

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. MO-0126560

Owner: Associated Electric Cooperative, Inc.  
Address: 2814 S. Golden  
Springfield, MO 65801

Continuing Authority: Same as above  
Address: Same as above

Facility Name: AECI- Holden Power Plant  
Facility Address: 100 SW State Route 131  
Holden, MO 64040

Legal Description: See page 2  
UTM Coordinates: See page 2

Receiving Stream: See page 2  
First Classified Stream and ID: See page 2  
USGS Basin & Sub-watershed No.: See page 2

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

### FACILITY DESCRIPTION

The facility is a simple cycle natural gas and fuel oil fired peaking power plant used for electric power generation. Each simple-cycle unit is guaranteed at 91 megawatts; however, the output of the units can be boosted to 122 megawatts with injection of water in the combustion process.

This permit authorizes only 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 Sections 640.013, 621.250, and 644.051.6 of the Law.

January 1, 2013  
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

September 30, 2016  
Expiration Date

John Madras, Director, Water Protection Program

**FACILITY DESCRIPTION (continued):**

Outfall #001 - SIC 4911

This outfall discharges process wastewater. Sources of discharge: reverse osmosis system, evaporative cooler blowdown, fire protection blowdown, demineralized drain, oil & water separator, and stormwater. Stormwater from 0.75 acre fuel unloading containment area and secondary containment around transformers drains to the oil & water separator.

Legal Description: NE ¼, NE ¼, Sec. 34, T46N, R28W, Johnson County

UTM Coordinates: X=413511, Y= 4289896

Receiving Stream: Unnamed Tributary to Pin Oak Creek (U)

First Classified Stream and ID: Pin Oak Creek (926)

USGS Basin & Sub-watershed No.: 10300104-0101

Design Flow: 45,000 GPD

Outfall #002- SIC 4911

This outfall is monitored when discharge occurs—fuel storage tank dike water. The fuel storage tank containment area is lined with a synthetic liner. Fire system testing water is also discharged through this outfall. The source of the fire protection system water is drinking water from the local rural water district.

Legal Description: NE ¼, NE ¼, Sec. 34, T46N, R28W, Johnson County

UTM Coordinates: X=413506, Y= 4289862

Receiving Stream: Unnamed Tributary to Pin Oak Creek (U)

First Classified Stream and ID: Pin Oak Creek (926)

USGS Basin & Sub-watershed No.: 10300104-0101

Design Flow: 2,200 GPD

Outfall #003 – SIC 4911

Outfall #003 is an internal outfall previously established by the department; consists of discharges from oil & water separator.

Legal Description: NE ¼, NE ¼, Sec. 34, T46N, R28W, Johnson County

UTM Coordinates: X=413308, Y= 4289874

Receiving Stream: Unnamed Tributary to Pin Oak Creek (U)

First Classified Stream and ID: Pin Oak Creek (926)

USGS Basin & Sub-watershed No.: 10300104-0101

Design Flow: 200 GPD

<b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>				PAGE NUMBER 3 of 5		
				PERMIT NUMBER MO-0126560		
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</u>						
Flow	GPD	*		*	once/quarter**	24 hr. estimate
Temperature	°F	*			once/quarter**	grab
<u>Outfall #002</u> (Note 1)						
Flow	GPD	*		*	once/discharge	24 hr. estimate
<u>Outfall #003</u>						
Flow	GPD	*		*	once/quarter**	24 hr. estimate
Oil & Grease	mg/L	15		10	once/quarter**	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>QUARTERLY</u> ; THE FIRST REPORT IS DUE <u>APRIL 28, 2013</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
<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</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

- \* Monitoring requirement only.
- \*\* See table below for quarterly sampling.

Minimum Sampling Requirements			
Quarter	Months	Effluent Parameters	Report is Due
First	January, February, March	Sample at least once during any month of the quarter	April 28 <sup>th</sup>
Second	April, May, June	Sample at least once during any month of the quarter	July 28 <sup>th</sup>
Third	July, August, September	Sample at least once during any month of the quarter	October 28 <sup>th</sup>
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28 <sup>th</sup>

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

### 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.
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. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.

