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or

      (2) controls any pollutant not limited in the permit.

   (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.

   (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

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

2. All outfalls must be clearly marked in the field.

3. Permittee will cease discharge by connection to areawide wastewater treatment system within 90 days of notice of its availability.

4. Changes in Discharges of Toxic Substances

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

   (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"

      (1) One hundred micrograms per liter (100 µg/L);

D. SPECIAL CONDITIONS (continued)

(2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;

(3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;

(4) The level established in Part A of the permit by the Director.

(b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

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

6. Water Quality Standards

(a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.

(b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:

(1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;

(2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;

(3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;

(4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;

(5) There shall be no significant human health hazard from incidental contact with the water;

(6) There shall be no acute toxicity to livestock or wildlife watering;

(7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;

(8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

7. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities

(a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.

(b) If sludge is not removed by a contract hauler, permittee is authorized to land apply biosolids. Permit Standard Conditions, Part III shall apply to the land application of biosolids. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.

8. The permittee shall develop and implement a program for maintenance and repair of the collection system. The recommended guidance is the US EPA's Guide For Evaluating Capacity, Management, Operation, And Maintenance (CMOM) Programs At Sanitary Sewer Collection Systems (Document number EPA 305-B-05-002). The permittee shall submit a report semi-annually in **April and October** with the Discharge and Monitoring reports which address measures taken to locate and eliminate sources of infiltration and inflow into the collection system serving the facility.

D. SPECIAL CONDITIONS (continued)

9. The permittee shall comply with any applicable requirements listed in 10 CSR 20-8 and 10 CSR 20-9. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. If a modification of the monitoring frequencies listed in 10 CSR 20-9 is needed, the permittee shall submit a written request to the department for review and, if deemed necessary, approval.

E. SCHEDULE OF COMPLIANCE

Operation and Maintenance
By **January 28 2010**, submit your operations and maintenance manual to State of Missouri to the Missouri Department of Natural Resources, 2040 West Woodland, Springfield, Missouri, 65807

Non-standard technology

Please note that the engineering design includes technology not addressed in Missouri Clean Water Commission Regulations 10 CSR 20-Chapter 8 design standards. To assess the effectiveness of the new technology at this facility, the following schedule of compliance must be followed.

1. The permittee acting under the supervision of a professional engineer registered in Missouri shall at a minimum, collect and test samples of wastewater treatment facility effluent as outlined in this permit, measure flow as outlined in this permit, and shall record all maintenance and operational problems experienced with the wastewater treatment facility during the first 34 months of operation. Other sample collection and testing including influent samples, and samples before and after each unit operation or group of unit operations, and other record keeping shall be done at the discretion of the professional engineer as needed to assess the new technology.

2. Within one (1) year of the date of issuance of this permit, the permittee shall submit a preliminary engineering report prepared by the professional engineer to the Southwest Regional Office evaluating the new technology for the first ten (10) months of operation. At the minimum, this evaluation shall include:

   (a) Calculation of the mean (average) test results for all wastewater treatment facility effluent sample results collected under this permit for all parameters that have a maximum average monthly permit limit except pH.

   (b) Calculation of the standard deviation of all test results noted above based on the following:

$$\text{Standard deviation} = \left[\frac{(R_1 - \text{mean})^2 + (R_2 - \text{mean})^2 + (R_3 - \text{mean})^2 + \ldots + (R_n - \text{mean})^2}{n - 1} \right]^{1/2}$$

   where R_1, R_2, R_3, etc. are the individual sample results
   n is the total number of samples

   (c) Calculation of the Coefficient of Variation (cv) for all test results noted above based on the following:

$$cv = \left[\frac{\text{Standard Deviation}}{\text{Mean}} \right]$$

   (d) Calculation of the Standard Deviation of Logarithms (σ) for all test results noted above based on the following:

$$\sigma = \left[\ln \left[\frac{cv^2}{4} + 1 \right] \right]^{1/2}$$

E. SCHEDULE OF COMPLIANCE (continued)

where ln is the natural logarithm to base e
e is 2.718281828

(e) Calculation of the Performance Standard (P) for 95th percentile probability for all test results noted above based on the following:

$$P = (\text{mean})e^{\wedge}(z\sigma - 0.5\sigma^2)$$

where z is 1.645 for 95 percentile probability

(f) The new technology will be deemed successful if the performance standard for 95th percentile probability is less than or equal to the permit maximum monthly average limit for each parameter.

(g) The preliminary engineering report shall also assess any operational or maintenance problems experienced during the initial ten (10) months of operation and shall describe all measures taken to overcome these problems. The engineer shall provide an assessment of whether operation or maintenance problems are sufficiently serious to require replacement of the new technology.

3. Within three (3) years of the date of issuance of this permit, the permittee shall submit a final engineering report prepared by the professional engineer to the Southwest Regional Office evaluating the new technology for the first 34 months of operation including all of the items described in the initial ten (10) month evaluation. Again, the new technology will be deemed successful if the performance standard for 95th percentile probability is less than or equal to the permit maximum monthly average limit for each parameter.

4. If the new technology fails to meet the 95th percentile probability performance standard for any parameter, or if the engineer assesses the operation and maintenance problems to be sufficiently serious to require replacement of the new technology, the permittee shall submit engineering report, plans, specifications prepared by a professional engineer registered in Missouri along with construction permit application forms, filing fee to Southwest Regional Office within one hundred twenty (120) calendar days of the date of submittal of the preliminary or final engineering report evaluation that identified the failure.

   These documents shall outline replacement of the failed new technology with standard technology listed in Missouri Clean Water Commission Regulation 10 CSR 20-Chapter 8.

5. Within one hundred eighty (180) calendar days of receiving the construction permit, the permittee shall construct the replacement facilities and submit the Statement of Work Complete prepared by the professional engineer to Southwest Regional Office.

Missouri Department of Natural Resources
Statement of Basis
MODOT I-44 Conway Welcome Center
NPDES #: MO-0056227
Webster County

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

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

Part I – Facility Information

Facility Type: Sewerage Works / POTW
Facility SIC Code(s): 4952

Facility Description: Septic tank / aerated fixed film biological reactor* / recirculating sand filter* / ultraviolet disinfection / reaeration / sludge disposal by contract hauler

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	0.034	Equivalent to Secondary	Domestic	~3.6

Water Quality History: BOD and TSS exceedances in 12/04, 3/05, 12/06, TSS exceedance in 3/06, BOD exceedance in 3/07. No DMR submitted for 9/06.

Comments: The discharge goes to a losing stream based on a geohydrologic evaluation.

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: ☒

This facility currently requires an operator with a D 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: Joe D. Vestal
Certification Number: 8276
Certification Level: C

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 1st classified receiving stream's beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Unnamed tributary to Starvey Creek	U	N/A	General Criteria	10290110	Ozark/Osage
Starvey Creek	C	01179	LWW, AQL, WBC-B	10290110	Ozark/Osage

* - 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 Starvey Creek	0	0	0
Starvey Creek	0	0	0.1

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)], and has submitted alternative evaluations.

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

☒ - All limits in this statement are at least as protective as those previously established; therefore, backsliding does not apply. The facility does not discharge to the watershed of Table Rock Lake or Lake Taneycomo, therefore total phosphorus monitoring is being removed.

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 ☒;

☒ - As per [10 CSR 20-7.031(2)(D)], the three (3) levels of protection provided by the antidegradation policy in subsections (A), (B), and (C) of this section shall be implemented according to procedures developed by the department. On April 20, 2007, the Missouri Clean Water Commission approved *Missouri Antidegradation Rule and Implementation Procedure* (Antidegradation Rule), which is applicable to new or upgraded/expanded facilities. The implementation of the Antidegradation Rule will be implemented upon promulgation, which is tentatively scheduled for August 2008.

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.

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.

Applicable ☒;
The permittee/facility is currently under a Schedule of Compliance Agreement, dated February 10, 2005, due to the current treatment facility is discharging into a losing stream and does not have sufficient treatment capability to meet losing stream effluent limits.

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_5) 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

Applicable ☒;
Secondary Treatment is 85% removal [40 CFR Part 133.102(a)(3) & (b)(3)].

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

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

SCHEDULE OF COMPLIANCE (SOC):
A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit.

Applicable ☒;
This facility is using nonstandard technology. Therefore a schedule of compliance is being added. The facility includes an aerated fixed film biological reactor with an undersized recirculating sand filter.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP):
A plan to schedule activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. The plan may include, but is not limited to, treatment

requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

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

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:

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

Where C = downstream concentration
C_s = upstream concentration
Q_s = upstream flow
C_e = effluent concentration
Q_e = effluent flow

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

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

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

WHOLE EFFLUENT TOXICITY (WET) TEST:
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	*	--	*	N/A	S
BOD_5**	MG/L	1	20	--	10	YES	45 WEEKLY
TSS **	MG/L	1	30	--	15	YES	80 WEEKLY
pH (S.U.)	SU	1	6.0-9.0	--	6.0-9.0	YES	ABOVE 6.0
AMMONIA AS N (MARCH - MAY)	MG/L	1,5	6.8	--	2.6	YES	NONE
AMMONIA AS N (JUNE - AUGUST)	MG/L	1,5	3.2	--	1.2	YES	NONE
AMMONIA AS N (SEPTEMBER - NOVEMBER)	MG/L	1,5	6.8	--	2.6	YES	NONE
AMMONIA AS N (DECEMBER - FEBRUARY)	MG/L	1,5	7.5	--	2.9	YES	NONE
FECAL COLIFORM	***	1	1,000	--	400	YES	MONITORING
NITRATES PLUS NITRITES	MG/L	1	20.1	--	10.0	YES	NONE
TEMPERATURE	°C	1,5	*	--	*	YES	NONE
DISSOLVED OXYGEN	MG/L	11	*	--	*	YES	NONE
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
2. Water Quality Standard (includes RPA)
3. Water Quality Based Effluent Limits
4. Lagoon Policy
5. Ammonia Policy
6. Antidegradation Policy
7. Water Quality Model
8. Best Professional Judgment
9. TMDL or Permit in lieu of TMDL
10. WET test Policy
11. Dissolved Oxygen Policy

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

Biochemical Oxygen Demand (BOD_5).

☒ – 20 mg/L Daily Maximum and 10 mg/L Monthly Average effluent limitations, as per [10 CSR 20-7.015]. The daily maximum is calculated by (10 AML)(LTAc/1.5524 AML)(3.114/LTAc) = 20 mg/L daily maximum. This method is outlined in SWRO-WP17-01 and is as protective as the weekly average of 15 mg/L, therefore the daily maximum is substituted for the weekly average in the permit..

Total Suspended Solids (TSS).

☒ – 30 mg/L Daily Maximum and 15 mg/L Monthly Average effluent limitations, as per [10 CSR 20-7.015]. The daily maximum is calculated by (15 AML)(LTAc/1.5524 AML)(3.114/LTAc) = 30 mg/L daily maximum. This method is outlined in SWRO-WP17-01 and is as protective as the weekly average of 20 mg/L, therefore the daily maximum is substituted for the weekly average in the permit..

pH.

☒ – pH is limited to the range of 6.0 – 9.0 pH units, as per [10 CSR 20-7.015]. pH is measured in pH units and is not to be averaged.

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

Total Ammonia Nitrogen. 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)
Mar 1 – May 31	16	7.8	2.8	12.1
Jun 1 – Aug 31	28	7.8	1.3	12.1
Sept 1 – Nov 30	16	7.8	2.8	12.1
Dec 1 – Feb 29	6	7.8	3.1	12.1

Spring: Mar 1 – May 31, Summer: Jun 1 – Aug 31, Fall: Sep 1 – Nov 30, Winter: Dec 1 – Feb 29

Spring – Chronic WLA = 2.8 mg N/L, Acute WLA = 12.1 mg N/L. No mixing zone is allowed. Discharges to Unclassified Stream.

LTA_c = 2.8 mg/L (0.780) = 2.2 mg N/L [CV = 0.6, 99th Percentile, 30 day average]
LTA_a = 12.1 mg/L (0.321) = 3.9 mg N/L [CV = 0.6, 99th Percentile]

MDL = 2.2 mg/L * 3.114 = 6.8 mg N/L [CV = 0.6, 99th Percentile]
AML = 2.2 mg/L * 1.19 = 2.6 mg N/L [CV = 0.6, 95th Percentile, n = 30]

Summer – Chronic WLA = 1.3 mg N/L, Acute WLA = 12.1 mg N/L. No mixing zone is allowed. Discharges to Unclassified Stream.

LTA_c = 1.3 mg/L (0.780) = 1.0 mg N/L [CV = 0.6, 99th Percentile, 30 day average]
LTA_a = 12.1 mg/L (0.321) = 3.9 mg N/L [CV = 0.6, 99th Percentile]

MDL = 1.0 mg/L * 3.114 = 3.2 mg N/L [CV = 0.6, 99th Percentile]
AML = 2.2 mg/L * 1.19 = 1.2 mg N/L [CV = 0.6, 95th Percentile, n = 30]

Fall – Chronic WLA = 2.8 mg N/L, Acute WLA = 12.1 mg N/L. No mixing zone is allowed. . Discharges to Unclassified Stream.

LTA_c = 2.8 mg/L (0.780) = 2.2 mg N/L [CV = 0.6, 99th Percentile, 30 day average]
LTA_a = 12.1 mg/L (0.321) = 3.9 mg N/L [CV = 0.6, 99th Percentile]

MDL = 2.2 mg/L * 3.114 = 6.8 mg N/L [CV = 0.6, 99th Percentile]
AML = 2.2 mg/L * 1.19 = 2.6 mg N/L [CV = 0.6, 95th 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_c = 3.1 mg/L (0.780) = 2.4 mg N/L [CV = 0.6, 99th Percentile, 30 day average]
LTA_a = 12.1 mg/L (0.321) = 3.9 mg N/L [CV = 0.6, 99th Percentile]

MDL = 2.4 mg/L * 3.114 = 7.5 mg N/L [CV = 0.6, 99th Percentile]
AML = 2.2 mg/L * 1.19 = 2.9 mg N/L [CV = 0.6, 95th Percentile, n = 30]

Season	Maximum Daily Limit (mg N/L)	Average Monthly Limit (mg N/L)
Mar 1 – May 31	6.8	2.6
Jun 1 – Aug 31	3.2	1.2
Sept 1 – Nov 30	6.8	2.6
Dec 1 – Feb 29	7.5	2.9

Fecal Coliform. Discharge shall not contain more than a monthly geometric mean of 400 colonies/100 mL and a daily maximum of 1000 colonies/100 mL, [10 CSR 20-7.015.]. Future renewals of the facility operating permit will contain effluent limitations for E. coli, which will replace fecal coliform as the applicable bacteria criteria in Missouri's water quality standards

Nitrates plus Nitrites Because this facility discharges to a losing stream Nitrates plus Nitrites is needed. Both of these compounds can cause serious health risks to animals and humans. Because losing streams can recharge groundwater, it is important to include these parameters. 10 CSR 20-7 Table A list the Water Quality Standard for Groundwater as 10 mg/L. Nitrite is including in the groundwater criteria because it is a very small part of this number, and it is easier to run the test for both compounds. If the applicant requests, these compounds can be separated out.

