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\textsuperscript{nd} Congress) as amended,

Permit No. MO-0121827

Owner: Associated Electric Cooperative, Inc. (AECI)
Address: P.O. Box 754, Springfield, MO 65801

Continuing Authority: Same as above
Address: Same as above

Facility Name: AECI, St. Francis Power Plant
Facility Address: 40753 County Road 101, Campbell, MO 63933

Legal Description: See Pages 2-3
UTM Coordinates: See Pages 2-3

Receiving Stream: Oxbow to St. Francis River
First Classified Stream and ID: St. Francis River (P) (02968)
USGS Basin & Sub-watershed No.: (08020203-0502)

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

FACILITY DESCRIPTION

St. Francis Power Plant is a two unit, 501 MW combined cycle natural gas fired generating station. Unit 1 is a 245 MW unit that came online in 1999, while Unit 2 is a 256 MW unit that came online in 2001. St. Francis Power Plant’s intake water is from wells located at the facility. St. Francis uses best technology available (BTA) cooling towers. Outfall #003 is the combined discharge from internal outfalls #001 and #002. Outfall #007 is the combined discharge from internal outfalls #005 and #006. The outfalls discharge into an oxbow, which flows via surface and subsurface routes to an open oxbow of the St. Francis River. See pages two and three for facility description. A certified operator is not required.

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 Sections 640.013, 621.250, and 644.051.6 of the Law.

March 1, 2019 Effective Date
October 1, 2020 Modification Date
Edward B. Galbraith, Director, Division of Environmental Quality

December 31, 2023 Expiration Date
Chris Wieberg, Director, Water Protection Program
**FACILITY DESCRIPTION (CONTINUED)**

**INTERNAL OUTFALL #001 – SIC # 4911; cooling tower blowdown from Unit #1; discharges through outfall #003**
- UTM Coordinates: X = 752409; Y = 4052709
- Design Flow: 0.7 MGD
- Average Flow: 0.153 MGD

**INTERNAL OUTFALL #002 – SIC # 4911; oil/water separator with Unit #1; pH adjustment; discharges through outfall #003**
- UTM Coordinates: X = 752409; Y = 4052709
- Design Flow: 0.576 MGD
- Average Flow: 0.098 MGD

**Outfall #003 – SIC # 4911; Lined basin, Cooling water pond; combined discharge from internal outfalls 001 and 002, fire suppression water supply and fire protection test water.**
- UTM Coordinates: X = 752343; Y = 4052651
- Legal Description: NW ¼, NE ½, Sec. 3, T22N, R8E, Dunklin County
- Receiving Stream: Oxbow to St. Francis River (U)
- USGS Basin & Sub-watershed No.: (08020203-0502)
- Design Flow: 1.4 MGD
- Average Flow: 0.167 MGD

**Outfall #004 – SIC #4911**
Stormwater; eliminated by certifying no industrial stormwater exposure. This permit authorizes the continued use of existing or new storm sewers where there is no exposure of industrial materials and activities to rain, snow, snowmelt, and/or runoff to convey uncontaminated storm runoff. Such outfalls do not require monitoring or limitations when appropriate best management practices are implemented. Special conditions have been added to the permit to minimal observation and appropriate best management practices to assure the facility maintains appropriate site cleanliness to maintain no industrial stormwater exposure occurs during the permit cycle.

**Outfall #005 – SIC # 4911**
Internal outfall; Cooling tower Blowdown from Unit #2; discharges through outfall #007
- UTM Coordinates: X = 752399; Y = 4052485
- Design Flow: 0.701 MGD
- Average Flow: 0.183 MGD

**Outfall #006 – SIC # 4911**
Internal outfall; oil/ water separator with Unit #2, pH adjustment; discharges through outfall #007
- UTM Coordinates: X = 752399; Y = 4052485
- Design Flow: 0.569 MGD
- Average Flow: 0.100 MGD

**Outfall #007 – SIC # 4911**
Lined basin. Cooling water pond; combined discharge from internal outfalls #005 and #006 and fire protection test water.
- UTM Coordinates: X = 752352; Y = 4052539
- Legal Description: NW ¼, NE ½, Sec. 3, T22N, R8E, Dunklin County
- Receiving Stream: Unnamed Oxbow to St. Francis River
- USGS Basin & Sub-watershed No.: (08020203-0502)
- Design Flow: 1.27 MGD
- Average Flow: 0.168 MGD

Sanitary wastewater from the power plant is treated with a subsurface onsite system. Sludge is managed by pumping and hauling using a contracted hauler.
## A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

### OUTFALLS #001 & #005

<table>
<thead>
<tr>
<th>Physical Parameters</th>
<th>Units</th>
<th>Final Effluent Limitations</th>
<th>Monitoring Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow MGD</td>
<td></td>
<td>Daily Maximum</td>
<td>Weekly Average</td>
</tr>
<tr>
<td>ELG SU</td>
<td></td>
<td>6.0 to 9.0</td>
<td>6.0 to 9.0</td>
</tr>
<tr>
<td>pH *</td>
<td>mg/L</td>
<td>6.0 to 9.0</td>
<td>6.0 to 9.0</td>
</tr>
<tr>
<td>Chlorine, Free Available µg/L</td>
<td>500</td>
<td>200</td>
<td>once/year</td>
</tr>
</tbody>
</table>

**Monitoring Requirements**
- Monitoring and reporting requirement only.
- The facility will report the minimum and maximum values. pH is not to be averaged.

### OUTFALLS #002 & #006

<table>
<thead>
<tr>
<th>Conventional Parameters</th>
<th>Units</th>
<th>Final Effluent Limitations</th>
<th>Monitoring Requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow MGD</td>
<td></td>
<td>Daily Maximum</td>
<td>Weekly Average</td>
</tr>
<tr>
<td>Oil &amp; Grease mg/L</td>
<td>15</td>
<td>10</td>
<td>once/month</td>
</tr>
<tr>
<td>pH * SU</td>
<td>6.0 to 9.0</td>
<td>6.0 to 9.0</td>
<td>continuous</td>
</tr>
<tr>
<td>pH – minutes of exceedance minutes</td>
<td>446</td>
<td>measured</td>
<td></td>
</tr>
<tr>
<td>pH – excursions &gt;60 minutes count</td>
<td>0</td>
<td>measured</td>
<td></td>
</tr>
<tr>
<td>Total Suspended Solids mg/L</td>
<td>100</td>
<td>30</td>
<td>once/month</td>
</tr>
</tbody>
</table>

**Monitoring Reports**
- Shall Be Submitted Monthly; The First Report Is Due: April 28, 2019.
- Shall Be No Discharge Of Floating Solids Or Visible Foam In Other Than Trace Amounts.

* Monitoring and reporting requirement only.

Ω The facility will report the minimum and maximum values. pH is not to be averaged.
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective on **March 1, 2019** and remain in effect through **December 31, 2023**. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

<table>
<thead>
<tr>
<th>EFFLUENT PARAMETERS</th>
<th>UNITS</th>
<th>INTERIM EFFLUENT LIMITATIONS</th>
<th>MONITORING REQUIREMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>DAILY MAXIMUM</td>
<td>WEEKLY AVERAGE</td>
</tr>
<tr>
<td><strong>PHYSICAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flow</td>
<td>MGD</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Temperature</td>
<td>°F</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td><strong>CONVENTIONAL</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chlorine, Total Residual Φ</td>
<td>µg/L</td>
<td>17 (ML130)</td>
<td>8 (ML130)</td>
</tr>
<tr>
<td>Oil &amp; Grease</td>
<td>mg/L</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td><strong>NUTRIENTS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitrogen, Total (TN)</td>
<td>mg/L</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Phosphorus, Total (TP)</td>
<td>mg/L</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td><strong>OTHER</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>mg/L</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Sulfate</td>
<td>mg/L</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Chloride plus Sulfate</td>
<td>mg/L</td>
<td>*</td>
<td>*</td>
</tr>
</tbody>
</table>

**MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE APRIL 28, 2019.**
**THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.**

**MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE JANUARY 28, 2020.**
**THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.**

* Monitoring and reporting requirement only.

Ω The facility will report the minimum and maximum values. pH is not to be averaged.

Φ This permit contains a Total Residual Chlorine (TRC) limit. This effluent limit is below the minimum quantification level (ML) of the most sensitive EPA approved CLTRC methods. The Department has determined the current acceptable ML for total residual chlorine to be 130 µg/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 130 µg/L will be considered violations of the permit and values less than the minimum quantification level of 130 µg/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.
A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (CONTINUED)

<table>
<thead>
<tr>
<th>OUTFALLS #003 AND #007 main outfalls</th>
<th>TABLE A-4 FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</th>
</tr>
</thead>
</table>

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 on **January 1, 2024** and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

**Effluent Parameters** | **Units** | **Final Effluent Limitations** | **Monitoring Requirements** |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>Daily Maximum</strong></td>
<td><strong>Weekly Average</strong></td>
<td><strong>Monthly Average</strong></td>
</tr>
<tr>
<td><strong>Physical</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flow</td>
<td>MGD</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Temperature</td>
<td>°F</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td><strong>Conventional</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chlorine, Total Residual Φ</td>
<td>µg/L (ML130)</td>
<td>17</td>
<td>8</td>
</tr>
<tr>
<td>Oil &amp; Grease</td>
<td>mg/L</td>
<td>15</td>
<td>(ML130)</td>
</tr>
<tr>
<td><strong>Nutrients</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitrogen, Total (TN)</td>
<td>mg/L</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Phosphorus, Total (TP)</td>
<td>mg/L</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>mg/L</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Sulfate</td>
<td>mg/L</td>
<td>*</td>
<td>*</td>
</tr>
<tr>
<td>Chloride plus Sulfate</td>
<td>mg/L</td>
<td>1000</td>
<td>1000</td>
</tr>
</tbody>
</table>

**Monitoring Reports Shall Be Submitted Monthly; The First Report Is Due April 28, 2021.**
**There Shall Be No Discharge Of Floating Solids Or Visible Foam In Other Than Trace Amounts.**

| Whole Effluent Toxicity, Chronic See Special Condition #3 | TUc | | | once/year | grab |

**Monitoring Reports Shall Be Submitted Annually; The First Report Is Due January 28, 2022.**
**There Shall Be No Discharge Of Floating Solids Or Visible Foam In Other Than Trace Amounts.**

* Monitoring and reporting requirement only.

Ω The facility will report the minimum and maximum values. pH is not to be averaged.

Φ This permit contains a Total Residual Chlorine (TRC) limit. This effluent limit is below the minimum quantification level (ML) of the most sensitive EPA approved CLTRC methods. The Department has determined the current acceptable ML for total residual chlorine to be 130 µg/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 130 µg/L will be considered violations of the permit and values less than the minimum quantification level of 130 µg/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. SCHEDULE OF COMPLIANCE

Schedules of compliance are allowed per 40 CFR 122.47. The facility shall attain compliance with final effluent limitations established in this permit as soon as reasonably achievable:

1. Within six months of the effective date of this permit, the permittee shall report progress made in attaining compliance with the final effluent limits.

2. The permittee shall submit interim progress reports detailing progress made in attaining compliance with the final effluent limits every 12 months from effective date. The first report is due MARCH 01, 2020.

3. Within 2 years of the effective date of this permit, the permittee shall attain compliance with the final effluent limits at outfalls #003 and #007 for chloride plus sulfate. (Schedule of compliance extended at the 2020 modification.)

4. By January 1, 2024 or before, the permittee shall attain compliance with the final effluent limits at outfalls #003 and #007 for chloride plus sulfate.

Please submit progress reports via the electronic reporting system.

C. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Part I and Part III standard conditions dated August 1, 2014 and March 1, 2015, respectively, and hereby incorporated as though fully set forth herein.

D. SPECIAL CONDITIONS

1. Per 40 CFR 423.15(a)(2): There shall be no discharge of polychlorinated biphenyl compounds (PCBs) such as those commonly [historically] used for transformer fluid.

2. Per 40 CFR 423.15(a)(10): The facility shall not discharge any of the 126 priority pollutants (listed in Appendix A) found in cooling tower maintenance chemicals in cooling tower blowdown in any detectable amount except for total recoverable chromium (daily maximum and monthly average limit of 200 µg/L) and total recoverable zinc (daily maximum and monthly average limit of 1000 µg/L). Per 40 CFR 423.15(a)(10)(iii) it is the permitting authority’s discretion to not require monitoring of constituents in 40 CFR 122.11(b) as the facility has presented Safety Data Sheets (SDS) which contain none of the pollutants present on the 126 priority pollutant list for cooling tower maintenance or cleaning chemicals.

In lieu of annual monitoring or reporting requirements, the facility shall, at a minimum of 30 days before use, divulge any new or proposed cooling tower cleaning or maintenance chemical to the Water Protection Program in writing (email is appropriate). If any additional requirements are obligatory of the permittee at that time; the Department will make the request to the permittee in writing.

