

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-0133141

Owner: KCP&L Greater Missouri Operations Company
Address: P.O. Box 418679, Kansas City, MO 64141-9679

Continuing Authority: Same as owner
Address: Same as owner

Facility Name: Greenwood Generating Station
Facility Address: 14015 Smart Road, Greenwood, MO 64034

Legal Description: See page two
UTM Coordinates: See page two

Receiving Stream: Tributary to East Branch (U)
First Classified Stream and ID: Big Creek (P) (01250)
USGS Basin & Sub-watershed No.: (10290108 – 0302)

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

All Outfalls – Industrial – SIC #4911

Evaporative cooling water blowdown discharges and stormwater discharges from fuel tank secondary containment at a combustion turbine electricity peaking facility

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

April 9, 2012
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

April 8, 2017
Expiration Date

Dorothy Franklin, Director, Kansas City Regional Office

FACILITY DESCRIPTION (continued):

Outfall #001

Evaporative cooling water blowdown only
Legal Description: SE ¼, NW ¼, Sec.25, T47N, R31W, Jackson County
UTM Coordinates: X = 387449, Y = 4302133
Design flow is 0.086 MGD.
Actual flow is dependent upon peak energy demand.

Outfall #002

Evaporative cooling water blowdown only
Legal Description: SE ¼, NW ¼, Sec.25, T47N, R31W, Jackson County
UTM Coordinates: X = 387208, Y = 4302105
Design flow is 0.086 MGD.
Actual flow is dependent upon peak energy demand.

Outfall #003

Stormwater only from bulk fuel storage secondary containment treated by an oil-water separator
Legal Description: NE ¼, NW ¼, Sec.25, T47N, R31W, Jackson County
UTM Coordinates: X = 387451, Y = 4302225
Design flow is 0.085 MGD.
Actual flow is dependent upon precipitation.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS				PAGE NUMBER 3 of 6		
				PERMIT NUMBER MO-0133141		
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>Outfalls #001 & #002</u>						
Flow	MGD	*		*	daily	24 hr. estimate
pH – Units	SU	***		***	once/quarter**	grab
Oil & Grease	mg/L	15		10	once/quarter**	grab
Total Residual Chlorine (Note 2)	mg/L	0.016 ML=0.13		0.008 ML=0.13	once/quarter**	grab
Chloride plus Sulfate	mg/L	1,000		1,000	once/quarter**	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>JULY 28, 2012</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM, OR WATER WITH A VISIBLE SHEEN.						
<u>Outfall #003</u>						
Visual Inspection (Note 1)	N/A	*		*	Each discharge	visual
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>JULY 28, 2012</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM, OR WATER WITH A VISIBLE SHEEN.						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I</u> STANDARD CONDITIONS DATED <u>October 1, 1980</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

** Monitor once per quarter in the months that a discharge occurs (see table below for reporting details).

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

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

Note 1 Accumulated water in the secondary containment area must be visually inspected for the presence of oil sheen prior to discharge. If sheen is detected permittee must comply with the requirements in Special Condition #8 prior to discharge to waters of the state. For reporting purposes, report “0” if no sheen is detected and report “1” if sheen is detected.

Note 2 See page four

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

Note 2 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) Do not chemically dechlorinate **if it is not needed to meet the limits in your permit.**

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

C. SPECIAL CONDITIONS (continued)

4. Changes in Discharges of Toxic Substances

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

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

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

6. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).

7. Permittee shall adhere to the following minimum Best Management Practices:

- (a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, or warehouse activities and thereby prevent the contamination of storm water from these substances.
- (b) Provide collection facilities and arrange for proper disposal of waste products including but not limited to petroleum waste products, and solvents.
- (c) Store all paint, solvents, petroleum products and petroleum waste products (except fuels), and storage containers (such as drums, cans, or cartons) so that these materials are not exposed to storm water or provide other prescribed BMP's such as plastic lids and/or portable spill pans to prevent the commingling of storm water with container contents. Commingled water may not be discharged under this permit. Provide spill prevention control, and/or management sufficient to prevent any spills of these pollutants from entering waters of the state. Any containment system used to implement this requirement shall be constructed of materials compatible with the substances contained and shall also prevent the contamination of groundwater.
- (d) Provide good housekeeping practices on the site to keep solid waste from entry into waters of the state.
- (e) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property.