WLA = 10.0 mg/L
Set the Average Monthly Limit equal to the WLA [per EPA/505/2-90-001 Section 5.4.4]
AML = 10.0 mg/L
MDL = AML * 2.01 [CV = 0.6, 95th Percentile]
MDL = 10.0 * 2.01 = 20.1 mg/L

MDL = 20.1 mg/L
AML = 10.0mg/L

Dissolved Oxygen. Monitoring requirement only. Monitoring for dissolved oxygen are included to determine whether "reasonable potential" to exceed water quality standards exists after the discharge begins.

Minimum Sampling and Reporting Frequency Requirements.

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
FLOW	MONTHLY	MONTHLY
BOD_5	MONTHLY	MONTHLY
TSS	MONTHLY	MONTHLY
pH	MONTHLY	MONTHLY
TEMPERATURE	MONTHLY	MONTHLY
AMMONIA AS N (MARCH - MAY)	MONTHLY	MONTHLY
AMMONIA AS N (JUNE - AUGUST)	MONTHLY	MONTHLY
AMMONIA AS N (SEPTEMBER - NOVEMBER)	MONTHLY	MONTHLY
AMMONIA AS N (DECEMBER - FEBRUARY)	MONTHLY	MONTHLY
FECAL COLIFORM	MONTHLY	MONTHLY
DISSOLVED OXYGEN	MONTHLY	MONTHLY
NITRATES PLUS NITRITES	MONTHLY	MONTHLY

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: May 28, 2008

Joshua L. Grosvenor, EI
WP Engineering Unit
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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

Item	Points Possible	Points Assigned
Maximum population equivalent (P.E.) served, peak day	1 pt. Per 10,000 PE or major fraction thereof	0
Design flow (avg. day) or peak month's flow, (avg. day) whichever is larger	Maximum: 10 Points 1 pt. Per MGD or major fraction thereof	0
REQUIRED LABORATORY CONTROL Performed by plant personnel (highest level only)		
Lab work done outside the plant	0	
Push – button or visual methods for simple tests such as pH, settleable solids	3	3
Additional procedures such as DO, COD, BOD, titrations, solids, volatile content	5	
More advanced determinations such as BOD seeding procedure, fecal coliform, nutrients, total oils, phenols, etc.	7	
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph	10	
TOTAL Page 1 Column A		**3**

Column B

Item	Points Possible	Points Assigned
EFFLUENT DISCHARGE RECEIVING WATER SENSITIVITY		
Missouri or Mississippi River	0	
All other stream discharges except to losing streams and stream reaches supporting whole body contact reaction	1	
Discharge to lake or reservoir outside of designated whole body contact recreational area	2	
Discharge to losing stream, or stream, lake or reservoir area supporting whole body contact recreation	3	3
HEADWORKS - PRELIMINARY TREATMENT		
Raw wastes subject to toxic waste discharges	6	
Screening and/or comminution	3	3
Grit removal	3	
Plant pumping of main flow (If 51% or greater flow comes into plant)	3	
PRIMARY TREATMENT		
Primary clarifiers (Flow EQ basins)	5	
Combined sedimentation/digestion (includes big septic tank or if cities clean out STEP system)	5	
Chemical addition (except chlorine, enzymes)	4	
TOTAL Page 1 Column B		**6**

ATTACHMENT C

ATTACHMENT C

Column A		
Item	**Points Possible**	**Points Assigned**
Direct reuse or recycle of effluent	6	
Land Disposal – Low rate (Irrigation) < 24" year	3	
Land Disposal – High rate (Irrigation) > 24" year	5	
Overland flow	4	
Variation in Raw Wastes (highest level only) (DMR exceedances & Design Flow exceedances)		
Variations do not exceed those normally or typically expected	0	
Recurring deviations or excessive variations of 100 to 200 % in strength and/or flow (use design flow for determination)	2	
Recurring deviations or excessive variations of more than 200 percent in strength and/or flow (use design flow for determination)	4	
SOLIDS HANDLING - SLUDGE		
Thickening (Lagoon sludge holding basin)	5	
Anaerobic digestion	10	
Aerobic digestion	6	
Evaporative sludge drying	2	
Mechanical dewatering (belt thickeners)	8	
Solids reduction (incineration, wet oxidation, composting)	12	
Land application	6	
TOTAL Page 2 Column A		**0**
Grand Total		**23**

Column B		
Item	**Points Possible**	**Points Assigned**
SECONDARY TREATMENT		
Trickling filter and other fixed film media with secondary clarifiers (recirculating sand filters)	10	10
Activated sludge with secondary clarifiers (including extended aeration and oxidation ditches)	15	
Stabilization ponds without aeration	5	
Aerated lagoon (Lemna)	8	
Advanced Waste Treatment Polishing pond (Lemna)	2	
Chemical/physical – without secondary (carbon filters such as at Wilson's Creek WWTF)	15	
Chemical/physical – following secondary (adding alum if not at headworks, tertiary filters)	10	
Biological or chemical biological (multi stage biological treatment, SBR and 3-phase biological treatment)	20	
Carbon Regeneration	4	
DISINFECTION		
Chlorination or comparable	5	
Dechlorination	2	
On-site generation of disinfectant (ozone)	5	
Ultraviolet light	4	4
TOTAL Page 2 Column B		**14**

Level of Certification Required

D	C	B	A
≤ 25	26 – 50	51 – 70	≥71

PREPARED BY:

(Name) (Date)

STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

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

Permit No.	MO-0133663
Owner:	Missouri Department of Transportation - Facilities
Address:	3602 North Belt Hwy, St. Joseph, MO 64506
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	Visitor Welcome Center
Address:	Interstate 35 (2 miles south of Iowa), Eagleville, MO 64442
Legal Description:	SE ¼, SE ¼, SW ¼, Sec. 4, T66N, R27W, Harrison County
Latitude/Longitude:	+4032431/-09357212
Receiving Stream:	Unnamed Tributary to Zadie Creek (U)
First Classified Stream and ID:	Zadie Creek (C) (0448)
USGS Basin & Sub-watershed No.:	(10280101-130001)

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 – Domestic Wastewater - SIC #4952

No-Discharge System

Single cell storage lagoon/Wastewater is irrigated/Sludge is retained in lagoon.
Design population equivalent is 90.
Design flow is 4,582 gallons per day (1-in-10 year design including net rainfall minus evaporation).
Average design flow is 3,128 gallons per day (dry weather flows).
Design sludge production is 1.35 dry tons per year.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

March 6, 2009
Effective Date

March 27, 2009
Revised Date

Mark N. Templeton, Acting Director, Department of Natural Resources

March 5, 2014
Expiration Date

Karl F. Fett, Director, Kansas City Regional Office

MO 780-0041 (10-93)

FACILITY DESCRIPTION (continued)

Outfall #001 –
Receiving Stream Watershed: Zadie Creek is a gaining stream setting.
Facility Type: No-discharge Storage and Irrigation System for year seasonal flows.

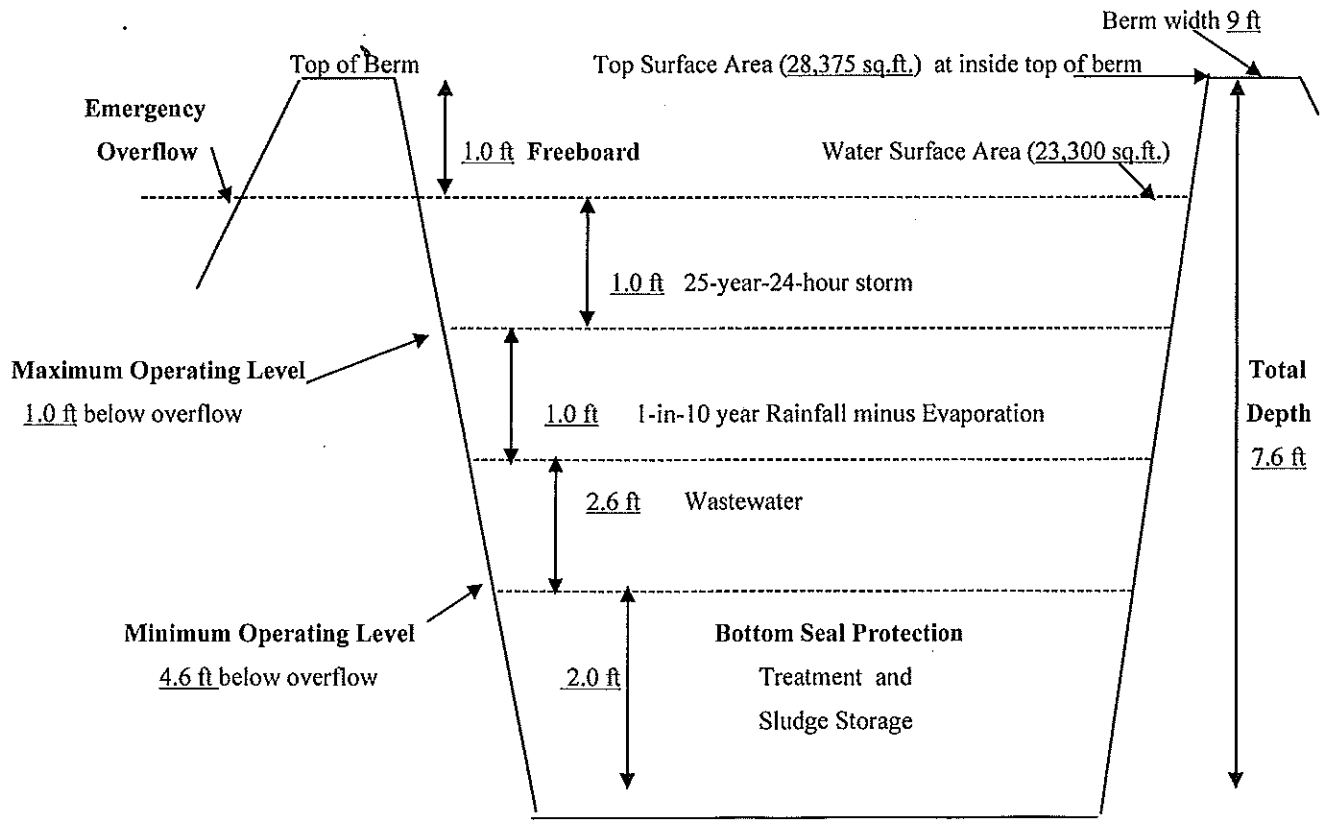
Design Basis:	**Avg Annual**
Design dry weather flows	3,128 gallons/day
Design with 1-in-10 year flows	4,582 gallons/day
Design PE 90	

Storage Basin/Tank:
Freeboard for basin: 1 foot
Maximum volume (minimum to maximum water levels) 549,800 gallons

Days of Storage Storage Capacity:	**Avg Annual**
Design for Dry weather Flows:	176 days
Design with 1-in 10 year flows:	120 days

Land Application:
Design Irrigation Volume/year: 1,672,000 gallons (including 1-in-10 year flows)
Irrigation areas: 1.8 acres at design loading (1.8 acres total available)
Application rates/acre: 0.03 inch/hour; 0.21 inch/day; 1.05 inches/week; 31.3 inches/year
Field slopes: less than 8.5 percent
Equipment type: Sprinklers
Vegetation: Pasture
Application rate is based on: Hydraulic loading

LAGOON PROFILE



A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS	PAGE NUMBER 3 of 7 PERMIT NUMBER MO-0133663

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

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001 - Emergency discharge from lagoon (Notes 1 & 2)						
Flow	MGD	*		*	once/day**	24 hr. estimate
Biochemical Oxygen Demand$_5$	mg/L		45	30	once/week**	grab
Total Suspended Solids	mg/L		45	30	once/week**	grab
pH – Units	SU	***		***	once/week**	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE July 28, 2009 .						
Outfall #001 - Land Application Operational Monitoring (Note 3)						
Lagoon Freeboard	feet	*		*	once/month	measured
Irrigation Period	hours	*		*	daily	total
Volume Irrigated	gallons	*		*	daily	total
Application Area	acres	*		*	daily	total
Application Rate	inches/ acre	*		*	daily	total
Rainfall	inches	*		*	daily	total
MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE January 28, 2010.						
Outfall #001 - Irrigated Wastewater (Notes 4 & 5)						
Total Kjeldahl Nitrogen as N	mg/L	*		*	once/quarter	grab
Nitrate as N	mg/L	*		*	once/quarter	grab
MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; 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 & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

MO 780-0010 (6/91)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.

** Monitor only when discharge occurs. Report as no-discharge when a discharge does not occur during the report period.

*** pH is measured in pH units and is not to be averaged. The pH shall be maintained above 6.0 pH units.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

Note 1 - No-discharge facility requirements. Wastewater shall be stored and land applied during suitable conditions so that there is no-discharge from the lagoon or irrigation site. An emergency discharge may occur when excess wastewater has accumulated above feasible irrigation rates due to precipitation exceeding the 1-in-10-year 365 day rainfall or the 25-year 24-hour storm event.

Note 2 - Records shall be maintained and summarized into an annual operating report, which shall be submitted by January 28th of each year for the previous calendar year period using report forms approved by the Department. The report shall include the following:

(a) Record of maintenance and repairs performed during the year, average number of times per month the facility is checked to see if it is operating properly, and description of any unusual operating conditions encountered during the year;

(b) The number of days the lagoon has discharged during the year, the discharge flow, the reasons discharge occurred and effluent analysis performed; and

(c) A summary of the irrigation operations including freeboard at the start and end of the irrigation season, the number of days of irrigation for each month, the total gallons irrigated, the total acres used, crops grown, crop yields per acre, the application rate in inches/acre per day and for the year, the monthly and annual precipitation received at the facility and summary of testing results.