3. Chronic Whole Effluent Toxicity (WET) Test shall be conducted as follows:
   (a) Freshwater Species and Test Methods: Species and short-term test methods for estimating the chronic toxicity of NPDES effluents are found in the most recent edition of *Short-term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms* (EPA/821/R-02/013; Table IA, 40 CFR Part 136). The permittee shall concurrently conduct 7-day, static, renewal toxicity tests with the following species:
       o The fathead minnow, *Pimephales promelas* (Survival and Growth Test Method 1000.0).
       o The daphnid, *Ceriodaphnia dubia* (Survival and Reproduction Test Method 1002.0).
   (b) Chemical and physical analysis of the upstream control sample and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping. Where upstream receiving water is not available or known to be toxic, other approved control water may be used.
   (c) Test conditions must meet all test acceptability criteria required by the EPA Method used in the analysis.
   (d) The Allowable Effluent Concentration (AEC) is 100%, the dilution series is: 100%, 50%, 25%, 12.5%, and 6.25%.
   (e) All chemical and physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% effluent concentration.
D. SPECIAL CONDITIONS (CONTINUED)

(f) The facility must submit a full laboratory report for all toxicity testing. The report must include a quantification of chronic toxic units \((TU_c = 100/IC_{25})\) reported according to the *Methods for Measuring the Chronic Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms* chapter on report preparation and test review. The 25 percent Inhibition Effect Concentration \((IC_{25})\) is the toxic or effluent concentration that would cause 25 percent reduction in mean young per female or in growth for the test populations.

4. Electronic Discharge Monitoring Report (eDMR) Submission System

(a) Discharge Monitoring Reporting Requirements. The permittee must electronically submit compliance monitoring data via the eDMR system. In regards to Standard Conditions Part I, Section B, #7, the eDMR system is currently the only Department approved reporting method for this permit. Programmatic Reporting Requirements. The following reports (if required by this permit) must be electronically submitted as an attachment to the eDMR system until such a time when the current or a new system is available to allow direct input of the data:

(1) Schedule of Compliance Progress Reports;
(2) Any additional report required by the permit excluding bypass reporting.

After such a system has been made available by the Department, required data shall be directly input into the system by the next report due date.

(b) Other actions. The following shall be submitted electronically after such a system has been made available by the Department:

(1) General Permit Applications/Notices of Intent to discharge (NOIs);
(2) Notices of Termination (NOTs);
(3) No Exposure Certifications (NOEs);
(4) Low Erosivity Waivers and Other Waivers from Stormwater Controls (LEWs); and
(5) Bypass reporting.

(c) Electronic Submission: access the eDMR system, via: https://edmr.dnr.mo.gov/edmr/E2/Shared/Pages/Main/Login.aspx.

(d) Waivers from Electronic Reporting. The permittee must electronically submit compliance monitoring data and reports unless a waiver is granted by the department in compliance with 40 CFR Part 127. The permittee may obtain an electronic reporting waiver by first submitting an eDMR Waiver Request Form: http://dnr.mo.gov/forms/780-2692-f.pdf. The Department will either approve or deny this electronic reporting waiver request within 120 calendar days. Only permittees with an approved waiver request may submit monitoring data and reports on paper to the Department for the period that the approved electronic reporting waiver is effective.

5. The facility’s description is found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2) hence stormwater requirements must be evaluated. The facility has attested none of the stormwater on site has industrial exposure therefore the requirements for stormwater are as follows:

(a) The facility shall maintain the stormwater as no-exposure at all times. Intermittent exposure is still exposure and the facility must obtain a permit modification if exposure is demonstrated.

(b) The facility shall perform a comprehensive review of the no-exposure requirements at least once per year. This information shall be kept on site and available to inspectors, DNR, or EPA personnel, and provided upon request.

6. Permittee shall adhere to the following minimum Best Management Practices (BMPs):

(a) Prevent the spillage or loss of fluids, oil, grease, fuel, etc. from vehicle maintenance, equipment cleaning, warehouse activities, and other areas and thereby prevent the contamination of stormwater 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 stormwater or provide other prescribed BMPs such as plastic lids and/or portable spill pans to prevent the commingling of stormwater 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. Any spills should be noted in the SWPPP.

(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

(f) Ensure adequate provisions are provided to prevent surface water intrusion into the storage basin, to divert stormwater runoff around the storage basin, and to protect embankments from erosion.
D. SPECIAL CONDITIONS (CONTINUED)

7. To protect the general criteria found at 10 CSR 20-7.031(4), before releasing water accumulated in secondary containment areas, it must be examined for hydrocarbon odor and presence of sheen. If odor or sheen is indicated, the water shall be treated using an appropriate method or disposed of in accordance with legally approved methods, such as being sent to a wastewater treatment facility. Following treatment, the water shall be tested for oil and grease, benzene, toluene, ethylbenzene, and xylene using 40 CFR part 136 methods. All pollutant levels must be below the most protective, applicable standards for the receiving stream, found in 10 CSR 20-7.031 Tables A1-B3. Records of all testing and treatment of water accumulated in secondary containment shall be stored in the SWPPP to be available on demand to Department and EPA personnel.

8. The full implementation of this operating permit, which includes implementation of any applicable schedules of compliance, shall constitute compliance with all applicable federal and state statutes and regulations in accordance with §644.051.16, RSMo, and the CWA section 402(k); however, this permit may be reopened and modified, or alternatively revoked and reissued to 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 contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or controls any pollutant not limited in the permit.

9. All outfalls and permitted features must be clearly marked in the field.

10. Changes in Discharges of Toxic Pollutant
In addition to the reporting requirements under §122.41(1), all existing manufacturing, commercial, mining, and silvicultural dischargers must notify the Director as soon as they know or have reason to believe:

(a) That an activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, 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;
   (3) Five hundred micrograms per liter (500 µg/L) for 2,4-dinitrophenol and for 2-methyl-4, 6-dinitrophenol;
   (4) One milligram per liter (1 mg/L) for antimony;
   (5) Five (5) times the maximum concentration value reported for the pollutant in the permit application in accordance with 40 CFR 122.21(g)(7); or
   (6) The notification level established by the Department in accordance with 40 CFR 122.44(f).

(b) That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following “notification levels”:
   (1) Five hundred micrograms per liter (500 µg/l);
   (2) One milligram per liter (1 mg/l) for antimony;
   (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application in accordance with §122.21(g)(7).
   (4) The level established by the Director in accordance with §122.44(f).

11. Report as no-discharge when a discharge does not occur during the report period. It is a violation of this permit to report no-discharge when a discharge has occurred.

12. Reporting of Non-Detects
(a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way the precision and accuracy of the analyzed result can be enumerated.

(b) The permittee shall not report a sample result as “non-detect” without also reporting the detection limit of the test or the reporting limit of the laboratory. Reporting as “non-detect” without also including the detection/reporting limit will be considered failure to report, which is a violation of this permit.

(c) The permittee shall report the non-detect result using the less than “<” symbol and the laboratory’s detection/reporting limit (e.g. <6).

(d) Where the permit contains a Minimum Level (ML) and the permittee is granted authority in the permit to report zero in lieu of the < ML for a specified parameter, then zero (0) is reported for that parameter.

(e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.

(f) When calculating monthly averages, one-half of the minimum detection limit (MDL) should be used instead of a zero. Where all data are below the MDL, the “<MDL” shall be reported as indicated in item (C).

13. Failure to pay fees associated with this permit is a violation of the Missouri Clean Water Law (644.055 RSMo).
MISSOURI DEPARTMENT OF NATURAL RESOURCES
MODIFICATION STATEMENT OF BASIS
FOR
MO-0121827
ST. FRANCIS POWER PLANT

This Statement of Basis (Statement) gives pertinent information regarding modification(s) to the above listed operating permit. A Statement is not an enforceable part of a Missouri State Operating Permit. Changes found here supersede previous fact sheet determinations. The permit was revised as appropriate to reflect changes enumerated in this modification.

PART I. FACILITY INFORMATION

The facility’s basic information has not changed; see original fact sheet.

PART II. MODIFICATION RATIONALE

This operating permit is hereby modified to reflect an extension of the schedule of compliance for chloride plus sulfate. The facility requires additional time to determine the source and eliminate the source or install a treatment device. The SOC was extended to the end of the permit term. No other changes were made at this time.

PART III. ADMINISTRATIVE REQUIREMENTS

On the basis of preliminary staff review, and utilizing current applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue this permit subject to specified effluent limitations, schedules, and special conditions. The changes contained herein require a public notice comment period per 10 CSR 20-6.020. 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 8/14/2020 through 9/14-2020; no comments were received.

DATE OF FACT SHEET: JULY 21, 2020

COMPLETED BY:
PAM HACKLER, ENVIRONMENTAL PROGRAM SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - INDUSTRIAL UNIT
(573) 526-3386
pam.hackler@dnr.mo.gov
MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FACT SHEET  
FOR THE PURPOSE OF RENEWAL  
OF  
MO-0121827  
ST. FRANCIS POWER PLANT

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollutant 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 stormwater 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 for less.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)(A)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 (MSOP or operating permit) listed below. A factsheet is not an enforceable part of an operating permit.

PART I. FACILITY INFORMATION

| Facility Type: | Industrial – Major |
| Facility SIC Code(s): | 4911 |
| Facility NAICS Code(s): | 221112 |
| Application Date: | 07/09/2018 |
| Modification Date: | 05/01/2017 |
| Expiration Date: | 12/31/2018 |
| Last Inspection: | 04/30/2009 |

FACILITY DESCRIPTION:

St. Francis Power Plant is a two unit, 501 MW combined cycle natural gas fired generating station, located on approximately 45 acres, nine miles northwest of Campbell, MO on Highway 53. Unit 1 is a 245 MW unit that came online in 1999, while Unit 2 is a 256 MW unit that came online in 2001. St. Francis Power Plant’s intake water is from wells located at the facility. St. Francis uses best technology available (BTA) cooling water towers. All outfalls combine and discharge into an oxbow, which flows via surface and subsurface routes to an open oxbow of the St. Francis River. Outfall 004 was removed from monitoring requirements in the 2006 renewal, as there is no industrial activities or storage exposed to stormwater at this site; however a Stormwater Prevention Pollution Plan (SWPPP) is required to help the facility maintain compliance with stormwater at the site. Domestic wastewater from the facility is treated by a sub-surface onsite system. Domestic flows are 0.4 gpm (576 gpd) and are regulated by the Department of Health. The facility discharges to the Ecological Drainage Unit (EDU) of Lower St. Francis and the Ecoregion is the Western Lowlands.

The facility is subject to federal effluent guidelines for Steam Electric Generating Stations, 40 CFR 423. The facility is subject to New Source Performance Standards of 40 CFR 423.15. St. Francis Power plant is a peaking plant; meaning the facility runs only when an electrical need exists.

Outfalls #001 and #005 are the cooling tower blowdown wastewater streams. Cooling Tower blowdown is subject to 40 CFR 423.15, which includes effluent limits for pH, freely available chlorine, 126 priority pollutants, total chromium, and total zinc. Oil and grease effluent limits were removed from the outfalls in this permit cycle due to no reasonable potential to exceed water quality standards. The permittee has stated in the permit application that chemicals using the 126 priority pollutants, total chromium, and total zinc are not used in association with the cooling tower blowdown.

Outfalls #002 and #006 have continuous pH monitoring, as allowed in 40 CFR 401.17, which allows for 446 minutes per calendar month of exceedance of pH values, with no individual excursion lasting more than sixty minutes. The facility has elected to install equipment necessary to adjust pH using sulfuric acid. The pH adjustment equipment includes a sump pump, pH probes, sulfuric acid pump feeder, and a secondary containment tray on a concrete pad. The acid pumps will run only when pH approaches 9.0 SU. Continuous pH monitors are used and acid is only used when necessary to adjust pH to acceptable range. Flows from the oil/water
separator are covered under the low volume waste sources, as defined in 40 CFR 423.15. 40 CFR 423.15 requires the monitoring of total suspended solids, and oil and grease.

Outfalls #003 and #007 are lined cooling water basins. The basins receive the combined flows of the cooling tower blowdown and the oil/water separator. Outfall #003 is designed to take the flows from Unit #1 cooling tower blowdown (Outfall #001) and the oil/water separator (outfall #002). Outfall #007 is designed to take the flows from Unit #2 cooling tower blowdown (Outfall #005) and the oil/water separator (outfall #006).

Outfall #004 was eliminated by a no exposure certification in the 2006 permit renewal. This permit authorizes the continued use of existing or new storm sewers where there is no exposure of industrial materials and activities to rain, snow, snowmelt and/or runoff to convey uncontaminated storm runoff. Such outfalls do not require monitoring or limitations when appropriate best management practices are implemented. Special conditions have been added to the permit to develop a stormwater pollution prevention plan and appropriate best management practices to maintain the no exposure certification during the permit cycle.

