

STATE OF MISSOURI  
**DEPARTMENT OF NATURAL RESOURCES**

MISSOURI CLEAN WATER COMMISSION



**MISSOURI STATE OPERATING PERMIT**

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

Permit No. MO0136522

Owner: Shannon County Commission  
Address: P.O. Box 187, Eminence, MO 65466

Continuing Authority: Same as above  
Address: Same as above

Facility Name: Shannon County Route H Quarry  
Facility Address: Route H and Route 106, Eminence, MO 65466

Legal Description: NW ¼, NE ¼, Sec. 35, T29N, R3W, Shannon County  
UTM Coordinates: X=656235, Y=4112159

Receiving Stream: Unnamed Tributary to Current River (U)  
First Classified Stream and ID: Current River (P) 2636 303(d) List  
USGS Basin & Sub-watershed No.: (11010008-060002)

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 - Limestone Quarry- SIC #1422

No Discharge System - Land Application of accumulated stormwater within quarry.

Land Application: Irrigation Volume/year: 1,625,000 gallons (including 1-in-10 year flows)

Irrigation areas: 2 acres at design loading

Application rates/acre: 1/8 inch/hour; 1 inch/day; 5 inches/week; 200 inches/year

Field slopes: less than 20 percent

Equipment type: Sprinklers; Vegetation: Trees

Application rate is based on: hydraulic loading rate

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.

January 24, 2011

Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

January 23, 2016

Expiration Date

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

<b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>					PAGE NUMBER 2 of 5	
					PERMIT NUMBER MO0136522	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001 - Land Application Operational Monitoring (Note 1)</u>						
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 <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>February 28, 2011</u> .						
<b>B. STANDARD CONDITIONS</b>						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Part I</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

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 6.5-9.0 pH units.

Note 1 - 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 storage area has discharged during the year, the discharge flow, the reasons discharge occurred and effluent analysis performed.

D. SPECIAL CONDITIONS

1. Emergency Discharge. Outfall 001 may only discharge if rainfall exceeds the 1 in 10 year (Data taken from the Missouri Climate Atlas) or the 24 hour, 25 year (Data taken from NRCS Urban Hydrology for Small Watersheds) rainfall events. **Discharge for any other reason shall constitute a permit violation and shall be recorded in accordance with Standard Conditions, Part 1, Section B.2.b.** Monitoring shall take place once per day while discharging. Test results are due on the 28<sup>th</sup> day of the month after the cessation of the discharge. Permittee shall monitor for the following constituents:

Constituent	Units
Flow	MGD
Settleable Solids	mL/L/hr
Oil and Grease	mg/L
pH – Units	Standard Units

D. SPECIAL CONDITIONS (continued)

2. Land application shall not cause surface ponding of applied water, runoff from the application sites during land application, or erosion due to land application.
3. 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.
4. All outfalls must be clearly marked in the field.
5. 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.
6. 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.
7. Report as no-discharge when a discharge does not occur during the report period.
  8. 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. SPECIAL CONDITIONS (continued)

9. 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.
10. Irrigation System.
- a. Discharge Reporting. Any unauthorized discharge from the storage basin 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. Water Storage Operating Levels - No-discharge Systems. The minimum and maximum operating water levels for the storage pit shall be clearly marked. The storage basin 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. Water shall be land applied whenever feasible based on soil and weather conditions and permit requirements. Storage basin shall be lowered to the minimum operating level prior to each winter by November 30.
  - c. Emergency Spillway. 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 irrigation system shall be operated so as to provide uniform distribution of irrigated water 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. Water shall be land applied only during daylight hours.
  - 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.
  - 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.

D. SPECIAL CONDITIONS (continued)

11. Permittee shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must be kept on-site and should not be sent to DNR unless specifically requested. The permittee shall select, install, use, operate, and maintain the Best Management Practices prescribed in the SWPPP in accordance with the concepts and methods described in the following document:

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

12. Permittee shall provide for inspection by facility staff, at least once per month, of all storm water pollution prevention structures, storm water and wastewater treatment structures, and of the facility in general to ensure that structures are properly maintained and effective, and that any Best Management Practices are continually implemented and effective. Inspections must be documented in the form of a written report or checklist. The reports must note any spills, leaks, or maintenance needs of any of the structures or practices. The reports must also describe action taken to correct or repair deficiencies. Areas of a quarry that have been permanently or temporarily stabilized need only be inspected once per year. Monthly inspections shall continue if the stabilized area is re-disturbed for any reason. Written records of inspections must be kept onsite and made available to the department upon request.
13. Permittee shall prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment maintenance, or warehousing activities and thereby prevent the contamination of storm water from these substances.
14. Permittee shall provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
15. Permittee shall store all paint, solvents, petroleum products, petroleum waste products, and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to storm water, or provide other prescribed BMP's such as plastic lids, portable spill pans or containment to prevent the commingling of storm water with container contents. Commingled water may not be discharged or irrigated under this permit. Permittee shall provide spill prevention, control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
16. Permittee shall designate an individual as responsible for environmental matters at the facility who will serve as a contact for the department. Permittee shall notify the department in writing of a personnel change for this position. One individual may be the contact for multiple facilities so long as that person can effectively communicate with the department on every facility.