8. Before releasing water that has accumulated in secondary containment areas it must be examined for hydrocarbon odor and presence of a sheen. When the presence of hydrocarbons is indicated water must be treated to remove contamination and tested prior to discharge to waters of the state. All discharges from the secondary containment area, treated or untreated, must meet water quality standards of 10mg/L of Oil and Grease as the maximum concentration prior to discharge.

PERMIT TRANSFER

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

PERMIT RENEWAL REQUIREMENTS

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

TERMINATION

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

DUTY OF COMPLIANCE

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

**Missouri Department of Natural Resources
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-0133141
GREENWOOD GENERATING STATION**

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: Power Plant
Facility SIC Code(s): 4911

Facility Description:

Evaporative cooling water blowdown discharges and stormwater discharges from fuel tank secondary containment at a combustion turbine electricity peaking facility

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

- Yes;
 - No.

Application Date: 05/03/2011
Expiration Date: 11/08/2011
Last Inspection: No inspections were conducted during the previous permit cycle

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (MGD)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
#001	0.086	None	Evaporative Cooling Water Blowdown	3.45
#002	0.086	None	Evaporative Cooling Water Blowdown	3.28
#003	0.085	Best Management Practices/Oil-Water Separator	Stormwater	3.48

Outfall #001

Evaporative cooling water blowdown only
Legal Description: SE ¼, NW ¼, Sec.25, T47N, R31W, Jackson County
UTM Coordinates: X = 387449, Y = 4302133
Receiving Stream: Tributary to East Branch (U)
First Classified Stream and ID: Big Creek (P) (01250)
USGS Basin & Sub-watershed No.: (10290108 – 0302)

Outfall #002

Evaporative cooling water blowdown only
Legal Description: SE ¼, NW ¼, Sec.25, T47N, R31W, Jackson County
UTM Coordinates: X = 387208, Y = 4302105
Receiving Stream: Tributary to East Branch (U)
First Classified Stream and ID: Big Creek (P) (01250)
USGS Basin & Sub-watershed No.: (10290108 – 0302)

Outfall #003

Stormwater only from bulk fuel storage secondary containment treated by an oil-water separator
Legal Description: NE ¼, NW ¼, Sec.25, T47N, R31W, Jackson County
UTM Coordinates: X = 387451, Y = 4302225
Receiving Stream: Tributary to East Branch (U)
First Classified Stream and ID: Big Creek (P) (01250)
USGS Basin & Sub-watershed No.: (10290108 – 0302)

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

Quarterly discharge monitoring reports from the previous permit cycle were reviewed. There were no effluent limit exceedances.

Comments:

This facility consists of four GE Model 7821B combustion turbines that are operational only during peak energy demand periods. The facility also has two large above-ground storage tanks for fuel-oil that are inside of earthen secondary containment dikes. Prior to 2006 an NPDES permit was not required for this facility. At that time evaporative cooling units were installed on each of the combustion units. The evaporative coolers lower the temperature of the air flowing into the combustion units, thereby increasing the combustion air density and the electrical output. The source of cooling water is the City of Lee's Summit which purchases its water from Independence and KCMO. The previous permit required monitoring of blowdown discharge for parameters that would be expected in concentrated municipal water from these two sources. These parameters and their associated limitations remain unchanged in the current permit renewal.

The maximum water usage for each unit is 45 gallons per minute (GPM). Estimated evaporative water loss is 15 GPM leaving 30 GPM as blowdown to be discharged. Outfalls #001 & #002 each drain the blowdown from two combustion turbines each having their own evaporative cooler. At initial issuance of this permit, the design flow was calculated for 24-hour operation of the unit at 30 GPM; however, the permit writer included the flow for only one unit per outfall, making the design flow for each 0.043 million gallons per day (MGD). The design flow for each outfall has been doubled in this permit as blowdown for two units per outfall should be included.