Note 3 - Lagoon freeboard shall be reported as lagoon water level in feet below the overflow level. See Special Conditions for Wastewater Irrigation System requirements.

Note 4 - Wastewater that is irrigated shall be sampled at the irrigation pump or wet well.

Note 5 - Sample once per quarter during the months of March through November (9 months per year) if active irrigation is occurring. The first quarter would be March, April, May: the second quarter would be June, July, August: and the third quarter would be September, October and November.

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

4. Water Quality Standards
   (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
   (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:

      (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
      (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
      (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
      (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
      (5) There shall be no significant human health hazard from incidental contact with the water;
      (6) There shall be no acute toxicity to livestock or wildlife watering;
      (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
      (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

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

C. SPECIAL CONDITIONS (continued)

6. Lagoons and earthen basins shall have a liner that is designed, constructed and maintained. If operating records indicate excessive percolation, the department may require corrective action as necessary to eliminate excess leakage.

7. Wastewater Irrigation System.
   (a) Discharge Reporting. Any unauthorized discharge from the lagoon or irrigation system shall be reported to the department as soon as possible but always within 24 hours. Discharge is allowed only as described in the Facility Description and Effluent Limitations sections of this permit.
   (b) Lagoon Operating Levels - No-discharge Systems. The minimum and maximum operating water levels for the storage lagoon shall be clearly marked. Each lagoon shall be operated so that the maximum water elevation does not exceed one foot below the overflow point except due to excedances of the 1-in-10 year or 25-year-24 hour storm events. Wastewater shall be land applied whenever feasible based on soil and weather conditions and permit requirements. Storage lagoon(s) shall be lowered to the minimum operating level prior to each winter by November 30.
   (c) Emergency Spillway. Lagoons and earthen storage basins should have an emergency spillway to protect the structural integrity of earthen structures during operation at near full water levels and in the event of overflow conditions. The spillway shall be at least one foot below top of berm. The department may waive the requirement for overflow structures on small existing basins.
   (d) General Irrigation Requirements. The wastewater irrigation system shall be operated so as to provide uniform distribution of irrigated wastewater over the entire irrigation site. A complete ground cover of vegetation shall be maintained on the irrigation site unless the system is approved for row crop irrigation. Wastewater shall be land applied only during daylight hours. The wastewater irrigation system shall be capable of irrigating the annual design flow during an application period of less than 100 days or 800 hours per year.
   (e) Saturated/Frozen Conditions. There shall be no irrigation during frozen, snow covered, or saturated soil conditions.
   (f) Buffer Zones. There shall be no irrigation within 300 feet of any down gradient pond, lake, sinkhole, losing stream or water supply withdrawal; 100 feet of gaining streams or tributaries; 150 feet of dwelling or public use areas; or 50 feet of the property line.
   (g) Public Access Restrictions. Public access shall not be allowed to the irrigation site(s).
   (h) Operation and Maintenance Manual.
   The permittee shall develop, maintain and implement an Operation and Maintenance (O&M) Manual that includes all necessary items to ensure the operation and integrity of the waste handling and land application systems. Copies of the O&M Manual and subsequent revisions shall be submitted to Regional Office for review and approval. The O&M Manual shall be reviewed and updated at least every five years.
   (i) Nitrogen Loading Rates. Wastewater irrigation rates shall not exceed a nitrogen application rate of 150 pounds total nitrogen per acre per year. Hydraulic application rates exceeding 60 inches per acre per year shall calculate nitrogen loading rates and include results in the annual report. The calculation procedures are as follows: (Total N) x (0.226) x (inches per acre irrigated) = pounds total N per acre. Where Total N = [Total Kjeldahl Nitrogen (TKN) as N] + [Nitrate Nitrogen as N]. If the applied wastewater exceeds, 150 pounds total nitrogen per acre/year, the permittee must reduce the application rates or submit a revised permit application to request use of the Plant Available Nitrogen (PAN) method based on crop nitrogen requirements for harvested crops. PAN availability factors for surface application are: [Ammonia N x 0.6] + [Nitrate N x 0.9] + [Organic N x 0.6] = PAN. The annual report shall include testing results for wastewater, soils and crop yields and calculations for nitrogen applied and crop removal of nitrogen.
   (j) Equipment Checks during Irrigation. The irrigation system and application site shall be visually inspected at least once/day during wastewater irrigation to check for equipment malfunctions and runoff from the irrigation site.

PERMIT TRANSFER

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

PERMIT RENEWAL REQUIREMENTS

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

TERMINATION

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

DUTY OF COMPLIANCE

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

STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

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

Permit No.	MO-0087190
Owner:	Missouri Department of Transportation (MODOT)
Address:	P.O. Box 1067, 1711 Route 61, Hannibal, MO 63401
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	MODOT – I-70 Rest Area, Warren County
Facility Address:	Route I-70, Wright City, MO 63390
Legal Description:	SE ¼, SE ¼, SE ¼, Sec. 18, T47N, R1W; Warren County.
Latitude/Longitude:	+3849470/ -09103215
Receiving Stream:	Tributary to Indian Camp Creek (U)
First Classified Stream and ID:	Indian Camp Creek (C) (00212)
USGS Basin & Sub-watershed No.:	(07110008 - 040002)

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 – Interstate Rest Area - SIC # 4952
Two cell lagoon/ sand filter/ sludge is retained in lagoon.
Design population equivalent is 369.
Design flow is 23,520 gallons per day.
Actual flow is 1,885 gallons per day.
Design sludge production is 5.54 dry tons/year.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

February 9, 2007
Effective Date

Doyle Childers, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

February 8, 2012
Expiration Date

Mike Struckhoff, Director, St. Louis Regional Office

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS	PAGE NUMBER 2 of 4 PERMIT NUMBER MO-0087190

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 PARAMETERS)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Flow	MGD	*		*	Once/ month	24 hour est.
Temperature	°C	*		*	Once/quarter**	Grab
Biochemical Oxygen Demand$_5$	mg/L		45	30	Once/quarter**	Composite***
Total Suspended Solids	mg/L		45	30	Once/quarter**	Composite***
pH – Units	SU	****		****	Once/quarter**	Grab
Ammonia as N	mg/L	*		*	Once/quarter**	Grab

MONITORING REPORTS SHALL BE SUBMITTED **QUARTERLY**; THE FIRST REPORT IS DUE **July 28, 2007**. 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 & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

MO 780-0010 (8/91)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

* Monitoring requirement only.

** Sample once per Quarter during the months of January, April, July and October.

*** 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. The pH is limited to the range of 6.0 to 9.0 pH units.

C. SPECIAL CONDITIONS

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

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

2. All outfalls must be clearly marked in the field.

3. Permittee will cease discharge by connection to areawide wastewater treatment system within 90 days of notice of its availability.

4. Changes in Discharges of Toxic Substances.
   The permittee shall notify the Director as soon as it knows or has reason to believe:
   a. That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
      (1) One hundred micrograms per liter (100 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. That the effluent limit established in part A of the permit will be exceeded.

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

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

C. SPECIAL CONDITIONS (continued)

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

Date of Fact Sheet: October 6, 2006

Date of Public Notice:

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT
FACT SHEET

This Fact Sheet explains the applicable regulations, rationale for development of this permit and the public participation process.

NPDES PERMIT NUMBER: MO-0087190

FACILITY NAME: MODOT – I-70 Rest Area – Warren County

OWNER NAME: Missouri Department of Transportation

LOCATION: SE ¼, SE ¼, SE ¼, Sec 18, T47N, R1W; Warren County.

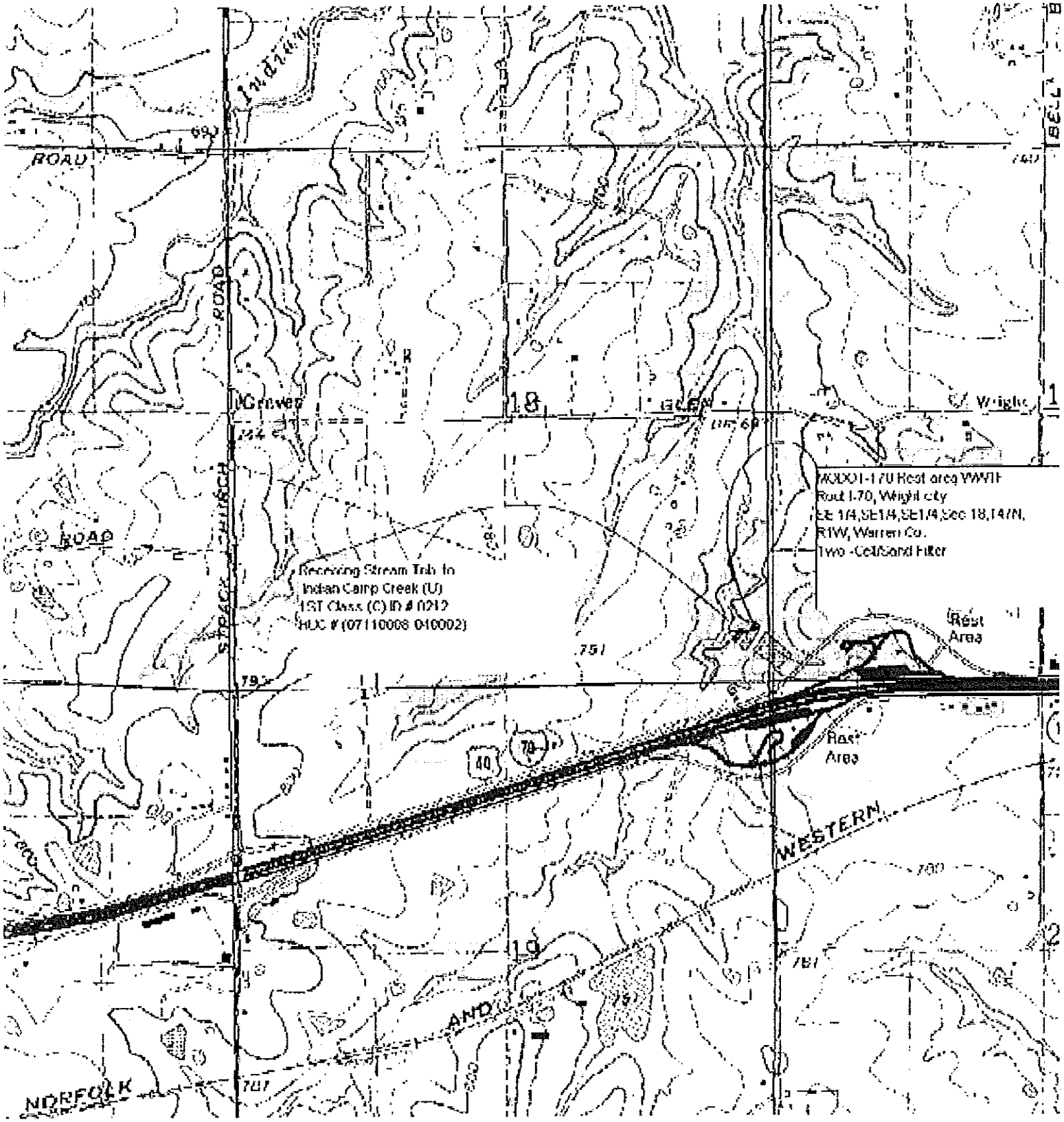
RECEIVING STREAM: Tributary to Indian Camp Creek

FACILITY CONTACT PERSON: Ervin Fackler (Area Engineer) TELEPHONE: (636) 528 - 3163

FACILITY DESCRIPTION AND RATIONALE

This facility provides secondary treatment to the wastewater discharge with a two cell lagoon and a sand filter. The sludge is retained in the lagoon. The discharge reports to a tributary to Indian Camp Creek, an unclassified stream then flows 4.5 miles to Indian Camp Creek, a class "C" stream that has been on the state 303(d) list since 1998 for NVSS and NH_3. A TMDL on the contaminated stream section has not been prepared. Standard technology-based limits for BOD_5, TSS and pH, as specified in 10 CSR 20-7.015 (8) (B) 1. and 2., should be protective of the receiving stream. Ammonia and temperature have been added as monitoring requirements to determine if there is "reasonable potential" to violate state water quality standards for those parameters. The permit should contain a reopener clause should the data generated by this permit, or other monitoring data, indicate that state water quality standards are being exceeded, due at least in part to this discharge.

This permit will be issued for a period of five years.


ROAD
ROAD
ROAD
STRACK CHURCH
Crewes
18
Wright
MOXOI-170 Rest area WWTF
Rout I-70, Wright city
SE 1/4,SE1/4,SE1/4,Sec 18,T47N,
R1W, Warren Co.
Two -Cell/Sand Filter
Receiving Stream Trib. to
Indian Camp Creek (U)
1ST Class (C) ID # 0212
HUC # (07110008 010002)
Rest
Area
Rest
Area
70
40
WESTERN
19
AND
NORFOLK

STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

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

Permit No.	MO-0129453
Owner:	Missouri Department of Transportation
Address:	600 NE Colbern Road, Lee's Summit, MO 64086
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	MoDOT, I-29 Dearborn Rest Area
Address:	21205 I-29 North bound, Camden Point, MO 64018
Legal Description:	NW ¼, SW ¼, Sec. 24, T54N, R35W, Platte County
Latitude/Longitude:	+3928215/-09447104
Receiving Stream:	Unnamed tributary to Owl Creek (U)
First Classified Stream and ID:	Owl Creek (C) (03572)
USGS Basin & Sub-watershed No.:	(10240011-080003)

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 – Rest Area - SIC #9621- No certified operator required, however a level "D" operator is recommended.
Two-cell lagoon/Sludge is retained in the lagoon.
Design population equivalent is 162.
Design flow is 8,900 gallons per day.
Actual flow is 3,263 gallons per day.
Design sludge production is 1.0 dry tons/year.
Actual sludge production is 0.36 dry tons/year.
This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

November 21, 2008
Effective Date

Doyle Childers, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

November 20, 2013
Expiration Date

Karl Fett, Director, Kansas City Regional Office

MO 780-0041 (10-93)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS	PAGE NUMBER 2 of 3 PERMIT NUMBER MO-0129453

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

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Flow	MGD	*		*	once/quarter**	24 hr. estimate
Biochemical Oxygen Demand$_5$	mg/L		65	45	once/quarter**	grab
Total Suspended Solids	mg/L		120	80	once/quarter**	grab
pH – Units	SU	***		***	once/quarter**	grab
Temperature	°C	*		*	once/quarter**	grab
Ammonia as N	mg/L	*		*	once/quarter**	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE, April 28, 2009 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 & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

MO 780-0010 (8/91)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.