**Missouri Department of Natural Resources**  
**FACT SHEET**  
**FOR THE PURPOSE OF ISSUANCE**  
**OF**  
**MO0136522**  
**SHANNON COUNTY ROUTE H QUARRY**

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: IND  
 Facility SIC Code(s): 1422

Facility Description:

No Discharge System - Land Application of accumulated stormwater within quarry.

Land Application: Irrigation Volume/year: 1,625,000 gallons (including 1-in-10 year flows)

Irrigation areas: 2 acres at design loading

Application rates/acre: 1/8 inch/hour; 1 inch/day; 5 inches/week; 200 inches/year

Field slopes: less than 20 percent

Equipment type: Sprinklers; Vegetation: Trees

Application rate is based on: hydraulic loading rate

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

- Yes;

- No.

Application Date: 8/23/2010  
 Expiration Date: N/A  
 Last Inspection: N/A In Compliance ; Non-Compliance

**OUTFALL(S) TABLE:**

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	2.5	No Discharge	Industrial Stormwater	4.7

Outfall #001

Legal Description: NW ¼, NE ¼, Sec. 35, T29N, R3W, Shannon County  
 UTM Coordinates: X=656235, Y=4112159

Receiving Stream: Unnamed Tributary to Current River (U)  
 First Classified Stream and ID: Current River (P) 2636 303(d) List  
 USGS Basin & Sub-watershed No.: (11010008-060002)

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

New facility.

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

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

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

**RECEIVING STREAM(S) TABLE:**

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Unnamed Tributary to Current River	U	-	General	11010008	Ozark/ Black/ Current
Current River	P	2636	AQL, CLF, IRR, LWW, SCR, WBC(A)***		

\* - 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 Current River	-	-	-

**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.

Applicable ;

Facility utilizes land application to dispose of waters in a non-discharging manner.

**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.

- New facility, 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.

- New and/or expanded discharge, please see **APPENDIX #1 – ANTIDegradation ANALYSIS**.

**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, SLUDGE, & SEWAGE SLUDGE:**

Bio-solids are solid materials resulting from wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sludge is any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect. Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information regarding biosolids and sludge is located at the following web address: <http://dnr.mo.gov/env/wpp/pub/index.html>, items WQ422 through WQ449.

Not applicable;

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

**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<sub>5</sub>) 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](http://www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-04/w18866.htm).

Not Applicable ;

Influent monitoring is not being required to determine percent removal.

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

Sanitary Sewer Systems (SSSs) are municipal wastewater collection systems 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)].

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.

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.

**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 ;

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 all facilities meeting the following criteria:

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

Applicable ;

Current River is listed on the 2006 Missouri 303(d) List for mercury.

– This facility is not considered to be a source of the above listed pollutant(s) or considered to contribute to the impairment of Current River.

## **Part V – Effluent Limits Determination**

### ***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 supercedes 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
FLOW	GPD	1	*				
SETTLABLE SOLIDS	ML/L/HR	2	*				
OIL & GREASE (MG/L)	MG/L	2	*				
pH	SU	2	*				
IRRIGATION PERIOD	HOURS	9	*				
VOLUME IRRIGATED	GALLONS	9	*				
APPLICATION AREA	ACRES	9	*				
APPLICATION RATE	INCHES/ ACRE	9	*				
RAINFALL	INCHES	9	*				
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

\* - Monitoring requirement only.

#### **Basis for Limitations Codes:**

- |  |                                    |
|--|------------------------------------|
| 1. State or Federal Regulation/Law       | 7. Antidegradation Policy          |
| 2. Water Quality Standard (includes RPA) | 8. Water Quality Model             |
| 3. Water Quality Based Effluent Limits   | 9. Best Professional Judgment      |
| 4. Lagoon Policy                         | 10. TMDL or Permit in lieu of TMDL |
| 5. Ammonia Policy                        | 11. WET Test Policy                |
| 6. Dissolved Oxygen Policy               | 12. Antidegradation Review         |

#### **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.
- **Settleable Solids.** No-Discharge Facility. Overflows shall be in accordance with 10 CSR 20-6.015. Monitoring requirement only.
- **Oil and Grease.** No-Discharge Facility. Overflows shall be in accordance with 10 CSR 20-6.015. Monitoring requirement only.
- **pH.** No-Discharge Facility. Overflows shall be in accordance with 10 CSR 20-6.015. Monitoring requirement only.
- **Rainfall, Irrigation Period, Volume Irrigated, Irrigation Area. No-Discharge Facility.** Necessary parameters to determine compliance with No-Discharge Requirements in 10 CSR 20-6.015.
- **Minimum Sampling and Reporting Frequency Requirements.**  
In accordance with 10 CSR 20-7.015(2-8), the Department has developed a minimum sampling frequency based on this facility's design and operation.