Other environmental permits and identification numbers associated to AECI St. Francis Power Plant, include: DNR Air Major Facility: 2906900066; EPA Registry ID#: 110017976403

<table>
<thead>
<tr>
<th>PERMITTED FEATURES TABLE:</th>
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<tbody>
<tr>
<td><strong>OUTFALL</strong></td>
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<tr>
<td>#001</td>
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<td>#002</td>
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<td>#003</td>
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<td>#004</td>
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<td>#005</td>
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<td>#006</td>
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<tr>
<td>#007</td>
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</tbody>
</table>

**FACILITY PERFORMANCE HISTORY & COMMENTS:**
The electronic discharge monitoring reports were reviewed for the last five years. Two exceedances were noted, one for TSS at outfall #005 for monthly average, and another for pH at outfall #001; reported 6.4 when the minimum is 6.5 SU. The permit writer observed no other concerns in the DMRs.

Free Available Chlorine monitoring and limits in the 40 CFR 423.15 are 0.5 mg/L as a daily maximum and 0.2 mg/L monthly average. Outfalls #001 and #005 discharge to a settling pond for further treatment and discharge through Outfalls #003 and #007. As total residual chlorine includes free chlorine, this is a more protective effluent limit. The appropriate water quality based total residual chlorine effluent limits will be applied to the final discharge outfalls since water quality based standards for total residual chlorine would be more protective than the federal categorical effluent limits.

In the antidegradation applicability review in 2011, AECI proposed adding continuous pH monitoring and automatic pH adjustment by addition of sulfuric acid to outfalls #002 and #006 as the untreated alkaline boiler blowdown water is alkaline with pH ranging from 9.2 to 9.8. Control of pH is necessary as the primary water entering the oil/water separator is alkaline boiler blowdown. Sulfuric acid is the most effective and convenient agent for control of pH as sulfuric acid is used elsewhere in the plant with an approximate usage of 96 gallons per day. Each proposed pH adjustment unit will only use approximately 0.5 gallons per day with nearly negligible impact on the sulfate discharge concentrations. Facility is not subject to an Antidegradation Review as this proposed project resulted in insignificant degradation. It only proposed to potentially increase the concentration of sulfate in the discharge by one milligram per liter while controlling the pH of the discharge. Monitoring requirements were recommended for sulfate, chloride, and hardness at outfalls #003 and #007.

In 2018, the facility requested another antidegradation applicability review. St. Francis Power Plant needed to expand the water treatment plant to handle the demand for increased cycling during peak use periods. Currently, if the system is started-up more than 3 times in a week, the water treatment system cannot handle the demand. The facility plans to install a larger reverse osmosis unit to handle the increased need for water treatment. The discharge will still be through outfalls #003 and #007. The proposed increase of water through the water treatment plant will discharge through existing outfalls #003 and #007, which are lined storage basins. While there will be an increase in flows during cycling, the overall flow rates will not change. Outfalls #003 and #007 have a design average flow of 1.4 MGD and 1.27 MGD, which will not increase as a result of the changes at the water treatment plant. The facility’s permit does not limit discharges from outfalls #003 or #007, or have requirements that may be impacted by the larger reverse osmosis system.
The northernmost triangle identifies outfalls #001, #002, and #004; the easternmost triangle identifies outfalls #005, #006, and #007; westernmost triangle is outfall #003.
WATER BALANCE DIAGRAM:
**PART II. RECEIVING WATERBODY INFORMATION**

**RECEIVING WATERBODY’S WATER QUALITY:**
The receiving waterbody has no concurrent water quality data available.

**303(D) LIST:**
Section 303(d) of the federal Clean Water Act requires each state identify waters 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 impaired waters not addressed by normal water pollution control programs. [http://dnr.mo.gov/env/wpp/waterquality/303d/303d.htm](http://dnr.mo.gov/env/wpp/waterquality/303d/303d.htm)

- Not applicable; this facility does not discharge to an impaired segment of a 303(d) listed stream.

**TOTAL MAXIMUM DAILY LOAD (TMDL):**
A TMDL is a calculation of the maximum amount of a given pollutant that a water body can absorb before its water quality is affected; hence, the purpose of a TMDL is to determine the pollutant loading a specific waterbody can assimilate without exceeding water quality standards. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan or TMDL may be developed. The TMDL shall include the WLA calculation. [http://dnr.mo.gov/env/wpp/tmdl/](http://dnr.mo.gov/env/wpp/tmdl/)

- Not applicable; this facility does not discharge to a waterbody/watershed with a TMDL.

**APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:**
Per Missouri’s Effluent Regulations [10 CSR 20-7.015(1)(B)], waters of the state are divided into seven categories. Each category lists effluent limitations for specific parameters, which are presented in each outfall’s effluent limitation table and further discussed in Part IV: Effluents Limits Determinations

- Missouri or Mississippi River
- Lake or Reservoir
- Losing
- Metropolitan No-Discharge
- Special Stream
- Subsurface Water
- All Other Waters; the previous permit issued 8/1/2014 stated that water flows by subsurface and surface flows to the St. Francis River, which appears to meet the requirements of 10 CSR 20-7.031(1)(F) Classified waters: All waters listed as L1, L2, and L3 in Table G: Lake Classifications and Use Designations and P, P1, and C in Table H: Stream Classifications and Use Designations. During normal flow periods, some rivers back water into tributaries which are not otherwise classified. These permanent backwater areas are considered to have the same classification as the water body into which the tributary flows. Even without this regulation, due to the distance to the St. Francis River, St. Francis River classifications are applicable.

**RECEIVING WATERBODY TABLE:**

<table>
<thead>
<tr>
<th>OUTFALL</th>
<th>WATERBODY NAME</th>
<th>CLASS</th>
<th>WBID</th>
<th>DESIGNATED USES</th>
<th>DISTANCE TO SEGMENT</th>
<th>12-DIGIT HUC</th>
</tr>
</thead>
<tbody>
<tr>
<td>#003 &amp; #007</td>
<td>St. Francis River</td>
<td>P</td>
<td>2968</td>
<td>GEN, HHP, IRR, LWW, SCR, WBC-B, WWH (ALP)</td>
<td>0.2 mi</td>
<td>Community of Powe – St. Francis River 08020203-0502</td>
</tr>
</tbody>
</table>

n/a not applicable

Classes are hydrologic classes as defined in 10 CSR 20-7.031(1)(F). L1: Lakes with drinking water supply - wastewater discharges are not permitted to occur to L1 watersheds per 10 CSR 20-7.015(3)(C); L2: major reservoirs; L3: all other public and private lakes; P: permanent streams; C: streams which may cease flow in dry periods but maintain pools supporting aquatic life; E: streams which do not maintain surface flow; and W: wetland. Losing streams are defined in 10 CSR 20-7.031(1)(O) and are designated on the Losing Stream dataset or determined by the Department to lose 30% or more of flow to the subsurface.

WBID = Waterbody Identification: Missouri Use Designation Dataset per 10 CSR 20-7.031(1)(Q) and (S) as 8-20-13 MUDD V1.0 or newer; data can be found as an ArcGIS shapefile on MSDIS at [ftp://msdis.missouri.edu/pub/Inland_Water_Resources/MO_2014_WQS_Stream_Classifications_and_Use_dhp.zip](ftp://msdis.missouri.edu/pub/Inland_Water_Resources/MO_2014_WQS_Stream_Classifications_and_Use_dhp.zip); New C streams described on the dataset per 10 CSR 20-7.031(2)(A)3: as 100K Extent Remaining Streams.

Per 10 CSR 20-7.031, the Department defines the Clean Water Commission’s water quality objectives in terms of “water uses to be maintained and the criteria to protect those uses.” The receiving stream and 1st classified receiving stream’s beneficial water uses are to be maintained in the receiving streams in accordance with [10 CSR 20-7.031(1)(C)]. Uses which may be found in the receiving streams table, above:

10 CSR 20-7.031(1)(C): - ALP = Aquatic Life Protection (formerly AQL; current uses are defined to ensure the protection and propagation of fish shellfish and wildlife, further subcategorized as: WWH = Warm Water Habitat; CLH = Cool Water Habitat; CDH = Cold Water Habitat; EAH = Ephemeral Aquatic Habitat; MAH = Modified Aquatic Habitat; LAH = Limited Aquatic Habitat. This permit uses ALP effluent limitations in 10 CSR 20-7.031 Table A1-A2 for all habitat designations unless otherwise specified.
10 CSR 20-7.031(1)(C)2.: Recreation in and on the water

WBC = Whole Body Contact recreation where the entire body is capable of being submerged;
WBC-A = whole body contact recreation supporting swimming uses and has public access;
WBC-B = whole body contact recreation not supported in WBC-A;
SCR = Secondary Contact Recreation (like fishing, wading, and boating)

10 CSR 20-7.031(1)(C)3. to 7.:
HHP (formerly HHF) = Human Health Protection as it relates to the consumption of fish and drinking of water;
IRR = irrigation for use on crops utilized for human or livestock consumption
LWW = Livestock and Wildlife Watering (current narrative use is defined as LWP = Livestock and Wildlife Protection);
DWS = Drinking Water Supply
IND = industrial water supply

10 CSR 20-7.031(1)(C)8-11.: Wetlands (10 CSR 20-7.031 Tables A1-B3 currently does not have corresponding habitat use criteria for these defined uses): WSA = storm- and flood-water storage and attenuation; WHP = habitat for resident and migratory wildlife species; WRC = recreational, cultural, educational, scientific, and natural aesthetic values and uses; WHC = hydrologic cycle maintenance.

10 CSR 20-7.031(6): GRW = Groundwater

MIXING CONSIDERATIONS:
For all outfalls, mixing zone and zone of initial dilution are not allowed per 10 CSR 20-7.031(5)(A)4.B.(I)(a) and (b), as the base stream flow does not provide dilution to the effluent.

RECEIVING STREAM MONITORING REQUIREMENTS:
No receiving water monitoring requirements are recommended at this time.

PART III, RATIONALE AND DERIVATION OF EFFLUENT LIMITATIONS & PERMIT CONDITIONS

126 PRIORITY POLLUTANTS:
40 CFR 423.15(a)(10) requires NSPS facilities with cooling towers to determine if any of the 126 priority pollutants are present from cooling tower cleaning chemicals in the cooling tower blowdown. The facility has certified all of these parameters are absent in the cooling tower maintenance and cleaning chemicals. If the facility determines the need for any new chemical to be used on the cooling towers, then the facility shall supply the Safety Data Sheet(s) of the chemical(s) to the Water Protection Program at least 30 days prior to use. The Program will approve, contingently approve, or deny the request. The facility may submit all requests via email to the Program contact or via mail to the Jefferson City office; responses will also be provided via email.

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.

ANTIBACKSLIDING:
Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(l)] require a reissued permit to be as stringent as the previous permit with some exceptions. Backsliding (a less stringent permit limitation) is only allowed under certain conditions.

The Department determined technical mistakes or mistaken interpretations of law were made in issuing the permit under Section 402(a)(1)(b).
- pH at outfalls #001 and #005 were based on water quality, however, these are internal outfalls therefore technology limitations may be applied.
- The previous permit special conditions contained a specific set of prohibitions related to general criteria found in 10 CSR 20-7.031(4); however, there was no determination as to whether the discharges have reasonable potential to cause or contribute to excursion of those general water quality criteria in the previous permit. Federal regulations 40 CFR 122.44(d)(1)(iii) requires instances where reasonable potential (RP) to cause or contribute to an exceedance of a water quality standard exists, a numeric limitation must be included in the permit. Rather than conducting the appropriate RP determination, the previous permit simply placed the prohibitions in the permit. These conditions were removed from the permit. Appropriate reasonable potential determinations were conducted for each general criterion listed in 10 CSR 20-7.031(4)(A) through (I) and effluent limitations were placed in the permit for those general criteria where it was determined the discharge had reasonable potential to cause or contribute to excursions of the general criteria. Specific effluent limitations were not included for those general criteria where it was determined the discharges will not cause or contribute to excursions of general criteria. Removal of the prohibitions does not reduce the protections of the permit or allow for impairment of the receiving stream. The permit maintains sufficient effluent limitations, monitoring requirements and best management practices to protect water quality. See GENERAL CRITERIA CONSIDERATIONS below.
The previous permit’s special conditions required sampling of total petroleum hydrocarbons (TPH) under the decision model to discharge stormwater having a sheen in secondary containment. The special condition has been revised in all permits beginning in 2015 to remove TPH as 40 CFR 136 does not contain any approved methods for the TPH parameter nor are there water quality standards for TPH. This permit requires oil and grease and BTEX (benzene, toluene, ethylbenzene, and xylene) sampling of the potentially contaminated stormwater in secondary containment. The facility need only sample for these constituents prior to release when a sheen or petroleum odor is present.