** Sample once per quarter in any month when there is a discharge. See table below for quarterly sampling

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

*** pH is measured in pH units and is not to be averaged. The pH is to be maintained at or above 6.0 pH units.

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.

C. SPECIAL CONDITIONS (continued)

2. All outfalls must be clearly marked in the field.

3. Permittee will cease discharge by connection to area-wide wastewater treatment system within 90 days of notice of its availability.

4. Changes in Discharges of Toxic Substances

   The permittee shall notify the Director as soon as it knows or has reason to believe:
   (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
      (1) One hundred micrograms per liter (100 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.

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

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

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

Missouri Department of Natural Resources
Statement of Basis
MODOT, I-29 Dearborn Rest Area
NPDES #: MO-0129453
Platte County

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

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

Part I – Facility Information

Facility Type: Rest Area
Facility SIC Code(s): 9621

Facility Description:
Three cell lagoon/ sludge is retained in the lagoon

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	.0137	Equivalent to secondary	Domestic	0.24

Water Quality History:
2005 one exceedance for BOD (46mg/L)

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;

- 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:

Each of the above entities are only applicable if they have a Population Equivalent greater than two hundred (200) and/or fifty (50) or more service connections.

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 1st classified receiving stream's beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Owl Creek	C	3572	LWW, AQL	10240011	Central Plains / Nishnabotna/Platte
			***		

* - Irrigation (IRR), Livestock & Wildlife Watering (LWW), Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cool Water Fishery(CLF), Cold Water Fishery (CDF), Whole Body Contact Recreation (WBC), Secondary Contact Recreation (SCR), Drinking Water Supply (DWS), Industrial (IND), Groundwater (GRW).
** - Ecological Drainage Unit
*** - UAA conducted on May 29, 2007 and was approved on November 9, 2007. The committee recommendation was to remove use for whole body contact recreation due to it not meeting the depth criteria; which also supported the previous 2005 UAA data.

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Owl Creek (C)	0.0	0.0	0.1

MIXING CONSIDERATIONS TABLE:

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.

ANTIDEGRADATION:
In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(2)], the department is to document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

☒ - Renewal no degradation proposed and no further review necessary.

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

COMPLIANCE AND ENFORCEMENT:
Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.

Not Applicable ☒;
The permittee/facility is not currently under Water Protection Program enforcement action.

PRETREATMENT PROGRAM:
The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a Publicly Owned Treatment Works [40 CFR 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):
Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard.

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_5) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals. Please see the United States Environmental Protection Agency's (EPA) website for interpretation of percent removal requirements for National Pollutant Discharge Elimination System Permit Application Requirements for Publicly Owned Treatment Works and Other Treatment Works Treating Domestic Sewage @ www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-04/w18866.htm

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

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

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

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

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.

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.

In accordance with the Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System. Furthermore, WET testing is a means by which the department determines that [10 CSR 20-7.031(3)(D, F, & G)] are being met by the permitted facility. In addition to justification for the WET testing, WET tests are required under [10 CSR 20-6.010(8)(A)4] to be performed by specialist who are properly trained in conducting the test according to the methods prescribed by the Federal Government as referenced in [40 CFR Part 136]. WET test will be required by <u>all</u> facilities meeting the following criteria:

- ☐ Facility is a designated Major.
- ☐ Facility continuously or routinely exceeds its design flow.
- ☐ Facility (industrial) that alters its production process throughout the year.
- ☐ Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.
- ☐ Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH_3)
- ☐ Facility is a municipality or domestic discharger with a Design Flow $\geq$ 22,500 gpd.
- ☐ Other – please justify.

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.

Part V – Effluent Limits Determination

Outfall #001 – Main Facility Outfall
EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	NO	S
BOD_5	MG/L	1		65	45	NO	S
TSS	MG/L	1		120	80	NO	S
pH (S.U.)	SU	1	≥6		≥6	NO	S
TEMPERATURE (°C)	°C	1/8	*		*	YES	****
AMMONIA AS N	MG/L	2/3/5	*		*	YES	****
ESCHERICHIA COLI	**	1/2	Please see Escherichia Coli (E. coli) in the Derivation and Discussion Section below.				
MONITORING FREQUENCY	Minimum Sampling is ONCE/QUARTER and Reporting Frequency Requirements is QUARTERLY						

* - Monitoring requirement only
**** - Parameter not previously established in previous state operating permit.
S – Same as previous operating permit

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

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow**. In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the department, which may require the submittal of an operating permit modification.

- **Biochemical Oxygen Demand (BOD_5)**. 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**. 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.**

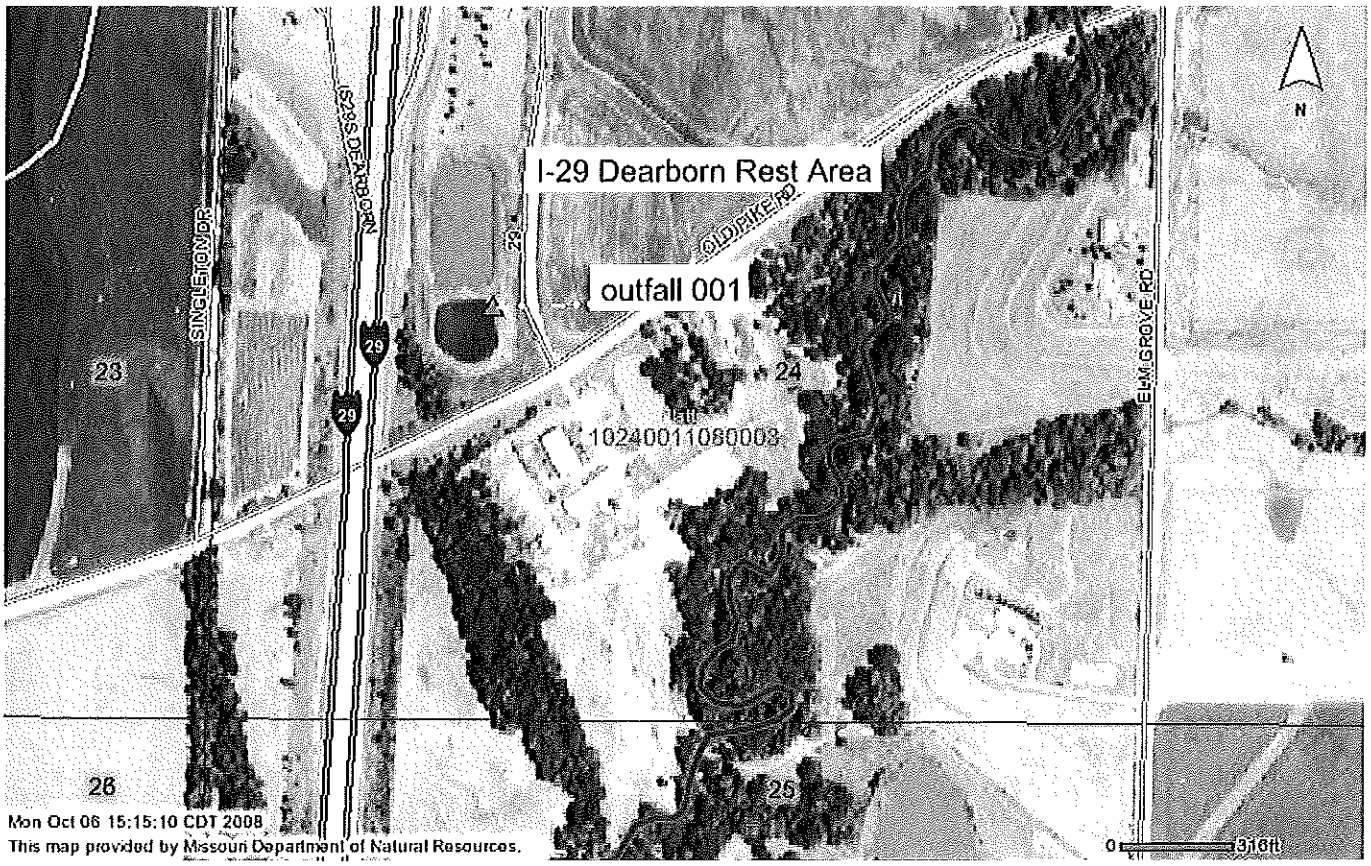
- **Temperature.** Monitoring requirement due to the toxicity of Ammonia varies by temperature.
- **Total Ammonia Nitrogen**. Monitoring requirement only. Monitoring for temperature and ammonia are included to determine whether "reasonable potential" to exceed water quality standards exists after the discharge begins.
- ***Escherichia coli (E. coli)***. This facility may be required to have *E. coli* effluent limitations when Missouri adopts the implementation of the *E. coli* standards, as per [10 CSR 20-7.031(4)(A)].

Part VI – Administrative Requirements

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

Date of Factsheet: October 6, 2008

Sunny Wellesley
Water Protection Program



STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

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

Permit No.	MO-0085804
Owner:	Missouri Department of Transportation (MoDOT)
Address:	600 NE Colbern Road, Lee's Summit, MO 64086
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	MoDOT, I-70 Rest
Address:	27905 (mile marker 58) N, Concordia, MO 64020
Legal Description:	NW ¼, SW ¼, Sec. 32, T49N, R24W, Lafayette County
Latitude/Longitude:	+3859455/-09335170
Receiving Stream:	Unnamed tributary to Davis Creek (U)
First Classified Stream and ID:	Davis Creek (P) (00907)
USGS Basin & Sub-watershed No.:	10300104-060004

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 - Rest Area- SIC #9621 – **Certified Operator Level "D" Required**
Three-cell lagoon / sludge is retained in lagoon.
Design population equivalent is 370
Design flow is 37,000 gallons per day.
Actual flow is 2,247 gallons per day.
Design sludge production is 5.6 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 644.051.6 of the Law.

August 7, 2009
Effective Date

Mark N. Templeton, Director, Department of Natural Resources

August 6, 2014
Expiration Date

Karl Fett, Director, Kansas City Regional Office

MO 780-0041 (10-93)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS	PAGE NUMBER 2 of 10 PERMIT NUMBER MO-0085804

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until three (3) years from the date of issuance of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE (Note 1)	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Flow	MGD	*		*	once/quarter***	24 hr. est.
Biochemical Oxygen Demand$_5$	mg/L		65	45	once/quarter***	grab
Total Suspended Solids	mg/L		120	80	once/quarter***	grab
pH – Units	SU	**		**	once/quarter***	grab
Ammonia as N	mg/L	*		*	once/quarter***	grab
Temperature	°C	*		*	once/quarter***	grab
Fecal Coliform	#/100 mL	*		*	once/quarter***	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE October 28, 2009 . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

Whole Effluent Toxicity (WET) test	% Survival	See Special Conditions #8	once/permit cycle yr. 2013	24 hr. composite

REPORTS SHALL BE SUBMITTED ONCE/PERMIT CYCLE; THE FIRST REPORT IS DUE January 28, 2014.

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.

MO 780-0010 (8/91)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.
** pH is measured in pH units and is not to be averaged. The pH is to be maintained at or above 6.0 pH units.
*** Sample once per quarter in any month when there is a discharge. See table below for quarterly sampling

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

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS	PAGE NUMBER 3 of 10
	PERMIT NUMBER MO-0085804

The final effluent limitations shall become effective three (3) years from the date of issuance of this permit and remain in effect until expiration of the permit. See Section D, Schedule of Compliance, for requirements regarding the timeline for achieving compliance with the final effluent limitations. 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 (Note 1)	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Flow	MGD	*		*	once/quarter***	24 hr. est.
Biochemical Oxygen Demand$_5$	mg/L		65	45	once/quarter***	grab
Total Suspended Solids	mg/L		120	80	once/quarter***	grab
pH – Units	SU	**		**	once/quarter***	grab
Ammonia as N	mg/L	*		*	once/quarter***	grab
Temperature	°C	*		*	once/quarter***	grab
Fecal Coliform (Note 2)	#/100 mL	1000		400	once/quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE October 28, 2012 . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
Whole Effluent Toxicity (WET) test	% Survival	See Special Conditions #8			once/permit cycle yr. 2013	24 hr. composite
REPORTS SHALL BE SUBMITTED ONCE/PERMIT CYCLE; THE FIRST REPORT IS DUE January 28, 2014.						
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.						

MO 780-0010 (8/91)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.
** pH is measured in pH units and is not to be averaged. The pH is to be maintained at or above 6.0 pH units.
*** Sample once per quarter in any month when there is a discharge. See table below for quarterly sampling

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

Note 1- Weekly average is the total mass or concentration of all daily discharges sampled during any calendar week divided by the number of daily discharges sampled or measured during that week. Average all samples that fall within a calendar week (Sunday through Saturday). (e.g. If you have three samples between Sunday and Saturday, add the three values together and divide by 3) If you have multiple samples that lie in separate calendar weeks, do not average data from separate weeks together.

Note 2 - Final limitations and monitoring requirements for Fecal Coliform are applicable only during the recreational season from April 1 through October 31. The Monthly Average Limit for Fecal Coliform is expressed as a geometric mean.

C. SPECIAL CONDITIONS

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

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

2. All outfalls must be clearly marked in the field.

3. Permittee will cease discharge by connection to a facility with an area-wide management plan per 10 CSR 20-6.010(3)(B) within 90 days of notice of its availability.

4. Changes in Discharges of Toxic Substances

   The permittee shall notify the Director as soon as it knows or has reason to believe:
   (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
      (1) One hundred micrograms per liter (100 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.

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

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

C. SPECIAL CONDITIONS (continued)

7. The permittee shall comply with any applicable requirements listed in 10 CSR 20-8 and 10 CSR 20-9, unless the facility has received written notification that the Department has approved a modification to the requirements. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. If a modification of the monitoring frequencies listed in 10 CSR 20-9 is needed, the permittee shall submit a written request to the department for review and, if deemed necessary, approval. (See Appendix #1)

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

SUMMARY OF ACUTE WET TESTING FOR THIS PERMIT					
OUTFALL	AEC	LC50%*	FREQUENCY	SAMPLE TYPE	MONTH
001	100 %	>100 %	Once/permit cycle	24 hr. composite	Any, 2013

* LC50 = AEC / 0.3.