At initial issuance it was determined that monitoring requirements for Outfall #003 would be only a visual inspection for sheen prior to release of accumulated storm water in the diked tank area. The monitoring requirement in the current permit renewal will remain as a visual inspection for sheen prior to release. If a sheen is not present the concentration of petroleum would be far below the water quality standard of 10mg/L and the oil-water separator would remove any contaminants not readily seen. Moreover, the only reason for petroleum products to be present in the diked area is in the case of a catastrophic tank failure. A special condition will be included in the permit that requires the facility to either treat accumulated water if a sheen is detected and to test the water prior to discharge or have it pumped and hauled to a permitted disposal facility. The design flow for Outfall #003 was determined to be 0.32 MGD at initial permit issuance. This flow was likely based on the size of the containment area and limitations of discharge volume by pumps, etc... The 2011 permit renewal application indicated that the maximum flow rate for the separator is 0.085 MGD so the design flow for this outfall will be updated to reflect this new information.

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 20-9.020(2)(A)], requirements for operation by certified personnel shall apply to all wastewater treatment systems, if applicable, as listed below:

Check boxes below that are applicable to the facility;

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

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

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

Part III – Receiving Stream Information

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

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

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

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

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	EDU**
Tributary to East Branch	U	N/A	General Criteria	10290108	Central Plains/ Osage/South Grand
Big Creek	P	01250	LWW, AQL, WBC-B		

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

** - Ecological Drainage Unit

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Trib. to East Branch	0	0	0

MIXING CONSIDERATIONS:

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

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements recommended at this time.

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

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:

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

Not Applicable .

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

ANTI-BACKSLIDING:

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

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

ANTIDEGRADATION:

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

- Renewal no degradation proposed and no further review necessary.

AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:

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

BIOSOLIDS & SEWAGE SLUDGE:

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

<http://dnr.mo.gov/env/wpp/pub/index.html>, items WQ422 through WQ449.

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 (BOD₅) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals.

Not Applicable ;

Influent monitoring is not being required to determine percent removal.

SANITARY SEWER OVERFLOWS (SSO) AND INFLOW AND INFILTRATION (I&I):

Sanitary Sewer Overflows (SSOs) are defined as an untreated or partially treated sewage release are considered bypassing under state regulation [10 CSR 20-2.010(11)] and should not be confused with the federal definition of bypass. SSO's have a variety of causes including blockages, line breaks, and sewer defects that allow excess storm water and ground water to (1) enter and overload the collection system, and (2) overload the treatment facility. Additionally, SSO's can be also be caused by lapses in sewer system operation and maintenance, inadequate sewer design and construction, power failures, and vandalism. SSOs also include overflows out of manholes and onto city streets, sidewalks, and other terrestrial locations.

Additionally, Missouri RSMo §644.026.1 mandates that the Department require proper maintenance and operation of treatment facilities and sewer systems and proper disposal of residual waste from all such facilities.

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

SCHEDULE OF COMPLIANCE (SOC):

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

Not Applicable ;

This permit does not contain a SOC.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP):

In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; (2) Authorized under section 402(p) of the CWA for the control of storm water discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (Document number EPA 833-B-09-002) [published by the United States Environmental Protection Agency (USEPA) in February 2009], BMPs are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure.

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

Not Applicable .

Discharges from Outfalls #001 and #002 are non-stormwater. Discharge from Outfall #003 is stormwater that has accumulated in the secondary containment area for the above ground storage tanks. Except for catastrophic tank failure, contamination of storm water is not expected in this area. Moreover, discharges are treated by an oil water separator for an extra degree of conservatism. Given that the primary discharges of concern are non-stormwater, the facility maintains a SPCC Plan for the fuel tanks, and a special condition requiring the use of Best Management Practices is included in the permit, a SWPPP requirement is not appropriate or necessary.

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.