**Antidegradation Review:**
Process water discharges with new, altered, or expanding flows, the Department is to document, by means of antidegradation review, if the use of a water body’s available assimilative capacity is justified. In accordance with Missouri’s water quality regulations for antidegradation [10 CSR 20-7.031(3)], degradation may be justified by documenting the socio-economic importance of a discharge after determining the necessity of the discharge. Facilities must submit the antidegradation review request to the Department prior to establishing, altering, or expanding discharges. See [http://dnr.mo.gov/env/wpp/permits/antideg-implementation.htm](http://dnr.mo.gov/env/wpp/permits/antideg-implementation.htm)

- Not applicable; the facility has not submitted information proposing expanded or altered process water discharge with this renewal; no further degradation proposed therefore no further review necessary. In 2018 the facility submitted an antidegradation applicability request; the facility was not required to undergo an antideg analysis for water treatment plant discharges.

For stormwater discharges with new, altered, or expanding discharges, the stormwater BMP chosen for the facility, through the antidegradation analysis performed by the facility, must be implemented and maintained at the facility. Failure to implement and maintain the chosen BMP alternative is a permit violation; see SWPPP.

- Applicable; the facility must review and maintain stormwater BMPs as appropriate.

**Changes in Discharges of Toxic Pollutant:**
This special condition reiterates the federal rules found in 40 CFR 122.44(f) and 122.42(a)(1). In these rules, the facility is required to report changes in amounts of toxic substances discharged. Toxic substances are defined in 40 CFR 122.2 as “…any pollutant listed as toxic under section 307(a)(1) or, in the case of “sludge use or disposal practices,” any pollutant identified in regulations implementing section 405(d) of the CWA.” Section 307 of the clean water act then refers to those parameters found in 40 CFR 401.15. The permittee should also consider any other toxic pollutant in the discharge as reportable under this condition.

**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.

**Discharge of Chlorine:**
This permit includes directives from the ELG at 40 CFR 423 for the Steam Electric category to include a statement regarding chlorine discharge from units at the facility in accordance with 40 CFR 423.15(a)(10)(ii). This facility cycles chlorine through the system prior to discharge and tests the wastewater prior to discharge to assure the discharge will be in compliance with the technology and water quality limitations for chlorine. The permit writer has noted the permittee has demonstrated sufficiently the requirement cannot be met. This facility is still subject to technology and water quality limitations for the discharge of chlorine.

**Effluent Limitation Guideline:**
Effluent Limitation Guidelines, or ELGs, are found at 40 CFR 400-499. These are limitations established by the EPA based on the SIC code and the type of work a facility is conducting. Most ELGs are for process wastewater and some address stormwater. All are technology based limitations which must be met by the applicable facility at all times.

- The facility has an associated Effluent Limit Guideline (ELG) which is applicable to the wastewater and certain stormwater discharge at this site and is applied under 40 CFR 125.3(a). The following table shows the limits in the ELG at 40 CFR 423. Should Reasonable Potential be established for any particular parameter and water-quality derived effluent limits are more protective of the receiving water’s quality, the WQS will be used as the limiting factor in accordance with 40 CFR 122.44(d) and 10 CSR 20-7.015(9)(A). See Part IV: EFFLUENT LIMITS DETERMINATION.

**General Criteria Considerations:**
In accordance with 40 CFR 122.44(d)(1), effluent limitations shall be placed into permits for pollutants which have been determined to cause, have the reasonable potential to cause, or to contribute to an excursion above any State water quality standard, including State narrative criteria for water quality. The rule further states pollutants which have been determined to cause, have the reasonable potential to cause, or contribute to an excursion above a narrative criterion within an applicable State water quality standard, the permit shall contain a numeric effluent limitation to protect that narrative criterion. The previous permit included the narrative criteria as specific prohibitions placed upon the discharge. These prohibitions were included in the permit absent any discussion of the discharge’s reasonable potential to cause or contribute to an excursion of the criterion. In order to comply with this regulation, the permit writer has completed a reasonable potential determination on whether the discharge has reasonable potential to cause, or
Groundwater is a water of the state according to 10 CSR 20-2.010(82), and is subject to regulations at 10 CSR 20-7.015(7) and 10 CSR 20-7.031(6) and must be protected accordingly.

- This facility is not required to monitor groundwater for the water protection program.
MAJOR WATER USER:
Any surface or groundwater user with a water source and the equipment necessary to withdraw or divert 100,000 gallons (or 70 gallons per minute) or more per day combined from all sources from any stream, river, lake, well, spring, or other water source is considered a major water user in Missouri. All major water users are required by law to register water use annually (Missouri Revised Statutes Chapter 256.400 Geology, Water Resources and Geodetic Survey Section). https://dnr.mo.gov/pubs/pub2337.htm
✓ Applicable; this facility is a major water user and is registered with the state.

NO-DISCHARGE LAND APPLICATION:
Land application of wastewater or sludge shall comply with the all applicable no-discharge requirements listed in 10 CSR 20-6.015 and all facility operations and maintenance requirements listed in 10 CSR 20-8.020(15). These requirements ensure appropriate operation of the no-discharge land application systems and prevent unauthorized and illicit discharges to waters of the state. Land applications by a contract hauler on fields that the permittee has a spreading agreement on are not required to be in this permit. A spreading agreement does not constitute the field being rented or leased by the permittee as they do not have any control over management of the field.
✓ Not applicable; this permit does not authorize operation of a no-discharge land application system to treat wastewater or sludge.

REASONABLE POTENTIAL (RP):
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 causing or have the reasonable potential to cause (or contribute to) an in-stream excursion above narrative or numeric water quality standards. Per 10 CSR 20-7.031(4), general criteria shall be applicable to all waters of the state at all times; however, acute toxicity criteria may be exceeded by permit in zones of initial dilution, and chronic toxicity criteria may be exceeded by permit in mixing zones. If the permit writer determines any given 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 per 40 CFR Part 122.44(d)(1)(iii) and the most stringent limits per 10 CSR 20-7.031(9)(A).
✓ Not applicable; a mathematical RPA was not conducted for this facility. This permit establishes new permit limits where limited data exist. However, the permit writer completed an RPD, a reasonable potential determination, using best professional judgment for all of the appropriate parameters in this permit. An RPD consists of reviewing application data and comparing those data to narrative or numeric water quality criteria.
✓ Permit writers use the Department’s permit writer’s manual (http://dnr.mo.gov/env/wpp/permits/manual/permit-manual.htm), the EPA’s permit writer’s manual (https://www.epa.gov/npdes/npdes-permit-writers-manual), program policies, and best professional judgment. For each parameter in each permit, the permit writer carefully considers all applicable information regarding: technology based effluent limitations, effluent limitation guidelines, water quality standards, stream flows and uses, and all applicable site specific information and data gathered by the permittee through discharge monitoring reports and renewal (or new) application sampling. Best professional judgment is based on the experience of the permit writer, cohorts in the Department and resources at the EPA, research, and maintaining continuity of permits if necessary. For stormwater permits, the permit writer is required per 10 CSR 6.200(6)(B)2 to consider: A. application and other information supplied by the permittee; B. effluent guidelines; C. best professional judgment of the permit writer; D. water quality; and E. BMPs. Part V provides specific decisions related to this permit.

SCHEDULE OF COMPLIANCE (SOC):
A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, effluent limits, 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. SOCs are allowed under 40 CFR 122.47 providing certain conditions are met. A SOC is not allowed:
• For effluent limitations based on technology-based standards established in accordance with federal requirements, if the deadline for compliance established in federal regulations has passed. 40 CFR § 125.3.
• For a newly constructed facility in most cases. Newly constructed facilities must meet applicable effluent limitations when discharge begins, because the facility has installed the appropriate control technology as specified in a permit or antidegradation review. A SOC is allowed for a new water quality based effluent limit that was not included in a previously public noticed permit or antidegradation review, which may occur if a regulation changes during construction.
• To develop a TMDL, UAA, or other study associated with development of a site specific criterion. A facility is not prohibited from conducting these activities, but a SOC may not be granted for conducting these activities.

In order to provide guidance in developing SOCs, and to attain a greater level of consistency, the department issued a policy on development of SOCs on October 25, 2012. The policy provides guidance to permit writers on standard time frames for schedules for common activities, and guidance on factors that may modify the length of the schedule.
✓ Applicable; the time given for effluent limitations of this permit listed under Interim Effluent Limitation and Final Effluent Limitations were established in accordance with [10 CSR 20-7.031(12)]. The facility has been given a schedule of compliance to meet final effluent limits as current effluent shows the facility cannot meet the proposed limits. See permit Sections A and B for compliance dates.
**SLUDGE – DOMESTIC BIOSOLIDS:**
Biosolids are solid materials resulting from domestic wastewater treatment meeting federal and state criteria for beneficial use (i.e., fertilizer). Sewage sludge is solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septic tank; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and 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: [http://extension.missouri.edu/main/DisplayCategory.aspx?C=74](http://extension.missouri.edu/main/DisplayCategory.aspx?C=74) (WQ422 through WQ449).

- Applicable, this facility has an on-site system. The facility has a contract hauler pump and haul the sludge to a permitted facility.
- Standard Conditions Part III is attached to this permit.

**SLUDGE – INDUSTRIAL:**
Industrial sludge is solid, semi-solid, or liquid residue generated during the treatment of industrial process wastewater in a treatment works; including but not limited to, scum or solids removed in primary, secondary, or advanced wastewater treatment process; scum and solids filtered from water supplies and backwashed; and a material derived from industrial sludge.

- Not applicable; industrial sludge is not generated at this facility.

**STANDARD CONDITIONS:**
The standard conditions Part I attached to this permit incorporate all sections of 40 CFR 122.41(a) through (n) by reference as required by law. These conditions, in addition to the conditions enumerated within the standard conditions should be reviewed by the permittee to ascertain compliance with this permit, state regulations, state statues, federal regulations, and the Clean Water Act.

**STORMWATER POLLUTION PREVENTION PLAN (SWPPP):**
In accordance with 40 CFR 122.44(k), Best Management Practices (BMPs) must be used 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 stormwater 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 waters of the state from a permitted facility. BMPs may take the form of a process, activity, or physical structure. Additionally in accordance with the Stormwater 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.

A SWPPP must be prepared by the permittee if the SIC code is found in 40 CFR 122.26(b)(14) and/or 10 CSR 20-6.200(2). A SWPPP may be required of other facilities where stormwater has been identified as necessitating better management. The purpose of a SWPPP is to comply with all applicable stormwater regulations by creating an adaptive management plan to control and mitigate stream pollution from stormwater runoff. Developing a SWPPP provides opportunities to employ appropriate BMPs to minimize the risk of pollutants being discharged during storm events. The following paragraph outlines the general steps the permittee should take to determine which BMPs will work to achieve the benchmark values or limits in the permit. This section is not intended to be all encompassing or restrict the use of any physical BMP or operational and maintenance procedure assisting in pollution control. Additional steps or revisions to the SWPPP may be required to meet the requirements of the permit.

Areas which should be included in the SWPPP are identified in 40 CFR 122.26(b)(14). Once the potential sources of stormwater pollution have been identified, a plan should be formulated to best control the amount of pollutant being released and discharged by each activity or source. This should include, but is not limited to, minimizing exposure to stormwater, good housekeeping measures, proper facility and equipment maintenance, spill prevention and response, vehicle traffic control, and proper materials handling. Once a plan has been developed the facility will employ the control measures determined to be adequate to achieve the benchmark values discussed above. The facility will conduct monitoring and inspections of the BMPs to ensure they are working properly and re-evaluate any BMP not achieving compliance with permitting requirements. For example, if sample results from an outfall show values of TSS above the benchmark value, the BMP being employed is deficient in controlling stormwater pollution. Corrective action should be taken to repair, improve, or replace the failing BMP. This internal evaluation is required at least once per month but should be continued more frequently if BMPs continue to fail. If failures do occur, continue this trial and error process until appropriate BMPs have been established.
For new, altered, or expanded stormwater discharges, the SWPPP shall identify reasonable and effective BMPs while accounting for environmental impacts of varying control methods. The antidegradation analysis must document why no discharge or no exposure options are not feasible. The selection and documentation of appropriate control measures shall serve as an alternative analysis of technology and fulfill the requirements of antidegradation [10 CSR 20-7.031(3)]. For further guidance, consult the antidegradation implementation procedure (http://dnr.mo.gov/env/wpp/docs/AIP050212.pdf).

Alternative Analysis (AA) evaluation of the BMPs is a structured evaluation of BMPs that are reasonable and cost effective. The AA evaluation should include practices that are designed to be: 1) non-degrading; 2) less degrading; or 3) degrading water quality. The glossary of AIP defines these three terms. The chosen BMP will be the most reasonable and effective management strategy while ensuring the highest statutory and regulatory requirements are achieved and the highest quality water attainable for the facility is discharged. The AA evaluation must demonstrate why “no discharge” or “no exposure” is not a feasible alternative at the facility. This structured analysis of BMPs serves as the antidegradation review, fulfilling the requirements of 10 CSR 20-7.031(3) Water Quality Standards and Antidegradation Implementation Procedure (AIP), Section ILB.