### C. SPECIAL CONDITIONS

8. Before releasing water that has accumulated in secondary containment areas, it must be examined for hydrocarbon odor and presence of sheen. When the presence of hydrocarbons is indicated, the water shall be appropriately treated or taken to an authorized facility for treatment or disposal. If treated on-site, treated water must be tested and have a TPH concentration less than 10 mg/L before being discharged. This condition does not apply to stormwater that is treated in an oil/water separator that was permitted pursuant to a construction permit issued by the Department and that has oil and grease effluent limitations applied to the discharge from the oil/water separator.
9. The permittee shall develop and implement a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must be prepared within 30 days and implemented within 90 days of permit issuance. The SWPPP must be kept on-site and should not be sent to DNR unless specifically requested. The SWPPP must be reviewed and updated, if needed, every five (5) years or as site conditions change. 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:

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.

The SWPPP must include the following:

- (a) A listing of specific Best Management Practices (BMPs) and a narrative explaining how BMPs will be implemented to control and minimize the amount of potential contaminants that may enter storm water. Minimum BMPs are listed in SPECIAL CONDITIONS #10 below.
  - (b) The SWPPP must include a schedule for twice per month site inspections and brief written reports. The inspections must include observation and evaluation of BMP effectiveness. Deficiencies must be corrected within seven (7) days and the actions taken to correct the deficiencies shall be included with the written report, including photographs. Any corrective measure that necessitates major construction may also need a construction permit. Inspection reports must be kept on site with the SWPPP and maintained for a period of five (5) years. These must be made available to DNR personnel upon request.
  - (c) A provision for designating an individual to be responsible for environmental matters.
  - (d) A provision for providing training to all personnel involved in material handling and storage, and housekeeping of maintenance and cleaning areas. Proof of training shall be submitted on request of DNR.
10. 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 trash from entry into waters of the state.
    - (e) Provide sediment and erosion control sufficient to prevent or control sediment loss off of the property. This could include the use of straw bales, silt fences, or sediment basins, if needed, to comply with effluent limits.
  11. The purpose of the SWPPP and the BMPs listed herein is the prevention of pollution of waters of the state. A deficiency of a BMP means it was not effective in preventing pollution [10 CSR 20-2.010(56)] of waters of the state, and corrective actions means the facility took steps to eliminate the deficiency.

**Missouri Department of Natural Resources**  
**FACT SHEET**  
**FOR THE PURPOSE OF RENEWAL**  
**OF**  
**MO-0126560**  
**AECI - HOLDEN POWER PLANT**

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 an Industrial Facility.

### **Part I – Facility Information**

Facility Type: IND  
Facility SIC Code(s): 4911

#### **Facility Description:**

AECI-Holden Power Plant is a simple cycle natural gas and fuel oil fired peaking power plant used for electric power generation. Each simple-cycle unit is guaranteed at 91 megawatts; however, the output of the units can be boosted to 122 megawatts with injection of water in the combustion process. The facility has a 250,000 gallon fuel tank on site. Chlorine or other biocides are not used.

The facility uses make-up water purchased from a rural water district with the primary use being to inject the water in the combustion units during fuel oil use to control NO<sub>x</sub> emissions. The injected water is required to be demineralized water; therefore, the facility has both a reverse osmosis and demineralized system. These systems generate a backwash that goes to the holding pond. As this power plant is used for "peak" use only, it is not operated frequently. The evaporative cooler is a system used in the summer that takes raw water and introduces evaporated water into the air inlet to the combustion system to generate more mass. There is a "blowdown" wastewater stream off this system to prevent any accumulation of minerals present in the rural water supply from building up in the system.

