

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-0133833

Owner: Richard & Karen Swainston
Address: 8752 W. Highway 76, Cape Fair, MO 65624

Continuing Authority: Same as Above.
Address: Same as Above

Facility Name: Kari's Cupboard & Camp WWTF
Facility Address: 8752 W. Highway 76, Cape Fair, MO 65624

Legal Description: SW¼, NE¼, Sec. 03, T23N, R24W, Stone County
Receiving Stream: Unnamed Tributary to Table Rock Lake (U)
First Classified Stream and ID: Table Rock Lake (L2) (07313) 303 (d)
USGS Basin & Sub-watershed No.: (11010002-070001)

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 – Campground / Sewerage works - SIC #7033 / 4952

Septic tank / extended aeration / secondary clarifier / aerated sludge holding / chlorination / sludge disposal by contract hauler.

Design organic population equivalent is 75.
Design average daily flow is 5,150 gallons per day.
Design sludge production is 1.35 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.

June 29, 2007
Effective Date

Handwritten signature of Doyle Childer in black ink.

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

June 28, 2012
Expiration Date
MO 780-0041 (10-93)

Cynthia S. Davies, Regional Director, Southwest Regional Office

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

PAGE NUMBER 2 of 7

PERMIT NUMBER MO-0133833

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 **June 30, 2010**. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u>						
Flow	GPD	*		*	once/month**	24 hr. estimate
Biochemical Oxygen Demand ₅	mg/L		30	20	once/month**	grab
Total Suspended Solids	mg/L		30	20	once/month**	grab
pH – Units	SU	***		***	once/month**	grab
Fecal Coliform (Note 1)	#/100 ml	1000		400 (Note 2)	once/month**	grab
Total Residual Chlorine as Cl ₂	mg/L	1.0 (Note x) (0.13 ML)		1.0 (Note x) (0.13ML)	once/month**	grab
Total Phosphorus as P	mg/L	*		*	once/month**	grab
Ammonia as N	mg/L	*		*	once/month**	grab
Temperature	°C	*		*	once/month**	grab

MONITORING REPORTS SHALL BE SUBMITTED **MONTHLY**; THE FIRST REPORT IS DUE **AUGUST 28, 2007**. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS				PAGE NUMBER 3 of 7		
				PERMIT NUMBER MO-0133833		
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 July 1, 2010 and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u>						
Flow	GPD	*		*	once/month**	24 hr. estimate
Biochemical Oxygen Demand ₅	mg/L		30	20	once/month**	grab
Total Suspended Solids	mg/L		30	20	once/month**	grab
pH – Units	SU	***		***	once/month**	grab
Fecal Coliform (Note 1)	#/100 ml	1000		400 (Note 2)	once/month**	grab
Total Residual Chlorine as Cl ₂	mg/L	0.019 (Note 3) (0.13 ML)		0.0095 (Note 3) (0.13ML)	once/month**	grab
Total Phosphorus as P	mg/L	*		0.5	once/month**	grab
Ammonia as N	mg/L	*		*	once/month**	grab
Temperature	°C	*		*	once/month**	grab
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY ; THE FIRST REPORT IS DUE AUGUST 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 <u>Parts I & III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

MO 780-0010 (8/91)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- * Monitoring requirement only.
- ** 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 - 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 = $[a_1 \times a_2 \times a_3 \dots \times a_n]^{1/n}$

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

Note 3 - 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;

C. SPECIAL CONDITIONS (continued)

- (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.

D. SCHEDULE OF COMPLIANCE

For WWTF improvements

1. By **January 1, 2008** submit a completed application for construction permit, application fee, and one copy each of an engineering report, plans and specifications prepared by a professional engineer registered in the State of Missouri to the Missouri Department of Natural Resources, 2040 West Woodland, Springfield, Missouri, 65807, for providing wastewater treatment improvements for **phosphorus removal, chlorination, dechlorination and flow equalization** to comply with the final effluent limitations as list in Part A of this permit, designed in accordance with Missouri Clean Water Law Regulation 10 CSR 20 Chapter 8.
2. 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.
3. Within 365 calendar days of issuance of the construction permit, construct the permitted wastewater treatment facility improvements.
4. 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 Missouri Department of Natural Resources, 2040 West Woodland, Springfield, Missouri, 65807.

