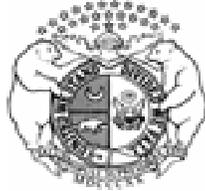


STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

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-0002372

Owner: U.S. Fish & Wildlife Service
Address: Bishop Henry Whipple Federal Building
Fort Snelling, MN 55111-4056

Continuing Authority: Same as above
Address: Same as above

Facility Name: Neosho National Fish Hatchery
Facility Address: 520 East Park Street, Neosho, MO 64850

Legal Description: NW¼, NE¼, Sec. 30, T25N, R31W, Newton County
Latitude/Longitude: +3651502/-09421385

Receiving Stream: Hickory Creek (P)
First Classified Stream and ID: Hickory Creek (P) (03226)
USGS Basin & Sub-watershed No.: (11070207 – 170001)

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 – Fish Hatchery – SIC #0921

Flow through raceways
Design flow is 2.6 MGD.
Actual flow is 2.6 MGD.

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 2, 2007
Effective Date


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

March 1, 2012
Expiration Date
MO 780-0041 (10-93)


Edward Galbraith, Director of Staff, Clean Water Commission

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

PAGE NUMBER 2 of 5

PERMIT NUMBER MO-0002372

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 one (1) year 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	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u>						
Flow	MGD	*		*	once/month	24 hr. total
Biochemical Oxygen Demand ₅	mg/L	*		*	once/month	grab
Total Suspended Solids	mg/L	*		*	once/month	grab
pH – Units	mg/L	**		**	once/month	grab
Temperature	°C	*		*	once/month	grab
Ammonia as N	mg/L	*		*	once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE April 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 5		
				PERMIT NUMBER MO-0002372		
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 <u>one (1) year</u> from the date of issuance of this 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
<u>Outfall #001</u>						
Flow	MGD	*		*	once/month	24 hr. total
Biochemical Oxygen Demand ₅	mg/L	20		20	once/month	grab
Total Suspended Solids	mg/L	15		15	once/month	grab
pH – Units	SU	**		**	once/month	grab
Temperature	°C	*		*	once/month	grab
Ammonia as N						
(March 1 – May 31)	mg/L	7.3		3.6	once/month	grab
(June 1 – August 31)	mg/L	3.4		1.7	once/month	grab
(September 1 – November 30)	mg/L	7.3		3.6	once/month	grab
(December 1 – February 29)	mg/L	8.1		4.0	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>April 28, 2008</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I, II, & III</u> STANDARD CONDITIONS DATED <u>October 1, 1980</u> and <u>August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

MO 780-0010 (8/91)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- * Monitoring requirement only.
- ** pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.0-9.0 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.

C. SPECIAL CONDITIONS (continued)

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

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

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
 - (4) The level established in Part A of the permit by the Director.
 - (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
4. Report as no-discharge when a discharge does not occur during the report period.
 5. Water Quality Standards
 - (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
 - (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
 - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
 - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
 - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
 - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
 - (5) There shall be no significant human health hazard from incidental contact with the water;
 - (6) There shall be no acute toxicity to livestock or wildlife watering;
 - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
 - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

6. Chemical & Feed Use Reporting

Records of drug, chemical and feed use shall be submitted with the testing required in section A. All drugs and chemicals to which fish or production waters are exposed shall be reported except ice, oxygen and carbon dioxide. This includes pesticides, sodium chloride (salt), vinegar, or any other substance added to the water. In addition, prior approval must be obtained from the department before these drugs or chemicals are used except for those which have been approved by the USEPA for use in aquatic environments. For drugs and chemicals, the name and amount used since the previous report shall be submitted. For feed, the product name, chemical additives (such as antibiotics), and guaranteed analysis shall be submitted with the amount used since the previous report.

7. In order to obtain approval for use of a drug or chemical a permittee should submit the following information:
 - (a) Method for exposing/treating fish or facility. Include concentration of the chemical and duration of exposure.
 - (b) Method for disposal of the chemical.
 - (c) Toxicity information for the chemical. The requirement for toxicity data may be waived for some drugs or chemicals on a case by case basis, and may also be waived if the chemical is not discharged.