Holden Plant was constructed in 2002, since its initial start-up there has been no waste removed from the oil/water separator, and therefore there has been no off-site disposal of removed material. The oil/water separator is frequently evaluated by plant staff and there is no wastewater that has entered the separator that has contained oil in the last 10 years. The separator serves the diesel fuel unloading area, transformer containment areas, and turbine enclosure floor drains. Except for the floor drains, these areas are operated by valves. Floor drains from the turbine enclosures do not represent any source of wastewater except when the areas are cleaned yearly by a water rinse. Plant operations control all primary flows to the separator by manually operated valves that are maintained closed until an operator evaluates the water in the hold area for oil then releases it to the separator. All the DMRs submitted to KCRO over the years, there has never been detection on oil and grease from the separator. All oil containing equipment located outside and the fuel oil storage tank is in containment. All water from containments is evaluated before the operator releases the water from manually operated valves.

Outfall #001—this outfall discharges process wastewater. Sources of discharge: reverse osmosis system, evaporative cooler blowdown, fire protection blowdown, demineralized drain, oil & water separator, and stormwater. Stormwater from 0.75 acre fuel unloading containment area and secondary containment around transformers drains to the oil & water separator. The stormwater flow is based on annual average rainfall, no evaporation, and the discharge averaged over 365. The max is based on a 10-year, 24-hour rainfall event of 5.16 inches over a 24-hour period. Draining of mineralizer tank has been necessary due to coating issues. The two million gallon mineralizer tank drained water is directed to the wastewater holding pond which is discharged through Outfall #001.

Outfall #002—this outfall discharges fuel storage tank dike water; not monitored. Subject to previous permits, Outfall #002 has been previously evaluated. During one permit cycle, the results of oil and grease analysis were evaluated against the facility's SPCC water release inspections. Per SPCC Plan, the facility evaluated the discharge from the containment dike for visible presence of oil, then the containment dike drain was opened to discharge accumulated storm water. As the results of the two evaluations were consistent, it was decided that the monitoring requirements and limitations be waived during the 2007-2012 cycle. Additionally, the facility is not a Steam Electric Power Plant and not subject to 40 CFR Part 423, so those limits are not applicable. The containment area is lined with a synthetic liner and is maintained in a very clean condition; if any oil or grease would be present it would be easily detected and removed before the dike drain were opened to release accumulated water. Since the plant was constructed, no oil or grease has ever entered the containment area. This outfall also discharges fire system testing water. The fire protection system is tested using two 1500 GPM pumps. The source of the fire protection system water is drinking water from the local rural water district.

Outfall #003 –this outfall is an internal outfall/oil & water separator.

SIC 4911

-Establishments engaged in the generation, transmission, and/or distribution of electric energy for sale.

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

- No.

Application Date: 12/02/11

Expiration Date: 05/24/12

**OUTFALL(S) TABLE:**

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
#001	0.0698	BMP/Primary	Industrial Process Wastewater	~0.5
#002	0.0034	BMP/Primary	Fuel storage tank dike water/ Stormwater/Fire System Testing	~0.5
#003	0.0003	BMP/Primary	Effluent from oil/water separator	~0.5

**Outfall #001 - SIC 4911**

This outfall discharges process wastewater. Sources of discharge: reverse osmosis system, evaporative cooler blowdown, fire protection blowdown, demineralized drain, oil & water separator, and stormwater. Stormwater from 0.75 acre fuel unloading containment area and secondary containment around transformers drains to the oil & water separator.

Legal Description: NE ¼, NE ¼, Sec. 34, T46N, R28W, Johnson County

UTM Coordinates: X=413511, Y= 4289896

Receiving Stream: Unnamed Tributary to Pin Oak Creek (U)

First Classified Stream and ID: Pin Oak Creek (926)

USGS Basin & Sub-watershed No.: 10300104-0101

Design Flow: 45,000 GPD

**Outfall #002- SIC 4911**

This outfall is monitored when discharge occurs—fuel storage tank dike water. The fuel storage tank containment area is lined with a synthetic liner. Fire system testing water is also discharged through this outfall. The source of the fire protection system water is drinking water from the local rural water district.