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

(a) Test Schedule and Follow-Up Requirements

(1) Perform a MULTIPLE-dilution acute WET test in the months and at the frequency specified above. For tests which are successfully passed, submit test results using the Department's WET test report form #MO-780-1899 along with complete copies of the test reports as received from the laboratory, including copies of chain-of-custody forms within 30 calendar days of availability to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102. If the effluent passes the test, do not repeat the test until the next test period.

(a) For discharges of stormwater, samples shall be collected within three hours from when discharge first occurs.

(b) Samples submitted for analysis of stormwater discharges shall be collected as a grab.

(c) For discharges of non-stormwater, samples shall be collected only when precipitation has not occurred for a period of forty-eight hours prior to sample collection. In no event shall sample collection occur simultaneously with the occurrence of precipitation excepting for stormwater samples.

(d) A twenty-four hour composite sample shall be submitted for analysis of non-stormwater discharges.

(e) Upstream receiving water samples, where required, shall be collected upstream from any influence of the effluent where downstream flow is clearly evident.

(f) Samples submitted for analysis of upstream receiving water may be collected as either a grab or twenty-four-hour composite as appropriate to the nature of the discharge.

(g) Chemical and physical analysis of the upstream control and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping.

(h) Any and all chemical or physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% Effluent concentration in addition to analyses performed upon any other effluent concentration.

(i) All chemical analyses included in the Missouri Department of Natural Resources WET test report form #MO-780-1899 shall be performed and results shall be recorded in the appropriate field of the report form.

(j) Where flow-weighted composite sample is required for analysis, the samples shall be composited at the laboratory where the test is to be performed.

(k) Where in stream testing is required downstream from the discharge, sample collection shall occur immediately below the established Zone of Initial Dilution in conjunction with or immediately following a release or discharge.

(l) Samples submitted for analysis of downstream receiving water may be collected as either a grab or twenty-four-hour composite as appropriate to the nature of the discharge.

(m) All instream samples, including downstream samples, shall be tested for toxicity at the 100% concentration in addition to any other assigned AEC for in-stream samples.

C. SPECIAL CONDITIONS (continued)

(2) All failing test results along with complete copies of the test reports as received from the laboratory, INCLUDING THOSE TESTS CONDUCTED UNDER CONDITION (3) BELOW, shall be reported to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the availability of the results.

(3) If the effluent fails the test, a multiple dilution test shall be performed for BOTH test species within 30 calendar days and biweekly thereafter (for storm water, tests shall be performed on the next and subsequent storm water discharges as they occur, but not less than 7 days apart) until one of the following conditions are met:
   (i) THREE CONSECUTIVE MULTIPLE-DILUTION TESTS PASS. No further tests need to be performed until next regularly scheduled test period.
   (ii) A TOTAL OF THREE MULTIPLE-DILUTION TESTS FAIL.

(4) Failure of at least two multiple-dilution tests during any period of accelerated monitoring violates the permit narrative requirement for aquatic life protection.

(5) The permittee shall submit a summary of all test results for the test series along with complete copies of the test reports as received from the laboratory to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the third failed test.

(6) Additionally, the following shall apply upon failure of the third MULTIPLE DILUTION test: A toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. The permittee shall contact THE WATER PROTECTION PROGRAM within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. The permittee shall submit a plan for conducting a TIE or TRE to the WATER PROTECTION PROGRAM within 60 calendar days of the date of DNR's direction to perform either a TIE or TRE. This plan must be approved by DNR before the TIE or TRE is begun. A schedule for completing the TIE or TRE shall be established in the plan approval.

(7) Upon DNR's approval, the TIE/TRE schedule may be modified if toxicity is intermittent during the TIE/TRE investigations. A revised WET test schedule may be established by DNR for this period.

(8) If a previously completed TIE has clearly identified the cause of toxicity, additional TIEs will not be required as long as effluent characteristics remain essentially unchanged and the permittee is proceeding according to a DNR approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the permit, without the follow-up requirements, will be required during this period.

(9) When WET test sampling is required to run over one DMR period, each DMR report shall contain a copy of the Department's WET test report form that was generated during the reporting period.

(10) Submit a concise summary in tabular format of all WET test results with the annual report.

(b) PASS/FAIL procedure and effluent limitations:

(1) To pass a multiple-dilution test:
   (i) For facilities with a computed percent effluent at the edge of the zone of initial dilution, Allowable Effluent Concentration (AEC) OF 30% OR LESS, the AEC must be less than three-tenths (0.3) of the LC_{50} concentration for the most sensitive of the test organisms; **OR,**
   (ii) For facilities with an AEC greater than 30%, the LC50 concentration must be greater than 100%; **AND,**
   (iii) All effluent concentrations equal to or less than the AEC must be nontoxic. Mortality observed in all effluent concentrations equal to or less than the AEC shall not be significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the upstream receiving-water control sample. Where upstream receiving water is not available mortality observed in the AEC test concentration shall not be significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the laboratory control. The appropriate statistical tests of significance shall be consistent with the most current edition of METHODS FOR MEASURING THE ACUTE TOXICITY OF EFFLUENTS AND RECEIVING WATERS TO FRESHWATER AND MARINE ORGANISMS or other federal guidelines as appropriate or required. Failure of one multiple-dilution test may be considered an effluent limit violation.

C. SPECIAL CONDITIONS (continued)

(c) Test Conditions

(1) Test Type: Acute Static non-renewal

(2) All tests, including repeat tests for previous failures, shall include both test species listed below.

(3) Test species: Ceriodaphnia dubia and Pimephales promelas (fathead minnow). Organisms used in WET testing shall come from cultures reared for the purpose of conducting toxicity tests and cultured in a manner consistent with the most current USEPA guidelines. All test animals shall be cultured as described in the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.

(4) Test period: 48 hours at the "Acceptable Effluent Concentration" (AEC) specified above.

(5) Upstream receiving stream water shall be used as dilution water. If upstream water is unavailable or if mortality in the upstream water exceeds 10%, "reconstituted" water will be used as dilution water. Procedures for generating reconstituted water will be supplied by the MDNR upon request.

(6) Multiple-dilution tests will be run with:

(i) 100%, 50%, 25%, 12.5%, and 6.25% effluent, unless the AEC is less than 25% effluent, in which case dilutions will be 4 times the AEC, two times the AEC, AEC, 1/2 AEC and 1/4 AEC;

(ii) 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent; and

(iii) Reconstituted water.

(7) If reconstituted-water control mortality for a test species exceeds 10%, the entire test will be rerun.

(8) If upstream control mortality exceeds 10%, the entire test will be rerun using reconstituted water as the dilutant.

C. SPECIAL CONDITIONS (continued)

SUMMARY OF TEST METHODOLOGY FOR ACUTE WHOLE-EFFLUENT TOXICITY TESTS

Whole-effluent-toxicity test required in NPDES permits shall use the following test conditions when performing single or multiple dilution methods. Any future changes in methodology will be supplied to the permittee by the Missouri Department of Natural Resources (MDNR). Unless more stringent methods are specified by the DNR, the procedures shall be consistent with the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms,

Test conditions for Ceriodaphnia dubia:

Test duration:	48 h
Temperature:	25 ± 1°C Temperatures shall not deviate by more than 3°C during the test.
Light Quality:	Ambient laboratory illumination
Photoperiod:	16 h light, 8 h dark
Size of test vessel:	30 mL (minimum)
Volume of test solution:	15 mL (minimum)
Age of test organisms:	<24 h old
No. of animals/test vessel:	5
No. of replicates/concentration:	4
No. of organisms/concentration:	20 (minimum)
Feeding regime:	None (feed prior to test)
Aeration:	None
Dilution water:	Upstream receiving water; if no upstream flow, synthetic water modified to reflect effluent hardness.
Endpoint:	Pass/Fail (Statistically significant Mortality when compared to upstream receiving water control or synthetic control if upstream water was not available at $p \leq 0.05$)
Test acceptability criterion:	90% or greater survival in controls

Test conditions for Pimephales promelas:

Test duration:	48 h
Temperature:	25 ± 1°C Temperatures shall not deviate by more than 3°C during the test.
Light Quality:	Ambient laboratory illumination
Photoperiod:	16 h light/ 8 h dark
Size of test vessel:	250 mL (minimum)
Volume of test solution:	200 mL (minimum)
Age of test organisms:	1-14 days (all same age)
No. of animals/test vessel:	10
No. of replicates/concentration:	4 (minimum) single dilution method 2 (minimum) multiple dilution method
No. of organisms/concentration:	40 (minimum) single dilution method 20 (minimum) multiple dilution method
Feeding regime:	None (feed prior to test)
Aeration:	None, unless DO concentration falls below 4.0 mg/L; rate should not exceed 100 bubbles/min.
Dilution water: Upstream receiving water; if no upstream flow, synthetic water modified to reflect effluent hardness.	
Endpoint:	Pass/Fail (Statistically significant Mortality when compared to upstream receiving water control or synthetic control if upstream water was not available at $p \leq 0.05$)
Test Acceptability criterion:	90% or greater survival in controls

D. SCHEDULE OF COMPLIANCE

1. This permit contains interim effluent limitations which are applicable for three (3) years following issuance of this permit. The final limits shall apply thereafter.

2. After one year of monitoring events following the issuance of this permit (which would be **August 7, 2010**), determine, by analyzing effluent data, if the wastewater treatment facility could comply with the final effluent limitations for Fecal Coliform bacteria. **During the first year of monitoring a minimum of 12 months of monitoring data is required.** In the case that the lagoon will not discharge once per month, additional samples should be taken when the lagoon is discharging.

3. If the final Fecal Coliform bacteria limits could not be complied with, submit, within twelve (12) months after the end of the first year of monitoring events (or twenty four {24} months after the issuance of this permit) (no later than **August 7, 2011**), a completed application for a construction permit, and one copy each of an engineering report, plans and specifications prepared by a professional engineer registered in the State of Missouri. Send the prepared submittal to the Missouri Department of Natural Resources, Kansas City Regional Office, 500 Northeast Colbern Road, Lee's Summit, MO 64086. This submittal shall include wastewater treatment facility improvements to comply with the final effluent limits as listed in Section A. of this permit, designed in accordance with the Missouri Clean Water Law Regulation 10 CSR 20 Chapter 8.

4. Within fifteen (15) calendar days of receipt of any request for additional information or changes in the engineering report, plans or specifications, respond and if necessary submit engineering modifications to the department's address as shown in Paragraph D.3 above.

5. Within six (6) months of the issuance of the construction permit, construct the permitted wastewater treatment facility improvements.

6. Within fifteen (15) calendar days of completion of construction of wastewater treatment facility improvements, submit a Statement of Work Completed form, signed, sealed, and dated by a professional engineer registered in the State of Missouri certifying that the project has been completed substantially in accordance with the approved plans and specifications. In addition to the Statement of Work Completed, submit an application for a Missouri State Operating Permit modification, complete with the appropriate modification fee, to the department's address shown in Paragraph D.3 above.

D. SCHEDULE OF COMPLIANCE FOR CERTIFIED OPERATOR

The MoDOT, I-70 Rest Area is required to have a Certified Operator for the wastewater treatment facility in accordance with 10 CSR 20-9.020(2)(A). Under the current facility description of the MoDOT, I-70 Rest Area, a Certified D Level Operator is required.

1. The facility will obtain the services of a Certified D Level Operator by **March 1, 2010.**

2. The City of Pattonsburg shall submit a written report to the Kansas City Regional Office by **April 1, 2010 (or as soon as possible),** that contains the Certified Operators name and certification number.

PERMIT TRANSFER

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

PERMIT RENEWAL REQUIREMENTS

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

TERMINATION

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

DUTY OF COMPLIANCE

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

This permit authorizes only the activities described in this permit. Compliance with this permit may not be considered a shield from compliance with any local ordinance, State Regulation or State Law.

Missouri Department of Natural Resources
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-0085804
MODOT, I-70 REST AREA

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a Factsheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (operating permit) listed below.

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

This Factsheet is for:

- ☐ Major
- ☑ Minor
- ☐ Industrial Facility
- ☐ Variance
- ☐ Master General Permit
- ☐ General Permit Covered Facility
- ☐ And/or permit with widespread public interest

Part I – Facility Information

Facility Type: Rest Area (NON-POTW)
Facility SIC Code(s): 9621

Facility Description:
Three cell lagoon/sludge is retained in lagoon

Three cell lagoon (waste stabilization lagoon): primary cell has a surface area of 80,500 SF, secondary cell has a surface area of 25,100 SF, and tertiary cell has a surface area of 8,500 SF. The facility currently reports that there are 2 rest areas connected.

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

☑ No

Application Date: January 9, 2009
Expiration Date: July 22, 2009

Last Inspection: October 22, 2003 ☑ In Compliance ☐ Non Compliance

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	0.057	Equivalent to secondary	Domestic	~1.5

Outfall #001

Legal Description:	NW ¼, SW ¼, Sec. 32, T49N, R24W, Lafayette County
Latitude/Longitude:	+3859455/-09335170
Receiving Stream:	Unnamed tributary to Davis Creek (U)
First Classified Stream and ID:	Davis Creek (P) (00907)
USGS Basin & Sub-watershed No.:	10300104-060004

Receiving Water Body's Water Quality & Facility Performance History:
September 2004 no report submitted

Comments

The actual flow listed for this permit was determined by using the flow data provided from the discharge monitoring reports from the years 2006 to 2008.

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;

- 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

Each of the above entities are only applicable if they have a Population Equivalent greater than two hundred (200) and/or fifty (50) or more service connections.

- Department required: ☑
  The Department requires this facility to retain the services of a certified operator due to: Facility has a Population Equivalent of 370.

This facility currently requires an operator with a(n) (D) Certification Level. Please see **Appendix # 3- Classification Worksheet** Modifications made to the wastewater treatment facility may cause the classification to be modified.

☑ - This facility does not currently retain an operator with the correct level of certification required to operate the wastewater treatment facility. Missouri Clean Water Law and its implementing regulation 10 CSR 20-9.020(2)(F) allows the department to develop a schedule of activities including the date by which compliance shall be obtained. This schedule of activities shall be established in this operating permit as a Schedule of Compliance.

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.

☑ All Other Waters [10 CSR 20-7.015(8)]

10 CSR 20-7.031 Missouri Water Quality Standards, the department defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1st classified receiving stream's beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Unnamed tributary to Davis Creek	U	NA	General Criteria	10300104	Central Plains/Blackwater/Lamine
Davis Creek	P	00907	LWW, AQL, WBC-B***		

* - Irrigation (IRR), Livestock & Wildlife Watering (LWW), Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cool Water Fishery(CLF), Cold Water Fishery (CDF), Whole Body Contact Recreation (WBC), Secondary Contact Recreation (SCR), Drinking Water Supply (DWS), Industrial (IND), Groundwater (GRW).
** - Ecological Drainage Unit
*** - UAA has not been conducted.