If parameter-specific numeric benchmark exceedances continue to occur and the permittee feels there are no practicable or cost-effective BMPs which will sufficiently reduce a pollutant concentration in the discharge to the benchmark values established in the permit, the permittee can submit a request to re-evaluate the benchmark values. This request needs to include 1) a detailed explanation of why the facility is unable to comply with the permit conditions and unable to establish BMPs to achieve the benchmark values; 2) financial data of the company and documentation of cost associated with BMPs for review and 3) the SWPPP, which should contain adequate documentation of BMPs employed, failed BMPs, corrective actions, and all other required information. This will allow the Department to conduct a cost analysis on control measures and actions taken by the facility to determine cost-effectiveness of BMPs. The request shall be submitted in the form of an operating permit modification; the application is found at: https://dnr.mo.gov/forms/#WaterPollution

- The facility has attested the site does not have industrial stormwater exposure; however, to continue to comply with the no-exposure, the facility shall maintain minimal requirements as outlined in the special conditions.

**TECHNOLOGY-BASED EFFLUENT LIMITATIONS (TBEL):**

One of the major strategies of the Clean Water Act (CWA) in making “reasonable further progress toward the national goal of eliminating the discharge of all pollutants” is to require effluent limitations based on the capabilities of the technologies available to control those discharges. Technology-based effluent limitations (TBELs) aim to prevent pollution by requiring a minimum level of effluent quality attainable using demonstrated technologies for reducing discharges of pollutants or pollution into the waters of the United States. TBELs are developed independently of the potential impact of a discharge on the receiving water, which is addressed through water quality standards and water quality-based effluent limitations (WQBELs).

- Not applicable; the permittee is subject to an ELG therefore those technology limitations will be used instead of an individual TBEL POC analysis.

**UNDERGROUND INJECTION CONTROL (UIC):**

The UIC program for all classes of wells in the State of Missouri is administered by the Missouri Department of Natural Resources and approved by EPA pursuant to section 1422 and 1425 of the Safe Drinking Water Act (SDWA) and 40 CFR 147 Subpart AA. Injection wells are classified based on the liquids which are being injected. Class I wells are hazardous waste wells which are banned by RSMo 577.155; Class II wells are established for oil and natural gas production; Class III wells are used to inject fluids to extract minerals; Class IV wells are also banned by Missouri in RSMo 577.155; Class V wells are shallow injection wells; some examples are heat pump wells and groundwater remediation wells. Domestic wastewater being disposed of sub-surface is also considered a Class V well. In accordance with 40 CFR 144.82, construction, operation, maintenance, conversion, plugging, or closure of injection wells shall not cause movement of fluids containing any contaminant into Underground Sources of Drinking Water (USDW) if the presence of any contaminant may cause a violation of drinking water standards or groundwater standards under 10 CSR 20-7.031, or other health based standards, or may otherwise adversely affect human health. If the director finds the injection activity may endanger USDWs, the Department may require closure of the injection wells, or other actions listed in 40 CFR 144.12(c), (d), or (e). In accordance with 40 CFR 144.26, the permittee shall submit a Class V Well Inventory Form for each active or new underground injection well drilled, or when the status of a wells changes, to the Missouri Department of Natural Resources, Geological Survey Program, P.O. Box 250, Rolla, Missouri 65402. The Class V Well Inventory Form can be requested from the Geological Survey Program or can be found at the following web address: http://dnr.mo.gov/forms/780-1774-f.pdf

- Not applicable; the permittee has not submitted materials indicating the facility will be performing UI at this site.

**VARIANCE:**

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 permit is not drafted under premise of a petition for variance.
WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:
As per [10 CSR 20-2.010(78)], the WLA is the amount of pollutant each discharger is allowed to discharge into the receiving stream without endangering water quality. Two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs) are reviewed. If one limit does not provide adequate protection for the receiving water, then the other must be used per 10 CSR 20-7.015(9)(A).

Applicable; wasteload allocations were calculated where relevant using water quality criteria or water quality model results and by applying the dilution equation below:

\[
C = \frac{(Cs \times Qs) + (Ce \times Qe)}{(Qe + Qs)}
\]

(EPA/505/2-90-001, Section 4.5.5)

Where
- \( C \) = downstream concentration
- \( Cs \) = upstream concentration
- \( Qs \) = upstream flow
- \( Ce \) = effluent concentration
- \( Qe \) = effluent flow

- Acute wasteload allocations designated as daily maximum limits (MDL) were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID).
- Chronic wasteload allocations designated as monthly average limits (AML) were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ).
- Water quality based MDL and AML effluent limitations were calculated using methods and procedures outlined in USEPA’s Technical Support Document For Water Quality-based Toxics Control or TSD EPA/505/2-90-001; 3/1991.
- Number of Samples “n”: In accordance with the TSD for water quality-based permitting, effluent quality is determined by the underlying distribution of daily values, which is determined by the Long Term Average (LTA) associated with a particular Wasteload Allocation (WLA) and by the Coefficient of Variation (CV) of the effluent concentrations. Increasing or decreasing the monitoring frequency does not affect this underlying distribution or treatment performance which should be, at a minimum, targeted to comply with the values dictated by the WLA. Therefore, it is recommended the actual planned frequency of monitoring normally be used to determine the value of “n” for calculating the AML. However, in situations where monitoring frequency is once per month or less, a higher value for “n” must be assumed for AML derivation purposes. Thus, the statistical procedure being employed using an assumed number of samples is “n = 4” at a minimum. For total ammonia as nitrogen, “n = 30” is used.

WLA MODELING:
Permittees may submit site specific studies to better determine the site specific wasteload allocations applied in permits.

Not applicable; a WLA study was either not submitted or determined not applicable by Department staff.
PART IV. EFFLUENT LIMITS DETERMINATIONS

Effluent limitations derived and established for this permit are based on current operations of the facility and applied per 10 CSR 20-7.015(9)(A). Any flow through the outfall is considered a discharge and must be sampled and reported as provided below. Future permit action due to facility modification may contain new operating permit terms and conditions which supersede the terms and conditions, including effluent limitations, of this operating permit. Daily maximums and monthly averages are required per 40 CFR 122.45(d)(1) for continuous discharges (not from a POTW).

INTERNAL OUTFALLS #001 & #005 – COOLING TOWER BLOWDOWN

### Effluent Limitations Table:

<table>
<thead>
<tr>
<th>PARAMETERS</th>
<th>UNIT</th>
<th>DAILY MAX</th>
<th>MONTHLY AVG</th>
<th>PREVIOUS PERMIT LIMITS</th>
<th>MINIMUM SAMPLING FREQUENCY</th>
<th>MINIMUM REPORTING FREQUENCY</th>
<th>SAMPLE TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PHYSICAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flow</td>
<td>MGD</td>
<td>*</td>
<td>*</td>
<td>SAME</td>
<td>DAILY</td>
<td>ONCE/MONTH</td>
<td>24 HR. TOT</td>
</tr>
<tr>
<td>Chlorine, Free Available</td>
<td>μg/L</td>
<td>500</td>
<td>200</td>
<td>SAME</td>
<td>ONCE/MONTH</td>
<td>ONCE/MONTH</td>
<td>GRAB</td>
</tr>
<tr>
<td>pH</td>
<td>SU</td>
<td>6.0 TO 9.0</td>
<td>6.0 TO 9.0</td>
<td>SAME</td>
<td>ONCE/MONTH</td>
<td>ONCE/MONTH</td>
<td>GRAB</td>
</tr>
<tr>
<td>Total Suspended Solids (TSS)</td>
<td>mg/L</td>
<td>100</td>
<td>30</td>
<td>SAME</td>
<td>ONCE/MONTH</td>
<td>ONCE/MONTH</td>
<td>GRAB</td>
</tr>
<tr>
<td>126 Priority Pollutants</td>
<td>μg/L</td>
<td>0</td>
<td>-</td>
<td>SAME</td>
<td>ONCE/YEAR</td>
<td>ONCE/YEAR</td>
<td>GRAB</td>
</tr>
</tbody>
</table>

* Monitoring and reporting requirement only

Ω Report the minimum and maximum pH values; pH is not to be averaged

NEW Parameter not established in previous state operating permit

### DERIVATION AND DISCUSSION OF LIMITS:

These are internal monitoring outfalls therefore water quality limitations were not evaluated.

**PHYSICAL:**

**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. The facility will report the total flow in millions of gallons per day (MGD). Daily sampling continued from previous permit.

**ELG REQUIREMENTS:**

**Chlorine, Freely Available**

40 CFR 423.15(a)(10)(i) 500 µg/L daily maximum and 200 µg/L monthly average. Limitations and monthly sampling continued from previous permit.

**pH**

6.0 to 9.0 SU per 40 CFR 423.15(a)(1). Revised from previous permit. See Part III: ANTIBACKSLIDING section. Monthly sampling continued from previous permit.

**Total Suspended Solids (TSS)**

100 mg/L daily maximum and 50 mg/L monthly average per 40 CFR 423.15(a)(3). Limitations and monthly sampling continued from previous permit.

**126 Priority Pollutants**

This permit implements the requirement for the facility to certify absent, the 126 priority pollutants listed in Appendix A of 40 CFR 423. See special condition #2 in the permit. Per 40 CFR 423.15(a)(10)(iii) it is the permitting authority’s discretion to not require monitoring of constituents in 40 CFR 122.11(b) as the facility has presented Safety Data Sheets (SDS) which contain none of the pollutants present on the 126 priority pollutant list for cooling tower maintenance or cleaning chemicals.
INTERNAL OUTFALLS #002 & #006 – OIL/WATER SEPARATORS

EFFLUENT LIMITATIONS TABLE:

<table>
<thead>
<tr>
<th>PARAMETERS</th>
<th>Unit</th>
<th>DAILY MAX</th>
<th>MONTHLY AVG</th>
<th>PREVIOUS PERMIT LIMITS</th>
<th>MINIMUM SAMPLING FREQUENCY</th>
<th>MINIMUM REPORTING FREQUENCY</th>
<th>SAMPLE TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHYSICAL</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flow</td>
<td>MGD</td>
<td>*</td>
<td>*</td>
<td>SAME</td>
<td>ONCE/MONTH</td>
<td>ONCE/MONTH</td>
<td>24 HR. TOT</td>
</tr>
<tr>
<td>CONVENTIONAL</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oil &amp; Grease</td>
<td>mg/L</td>
<td>15</td>
<td>10</td>
<td>SAME</td>
<td>ONCE/MONTH</td>
<td>ONCE/MONTH</td>
<td>GRAB</td>
</tr>
<tr>
<td>pH Ω</td>
<td>SU</td>
<td>6.0 to 9.0</td>
<td>6.0 to 9.0</td>
<td>SAME</td>
<td>CONTINUOUS</td>
<td>ONCE/MONTH</td>
<td>GRAB</td>
</tr>
<tr>
<td>pH – TIME OF EXCEEDANCE</td>
<td>minutes</td>
<td>-</td>
<td>446</td>
<td>SAME</td>
<td>CONTINUOUS</td>
<td>ONCE/MONTH</td>
<td>GRAB</td>
</tr>
<tr>
<td>pH – INDIVIDUAL EXCURSION &gt;60</td>
<td>count</td>
<td>-</td>
<td>0</td>
<td>SAME</td>
<td>CONTINUOUS</td>
<td>ONCE/MONTH</td>
<td>GRAB</td>
</tr>
<tr>
<td>Total Suspended Solids</td>
<td>mg/L</td>
<td>100</td>
<td>30</td>
<td>SAME</td>
<td>ONCE/MONTH</td>
<td>ONCE/MONTH</td>
<td>GRAB</td>
</tr>
</tbody>
</table>

* Monitoring and reporting requirement only
Ω Report the minimum and maximum pH values; pH is not to be averaged

DERIVATION AND DISCUSSION OF LIMITS:

Limitations for these outfalls were derived using an antidegradation therefore the limits will be retained form the previous permit even though the permit applies water quality limitations at internal outfalls.

PHYSICAL:

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. The facility will report the total flow in millions of gallons per day (MGD).