Legal Description: NE ¼, NE ¼, Sec. 34, T46N, R28W, Johnson County

UTM Coordinates: X=413506, Y= 4289862

Receiving Stream: Unnamed Tributary to Pin Oak Creek (U)

First Classified Stream and ID: Pin Oak Creek (926)

USGS Basin & Sub-watershed No.: 10300104-0101

Design Flow: 2,200 GPD

Outfall #003 – SIC 4911

Outfall #003 is an internal outfall previously established by the department; consists of discharges from oil & water separator.

Legal Description: NE ¼, NE ¼, Sec. 34, T46N, R28W, Johnson County

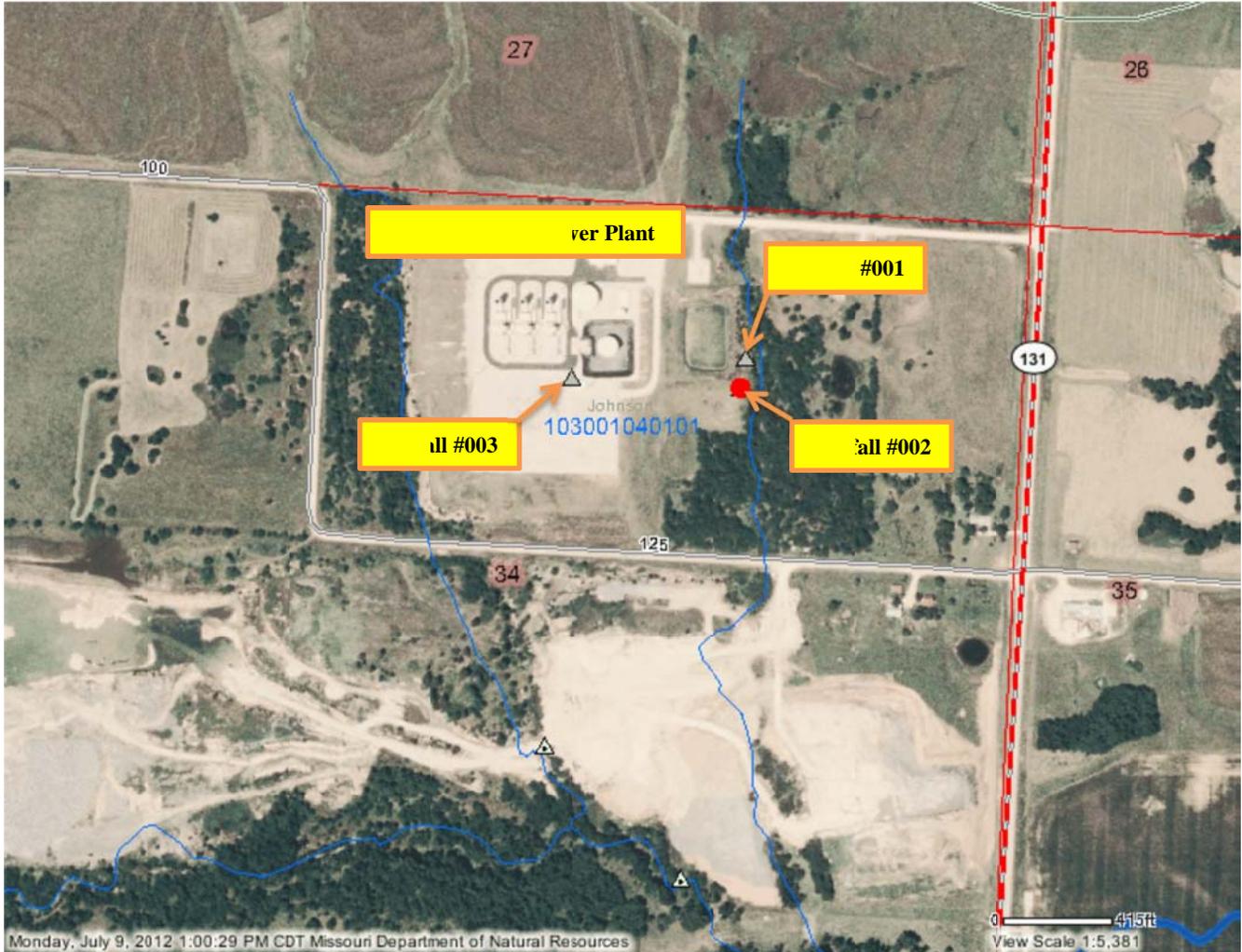
UTM Coordinates: X=413308, Y= 4289874

Receiving Stream: Unnamed Tributary to Pin Oak Creek (U)