If you have questions you may contact the Missouri Department of Natural Resources, Southwest Regional Office by calling 417-891-4300 or by mail at 2040 West Woodland, Springfield, Missouri, 65807.

Using nonstandard technology (chlorination)

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:

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

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

D. SCHEDULE OF COMPLIANCE (continued)

(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:

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

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:

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

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
Kari's Cupboard & Camp
NPDES #: MO-0133833
Stone 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 does not include calculations for the effluent limits provided herein and in the operating permit, and does not discuss the public comment process. This Statement also does not pertain to operating permits that include sewage sludge land application plans and variance procedures.

A Statement is not an enforceable part of a Missouri State Operating Permit.

Rationale of Effluent Limitations & Permit Language Determination

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. New permit.

- Backsliding proposed in this statement for the reissuance of this permit conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 § CFR 122.44.

ANTIDegradation:

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. *Missouri Antidegradation Rule and Implementation Procedure*, when approved, shall be applicable to new or upgraded/expanded facilities only.

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.

BASIS FOR LIMITATIONS:

Effluent limits established in this Statement of Basis and Missouri State Operating Permit are derived from State or Federal Regulation, Water Quality Standards, Lagoon Policy, Ammonia Policy, Antidegradation Policy, Best Professional Judgement, TMDL or Permit in lieu of TMDL, or WET Test Policy.

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 enforcement action due to.

Not Applicable ; New permit.

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 §403.3(q)].

Applicable ;

Permittee shall implement and enforce its approved pretreatment program in accordance with the requirements of 40 CFR Part 403. The approved pretreatment program is hereby incorporated by reference. Permittee shall submit to the department on or before March 31st of each year a report briefly describing its pretreatment activities during the previous calendar year.

Not Applicable ;

At this time, the permittee is not required to implement and enforce a Pretreatment Program.

RECEIVING STREAM INFORMATION:

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 1st receiving stream for this facility is Unnamed Tributary to Table Rock Lake, which is a class (U) stream, and its Beneficial Water Uses* to be maintained are General Criteria.

The first classified receiving stream is Table Rock Lake, which is a class (L2) stream and is approximately 0.5 miles downstream from the discharge point. Table Rock Lake beneficial uses* are LWW, AQL, WBC** SCR.

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

** - UAA has not been conducted.

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements recommended at this time.

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.

Applicable ;

The permittee is required to develop or implement a program for maintenance and repair of the collection system and shall be required in this operating permit by either means of a Special Condition or Schedule of Compliance.

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)].

This facility is using nonstandard technology. Therefore a schedule of compliance is being added and the facility was originally constructed approximately 20-30 years ago without obtaining a construction permit or an operating permit. Flow equalization was not added. The Chlorination basin is too small and dechlorination is needed. Because this is being considered a new permit, Phosphorus removal is needed. Therefore a schedule of compliance is added to include these items.

Not Applicable ;

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.

Applicable ;

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

Not Applicable ;

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

WHOLE EFFLUENT TOXICITY (WET) TEST:

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

Applicable ;

Effective July 15, 2005, upon revision, renewal, modification, or issuance, all Missouri State Operating Permits under the NPDES will incorporate use of the following guidelines for determining the applicability and requirements for WET testing. WET testing requirements are established by the WET Test Policy, 120 § 308 of the Federal Water Pollution Control Act, and 40 CFR § 136. Please check WET tests applicability for this facility:

- All major discharge facilities ;

- Facilities that are exceeding or routinely exceed their design flow ;
- Most municipals, domestic sewage dischargers ;
- Industrial dischargers or other dischargers that may alter their production processes throughout the year ;
- Facilities that may handle large quantities of toxic substances, or substances that are toxic in large amounts ; and
- Facilities that have been granted seasonal relief of numeric limitations .