CONVENTIONAL:

Oil & Grease
Daily maximum 15 mg/L; monthly average 10 mg/L; conventional pollutant [10 CSR 20-7.031 Table A1]: Criteria for Designated Uses and Health Advisory Levels; 10 mg/L monthly average (chronic standard). The daily maximum was calculated using the Technical Support Document for Water Quality-Based Toxics Control (EPA/505/2-90-001). Section 5.4.2 indicates the waste load allocation can be set to the chronic standard. When the chronic standard is multiplied by 1.5, the daily maximum can be calculated. Hence, 10 * 1.5 = 15 mg/L for the daily maximum. Continued from previous permit.

pH
6.0 to 9.0 SU. Technology based limits [10 CSR 20-7.015(9)(I)1. and 40 CFR 423.15(a)(1)] are applicable to this outfall. Continuous monitoring technology based limits 6.0 to 9.0 SU with deviations allowed [40 CFR 401.17]. The permittee uses a continuous sampling regime therefore is provided technology based allowances of excursions where the pH may deviate from the technology-based limitations. The total time of deviation allowed is 7 hours 26 minutes (7.43 hours) in any calendar month, and any single excursion is prohibited when greater than 60 minutes; continuous monitoring and limitations continued from previous permit. Limitations at these outfalls were established during the 2011 antidegradation review as the facility discharges alkaline boiler blowdown water which is 9.2 to 9.8 from these outfalls.

Total Suspended Solids (TSS)
100 mg/L daily maximum and 30 mg/L monthly average per 40 CFR 423.15(a)(3); monthly monitoring and limitations continued from previous permit.
### Effluent Limitations Table:

<table>
<thead>
<tr>
<th>PARAMETERS</th>
<th>Unit</th>
<th>DAILY MAX</th>
<th>MONTHLY AVG</th>
<th>PREVIOUS PERMIT LIMITS</th>
<th>MINIMUM SAMPLING FREQUENCY</th>
<th>MINIMUM REPORTING FREQUENCY</th>
<th>SAMPLE TYPE</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PHYSICAL</strong></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flow</td>
<td>MGD</td>
<td>*</td>
<td>*</td>
<td>SAME</td>
<td>ONCE/MONTH</td>
<td>ONCE/MONTH</td>
<td>24 HR. TOT</td>
</tr>
<tr>
<td>Temperature</td>
<td>°F</td>
<td>*</td>
<td>*</td>
<td>SAME</td>
<td>ONCE/MONTH</td>
<td>ONCE/MONTH</td>
<td>GRAB</td>
</tr>
<tr>
<td><strong>CONVENTIONAL</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chlorine, Total Residual (\Phi)</td>
<td>µg/L</td>
<td>17</td>
<td>8</td>
<td>SAME</td>
<td>ONCE/MONTH</td>
<td>ONCE/MONTH</td>
<td>GRAB</td>
</tr>
<tr>
<td>Oil &amp; Grease</td>
<td>mg/L</td>
<td>15</td>
<td>10</td>
<td>SAME</td>
<td>ONCE/MONTH</td>
<td>ONCE/MONTH</td>
<td>GRAB</td>
</tr>
<tr>
<td><strong>NUTRIENTS</strong></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nitrogen, Total N (TN)</td>
<td>mg/L</td>
<td>*</td>
<td>*</td>
<td>SAME</td>
<td>ONCE/MONTH</td>
<td>ONCE/MONTH</td>
<td>GRAB</td>
</tr>
<tr>
<td>Phosphorus, Total P (TP)</td>
<td>mg/L</td>
<td>*</td>
<td>*</td>
<td>SAME</td>
<td>ONCE/MONTH</td>
<td>ONCE/MONTH</td>
<td>GRAB</td>
</tr>
<tr>
<td><strong>OTHER</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chloride</td>
<td>mg/L</td>
<td>*</td>
<td>*</td>
<td>NEW</td>
<td>ONCE/MONTH</td>
<td>ONCE/MONTH</td>
<td>GRAB</td>
</tr>
<tr>
<td>Sulfate</td>
<td>mg/L</td>
<td>*</td>
<td>*</td>
<td>NEW</td>
<td>ONCE/MONTH</td>
<td>ONCE/MONTH</td>
<td>GRAB</td>
</tr>
<tr>
<td>Chloride plus Sulfate</td>
<td>mg/L</td>
<td>1000</td>
<td>*</td>
<td>F-NEW</td>
<td>ONCE/MONTH</td>
<td>ONCE/MONTH</td>
<td>CALC.</td>
</tr>
<tr>
<td>WET Test - Chronic</td>
<td>TUC</td>
<td>*</td>
<td>-</td>
<td>TUA</td>
<td>ONCE/YEAR</td>
<td>ONCE/YEAR</td>
<td>GRAB</td>
</tr>
</tbody>
</table>

* Monitoring and reporting requirement only
Ω Report the minimum and maximum pH values; pH is not to be averaged
NEW Parameter not established in previous state operating permit
TR Total Recoverable
I interim limits
F final limits
\(\Phi\) This permit contains a Total Residual Chlorine (TRC) limit. This effluent limit is below the minimum quantification level (ML) of the most sensitive EPA approved CLTRC methods. The Department has determined the current acceptable ML for total residual chlorine to be 130 µg/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 130 µg/L will be considered violations of the permit and values less than the minimum quantification level of 130 µg/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.

### Derivation and Discussion of Limits:

#### PHYSICAL:

**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. The facility will report the total flow in millions of gallons per day (MGD).

**Temperature**
The facility employs best available control technology with cooling towers; after the water leaves the cooling towers (outfalls #001 & #005), the water flows to the cooling water ponds (outfalls #003 & #007), where it is stored for reuse at the plant or for discharge to the Oxbow Lake to the St. Francis River. As the water has significant residence time, the permit writer has determined thermal limitations are not required. For the last permit term, the facility reported from 35.6 to 88.52 °F. Monthly monitoring continued.
CONVENTIONAL:

**Chlorine, Total Residual (TRC)**
17 µg/L daily maximum and 8 µg/L monthly average; warm-water Protection of Aquatic Life CCC = 11 µg/L, CMC = 19 µg/L [10 CSR 20-7.031, Table A1]. Background = 0 µg/L. Standard compliance language for TRC, including the minimum level (ML), is described in the permit. Limits and monthly monitoring continued from previous permit.

Acute WLA:  $C_e = 19$ µg/L

Chronic WLA: $C_e = 11$ µg/L

\[
\text{LTA}_a = 19 (0.321) = 6.1 \text{ µg/L} \quad \text{[CV = 0.6, 99th Percentile]}
\]

\[
\text{LTA}_c = 10 (0.527) = 5.3 \text{ µg/L} \quad \text{[CV = 0.6, 99th Percentile]}
\]

Use most protective number of LTA$_a$ or LTA$_c$.

\[
\text{MDL:} \quad 5.3 (3.11) = 16.5 \text{ µg/L} \quad \text{[CV = 0.6, 99th Percentile]}
\]

\[
\text{AML:} \quad 5.3 (1.55) = 8.2 \text{ µg/L} \quad \text{[CV = 0.6, 95th Percentile, n = 4]}
\]

**Oil & Grease**
Daily maximum 15 mg/L; monthly average 10 mg/L; conventional pollutant [10 CSR 20-7.031 Table A1]: *Criteria for Designated Uses and Health Advisory Levels*; 10 mg/L monthly average (chronic standard). The daily maximum was calculated using the Technical Support Document for Water Quality-Based Toxics Control (EPA/505/2-90-001). Section 5.4.2 indicates the waste load allocation can be set to the chronic standard. When the chronic standard is multiplied by 1.5, the daily maximum can be calculated. Hence, $10 \times 1.5 = 15$ mg/L for the daily maximum. Monthly monitoring and limitations continued from the previous permit.

**NUTRIENTS:**

**Nitrogen, Total N (TN)**
Per 10 CSR 20-7.015(9)(D)7, nutrient monitoring required for facilities with a design flow greater than 0.1 MGD; monthly monitoring continued.

**Phosphorous, Total P (TP)**
Per 10 CSR 20-7.015(9)(D)7, nutrient monitoring required for facilities with a design flow greater than 0.1 MGD; monthly monitoring continued.

**OTHER:**

**Chloride, Sulfate, Chloride plus Sulfate**
Monitoring results for outfall #003 were 480 mg/L for chloride and 470 mg/L for sulfate; at outfall #007 were 580 mg/L for chloride and 970 mg/L for sulfate. The permit writer has determined this parameter has reasonable potential per RPD. The facility is not able to meet new effluent limitations of 1000 mg/L per 10 CSR 20-7.031(5)(L)1. total for both outfalls immediately; a schedule of compliance is afforded for these parameters. This effluent limitation is required; see Part III; REASONABLE POTENTIAL. The permit writer has reviewed the 2003 departmental decision on the Water Quality Study. However, the permit writer believes the decision was unlawful for the following reasons. 1) The facility may not contribute to increases of in-stream water quality standards. 2) As the facility is discharging these pollutants very near the water quality standard, the permit writer must implement limitations per 40 CFR 122.44(d)(ii). 3) Simply because the stream is not attaining the in-stream standard, does not provide authorization for the facility to discharge the same pollutants. Until a variance is completed or alternative limitation is promulgated, the permit writer must apply the limitations provided in 10 CSR 20-7.031(5)(L)1.

**Whole Effluent Toxicity (WET) Test, Chronic**
Monitoring is required to determine if reasonable potential exists for the discharge to cause toxicity within the receiving stream. There was no toxicity reported in the last permit cycle using the acute test. The previous permit evaluated only acute toxicity, however, this facility has a constant discharge to a tributary therefore a chronic test is required and is more protective to the receiving stream. A WET test is a quantifiable method to determine discharges from the facility cause toxicity to aquatic life by itself, in combination with, or through synergistic responses, when mixed with receiving stream water. Annual monitoring continued from the previous permit. Annual testing is the minimum testing frequency; monitoring requirements promulgated in 40 CFR 122.44(i)(2) states “requirements to report monitoring results shall be established on a case-by-case basis with a frequency dependent on the nature and effect of the discharge, but in no case less than once per year.”
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 the provisions in 10 CSR 20-6 and the Water Quality Standards in 10 CSR 20-7 are being met. Under 10 CSR 20-6.010(b)(8)(A)4, the Department may require other terms and conditions if it deems necessary to assure compliance with the CWA and related regulations of the Missouri Clean Water Commission. The following Missouri Clean Water Laws (MCWL) apply: §644.051.3. requires the Department to set permit conditions complying 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); and §644.051.5. is the basic authority to require testing conditions. WET tests are required by all facilities meeting the following criteria:

- Facility is designated a Major Facility continuously or routinely exceeds its design flow
- Facility that exceeds its design population equivalent (PE) for BOD5 whether or not its design flow is being exceeded
- Facility (whether primarily domestic or industrial) that alters its production process throughout the year
- Facility handles large quantities of toxic substances, or substances that are toxic in large amounts
- Facility has Water Quality-Based Effluent Limitations for toxic substances
- Facility is a municipality with a Design Flow ≥ 22,500 GPD
- Other

The standard Allowable Effluent Concentration (AEC) for facilities discharging to streams without mixing considerations or lakes is 100%. The standard dilution series for facilities discharging to waterbodies without mixing considerations is 100%, 50%, 25%, 12.5%, & 6.25%.

**PART V. SAMPLING AND REPORTING REQUIREMENTS**

Refer to each outfall’s derivation and discussion of limits section to review individual sampling and reporting frequencies and sampling type. Additionally, see Standard Conditions Part I attached at the end of this permit and fully incorporated within.

**EleCTRONIC DISCHARGE MOnITORING REPORT (eDMR) SUBMISSION SYSTEM:**

The U.S. Environmental Protection Agency (EPA) promulgated a final rule on October 22, 2015, to modernize Clean Water Act reporting for municipalities, industries, and other facilities by converting to an electronic data reporting system. The final rule requires regulated entities and state and federal regulators to use information technology to electronically report data required by the National Pollutant Discharge Elimination System (NPDES) permit program instead of filing paper reports. To comply with the federal rule, the Department is requiring all permittees to begin submitting discharge monitoring data and reports online.

Per 40 CFR 127.15 and 127.24, permitted facilities may request a temporary waiver for up to 5 years or a permanent waiver from electronic reporting from the Department. To obtain an electronic reporting waiver, a permittee must first submit an eDMR Waiver Request Form: [http://dnr.mo.gov/forms/780-2692-f.pdf](http://dnr.mo.gov/forms/780-2692-f.pdf). A request must be made for each facility. If more than one facility is owned or operated by a single entity, then the entity must submit a separate request for each facility based on its specific circumstances. An approved waiver is not transferable.

The Department must review and notify the facility within 120 calendar days of receipt if the waiver request has been approved or rejected [40 CFR 124.27(a)]. During the Department review period as well as after a waiver is granted, the facility must continue submitting a hard-copy of any reports required by their permit. The Department will enter data submitted in hard-copy from those facilities allowed to do so and electronically submit the data to the EPA on behalf of the facility.

- The permittee/facility is currently using the eDMR data reporting system.