The department may request additional information before approval is granted.

C. SPECIAL CONDITIONS (continued)

8. Feed, fertilizers and chemicals shall be stored in an area protected from contact with stormwater.
9. Mechanical devices associated with feeding or solids collection shall be maintained in good repair to reduce solids generation and subsequent discharge.

Missouri Department of Natural Resources

Fact Sheet – Operating Permit Renewal

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. Permits in Missouri 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). NPDES operating permits are issued for a period of five (5) years unless otherwise specified.

A Fact Sheet gives pertinent information regarding the applicable regulations, rational for the development of the NPDES Missouri State Operating Permit (operating permit), and the public participation process for operating permit listed below.

A Fact Sheet is not an enforceable part of an operating permit.

This Fact Sheet is for a Major , Minor , Industrial Facility ; Variance ; General Permit Template ; and/or permit with widespread public interest .

Facility Information

NPDES #: MO-0002372
 Facility Name: Neosho National Fish Hatchery
 Facility Address: 520 East Park Street, Neosho, Missouri 64850
 Owner's Name: U.S. Fish & Wildlife Service
 Owner's Address: Bishop Henry Whipple Federal Building
 Fort Snelling, MN 55111-4056

Facility Region: SWRO
 Facility County: Newton

Facility Type: Fish Hatchery
 Facility SIC Code(s): 0921

Facility Description: This is a Concentrated Aquatic Animal Production Facility with a design flow of 2.6 MGD. This facility produces Rainbow Trout for Lake Taneycomo, Missouri. Trout waste and Cleaning water from the race-way system is pumped into a 13,000 cubic foot settling basin 2 – 3 times per week and later pumped to the City of Neosho's Wastewater Treatment Facility.

Application Date: August 25, 2006
 Expiration Date: November 29, 2006
 Last Inspection: June 6, 2001 In Compliance ; Non-Compliance

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	4.03	Industrial	Process wastewater from CAAPF	0.0

Outfall #001

Legal Description: NW ¼, NE ¼, Sec. 30, T25N, R31W
 Latitude/Longitude: +3651502/-09421385
 Receiving Stream: Hickory Creek (P)
 First Classified Stream and ID: Hickory Creek (P) (03226)
 USGS Basin & Sub-watershed No.: (11070207 – 170001)

Water Quality History: Minimal effluent violations and missing concentration fields in submitted DMRs.

Comments: No recent stream survey has been conducted. The previous permit required monitoring only for Fungicides, Bactericides, and External Parasites Treatment Chemicals. The renewed permit shall contain language requiring the permittee to have prior approval from the department for drugs & chemicals used except for those that have been approved by the USEPA for use in aquatic environments.

Receiving Stream Information

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**
Hickory Creek	P	03226	LWW, AQL, WBC, CDF	11070207	OES

* - 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
Hickory Creek	0.1	0.1	1.0

MIXING CONSIDERATIONS TABLE:

MIXING ZONE (CFS) [10 CSR 20-7.031(4)(A)4.B.(II)(a)]			ZONE OF INITIAL DILUTION (CFS) [10 CSR 20-7.031(4)(A)4.B.(II)(b)]		
1Q10	7Q10	30Q10	1Q10	7Q10	30Q10
0.025	0.025	0.25	0.0025	0.0025	0.025

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements recommended at this time.

Rationale and Derivation of Effluent Limitations & Permit Conditions**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 Fact Sheet 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 plans are adopted by each State to minimize adverse effects on water.

Not 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. *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 (TBEL), 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 §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.

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 has a one (1) year grace period before the effluent limitations contained herein this Fact Sheet become effective. The one (1) year grace period is applicable so that the facility can take the necessary Operation & Maintenance action, if needed.

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.

Applicable ;

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

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

Where C = downstream concentration
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).