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Unnamed tributary to Davis Creek (U)	0	0	0

MIXING CONSIDERATIONS TABLE:

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

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements recommended at this time.

Part IV – Rationale and Derivation of Effluent Limitations & Permit Conditions

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:
As per [10 CSR 20-7.015(4)(A)], discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

☑ Not Applicable

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(l)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

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

ANTIDEGRADATION:
In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(2)], the department is to document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

☑

Renewal no degradation proposed and no further review necessary.

AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:
As per [10 CSR 20-6.010(3)(B)], ...An applicant may utilize a lower preference continuing authority by submitting, as part of the application, a statement waiving preferential status from each existing higher preference authority, providing the waiver does not conflict with any area-wide management plan approved under section 208 of the Federal Clean Water Act or any other regional sewage service and treatment plan approved for higher preference authority by the department.

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 at this time. This facility retains the sludge in the lagoon. The facility has not reported any sludge removal nor indicated the type of sludge disposal. This permit is a renewal and in the previous permit cycle the facility has been approved to land apply; therefore if the facility does need to remove sludge and chooses to land apply then the facility must notify the department in writing 60 days prior to sludge removal and must then follow the requirements under Standard Conditions Part III.

COMPLIANCE AND ENFORCEMENT:
Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.

☑ Not Applicable

The permittee/facility is not currently under Water Protection Program enforcement action.

PRETREATMENT PROGRAM:
The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a Publicly Owned Treatment Works [40 CFR 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):
Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard.

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

☑ 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_5) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals. Please see the United States Environmental Protection Agency's (EPA) website for interpretation of percent removal requirements for National Pollutant Discharge Elimination System Permit Application Requirements for Publicly Owned Treatment Works and Other Treatment Works Treating Domestic Sewage @ www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-04/w18866.htm .

☑ Not Applicable

Influent monitoring is not being required to determine percent removal.

SANITARY SEWER OVERFLOWS (SSOS), 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.

☑ Applicable

The time given for effluent limitations of this permit listed under Interim Effluent Limitation and Final Effluent Limitations were established in accordance with [10 CSR 20-7.031(10)].

STORM WATER POLLUTION PREVENTION PLAN (SWPPP):
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.

VARIANCE:
As per the Missouri Clean Water Law § 644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

☑ Not Applicable

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

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

☑ Not Applicable

Wasteload allocations were not calculated.

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

☑ 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.

☑ Applicable

In accordance with the Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System. Furthermore, WET testing is a means by which the department determines that [10 CSR 20-7.031(3)(D, F, & G)] are being met by the permitted facility. In addition to justification for the WET testing, WET tests are required under [10 CSR 20-6.010(8)(A)4] to be performed by specialists who are properly trained in conducting the test according to the methods prescribed by the Federal Government as referenced in [40 CFR Part 136]. WET test will be required by all facilities meeting the following criteria:

☐ Facility is a designated Major.

☐ Facility continuously or routinely exceeds its design flow.

☐ Facility (industrial) that alters its production process throughout the year.

☐ Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.

☐ Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH3)

☑ Facility is a municipality or domestic discharger with a Design Flow > 22,500 gpd.

☐ Other - Please justify

303(d) LIST & TOTAL MAXIMUM DAILY LOAD (TMDL):
Section 303(d) of the federal Clean Water Act requires that each state identify waters that are not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock and wildlife. The 303(d) list helps state and federal agencies keep track of waters that are impaired but not addressed by normal water pollution control programs.

A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed that shall include the TMDL calculation

☑ Not Applicable

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

Part V – Effluent Limits Determination

Outfall #001 – Main Facility Outfall
EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	NO	
BOD_5	MG/L	1		65	45	NO	
TSS	MG/L	1		120	80	NO	
pH	SU	1	≥6		≥6	NO	
TEMPERATURE	°C	1/8	*		*	YES	***
AMMONIA AS N	MG/L	2/3/5	*		*	YES	***
ESCHERICHIA COLI	Please see Escherichia Coli (E. coli) in the Derivation and Discussion Section below.						
FECAL COLIFORM	**	1/2	1000		400	YES	***
WHOLE EFFLUENT TOXICITY (WET) TEST	% Survival	11	Please see WET Test in the Derivation and Discussion Section below.				
MONITORING FREQUENCY	Minimum Sampling is QUARTERLY and Reporting Frequency Requirements is QUARTERLY						

* - 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.

Basis for Limitations Codes:

1. State or Federal Regulation/Law
2. Water Quality Standard (includes RPA)
3. Water Quality Based Effluent Limits
4. Lagoon Policy
5. Ammonia Policy
6. Dissolved Oxygen Policy
7. Antidegradation Policy
8. Water Quality Model
9. Best Professional Judgment
10. TMDL or Permit in lieu of TMDL
11. WET Test Policy
12. Antidegradation Review
13. 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_5)**. Effluent limitations from the previous state operating permit have been reassessed and verified that they are still protective of the receiving stream's Water Quality. Therefore, 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 from the previous state operating permit have been reassessed and verified that they are still protective of the receiving stream's Water Quality. Therefore, effluent limitations have been retained from previous state operating permit, please see the APPLICABLE DESIGNATION OF WATERS OF THE STATE sub-section of the **Receiving Stream Information.**

- **pH**. Effluent 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.**

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

- **Total Ammonia Nitrogen**. Monitoring requirement only. Monitoring for temperature and ammonia are included to determine whether "reasonable potential" to exceed water quality standards exists after the discharge begins.

- ***Escherichia coli (E. coli)***. This facility may be required to have *E. coli* effluent limitations when Missouri adopts the implementation of the *E. coli* standards, as per [10 CSR 20-7.031(4)(C)]. (This will be updated upon promulgation of the regulation).

- **Fecal Coliform**. Discharge shall not contain more than a monthly geometric mean of 400 colonies/100 mL and a daily maximum of 1000 colonies/100 mL during the recreational season (April 1 – October 31), please see the APPLICABLE DESIGNATION OF WATERS OF THE STATE sub-section of the **Receiving Stream Information.** Future renewals of the facility operating permit will contain effluent limitations for E. coli, which will replace fecal coliform as the applicable bacteria criteria in Missouri's water quality standards.

- **WET Test**. WET Testing schedules and intervals are established in accordance with the department's Permit Manual; Section 5.2 *Effluent Limits / WET Testing for Compliance Bio-monitoring.* It is recommended that WET testing be conducted during the period of lowest stream flow.

  ☑ Acute

  ☑ No less than ONCE/PERMIT CYCLE

  ☑ Municipality or domestic facility with a design flow > 22,500 gpd, but less than 1.0 MGD.

  ☐ Other, please justify.

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

Part VI – Administrative Requirements

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

PUBLIC NOTICE:
The department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing.

The department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit.

For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

☑ The Public Notice period for this operating permit is tentatively schedule to begin June 2009.

DATE OF FACT SHEET: JUNE 17, 2009

COMPLETED BY:

SUNNY WELLESLEY, ENVIRONMENTAL SPECIALIST IV
KANSAS CITY REGIONAL OFFICE
WATER PROTECTION PROGRAM

Part VII – Appendices

APPENDIX # 1- Lagoon Plant Operational Control Parameters as required by CSR 20-9.010 Wastewater Treatment Systems Operation Scope Monitoring

The operational control parameters listed here apply to all facilities that are owned or operated by or for any of the following:

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

Each of the above entities are only applicable if they have a Population Equivalent greater than two hundred (200) and/or twenty-five (25) or more service connections.

These operational tests and monitoring are to be conducted in addition to the requirements of the permit effluent limitations of your Missouri State Operating Permit (MSOP).

Parameter	Units	Sample Type	Frequency	Sample Location
pH	Standard Units	grab	Twice/Week	Primary Cell
D.O.	mg/L	grab	Twice/Week	Primary Cell
Flow	MGD	direct measurement	Twice/Week	Influent OR Effluent
Ambient Air Temperature	°C	direct measurement	Twice/Week	Nearest Temperature Gauge
Precipitation	inches	direct measurement	Twice/Week	Nearest Rain Gauge
Cloud Cover	R,S,C,PC,O*	observation	Twice/Week	

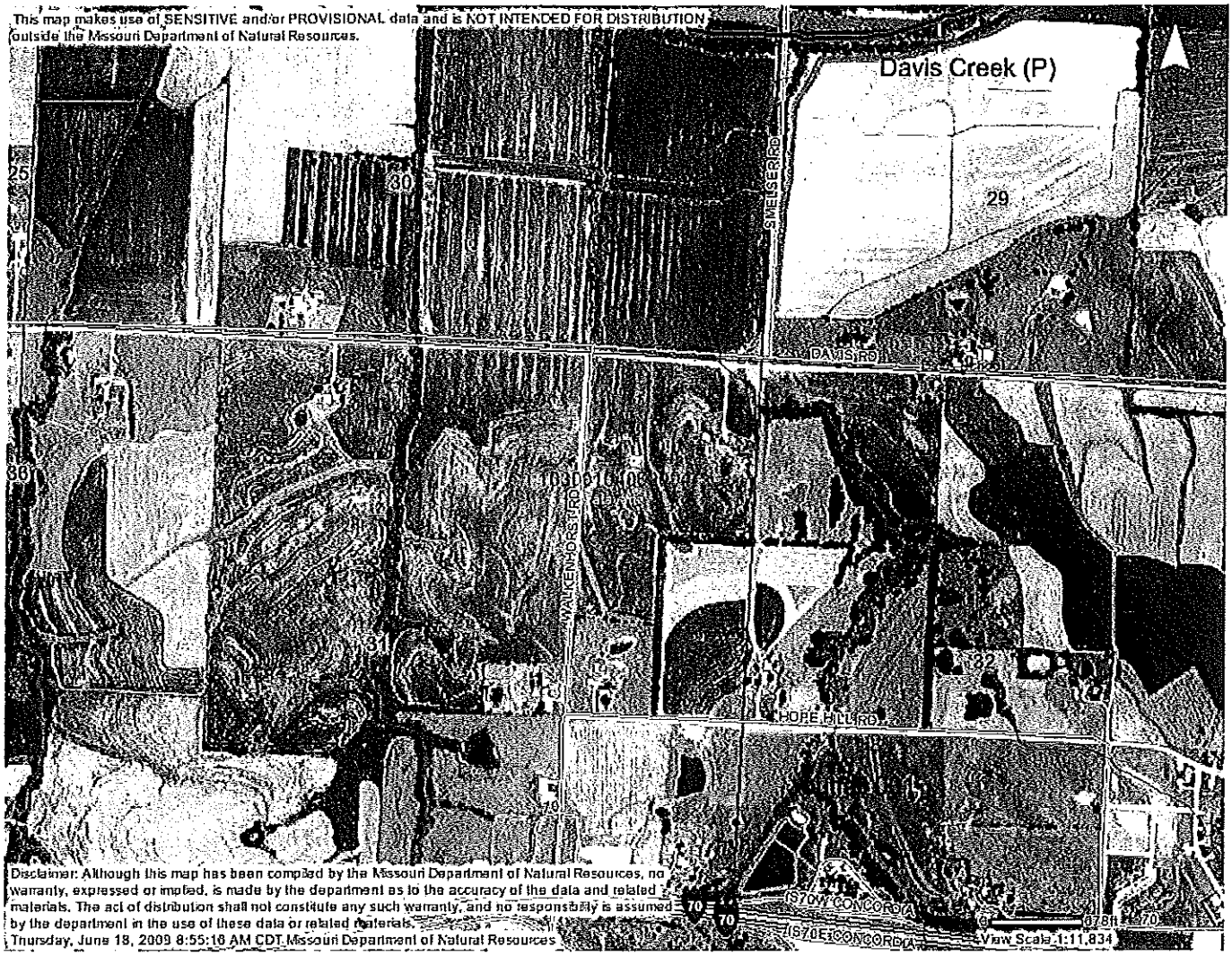
* R – Rain
S – Snow
C – Cloudy
PC – Partly Cloudy
O – Overcast

Total Residual Chlorine
Facilities which chlorinate for disinfection shall perform total chlorine residual analyses of the effluent on a daily basis during those periods when chlorination facilities are in use.

Test Methods
Laboratory procedures shall be performed according to the most current edition of *Standard Methods for the Examination of Water and Wastewater* or other methods approved by the department.

APPENDIX # 2- FACILITY MAP VIEW

APPENDIX # 2- FACILITY MAP VIEW (CONTINUED)



APPENDIX # - CLASSIFICATION WORKSHEET (CONTINUED):

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
VARIATION IN RAW WASTE (highest level only) (DMR exceedances and Design Flow exceedances)		
Variation do not exceed those normally or typically expected	0	
Recurring deviations or excessive variations of 100 to 200 % in strength and/or flow	2	
Recurring deviations or excessive variations of more than 200 % in strength and/or flow	4	
Raw wastes subject to toxic waste discharge	6	
SECONDARY TREATMENT		
Trickling filter and other fixed film media with secondary clarifiers	10	
Activated sludge with secondary clarifiers (including extended aeration and oxidation ditches)	15	
Stabilization ponds without aeration	5	5
Aerated lagoon	8	
Advanced Waste Treatment Polishing Pond	2	
Chemical/physical – without secondary	15	
Chemical/physical – following secondary	10	
Biological or chemical/biological	12	
Carbon regeneration	4	
DISINFECTION		
Chlorination or comparable	5	
Dechlorination	2	
On-site generation of disinfectant (except UV light)	5	
UV light	4	
SOLIDS HANDLING - SLUDGE		
Solids Handling Thickening	5	
Anaerobic digestion	10	
Aerobic digestion	6	
Evaporative sludge drying	2	
Mechanical dewatering	8	
Solids reduction (incineration, wet oxidation)	12	
Land application	6	
Total from page TWO (2)	----	5
Total from page ONE (1)	---	1
Grand Total	---	6

☐ A : 71 points or greater

☐ B: 51 points - 70 points

☐ C: 26 points - 50 points

☑ D: 0 points - 25 points

APPENDIX # - CLASSIFICATION WORKSHEET (CONTINUED):

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☐ A : 71 points or greater

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☐ C: 26 points - 50 points

☑ D: 0 points - 25 points

STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

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

Permit No.	MO-0089311
Owner:	Missouri Department of Transportation (MoDOT)
Address:	3602 North Belt, St. Joseph, MO 64502-1399
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	MoDOT, Mound City Rest Area
Address:	I-29 Rest Area, Mound City, MO 64470
Legal Description:	NW ¼, NW ¼, Sec. 17, T61N, R38W, Holt County
Latitude/Longitude:	+4006069/-09512587
Receiving Stream:	Ditch to Bluff Pool-Squaw Creek Wildlife Refuge (U)
First Classified Stream and ID:	Davis Creek Ditch (C) (00253)
USGS Basin & Sub-watershed No.:	(10240005-220002)

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 - Rest Area - SIC #4952/9621
Three cell lagoon/spray irrigation/sludge is retained in lagoon.
Design population equivalent is 52.
Design flow is 5,000 gallons per day.
Actual flow is 2,100 gallons per day.
Design sludge production is 0.36 dry tons/year.
Actual sludge production is 0.14 dry tons/year.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

February 22, 2008
Effective Date

Doyle Childers, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

February 21, 2013
Expiration Date

Karl Fett, Director, Kansas City Regional Office

MO 780-0041 (10-93)

FACILITY DESCRIPTION (continued)

Outfall #001 – Irrigation System Design

Receiving Stream Watershed: a gaining stream setting

Facility Type: No-discharge Storage and Irrigation System for year round flows into lagoon.