Not Applicable ;

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

Outfall #001 – Main Facility Outfall
EFFLUENT LIMITATIONS TABLE

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED
FLOW	GPD	1	*		*	N/A
BOD ₅ **	MG/L	1		30	20	N/A
TSS **	MG/L	1		30	20	N/A
PH (S.U.)	SU	1	6-9		6-9	N/A
AMMONIA AS N	MG/L	1	*		*	N/A
FECAL COLIFORM	***	1	1000		400 Note 1	N/A
CHLORINE, TOTAL RESIDUAL (MG/L)	MG/L	1	0.019		0.0095	N/A
PHOSPHORUS, TOTAL	MG/L	1			0.5	N/A
MONITORING FREQUENCY	N/A	1	MONTHLY	MONTHLY	MONTHLY	

* - Monitoring requirement only

** - % removal language (if needed).

*** - # of colonies/100mL

**** - Parameter not previously established in previous state operating permit.

N/A – Not applicable

N/C – No Change

Note 1 – Monthly Average for Fecal Coliform is a geometric mean and not average.

Basis for Limitations Codes:

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

² – Water Quality Standards also includes Reasonable Potential Analysis.

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

Biochemical Oxygen Demand (BOD₅).

– Effluent limitations are protective and have been retained from previous state operating permit.

- 30 mg/L Weekly Average and 20 mg/L Monthly Average effluent limitations, as per [10 CSR 20-7.015]

Total Suspended Solids (TSS).

- Effluent limitations are protective and have been retained from previous state operating permit.
- 30 mg/L Weekly Average and 20 mg/L Monthly Average effluent limitations, as per [10 CSR 20-7.015]

pH.

- Effluent limitation has been retained from previous state operating permit,
- pH is to be maintained at or above 6.0 pH units. for Daily Maximum and Monthly Average, as per [10 CSR 20-7.015]. pH is measured in pH units and is not to be averaged.
- 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.
- Other – please specify.

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

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.

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) [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 Residual Chlorine: Table A – warm body criteria. Chronic 0.01 mg/L, Acute 0.019 mg/L

$$((Q_e + Q_s) * C - (Q_s * C_s)) / Q_e$$

$$C_c = ((Q_e + 0) * 0.019 - (0 * 0)) / Q_e = 0.019$$

$$WLA_a = 0.019 \text{ mg/L}$$

$$LTA_a = 0.019 (0.321) = \mathbf{0.0061 \text{ mg/L}} \quad [CV = 0.6, 99^{\text{th}} \text{ Percentile}]$$

$$MDL = 0.0061(3.114) = 0.019 \text{ mg/L} \quad [CV = 0.6, 99^{\text{th}} \text{ Percentile}]$$

$$AML = 0.0061(1.5524) = 0.0095 \text{ mg/L} \quad [CV = 0.6, 95^{\text{th}} \text{ Percentile, } n = 4]$$

Standard compliance language for TRC, including the minimum level (ML), should be included in the permit.

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 or within the operating permit. The proposed determinations are tentative pending public comment.

GENERAL ASSUMPTIONS OF THE STATEMENT:

1. A Statement assumes that [10 CSR 20-6.010(3) Continuing Authorities] has been or will be addressed in a Missouri State Operating Permit or Construction Permit Application.
2. A Statement does not indicate approval or disapproval of alternative analysis as per [10 CSR 20-7.015(4) Losing Streams], and/or any section of the effluent regulations.
3. Changes to Federal and State Regulations made subsequent to the drafting of this Statement may alter effluent limitations and or permit conditions.
4. Water Quality Based Effluent Limitations supercede Effluent Guidelines Limits only when they are more stringent. Mass limits derived from technology based limits are still appropriate.
5. A Statement does not allow discharges to waters of the state, and shall not be construed as a National Pollution Discharge Elimination System or Missouri State Operating Permit to discharge or a permit to construct, modify, or upgrade.
6. Limitations and other requirements in a Statement may change as Water Quality Standards, Methodology, and Implementation procedures change.

Date of Statement: April 10, 2007

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