## **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:** OCTOBER 25, 2010

**COMPLETED BY:**

**TIM SOUTHARDS  
ENVIRONMENTAL ENGINEER  
MISSOURI DEPARTMENT OF NATURAL RESOURCES  
SOUTHEAST REGIONAL OFFICE  
(573)840-9750**

**APPENDIX #1 – ANTIDegradation ANALYSIS**



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
 WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH  
**NO DEGRADATION EVALUATION**  
**CONCLUSION OF ANTIDegradation REVIEW**  
 (Submit this form with the appropriate Permit Application)

<b>1. FACILITY</b>			
NAME Shannon County Route H & Route 106 Quarry		COUNTY Shannon	
ADDRESS (PHYSICAL) Route H & Route 106	CITY Eminence	STATE MO	ZIP CODE 65466
FACILITY CONTACT: Dale Counts		TELEPHONE NUMBER WITH AREA CODE 573-226-3414	

<b>2. NO DEGRADATION OPTIONS</b>											
<input type="checkbox"/> Renewal without changes <input type="checkbox"/> Sewer extensions <input type="checkbox"/> CSO elimination projects <input checked="" type="checkbox"/> No-discharge with land application <input type="checkbox"/> No-discharge with subsurface irrigation <input type="checkbox"/> Recycle or reuse of effluent <input type="checkbox"/> Discharge to a regional wastewater collection and treatment system. <input type="checkbox"/> Addition or replacement of disinfection system for an existing wastewater facility: Ultraviolet or Ozone The facility will be required to meet regulatory effluent limits for bacteria. <input type="checkbox"/> Addition or replacement for chlorination or dechlorination disinfection system of existing facility. The chlorination or dechlorination disinfection treatment system design must be for total removal of Total Residual Chlorine. Therefore, the facility will be required to meet the water quality-based effluent limits determined by the permit writer or the following water quality-based effluent limits:											
<table border="1"> <thead> <tr> <th>Beneficial Use of Classified Water</th> <th>MDL (µg/l)</th> <th>AML (µg/l)</th> </tr> </thead> <tbody> <tr> <td>Warm-water fishery</td> <td>17</td> <td>8.2</td> </tr> <tr> <td>Cold-water fishery</td> <td>3.3</td> <td>1.6</td> </tr> </tbody> </table>			Beneficial Use of Classified Water	MDL (µg/l)	AML (µg/l)	Warm-water fishery	17	8.2	Cold-water fishery	3.3	1.6
Beneficial Use of Classified Water	MDL (µg/l)	AML (µg/l)									
Warm-water fishery	17	8.2									
Cold-water fishery	3.3	1.6									
<p>Note: These compliance limits for Total Residual Chlorine are much less than minimum quantification level, or ML, of 0.13. The facility will be required to meet regulatory effluent limits for bacteria.</p> <input type="checkbox"/> Other, please describe: _____											

Consulted with Water Protection Staff:	
NAME	DATE

<b>3. NO DEGRADATION PROPOSED PROJECT SUMMARY</b>
Development of a no-discharge limestone quarry. Collected runoff will be land applied.

**CONSULTANT:** I have prepared or reviewed this form and all attached reports and documentation. The conclusion proposed is consistent with the Antidegradation Implementation Procedure and current state and federal regulations.

SIGNATURE *Rusty Doss* DATE 10/25/10

PRINT NAME  
Rusty Doss

TELEPHONE NUMBER WITH AREA CODE 417-256-8180 E-MAIL ADDRESS rusty@greatriv.com

**Owner:** I have read and reviewed the prepared documents and agree with this submittal.

SIGNATURE *Dale Counts Herman Kelly* Shannon County Commissioners DATE 10/25/10

TELEPHONE NUMBER WITH AREA CODE 573-226-3414 E-MAIL ADDRESS shannon@sos.mo.gov

**Continuing Authority:** Continuing Authority is the permanent organization that will be responsible for the operation, maintenance and modernization of the facility. The regulatory requirement regarding continuing authority is available at [www.sos.mo.gov/adrules/csr/current/10csr/10c20-6a.pdf](http://www.sos.mo.gov/adrules/csr/current/10csr/10c20-6a.pdf).

I have read and reviewed the prepared documents and agree with this submittal.

SIGNATURE *Dale Counts Herman Kelly* Shannon County Commissioners DATE 10/25/10

TELEPHONE NUMBER WITH AREA CODE 573-226-3414 E-MAIL ADDRESS shannon@sos.mo.gov

**Return completed form with the appropriate Permit Application to:**  
Missouri Department of Natural Resources  
Water Protection Program  
Water Pollution Control Branch  
P.O. Box 176  
Jefferson City, MO 65102

MO780-2026 (01/09)