First Classified Stream and ID: Pin Oak Creek (926)

USGS Basin & Sub-watershed No.: 10300104-0101

Design Flow: 200 GPD



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

There seem to be no record of impairment for this segment of the receiving stream.

Comments:

The facility’s five –year discharge monitoring report (DMR) from 5/24/07 to 5/24/12 showed no limitations exceedance.

Below is the facility’s history of established parameters from 2001 to 2012:

Outfalls	2001-2002	2002-2007	2007-2012
Outfall 001	Flow SO4 <sup>+</sup> plus Chlorides Temperature	Flow SO4 <sup>+</sup> plus Chlorides Temperature	Flow - Temperature
Outfall 002	Flow Visual Inspection for Oil Sheen	Flow -	- -
Outfall 003	Flow Oil & Grease	Flow Oil & Grease	Flow Oil & Grease

2007-2012 permit cycle:

- Sulfate (SO<sub>4</sub>) plus chloride parameter for Outfall #001 was removed. No exceedance of limits found in 5 years.
- Outfall #002 remains as an outfall, but is not monitored. Visual inspection for oil sheen was removed during the 2002-2007 & 2007-2012 cycles. No oil & grease observed at outfall #002.

**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:

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 seven (7) categories. Each category lists effluent limitations for specific parameters, which are presented in each outfall’s Effluent Limitation Table and further discussed in the Derivation & Discussion of Limits section.

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

10 CSR 20-7.031 Missouri Water Quality Standards, the Department defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 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*	12-DIGIT HUC**
Unnamed Tributary to Pin Oak Creek	U	n/a	General Criteria	10300104-0101
Pin Oak Creek	C	926	LWW, AQL, WBC-B, SCR	

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

\*\* - Hydrological Unit Code

**RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:**

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

**MIXING CONSIDERATIONS**

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

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

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

### **ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:**

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

Not Applicable;

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

### **ANTI-BACKSLIDING:**

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

- All limits in this 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 (BOD<sub>5</sub>) 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.

Applicable;

The permittee is required to develop and implement a SWPPP.

**VARIANCE:**

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

Not Applicable;

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

**WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:**

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

Not Applicable;

Wasteload allocations were not calculated.

**WLA MODELING:**

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

Not Applicable;

A WLA study was either not submitted or determined not applicable by Department staff.

**WATER QUALITY STANDARDS:**

Per [10 CSR 20-7.031(3)], General Criteria shall be applicable to all waters of the state at all times including mixing zones.

Additionally, [40 CFR 122.44(d)(1)] directs the Department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including State narrative criteria for water quality.

**WHOLE EFFLUENT TOXICITY (WET) TEST:**

A WET test is a quantifiable method of determining if a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with or through synergistic responses when mixed with receiving stream water.

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**

**EFFLUENT LIMITATIONS TABLE: *Outfall #001* – Main Facility Outfall**

PARAMETER	UNIT	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	*		*	NO	*
TEMPERATURE	°F	*		*	NO	*

**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.
- **Temperature.** In accordance with 10 CSR 20-7.031(4)(D)5., this facility shall not exceed the monthly temperature criteria established of 90°F.

**EFFLUENT LIMITATIONS TABLE: *Outfall #002***

PARAMETER	UNIT	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	*		*	NEW PARAMETER	

**OUTFALL #002 – DERIVATION AND DISCUSSION OF LIMITS:**

- **Flow.** This parameter has been re-established for this permit cycle as a monitoring requirement only. In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance. 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.