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 §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	*
BOD ₅	MG/L	8	20		20	YES	*
TSS	MG/L	8	15		15	YES	*
pH (S.U.)	SU	8	6 – 9		6 – 9	YES	*
TEMPERATURE (°C)	°C	1	*		*	NO	*
AMMONIA AS N (MAR 1 – MAY 31)	MG/L	3/8	7.3		3.6	YES	*
AMMONIA AS N (JUN 1 – AUG 31)	MG/L	3/8	3.4		1.7	YES	*
AMMONIA AS N (SEPT 1 – NOV 30)	MG/L	3/8	7.3		3.6	YES	*
AMMONIA AS N (DEC 1 – FEB 28)	MG/L	3/8	8.1		4.0	YES	*
MONITORING FREQUENCY	N/A	1	N/A	N/A	N/A		N/A

* - Monitoring requirement only

N/A – Not applicable

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).** 20 mg/L Monthly Average and Daily Maximum. Missouri General Permit MO-G13 Flow-Through CAAPF based effluent limitations are expected to be protective of the receiving streams water quality. This facility has demonstrated that these limitations are achievable year-round. Therefore BOD₅ limitations are to become effective one (1) year after issuance of the operating permit. This one (1) year grace period is applicable so that the facility can take necessary Operational & Maintenance action, if needed.
- **Total Suspended Solids (TSS).** 15 mg/L Monthly Average and Daily Maximum. Missouri General Permit MO-G13 Flow-Through CAAPF based effluent limitations are expected to be protective of the receiving streams water quality. This facility has demonstrated that these limitations are achievable year-round. Therefore, TSS limitations are to become effective one (1) year after issuance of the operating permit. This one (1) year grace period is applicable so that the facility can take necessary Operational and Maintenance action, if needed.
- **pH.** 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. Missouri General Operating Permit MO-G13 Flow-Through CAAPF based effluent limitation is expected to be protective of the receiving streams water quality. This facility has demonstrated that this limitation is achievable year-round. Therefore, pH limitation is to become effective one (1) year after issuance of the operating permit to allow necessary Operational and Maintenance action, if needed.
- **Temperature.** Monitoring requirement due to the toxicity of Ammonia varies by temperature. This requirement is also retained from the previous state operating permit.
- **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. Ammonia limitations established below are to become effective one (1) year after issuance of the operating permit. Default base temperature and pH data is used in the below calculations for Ammonia effluent limitations. Site-specific temperatures and pH data may be considered to calculate more appropriate limitations.

Season	Temp (°C)	pH (SU)	Total Ammonia Nitrogen CCC (mg/L)	Total Ammonia Nitrogen CMC (mg/L)
Spring	16	7.8	2.8	12.1
Summer	28	7.8	1.3	12.1
Fall	16	7.8	2.8	12.1
Winter	6	7.8	3.1	12.1

Spring: March 1 – May 31; Summer: June 1 – August 31; Fall: September 1 – November 30; Winter: December 1 – February 29.

Spring

Chronic WLA: $C_e = ((4.03 + 0.25)2.8 - (0.25 * 0.01))/4.03$
 $C_e = 3.0 \text{ mg/L}$

Acute WLA: $C_e = ((4.03 + 0.0025)12.1 - (0.0025 * 0.01))/4.03$
 $C_e = 12.1 \text{ mg/L}$

$LTA_c = 3.0 \text{ mg/L (0.780)} = \mathbf{2.34 \text{ mg/L}}$ [CV = 0.6, 99th Percentile, n = 30]
 $LTA_a = 12.1 \text{ mg/L (0.321)} = 3.9 \text{ mg/L}$ [CV = 0.6, 99th Percentile]

Use most protective LTA_c or LTA_a .

$MDL = 2.34 \text{ mg/L (3.11)} = 7.3 \text{ mg/L}$ [CV = 0.6, 99th Percentile]
 $AML = 2.34 \text{ mg/L (1.55)} = 3.6 \text{ mg/L}$ [CV = 0.6, 95th Percentile, n = 4]

Summer

Chronic WLA: $C_e = ((4.03 + 0.25)1.3 - (0.25 * 0.01))/4.03$
 $C_e = 1.4 \text{ mg/L}$

Acute WLA: $C_e = ((4.03 + 0.0025)12.1 - (0.0025 * 0.01))/4.03$
 $C_e = 12.1 \text{ mg/L}$

$LTA_c = 1.4 \text{ mg/L (0.780)} = \mathbf{1.1 \text{ mg/L}}$ [CV = 0.6, 99th Percentile, n = 30]
 $LTA_a = 12.1 \text{ mg/L (0.321)} = 3.9 \text{ mg/L}$ [CV = 0.6, 99th Percentile]

Use most protective LTA_c or LTA_a .