Design Basis:	**Avg Annual**
Design dry weather flows:	5,000 gpd
Design with 1-in-10 year flows:	5,000 gpd

Design PE: 52

Storm Water Flows: (Holt County)
Average Annual Rainfall. 36 inches
1-in-10 Year Annual Rainfall. 46.8 inches 25-year-24-hour storm: 6 inches

1-in-10 year Flows:	Annual
Runoff concrete and roof areas	3.1 ft.
Runoff earth areas (lagoon berm, lots, etc)	1.8 ft.
Rainfall minus Evaporation (R-E) on lagoon water surface	1.2 ft.

Lagoon Dimensions:	**Surface Area**	**Depth from Bottom**	**Pump down depth (from spillway)**
Center Line Top Berm:	864 sq.ft.	6 feet depth	
Inside Top Berm:	864 sq.ft.	4 feet depth	
Freeboard: (top berm to spillway 2 feet depth)			
Maximum operating level		2.0 feet depth	1.0 feet
Minimum operating level		2.0 feet depth	4.0 feet
Aerobic BOD design basis		3.0 feet depth	

Storage volume (minimum to maximum water levels) 438.866 gallons

Berm top width: 10 feet Berm runoff area (Centerline to emergency spillway) 60 sq.ft.

1-in-10 year Annual Storm water flows into lagoon (R-E): 1.72 cu.ft. (1,286 gallons)

Days of Storage

Storage Capacity:	**Avg Annual**
Design with 1-in 10 year flows:	123.5 days

Land Application:
Irrigation Volume /year: 1,825,000 gallons (including 1-in-10 year flows)

Irrigation areas: 1.98 acres at design loading (4.08 acres total available)

Application rates/acre: 0.0038 inch/hour; 0.092 inch/day; 0.64 inches/week; 33.87 inches/year

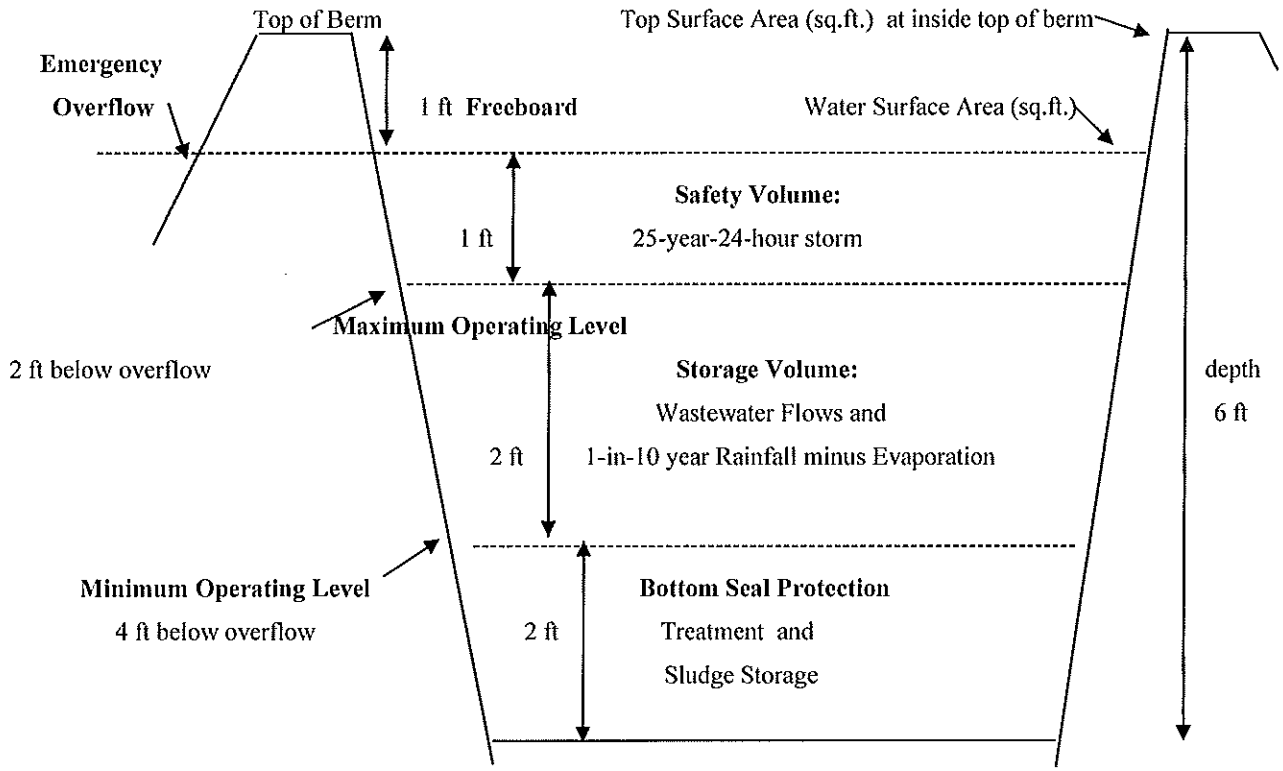
Equipment type: gated pipe

Vegetation: grass land

Application rate is based on: Based on Flow

Additional Comments:

LAGOON PROFILE



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
Outfall #001 - Emergency discharge from lagoon or irrigation sites (Note 1)						
Flow	MGD	*		*	once/day**	24 hr. estimate
Biochemical Oxygen Demand$_5$	mg/L		65	45	once/week**	grab
Total Suspended Solids	mg/L		110	70	once/week**	grab
pH - Units	SU	***		***	once/week**	grab
Temperature	°C	****		****	once/week**	grab
Ammonia as N	mg/L	*		*	once/week**	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE July 28, 2008.						
Outfall #001 - Land Application Operational Monitoring (Notes 2 & 3)						
Lagoon Freeboard	feet	*			once/month	measured
Irrigation Period	hours	*			daily	total
Volume Irrigated	gallons	*			daily	total
Application Area	acres	*			daily	total
Application Rate	inches/ acre	*			daily	total
Rainfall	inches	*			daily	total
MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE January 28, 2009. 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 & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

MO 780-0010 (8/91)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.
** Monitor only when discharge occurs. Report as no-discharge when a discharge does not occur during the reporting period.
*** pH is measured in pH units and is not to be averaged. The pH is to be maintained at or above 6.0 pH units.
**** Comply with water quality standards per Special Conditions #4.

Note 1 - **No-discharge facility requirements**. Wastewater shall be stored and land applied during suitable conditions so that there is no-discharge form the lagoon or irrigation site. An emergency discharge may occur when excess wastewater has accumulated above feasible irrigation rates due to precipitation exceeding the 1-in-10 year 365 day rainfall or the 25-year 24-hour storm event.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

Note 2 - Records shall be maintained and summarized into an annual operating report, which shall be submitted by January 28th of each year for the previous calendar year period. The report shall include the following:

(a) Record of maintenance and repairs performed during the year, average number of times per month the facility is checked to see if it is operating properly, and description of any unusual operating conditions encountered during the year.
(b) The number of days the lagoon has discharged during the year, the discharge flow, the reasons discharge occurred and effluent analysis performed; and
(c) A summary of the irrigation operations including freeboard at the start and end of the irrigation season, the number of days of irrigation for each month, the total gallons irrigated, the total acres used, crops grown, crop yields per acre, the application rate in inches/acre per day and for the year, the monthly annual precipitation received at the facility and summary of testing results

Note 3 - Lagoon freeboard shall be reported as lagoon water level in feet below the overflow level. See Special Conditions for Wastewater Irrigation System requirements.

C. SPECIAL CONDITIONS

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

2. Outfalls must be marked in field and on the topographic site map submitted with the permit application.

3. Permittee will cease discharge by connection to area wide wastewater treatment system within 180 days of notice of its availability.

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

C. SPECIAL CONDITIONS (continued)

5. 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.

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

7. 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.

8. Lagoons and earthen basins shall have a liner that is designed, constructed and maintained in accordance with 10 CSR 20-8.020(13)(A)4. If operating records indicated, excessive percolation, the department may required a water balance test in accordance with 10 CSR 20-8.020(16) or other investigations to evaluate adequacy of the lagoon seal. The department may require corrective action as necessary to eliminate excess leakage.

C. SPECIAL CONDITIONS (continued)

9. Annual Report. (Outfall #001)
An annual report is required in addition to the quarterly reporting under Section A of this permit. The annual report shall be submitted by January 28th of each year for the previous growing season from October 1 through September 30 or an alternate 12 month period approved by the Department and listed in the Operation and Maintenance Manual. This report shall be submitted using report forms approved by the Department and shall include a summary of the monitoring and records keeping required by the Special Conditions and Standard Conditions of this permit.

10. Wastewater Irrigation System.

a. Discharge Reporting. Any unauthorized discharge from the lagoon or irrigation system shall be reported to the department as soon as possible but always within 24 hours. Discharge is allowed only as described in the Facility Description and Effluent Limitations sections of this permit.

b. Irrigation Design. Design and operation shall be in accordance with 10 CSR 20-8.020(15). Permittee shall operate the land application system in accordance with the design parameters listed in the Facility Description section of this permit:

(1) No-Discharge System. When the Facility Description is "No-Discharge", wastewater must be stored and irrigated at appropriate times. There shall be no-discharge from the irrigation site or storage lagoon except due to precipitation exceeding either the 1-in-10 year rainfall event for the design storage period or the 25-year-24-hour rainfall event.

c. Lagoon Operating Levels - No-discharge Systems. The minimum and maximum operating water levels for the storage lagoon shall be clearly marked. Each lagoon shall be operated so that the maximum water elevation does not exceed one foot below the overflow point except due to exceedances of the 1-in-10 year or 25-year-24 hour storm events. Wastewater shall be land applied whenever feasible based on soil and weather conditions and permit requirements. Storage lagoon(s) shall be lowered to the minimum operating level prior to each winter by November 30.

d. Emergency Spillway. Lagoons and earthen storage basins should have an emergency spillway to protect the structural integrity of earthen structures during operation at near full water levels and in the event of overflow conditions. The spillway shall be at least one foot below top of berm. The department may waive the requirement for overflow structures on small existing basins.

e. General Irrigation Requirements. The wastewater irrigation system shall be operated so as to provide uniform distribution of irrigated wastewater over the entire irrigation site. A complete ground cover of vegetation shall be maintained on the irrigation site unless the system is approved for row crop irrigation. Wastewater shall be land applied only during daylight hours. The wastewater irrigation system shall be capable of irrigating the annual design flow during an application period of less than 100 days or 800 hours per year.

f. Saturated/Frozen Conditions. There shall be no irrigation during frozen, snow covered, or saturated soil conditions. There shall be no irrigation on days when more than 0.2 inch of precipitation is received or when there is observation by operator of an imminent or impending rainfall event.

g. Buffer Zones. There shall be no irrigation within 300 feet of any down gradient pond, lake, sinkhole, losing stream or water supply withdrawal; 100 feet of gaining streams or tributaries; 150 feet of dwelling; or 50 feet of the property line.

C. SPECIAL CONDITIONS (continued)

10. Wastewater Irrigation System (continued)

h. Public Access Restrictions. Public access shall not be allowed to the irrigation site(s). Fencing and public access restrictions to land application sites shall be in accordance with requirements in 10 CSR 20-8.020(15)(b)(5).

i. Equipment Checks during Irrigation. The irrigation system and application site shall be visually inspected at least once/hour during wastewater irrigation to check for equipment malfunctions and runoff from the irrigation site.

j. Operation and Maintenance Manual.
The permittee shall develop, maintain and implement an Operation and Maintenance (O&M) Manual that includes all necessary items to ensure the operation and integrity of the waste handling and land application systems. Copies of the O&M Manual and subsequent revisions shall be submitted to the Regional Office for review and approval. The O&M Manual shall be reviewed and updated at least every five years.

Missouri Department of Natural Resources
Statement of Basis
MODOT, Mound City Rest Area
NPDES #: MO-0089311
Holt County

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

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

Facility Information

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (GPD)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
All	5000	Equivalent to secondary-Land application	Domestic	1.2

Comments: Missing and/or incomplete DMRs

Receiving Stream Information

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

Missouri or Mississippi River [10 CSR 20-7.015(2)]: Yes ☐; No ☐
Lake or Reservoir [10 CSR 20-7.015(3)]: Yes ☐; No ☐
Losing [10 CSR 20-7.015(4)]: Yes ☐; No ☐
Metropolitan No-Discharge [10 CSR 20-7.015(5)]: Yes ☐; No ☐
Special Stream [10 CSR 20-7.015(6)]: Yes ☐; No ☐
Subsurface Water [10 CSR 20-7.015(7)]: Yes ☐; No ☐
All Other Waters [10 CSR 20-7.015(8)]: Yes ☒; No ☐

10 CSR 20-7.031 Missouri Water Quality Standards, the department defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1st classified receiving stream's beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Davis Creek Ditch	C	253	LWW, AQL	1024005	Plains/MO tribs btwn. Nishnabotna & Platte

* - 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
*** - UAA conducted on DATE and approved on DATE or disapproved on DATE.
*** - UAA has not been conducted.

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.

ANTIDEGRADATION:
In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(2)], the department is to document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

☒ - Renewal no degradation proposed and no further review necessary.