**EFFLUENT LIMITATIONS TABLE: *Outfall #003***

PARAMETER	UNIT	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	*		*	NO	*
OIL & GREASE	MG/L	15		10	NO	15/10

\* - Monitoring requirement only.

**OUTFALL #003 – 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.
- **Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.

## **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**.

## **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.

### **PERMIT SYNCHRONIZATION:**

The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also allow the department to explore a watershed based permitting effort at some point in the future.

This permit will expire on **September 30, 2017** in order to meet the permit synchronization goals.

### **PUBLIC NOTICE:**

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

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

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

- The Public Notice period for this operating permit is tentatively scheduled to begin in September 2012.

The Public Notice period for this operating permit was from November 3, 2012 to December 3, 2012. 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.

### **Comments Received from the Facility:**

1. Page 2 of 5 Descriptions of Outfalls #002 and #003. The last two sentences of the description for Outfall #003 should be moved to the description for Outfall #002 and corrected to read as follows: "Fire system testing water is also discharged through this outfall. The source of the fire protection system water is drinking water from the local rural water district."

### **Response to 1:**

Descriptions of Outfalls #002 and #003 have been updated.

2. Page 5 of 5. Special Condition 8 states *“Before releasing water that has accumulated in secondary containment areas it must be examined for hydrocarbon odor and presence of sheen. When the presence of hydrocarbons is indicated, the water shall be appropriately treated or taken to an authorized facility for treatment or disposal. If treated on this site, treated water released must be tested and have no detectable concentrations of TPH before being discharged.”*

This proposed requirement is unrealistic to achieve and inconsistent with other permits, specifically General Permits issued by the Department. The General Permit issued by the Department for Oil/Water Separators, MO-G14, has an effluent limitation for Oil and Grease and not Total Petroleum Hydrocarbons (TPH), while other General Permits that have TPH effluent limitations are not restricted to “no detectable concentration” but a concentration of 10 mg/l. Holden Plant was specifically designed to treat certain wastewater streams through an oil/water separator and has an effluent limitation for Oil and Grease applied to the discharge from the equipment. This technology was permitted through the Department and should be recognized as adequate to treat wastewater that has oil or petroleum present. To be consistent with other permits issued by the Department AECI requests that this condition be modified to read *“Before releasing water that has accumulated in secondary containment areas, it must be examined for hydrocarbon odor and presence of sheen. When the presence of hydrocarbons is indicated, the water shall be appropriately treated or taken to an authorized facility for treatment or disposal. If treated on-site, treated water must be tested **and have a TPH concentration less than 10 mg/l** before being discharged. **This condition does not apply to storm water that is treated in an oil/water separator that was permitted pursuant to a construction permit issued by the Department and that has oil and grease effluent limitations applied to the discharge from the oil/water separator.”***

**Response to 2:**

The permit has been updated to reflect the new proposed language.

3. Page #2, Fact Sheet. The Outfall(s) Table needs to be corrected by taking the Effluent Type description for #003 and including it in the Effluent Type for #002 and inserting “Effluent from oil/water separator” in the Effluent Type description for #003.

**Response to 3:**

Effluent Type descriptions of Outfalls #002 and #003 have been updated.

4. Page #2, Fact Sheet. The Description for Outfall #003 needs to be corrected. The last three sentences need to be moved to the description for Outfall #002. The second sentence needs to be corrected to read “Fire system testing water is also discharged through this outfall.”

**Response to 4:**

In order for outfalls descriptions to match, the corrected outfalls descriptions from Page 2 of the permit were copied and paste to the outfalls descriptions on Page 2 of the fact sheet. Relevant outfalls information was moved to the Facility Description section of the fact sheet.

**DATE OF FACT SHEET: DECEMBER 4, 2012**

**COMPLETED BY:**

**JOY JOHNSON, ENVIRONMENTAL SPECIALIST III**  
**NPDES PERMITS UNIT**  
**WATER PROTECTION PROGRAM**  
**(573) 751-6982**  
**[joy.johnson@dnr.mo.gov](mailto:joy.johnson@dnr.mo.gov)**