$MDL = 1.1 \text{ mg/L (3.11)} = 3.4 \text{ mg/L}$ [CV = 0.6, 99th Percentile]
 $AML = 1.1 \text{ mg/L (1.55)} = 1.7 \text{ mg/L}$ [CV = 0.6, 95th Percentile, n = 4]

Fall

Chronic WLA: $C_e = ((4.03 + 0.25)2.8 - (0.25 * 0.01))/4.03$
 $C_e = 3.0 \text{ mg/L}$

Acute WLA: $C_e = ((4.03 + 0.0025)12.1 - (0.0025 * 0.01))/4.03$
 $C_e = 12.1 \text{ mg/L}$

$LTA_c = 3.0 \text{ mg/L (0.780)} = \mathbf{2.34 \text{ mg/L}}$ [CV = 0.6, 99th Percentile, n = 30]
 $LTA_a = 12.1 \text{ mg/L (0.321)} = 3.9 \text{ mg/L}$ [CV = 0.6, 99th Percentile]

Use most protective LTA_c or LTA_a .

$MDL = 2.34 \text{ mg/L (3.11)} = 7.3 \text{ mg/L}$ [CV = 0.6, 99th Percentile]
 $AML = 2.34 \text{ mg/L (1.55)} = 3.6 \text{ mg/L}$ [CV = 0.6, 95th Percentile, n = 4]

Winter

Chronic WLA: $C_e = ((4.03 + 0.25)3.1 - (0.25 * 0.01))/4.03$
 $C_e = 3.3 \text{ mg/L}$

Acute WLA: $C_e = ((4.03 + 0.0025)12.1 - (0.0025 * 0.01))/4.03$
 $C_e = 12.1 \text{ mg/L}$

LTA_c = 3.3 mg/L (0.780) = **2.6 mg/L**
 LTA_a = 12.1 mg/L (0.321) = 3.9 mg/L

[CV = 0.6, 99th Percentile, n = 30]
 [CV = 0.6, 99th Percentile]

Use most protective LTA_c or LTA_a.

MDL = 2.6 mg/L (3.11) = 8.1 mg/L
 AML = 2.6 mg/L (1.55) = 4.0 mg/L

[CV = 0.6, 99th Percentile]
 [CV = 0.6, 95th Percentile, n = 4]

Season	Maximum Daily Limit (mg/L)	Average Monthly Limit (mg/L)
Spring	7.3	3.6
Summer	3.4	1.7
Fall	7.3	3.6
Winter	8.1	4.0

• **Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
FLOW	ONCE/DAY	ONCE/MONTH
BOD ₅	ONCE/MONTH	ONCE/MONTH
TSS	ONCE/MONTH	ONCE/MONTH
pH (S.U.)	ONCE/MONTH	ONCE/MONTH
TEMPERATURE (°C)	ONCE/MONTH	ONCE/MONTH
AMMONIA AS N (ALL SEASONS)	ONCE/MONTH	ONCE/MONTH

Once per day is the minimum sampling frequency requirement; however, the samples may be averaged for the minimum reporting frequency requirement.

Once per month is the minimum sampling requirement. Samples may be obtained on a more frequent basis, but the average of the samples must be reported as required in the reporting frequency column. Monthly Discharge Monitoring Reports (DMRs) are to be submitted to the department by the 28th day of the following month.

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 FACT SHEET:

1. A Fact Sheet 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 Fact Sheet 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 Fact Sheet 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 Fact Sheet 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 Fact Sheet may change as Water Quality Standards, Methodology, and Implementation procedures change.

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 was from December 29, 2006, to January 31, 2007. No responses received to the Public Notice of this operating permit; therefore, this operating permit shall not be modified.

Date of Fact Sheet: February 15, 2007

Michael Abbott, ES-II
Water Protection Program
(573) 526-1139
michael.abbott@dnr.mo.gov