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

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_5) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs). Please see the United States Environmental Protection Agency's (EPA) website for interpretation of percent removal requirements for National Pollutant Discharge Elimination System Permit Application Requirements for Publicly Owned Treatment Works and Other Treatment Works Treating Domestic Sewage @ www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-04/w18866.htm

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

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

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

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

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.

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

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

303(d) LIST & TOTAL MAXIMUM DAILY LOAD (TMDL):
Section 303(d) of the federal Clean Water Act requires that each state identify waters that are not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock and wildlife. The 303(d) list helps state and federal agencies keep track of waters that are impaired but not addressed by normal water pollution control programs.

A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed that shall include the TMDL calculation

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

Outfall #001 – Main Facility Outfall
EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	NO	S
BOD_5	MG/L	1		65	45	YES	S
TSS	MG/L	1		110	70	YES	S
pH (S.U.)	SU	1	≥6		≥6	NO	S
TEMPERATURE (°C)	°C	1/8	*		*	NO	S
AMMONIA AS N	MG/L	2/3/5	*		*	YES	****
MONITORING FREQUENCY	Once/week - Grab						

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

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

- **Biochemical Oxygen Demand (BOD_5)**. 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**. 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.**

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

- Total Ammonia Nitrogen. **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.**

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:

Sunny Wellesley
Water Protection Program
816-622-7000

STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

MISSOURI STATE OPERATING PERMIT

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

Permit No.:	MO0095081
Owner:	Missouri Department of Transportation (MODOT)
Owner's Address:	PO Box 160, Sikeston, MO 63801
Continuing Authority:	Same as above
Continuing Authority's Address:	Same as above
Facility Name:	MODOT, I-55 Rest Area (Bloomsdale)
Facility Address:	I-55 Northbound Side, Bloomsdale, MO 63627
Legal Description:	NE ¼, SW ¼, Sec. 3, T38N, R7E, Ste. Genevieve County
UTM Coordinates:	X=741665, Y=4212874
Receiving Stream:	Unnamed Tributary to Fourche A Duclos Creek (U)
First Classified Stream and ID:	Fourche A Duclos Creek (P)(01740)
USGS Basin & Sub-watershed No.:	07140101-0906

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 - Rest Stop – SIC# 9621 - **Certified Operator Not Required**
Aerated Two Cell Lagoon/Sand Filter/Ultraviolet Disinfection/Sludge is retained in lagoon
Design population equivalent is 633.
Design flow is 16,134 gallons per day.
Actual flow is 5,000 gallons per day.
Design sludge production is 0.24 dry tons/year.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 644.051.6 of the Law.

November 8, 2011
Effective Date

Sara Parker Pauley
Sara Parker Pauley, Director, Department of Natural Resources

November 7, 2016
Expiration Date

Gary L. Gaines, P.E., Director, Southeast Regional Office

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS	PAGE NUMBER 2 of 3 PERMIT NUMBER MO0090581

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

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Ammonia as N	mg/L				once/quarter**	Grab
(Apr 1 – Sept 31)		3.6		1.4		
(Oct 1 – Mar 30)		7.5		2.9		
Biochemical Oxygen Demand$_5$	mg/L		45	30	once/quarter**	Grab
E. Coli (Note 1)	#/100 ml	1030		206	once/quarter**	Grab
Flow	MGD	*		*	once/quarter**	24 hr. total
pH – Units	SU	***		***	once/quarter**	Grab
Solids, Total Suspended	mg/L		45	30	once/quarter**	Grab
Temperature	°C	*		*	once/quarter**	Grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE January 28, 2012. 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 & 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.

**

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

*** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.

Note 1 - Final limitations and monitoring requirements for *E. coli* are applicable only during the recreational season from April 1 through October 31. The Monthly Average Limit for *E. coli* is expressed as a geometric mean.

C. SPECIAL CONDITIONS

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

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

C. SPECIAL CONDITIONS

2. All outfalls must be clearly marked in the field.

3. Permittee will cease discharge by connection to a facility with an area-wide management plan per 10 CSR 20-6.010(3)(B) within 90 days of notice of its availability.

4. 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.

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

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

7. The permittee shall comply with any applicable requirements listed in 10 CSR 20-8 and 10 CSR 20-9, unless the facility has received written notification that the Department has approved a modification to the requirements. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. If a modification of the monitoring frequencies listed in 10 CSR 20-9 is needed, the permittee shall submit a written request to the department for review and, if deemed necessary, approval.

8. Bypasses are not authorized at this facility and are subject to 40 CFR 122.41(m). If a bypass occurs, the permittee shall report in accordance to 40 CFR 122.41(m)(3)(i), and with Standard Condition Part I, Section B, subsection 2.b. Bypasses are to be reported to the Southeast Regional Office.

Missouri Department of Natural Resources
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO0090581
MODOT , I-55 REST AREA BLOOMSDALE

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a Factsheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (operating permit) listed below.

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

This Factsheet is for a Major ☐, Minor ☒, Industrial Facility ☐; Variance ☐;
Master General Permit ☐; General Permit Covered Facility ☐; and/or permit with widespread public interest ☐.

Part I – Facility Information

Facility Type: NON-POTW
Facility SIC Code(s): 9621

Facility Description:
Aerated Two Cell Lagoon/Sand Filter/Ultraviolet Disinfection/Sludge is retained in lagoon
Design population equivalent is 633.
Design flow is 16,134 gallons per day.
Actual flow is 5,000 gallons per day.
Design sludge production is 0.24 dry tons/year.

Have any changes occurred at this facility or in the receiving water body that effects effluent limit derivation?
☒ - Yes; (See Comments)
☐, - No.

Application Date: 3/4/2011 (renewal) 4/29/2011 (upgrade)
Expiration Date: 8/17/2011
Last Inspection: 3/3/2011 In Compliance ☒; Non-Compliance ☐

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	0.025	Secondary	Domestic	1.25

Outfall #001
Legal Description: NE ¼, SW ¼, Sec. 3, T38N, R7E, Ste. Genevieve County
UTM Coordinates: X=741665, Y=4212874

Receiving Stream: Unnamed Tributary to Fourche A Duclos Creek (U)
First Classified Stream and ID: Fourche A Duclos Creek (P)(01740)
USGS Basin & Sub-watershed No.: 07140101-0906

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

Facility was cited as having a stream impact during a low flow survey.

Comments:
Facility required to upgrade due to disinfection and low flow impact study. Cannot renew permit without upgrades. Upgrades include the addition of aerators to the lagoon, rehabilitating the sand filter, and adding ultraviolet disinfection.

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 lists effluent limitations for specific parameters, which are presented in each outfall's Effluent Limitation Table and further discussed in the Derivation & Discussion of Limits section.

Missouri or Mississippi River [10 CSR 20-7.015(2)]: ☐
Lake or Reservoir [10 CSR 20-7.015(3)]: ☐
Losing [10 CSR 20-7.015(4)]: ☐
Metropolitan No-Discharge [10 CSR 20-7.015(5)]: ☐
Special Stream [10 CSR 20-7.015(6)]: ☐
Subsurface Water [10 CSR 20-7.015(7)]: ☐
All Other Waters [10 CSR 20-7.015(8)]: ☒

10 CSR 20-7.031 Missouri Water Quality Standards, the Department defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1st classified receiving stream's beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Unnamed Tributary to Fourche A Duclos Creek	U	-	General	07140101	Ozark/ Apple/ Joachim
Fourche A Duclos Creek	P	1740	AQL, LWW, WBC(B)		

* - Irrigation (IRR), Livestock & Wildlife Watering (LWW), Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cool Water Fishery(CLF), Cold Water Fishery (CDF), Whole Body Contact Recreation (WBC), Secondary Contact Recreation (SCR), Drinking Water Supply (DWS), Industrial (IND), Groundwater (GRW).
** - Ecological Drainage Unit

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Unnamed Trib to Fourche A Duclos Creek (U)	0	0	0

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

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements recommended at this time.

Part IV – Rationale and Derivation of Effluent Limitations & Permit Conditions

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:
As per [10 CSR 20-7.015(4)(A)], discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

Not Applicable ☒;
The facility 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 operating permit are at least as protective as those previously established; therefore, backsliding does not apply.

ANTIDEGRADATION:
In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(2)], the Department is to document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

☒ - Renewal no degradation proposed and no further review necessary.

AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:
As per [10 CSR 20-6.010(3)(B)], ...An applicant may utilize a lower preference continuing authority by submitting, as part of the application, a statement waiving preferential status from each existing higher preference authority, providing the waiver does not conflict with any area-wide management plan approved under section 208 of the Federal Clean Water Act or any other regional sewage service and treatment plan approved for higher preference authority by the Department.

BIOSOLIDS & SEWAGE SLUDGE:
Biosolids are solid materials resulting from domestic wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information regarding biosolids and sludge is located at the following web address: http://dnr.mo.gov/env/wpp/pub/index.html, items WQ422 through WQ449.

☒ - 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.

Not Applicable ☒;
The permittee/facility is not currently under Water Protection Program enforcement action.

PRETREATMENT PROGRAM:
The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a Publicly Owned Treatment Works [40 CFR 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):
Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard.

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

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_5) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals.

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

SANITARY SEWER OVERFLOWS (SSO) AND INFLOW AND INFILTRATION (I&I):
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 *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (Document number EPA 833-B-09-002) [published by the United States Environmental Protection Agency (USEPA) in February 2009], BMPs

are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure.

Additionally in accordance with the Storm Water Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of storm water discharges.

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

VARIANCE:
As per the Missouri Clean Water Law § 644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

Not Applicable ☒;
This operating permit is not drafted under premises of a petition for variance.

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

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

$$C = \frac{(Cs \times Qs) + (Ce \times Qe)}{(Qe + Qs)}$$ (EPA/505/2-90-001, Section 4.5.5)

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

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

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

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

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

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.

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

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

☒ – 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.

<u>Part V – Effluent Limits Determination</u>

Outfall #001 – Main Facility Outfall

Effluent limitations derived and established in the below Effluent Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supersede the terms and conditions, including effluent limitations, of this operating permit.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Ammonia as N (Apr 1 – Sept 31)	mg/L	3/5	3.6		1.4	YES	*
Ammonia as N (Oct 1 – Mar 30)	mg/L	3/5	7.5		2.9	YES	*
Biochemical Oxygen Demand$_5$	Mg/L	1/2		45	30	YES	65/45
E. Coli ***	#/100 ml	2	1030		206	YES	FECAL
Flow	MGD	1	*		*	NO	
pH – Units	SU	2	6.5-9.0		6.5-9.0	YES	6.0-9.0
Solids, Total Suspended	mg/L	1/2		45	30	YES	110/70
Temperature	°C	5	*		*	NO	

* - Monitoring requirement only.
** - For DO the Daily Maximum is a Daily Minimum and the Monthly Average is a Monthly Average Minimum.
*** - # of colonies/100mL; the Monthly Average for *E. coli* is a geometric mean.
**** - Parameter not previously established in previous state operating permit.

Basis for Limitations Codes:

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

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow**. In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.

- **Biochemical Oxygen Demand (BOD_5)**. 45 mg/L as a Weekly Average and 30 mg/L as a Monthly Average. Please see the APPLICABLE DESIGNATION OF WATERS OF THE STATE sub-section of the **Receiving Stream Information.**

- **Total Suspended Solids (TSS)**. 45 mg/L as a Weekly Average and 30 mg/L as a Monthly Average. Please see the APPLICABLE DESIGNATION OF WATERS OF THE STATE sub-section of the **Receiving Stream Information.**

- **pH**. Effluent limitations have been reassessed and verified to still be protective of receiving water body's water quality, and minimum limitation revised to 6.5 per Missouri Clean Water Commission (MCWC) regulation [10 CSR 20-7.015(8)(B)A.], referenced above (please see **Part III – Receiving Water Body (Stream) Information**, APPLICABLE DESIGNATION OF WATERS OF THE STATE section above).

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

- **Total Ammonia Nitrogen**. Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(4)(B)7.C. & Table B3] default pH 7.8 SU.

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

Summer: April 1 – September 30

Chronic WLA: $C_e = ((0.025 + 0.0)1.5 - (0.025 * 0.0))/0.025$

$C_e = 1.5$ mg/L

Acute WLA: $C_e = ((0.025 + 0.0)12.1 - (0.025 * 0.0))/0.025$
$C_e = 12.1$ mg/L

$LTA_c = 1.5$ mg/L (0.780) = **1.17 mg/L** [CV = 0.6, 99th Percentile, 30 day avg.]
$LTA_a = 12.1$ mg/L (0.321) = 3.88 mg/L [CV = 0.6, 99th Percentile]

Use most protective number of LTA_c or LTA_a.

MDL = 1.17 mg/L (3.11) = 3.6 mg/L [CV = 0.6, 99th Percentile]
AML = 1.17 mg/L (1.19) = 1.4 mg/L [CV = 0.6, 95th Percentile, n =30]

Winter: October 1 – March 31
Chronic WLA: $C_e = ((0.025 + 0.0)3.1 - (0.025 * 0.0)/0.025$
$C_e = 3.1$ mg/L

Acute WLA: $C_e = ((0.025 + 0.0)12.1 - (0.025 * 0.0))/0.025$
$C_e = 12.1$ mg/L

$LTA_c = 3.1$ mg/L (0.780) = **2.4 mg/L** [CV = 0.6, 99th Percentile, 30 day avg.]
$LTA_a = 12.1$ mg/L (0.321) = 3.9 mg/L [CV = 0.6, 99th Percentile]

Use most protective number of LTA_c or LTA_a.

MDL = 2.4 mg/L (3.11) = 7.5 mg/L [CV = 0.6, 99th Percentile]
AML = 2.4 mg/L (1.19) = 2.9 mg/L [CV = 0.6, 95th Percentile, n =30]

- ***Escherichia coli (E. coli)***. Monthly average of 206 per 100 ml as a geometric mean and Daily Maximum of 1030 during the recreational season (April 1 – October 31), to protect Whole Body Contact Recreation (B) designated use of the receiving stream, as per 10 CSR 20-7.031(4)(C). Daily Maximum effluent variability will be evaluated in development of a future effluent limit. An effluent limit for both monthly average and daily maximum is required by 40 CFR 122.45(d).

Part VI – Administrative Requirements

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit. The proposed determinations are tentative pending public comment.

PUBLIC NOTICE:
The Department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing.

The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit.

For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

DATE OF FACT SHEET: AUGUST 9, 2011

COMPLETED BY:

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