40 CFR 122.41(M) - BYPASSES:

The federal Clean Water Act (CWA), Section 402 prohibits wastewater dischargers from “bypassing” untreated or partially treated sewage (wastewater) beyond the headworks. A bypass, which includes blending, is defined as an intentional diversion of waste streams from any portion of a treatment facility, [40 CFR 122.41(m)(1)(i)]. Additionally, Missouri regulation 10 CSR 20-2.010(11) defines a bypass as the diversion of wastewater from any portion of wastewater treatment facility or sewer system to waters of the state. Only under exceptional and specified limitations do the federal regulations allow for a facility to bypass some or all of the flow from its treatment process. Bypasses are prohibited by the CWA unless a permittee can meet all of the criteria listed in 40 CFR 122.41(m)(4)(i)(A), (B), & (C). Any bypasses from this facility are subject to the reporting required in 40 CFR 122.41(l)(6) and per Missouri’s Standard Conditions I, Section B, part 2.b. Additionally, Anticipated Bypasses include bypasses from peak flow basins or similar devices designed for peak wet weather flows.

- Not Applicable, this facility does not bypass.

303(d) LIST & TOTAL MAXIMUM DAILY LOAD (TMDL):

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

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

Not Applicable ;

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

Part V – Effluent Limits Determination

Outfalls #001 & #002 – Evaporative Cooling Water Blowdown

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
Flow	MGD	1	*		*	No	Same
Chloride plus Sulfate	mg/L	2, 9	1000		1000	No	Same
pH	SU	2, 9	6.5 – 9.0		6.5 – 9.0	Yes	6 – 9
Chlorine, Total Residual	mg/L	2, 9	0.017		0.008	No	**
Oil & Grease (mg/L)	mg/L	2, 9	15		10	No	Same

* - Monitoring requirement only.

** - Values have been rounded to the nearest thousandth and units have been changed to mg/L

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. 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.
- pH.** pH shall be maintained within the range of 6.5 – 9.0 standard pH units, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.**
- Total Residual Chlorine (TRC).** Warm-water Protection of Aquatic Life CCC = 10 µg/L, CMC = 19 µg/L [10 CSR 20-7.031, Table A]. Background TRC = 0.0 µg/L.

Chronic WLA: $C_e = ((10.08 + 0.0)10 - (0.0 * 0.0))/10.08$
 $C_e = 10 \mu\text{g/L}$

Acute WLA: $C_e = ((10.08 + 0.0)19 - (0.0 * 0.0))/10.08$
 $C_e = 19 \mu\text{g/L}$

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

Use most protective number of LTA_c or LTA_a .

$MDL = 5.3 (3.11) = 16.5 \mu\text{g/L}$ [CV = 0.6, 99th Percentile]
 $AML = 5.3 (1.55) = 8.2 \mu\text{g/L}$ [CV = 0.6, 95th Percentile, n = 4]

- Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.
- Chloride plus Sulfate.** Shall not exceed 1000mg/L for the protection of aquatic life per [10 CSR 7.031(4)].

OUTFALL #003 – DERIVATION AND DISCUSSION OF LIMITS:

- **Visual Inspection.** Accumulated stormwater shall be inspected for the presence or absence of a sheen prior to release from the secondary containment area through the oil-water separator. If a sheen is detected the water will either be fully treated and tested prior to release to ensure that it meets water quality standards of 10mg/L of oil and grease or it shall be pumped and hauled to a permitted disposal facility.

Part VI – Finding of Affordability

Pursuant to Section 644.145, RSMo., the Department is required to determine whether a permit or decision is affordable and makes a finding of affordability for certain permitting and enforcement decisions. This requirement applies to discharges from combined or separate sanitary sewer systems or publically-owned treatment works.

Not Applicable;
The Department is not required to determine findings of affordability because the facility is not a **combined or separate sanitary sewer system for a publically-owned treatment works.**

Applicable; The Department is required to determine findings of affordability because the permit applies to a **combined or separate sanitary sewer system for a publically-owned treatment works.**

Part VII – Administrative Requirements

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

PUBLIC NOTICE:

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

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

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

- The Public Notice period for this operating permit was from January 27, 2012 to February 27, 2012. No responses received or responses to the Public Notice of this operating permit do not warrant the modification of effluent limits and/or the terms and conditions of this permit.

DATE OF FACT SHEET: NOVEMBER 8, 2011

COMPLETED BY:

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Part VIII – Appendices

APPENDIX #1 – FACILITY AERIAL VIEW.