**SAMPLING FREQUENCY JUSTIFICATION:**

Sampling and reporting frequency was generally retained from previous permit. 40 CFR 122.45(d)(1) indicates all continuous discharges shall be permitted with daily maximum and monthly average limits. Minimum sampling frequency for all parameters is annually per 40 CFR 122.44(i)(2).

**SAMPLING TYPE JUSTIFICATION:**

Sampling type was continued from the previous permit. The sampling types are representative of the discharges, and are protective of water quality. Discharges with altering effluent should have composite sampling; discharges with uniform effluent can have grab samples. Grab samples are usually appropriate for stormwater. Parameters which must have grab sampling are: pH, ammonia, *E. coli*, total residual chlorine, free available chlorine, dissolved oxygen, total phosphorus, volatile organic compounds, and others.

**SUFFICIENTLY SENSITIVE ANALYTICAL METHODS:**

Please review Standard Conditions Part 1, section A, number 4. The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 and/or 40 CFR 136 unless alternates are approved by the Department. The facility shall
use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is "sufficiently sensitive" when; 1) the method quantifies the pollutant below the level of the applicable water quality criterion or; 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility’s discharge is high enough that the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015 and or 40 CFR 136. These methods are also required for parameters listed as monitoring only, as the data collected may be used to determine if numeric limitations need to be established. A permittee is responsible for working with their contractors to ensure the analysis performed is sufficiently sensitive. 40 CFR 136 lists the approved methods accepted by the Department. Tables A1-B3 at 10 CSR 20-7.031 shows water quality standards.

**PART VI. ADMINISTRATIVE REQUIREMENTS**

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

**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. [http://dnr.mo.gov/env/wpp/cpp/docs/watershed-based-management.pdf](http://dnr.mo.gov/env/wpp/cpp/docs/watershed-based-management.pdf) 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. Renewal applications must continue to be submitted within 180 days of expiration, however, in instances where effluent data from the previous renewal is less than three years old, that data may be re-submitted to meet the requirements of the renewal application. If the permit provides a schedule of compliance for meeting new water quality based effluent limits beyond the expiration date of the permit, the time remaining in the schedule of compliance will be allotted in the renewed permit.

✔ This permit will maintain synchronization by expiring the end of the 4th quarter, 2023.

**PUBLIC NOTICE:**
The Department shall give public notice a draft permit has been prepared and its issuance is pending. [http://dnr.mo.gov/env/wpp/permits/pn/index.html](http://dnr.mo.gov/env/wpp/permits/pn/index.html) Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in or with 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 12/14/2018-1/14/2019. No comments were received.

**DATE OF FACT SHEET: JANUARY 16, 2019**

**COMPLETED BY:**

PAM HACKLER, ENVIRONMENTAL SCIENTIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - INDUSTRIAL UNIT
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These Standard Conditions incorporate permit conditions as required by 40 CFR 122.41 or other applicable state statutes or regulations. These minimum conditions apply unless superseded by requirements specified in the permit.

Part I – General Conditions

Section A – Sampling, Monitoring, and Recording

1. Sampling Requirements.
   a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
   b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.

2. Monitoring Requirements.
   a. Records of monitoring information shall include:
      i. The date, exact place, and time of sampling or measurements;
      ii. The individual(s) who performed the sampling or measurements;
      iii. The date(s) analyses were performed;
      iv. The individual(s) who performed the analyses;
      v. The analytical techniques or methods used; and
      vi. The results of such analyses.
   b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.

3. Sample and Monitoring Calculations. Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.

4. Test Procedures. The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is “sufficiently sensitive” when:
   1) the method minimum level is at or below the level of the applicable water quality criterion for the pollutant and;
   2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility’s discharge is high enough that the method detects and quantifies the level of pollutant in the discharge, or
   3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.

5. Record Retention. Except for records of monitoring information required by the permit related to the permittee’s sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

6. Illegal Activities.
   a. The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under the permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than two (2) years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than four (4) years, or both.
   b. The Missouri Clean Water Law provides that any person or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than six (6) months, or by both. Second and successive convictions for violation under this paragraph by any person shall be punished by a fine of not more than $50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

Section B – Reporting Requirements

1. Planned Changes.
   a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
      i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
      ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42; and
      iii. The alteration or addition results in a significant change in the permittee’s sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
   iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/ or permit modification as a result of the proposed changes at the facility.

   a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.
b. Notice. i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass. 
   ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in section B – Reporting Requirements, paragraph 5 (24-hour notice). 

3. Prohibition of bypass. 
   i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless: 
      1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage; 
      2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and 
   3. The permittee submitted notices as required under paragraph 2. b. of this section. 
   ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section. 

3. Upset Requirements. 
   a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review. 
   b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that: 
      i. An upset occurred and that the permittee can identify the cause(s) of the upset; 
      ii. The permitted facility was at the time being properly operated; and 
      iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice). 
   c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof. 

Section D – Administrative Requirements 

1. Duty to Comply. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application. 
   a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement. 
   b. The Federal Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation. The Federal Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement
imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(ii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000.

d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Act or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed $10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than $50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

2. Duty to Reapply.
   a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
   b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
   c. A permittees with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

3. Need to Halt or Reduce Activity Not a Defense. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. Proper Operation and Maintenance. The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

6. Permit Actions.
   a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
      i. Violations of any terms or conditions of this permit or the law;
      ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
      iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
      iv. Any reason set forth in the Law or Regulations.
   b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

7. Permit Transfer.
   a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
   b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
   c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.

8. Toxic Pollutants. The permittee shall comply with efficient standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

9. Property Rights. This permit does not convey any property rights of any sort, or any exclusive privilege.
10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
   a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
   c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
   d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.

12. **Closure of Treatment Facilities.**
   a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
   b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.

13. **Signatory Requirement.**
   a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
   b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
   c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.

14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.
PART III – SLUDGE AND BIOSOLIDS FROM DOMESTIC AND INDUSTRIAL WASTEWATER TREATMENT FACILITIES

SECTION A – GENERAL REQUIREMENTS

1. This permit pertains to sludge requirements under the Missouri Clean Water Law and regulation for domestic wastewater and industrial process wastewater. This permit also incorporates applicable federal sludge disposal requirements under 40 CFR 503 for domestic wastewater. The Environmental Protection Agency (EPA) has principal authority for permitting and enforcement of the federal sludge regulations under 40 CFR 503 for domestic wastewater. EPA has reviewed and accepted these standard sludge conditions. EPA may choose to issue a separate sludge addendum to this permit or a separate federal sludge permit at their discretion to further address the federal requirements.

2. These PART III Standard Conditions apply only to sludge and biosolids generated at domestic wastewater treatment facilities, including public owned treatment works (POTW), privately owned facilities and sludge or biosolids generated at industrial facilities.

3. Sludge and Biosolids Use and Disposal Practices:
   a. The permittee is authorized to operate the sludge and biosolids treatment, storage, use, and disposal facilities listed in the facility description of this permit.
   b. The permittee shall not exceed the design sludge volume listed in the facility description and shall not use sludge disposal methods that are not listed in the facility description, without prior approval of the permitting authority.
   c. The permittee is authorized to operate the storage, treatment or generating sites listed in the Facility Description section of this permit.

4. Sludge Received from other Facilities:
   a. Permittees may accept domestic wastewater sludge from other facilities including septic tank pumpings from residential sources as long as the design sludge volume is not exceeded and the treatment facility performance is not impaired.
   b. The permittee shall obtain a signed statement from the sludge generator or hauler that certifies the type and source of the sludge.

5. These permit requirements do not supersede nor remove liability for compliance with county and other local ordinances.

6. These permit requirements do not supersede nor remove liability for compliance with other environmental regulations such as odor emissions under the Missouri Air Pollution Control Law and regulations.

7. This permit may (after due process) be modified, or alternatively revoked and reissued, to comply with any applicable sludge disposal standard or limitation issued or approved under Section 405(d) of the Clean Water Act or under Chapter 644 RSMo.

8. In addition to STANDARD CONDITIONS, the Department may include sludge limitations in the special conditions portion or other sections of a site specific permit.

9. Alternate Limits in the Site Specific Permit.
   Where deemed appropriate, the Department may require an individual site specific permit in order to authorize alternate limitations:
   a. A site specific permit must be obtained for each operating location, including application sites.
   b. To request a site specific permit, an individual permit application, permit fee, and supporting documents shall be submitted for each operating location. This shall include a detailed sludge/biosolids management plan or engineering report.

10. Exceptions to these Standard Conditions may be authorized on a case-by-case basis by the Department, as follows:
    a. The Department will prepare a permit modification and follow permit notice provisions as applicable under 10 CSR 20-6.020, 40 CFR 124.10, and 40 CFR 501.15(a)(2)(ix)(E). This includes notification of the owner of the property located adjacent to each land application site, where appropriate.
    b. Exceptions cannot be granted where prohibited by the federal sludge regulations under 40 CFR 503.
SECTION B – DEFINITIONS

1. Best Management Practices include agronomic loading rates, soil conservation practices and other site restrictions.
2. Biosolids means organic fertilizer or soil amendment produced by the treatment of domestic wastewater sludge.
3. Biosolids land application facility is a facility where biosolids are spread onto the land at agronomic rates for production of food or fiber. The facility includes any structures necessary to store the biosolids until soil, weather, and crop conditions are favorable for land application.
4. Class A biosolids means a material that has met the Class A pathogen reduction requirements or equivalent treatment by a Process to Further Reduce Pathogens (PFRP) in accordance with 40 CFR 503.
5. Class B biosolids means a material that has met the Class B pathogen reduction requirements or equivalent treatment by a Process to Significantly Reduce Pathogens (PFRP) in accordance with 40 CFR 503.
6. Domestic wastewater means wastewater originating from the sanitary conveniences of residences, commercial buildings, factories and institutions; or co-mingled sanitary and industrial wastewater processed by a (POTW) or a privately owned facility.
7. Industrial wastewater means any wastewater, also known as process water, not defined as domestic wastewater. Per 40 CFR Part 122, process water means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.
8. Mechanical treatment plants are wastewater treatment facilities that use mechanical devices to treat wastewater, including septic tanks, sand filters, extended aeration, activated sludge, contact stabilization, trickling filters, rotating biological discs, and other similar facilities. It does not include wastewater treatment lagoons and constructed wetlands for wastewater treatment.
9. Operating location as defined in 10 CSR 20-2.010 is all contiguous lands owned, operated or controlled by one (1) person or by two (2) or more persons jointly or as tenants in common.
10. Plant Available Nitrogen (PAN) is the nitrogen that will be available to plants during the growing seasons after biosolids application.
11. Public contact site is land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.
12. Sludge is the solid, semisolid, or liquid residue removed during the treatment of wastewater. Sludge includes septage removed from septic tanks or equivalent facilities. Sludge does not include carbon coal byproducts (CCBs)
13. Sludge lagoon is part of a mechanical wastewater treatment facility. A sludge lagoon is an earthen basin that receives sludge that has been removed from a wastewater treatment facility. It does not include a wastewater treatment lagoon or sludge treatment units that are not a part of a mechanical wastewater treatment facility.
14. Septage is the material pumped from residential septic tanks and similar treatment works (with a design population of less than 150 people). The standard for biosolids from septage is different from other sludges.

SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES

1. Sludge shall be routinely removed from wastewater treatment facilities and handled according to the permit facility description and sludge conditions of this permit.
2. The permittee shall operate the facility so that there is no sludge discharged to waters of the state.
3. Mechanical treatment plants shall have separate sludge storage compartments in accordance with 10 CSR 20, Chapter 8. Failure to remove sludge from these storage compartments on the required design schedule is a violation of this permit.

SECTION D – SLUDGE DISPOSED AT OTHER TREATMENT FACILITY OR CONTRACT HAULER

1. This section applies to permittees that haul sludge to another treatment facility for disposal or use contract haulers to remove and dispose of sludge.
2. Permittees that use contract haulers are responsible for compliance with all the terms of this permit including final disposal, unless the hauler has a separate permit for sludge or biosolids disposal issued by the Department; or the hauler transports the sludge to another permitted treatment facility.
3. Haulers who land apply septage must obtain a state permit.
4. Testing of sludge, other than total solids content, is not required if sludge is hauled to a municipal wastewater treatment facility or other permitted wastewater treatment facility, unless it is required by the accepting facility.
SECTION E – INCINERATION OF SLUDGE

1. Sludge incineration facilities shall comply with the requirements of 40 CFR 503 Subpart E; air pollution control regulations under 10 CSR 10; and solid waste management regulations under 10 CSR 80.
2. Permittee may be authorized under the facility description of this permit to store incineration ash in lagoons or ash ponds. This permit does not authorize the disposal of incineration ash. Incineration ash shall be disposed in accordance with 10 CSR 80; or if the ash is determined to be hazardous with 10 CSR 25.
3. In addition to normal sludge monitoring, incineration facilities shall report the following as part of the annual report, quantity of sludge incinerated, quantity of ash generated, quantity of ash stored, and ash used or disposal method, quantity, and location. Permittee shall also provide the name of the disposal facility and the applicable permit number.

SECTION F – SURFACE DISPOSAL SITES AND SLUDGE LAGOONS

1. Surface disposal sites of domestic facilities shall comply with the requirements in 40 CFR 503 Subpart C; air pollution control regulations under 10 CSR 10; and solid waste management regulations under 10 CSR 80.
2. Sludge storage lagoons are temporary facilities and are not required to obtain a permit as a solid waste management facility under 10 CSR 80. In order to maintain sludge storage lagoons as storage facilities, accumulated sludge must be removed routinely, but not less than once every two years unless an alternate schedule is approved in the permit. The amount of sludge removed will be dependent on sludge generation and accumulation in the facility. Enough sludge must be removed to maintain adequate storage capacity in the facility.
   a. In order to avoid damage to the lagoon seal during cleaning, the permittee may leave a layer of sludge on the bottom of the lagoon, upon prior approval of the Department; or
   b. Permittee shall close the lagoon in accordance with Section H.

SECTION G – LAND APPLICATION

1. The permittee shall not land apply sludge or biosolids unless land application is authorized in the facility description or the special conditions of the issued NPDES permit.
2. Land application sites within a 20 miles radius of the wastewater treatment facility are authorized under this permit when biosolids are applied for beneficial use in accordance with these standard conditions unless otherwise specified in a site specific permit. If the permittee’s land application site is greater than a 20 mile radius of the wastewater treatment facility, approval must be granted from the Department.
3. Land application shall not adversely affect a threatened or endangered species or its designated critical habitat.
4. Biosolids shall not be applied unless authorized in this permit or exempted under 10 CSR 20, Chapter 6.
   a. This permit does not authorize the land application of domestic sludge except for when sludge meets the definition of biosolids.
   b. This permit authorizes “Class A or B” biosolids derived from domestic wastewater and/or process water sludge to be land applied onto grass land, crop land, timber or other similar agricultural or silviculture lands at rates suitable for beneficial use as organic fertilizer and soil conditioner.
5. Public Contact Sites:
   Permittees who wish to apply Class A biosolids to public contact sites must obtain approval from the Department after two years of proper operation with acceptable testing documentation that shows the biosolids meet Class A criteria. A shorter length of testing will be allowed with prior approval from the Department. Authorization for land applications must be provided in the special conditions section of this permit or in a separate site specific permit.
   a. After Class B biosolids have been land applied, public access must be restricted for 12 months.
   b. Class B biosolids are only land applied to root crops, home gardens or vegetable crops whose edible parts will not be for human consumption.
6. Agricultural and Silvicultural Sites:
   Septage – Based on Water Quality guide 422 (WQ422) published by the University of Missouri
   a. Haulers that land apply septage must obtain a state permit
   b. Do not apply more than 30,000 gallons of septage per acre per year.
   c. Septage tanks are designed to retain sludge for one to three years which will allow for a larger reduction in pathogens and vectors, as compared to other mechanical type treatment facilities.
   d. To meet Class B sludge requirements, maintain septage at 12 pH for at least thirty (30) minutes before land application. 50 pounds of hydrated lime shall be added to each 1,000 gallons of septage in order to meet pathogen and vector stabilization for septage biosolids applied to crops, pastures or timberland.
   e. Lime is to be added to the pump truck and not directly to the septic tanks, as lime would harm the beneficial bacteria of the septic tank.
Biosolids - Based on Water Quality guide 423, 424, and 425 (WQ423, WQ424, WQ425) published by the University of Missouri;

a. Biosolids shall be monitored to determine the quality for regulated pollutants

b. The number of samples taken is directly related to the amount of sludge produced by the facility (See Section I of these Standard Conditions). Report as dry weight unless otherwise specified in the site specific permit. Samples should be taken only during land application periods. When necessary, it is permissible to mix biosolids with lower concentrations of biosolids as well as other suitable Department approved material to reach the maximum concentration of pollutants allowed.

c. Table 1 gives the maximum concentration allowable to protect water quality standards

| TABLE 1 | Biosolids ceiling concentration
<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Milligrams per kilogram dry weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>75</td>
</tr>
<tr>
<td>Cadmium</td>
<td>85</td>
</tr>
<tr>
<td>Copper</td>
<td>4,300</td>
</tr>
<tr>
<td>Lead</td>
<td>840</td>
</tr>
<tr>
<td>Mercury</td>
<td>57</td>
</tr>
<tr>
<td>Molybdenum</td>
<td>75</td>
</tr>
<tr>
<td>Nickel</td>
<td>420</td>
</tr>
<tr>
<td>Selenium</td>
<td>100</td>
</tr>
<tr>
<td>Zinc</td>
<td>7,500</td>
</tr>
</tbody>
</table>

1 Land application is not allowed if the sludge concentration exceeds the maximum limits for any of these pollutants

d. The low metal concentration biosolids has reduced requirements because of its higher quality and can safely be applied for 100 years or longer at typical agronomic loading rates. (See Table 2)

| TABLE 2 | Biosolids Low Metal Concentration
<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Milligrams per kilogram dry weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arsenic</td>
<td>41</td>
</tr>
<tr>
<td>Cadmium</td>
<td>39</td>
</tr>
<tr>
<td>Copper</td>
<td>1,500</td>
</tr>
<tr>
<td>Lead</td>
<td>300</td>
</tr>
<tr>
<td>Mercury</td>
<td>17</td>
</tr>
<tr>
<td>Nickel</td>
<td>420</td>
</tr>
<tr>
<td>Selenium</td>
<td>36</td>
</tr>
<tr>
<td>Zinc</td>
<td>2,800</td>
</tr>
</tbody>
</table>

1 You may apply low metal biosolids without tracking cumulative metal limits, provided the cumulative application of biosolids does not exceed 500 dry tons per acre.

e. Each pollutant in Table 3 has an annual and a total cumulative loading limit, based on the allowable pounds per acre for various soil categories.

<p>| TABLE 3 |  |</p>
<table>
<thead>
<tr>
<th>Pollutant</th>
<th>CEC 15+</th>
<th>CEC 5 to 15</th>
<th>CEC 0 to 5</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Annual</td>
<td>Total 1</td>
<td>Annual</td>
</tr>
<tr>
<td>Arsenic</td>
<td>1.8</td>
<td>36.0</td>
<td>1.8</td>
</tr>
<tr>
<td>Cadmium</td>
<td>1.7</td>
<td>35.0</td>
<td>0.9</td>
</tr>
<tr>
<td>Copper</td>
<td>66.0</td>
<td>1,335.0</td>
<td>25.0</td>
</tr>
<tr>
<td>Lead</td>
<td>13.0</td>
<td>267.0</td>
<td>13.0</td>
</tr>
<tr>
<td>Mercury</td>
<td>0.7</td>
<td>15.0</td>
<td>0.7</td>
</tr>
<tr>
<td>Nickel</td>
<td>19.0</td>
<td>347.0</td>
<td>19.0</td>
</tr>
<tr>
<td>Selenium</td>
<td>4.5</td>
<td>89.0</td>
<td>4.5</td>
</tr>
<tr>
<td>Zinc</td>
<td>124.0</td>
<td>2,492.0</td>
<td>50.0</td>
</tr>
</tbody>
</table>

1 Total cumulative loading limits for soils with equal or greater than 6.0 pH (salt based test) or 6.5 pH (water based test)
TABLE 4 - Guidelines for land application of other trace substances

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Cumulative Loading Pounds per acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aluminum</td>
<td>4,000(^2)</td>
</tr>
<tr>
<td>Beryllium</td>
<td>100</td>
</tr>
<tr>
<td>Cobalt</td>
<td>50</td>
</tr>
<tr>
<td>Fluoride</td>
<td>800</td>
</tr>
<tr>
<td>Manganese</td>
<td>500</td>
</tr>
<tr>
<td>Silver</td>
<td>200</td>
</tr>
<tr>
<td>Tin</td>
<td>1,000</td>
</tr>
<tr>
<td>Dioxin</td>
<td>(10 ppt in soil)(^3)</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
</tr>
</tbody>
</table>

2 This applies for a soil with a pH between 6.0 and 7.0 (salt based test) or a pH between 6.5 to 7.5 (water based test). Case-by-case review is required for higher pH soils.
4 Case by case review. Concentrations in sludge should not exceed the 95\(^{th}\) percentile of the National Sewage Sludge Survey, EPA, January 2009.

Best Management Practices – Based on Water Quality guide 426 (WQ426) published by the University of Missouri

a. Use best management practices when applying biosolids.
b. Biosolids cannot discharge from the land application site
c. Biosolid application is subject to the Missouri Department of Agriculture State Milk Board concerning grazing restrictions of lactating dairy cattle.
d. Biosolid application must be in accordance with section 4 of the Endangered Species Act.
e. Do not apply more than the agronomic rate of nitrogen needed.
f. The applicator must document the Plant Available Nitrogen (PAN) loadings, available nitrogen in the soil, and crop removal when either of the following occurs: 1) When biosolids are greater than 50,000 mg/kg TN; or 2) When biosolids are land applied at an application rate greater than two dry tons per acre per year.
   i. PAN can be determined as follows and is in accordance with WQ426
      \[(\text{Nitrate + nitrite nitrogen}) + (\text{organic nitrogen} \times 0.2) + (\text{ammonia nitrogen} \times \text{volatilization factor})\]
      1 Volatilization factor is 0.7 for surface application and 1 for subsurface application.
g. Buffer zones are as follows:
   i. 300 feet of a water supply well, sinkhole, lake, pond, water supply reservoir or water supply intake in a stream;
   ii. 300 feet of a losing stream, no discharge stream, stream stretches designated for whole body contact recreation, wild and scenic rivers, Ozark National Scenic Riverways or outstanding state resource waters as listed in the Water Quality Standards, 10 CSR 20-7.031;
   iii. 150 feet if dwellings;
   iv. 100 feet of wetlands or permanent flowing streams;
   v. 50 feet of a property line or other waters of the state, including intermittent flowing streams.
h. Slope limitation for application sites are as follows:
   i. A slope 0 to 6 percent has no rate limitation
   ii. Applied to a slope 7 to 12 percent, the applicator may apply biosolids when soil conservation practices are used to meet the minimum erosion levels
   iii. Slopes > 12 percent, apply biosolids only when grass is vegetated and maintained with at least 80 percent ground cover at a rate of two dry tons per acre per year or less.
i. No biosolids may be land applied in an area that is reasonably certain that pollutants will be transported into waters of the state.
j. Do not apply biosolids to sites with soil that is snow covered, frozen or saturated with liquid without prior approval by the Department.
k. Biosolids / sludge applicators must keep detailed records up to five years.
SECTION H – CLOSURE REQUIREMENTS

1. This section applies to all wastewater facilities (mechanical, industrial, and lagoons) and sludge or biosolids storage and treatment facilities and incineration ash ponds. It does not apply to land application sites.

2. Permittees of a domestic wastewater facility who plan to cease operation must obtain Department approval of a closure plan which addresses proper removal and disposal of all residues, including sludge, biosolids. Mechanical plants, sludge lagoons, ash ponds and other storage structures must obtain approval of a closure plan from the Department. Permittee must maintain this permit until the facility is closed in accordance with the approved closure plan per 10 CSR 20 – 6.010 and 10 CSR 20 – 6.015.

3. Residuals that are left in place during closure of a lagoon or earthen structure or ash pond shall not exceed the agricultural loading rates as follows:
   a. Residuals shall meet the monitoring and land application limits for agricultural rates as referenced in Section H of these standard conditions.
   b. If a wastewater treatment lagoon has been in operation for 15 years or more without sludge removal, the sludge in the lagoon qualifies as a Class B biosolids with respect to pathogens due to anaerobic digestion, and testing for fecal coliform is not required. For other lagoons, testing for fecal coliform is required to show compliance with Class B biosolids limitations. In order to reach Class B biosolids requirements, fecal coliform must be less than 2,000,000 colony forming units or 2,000,000 most probable number. All fecal samples must be presented as geometric mean per gram.
   c. The allowable nitrogen loading that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. For a grass cover crop, the allowable PAN is 300 pounds/acre.
      i. PAN can be determined as follows:
      \[(\text{Nitrate + nitrite nitrogen}) + (\text{organic nitrogen} \times 0.2) + (\text{ammonia nitrogen} \times \text{volatilization factor})\]
      Volatilization factor is 0.7 for surface application and 1 for subsurface application.

4. When closing a domestic wastewater treatment lagoon with a design treatment capacity equal or less than 150 persons, the residuals are considered “septage” under the similar treatment works definition. See Section B of these standard conditions. Under the septage category, residuals may be left in place as follows:
   a. Testing for metals or fecal coliform is not required
   b. If the wastewater treatment lagoon has been in use for less than 15 years, mix lime with the sludge at a rate of 50 pounds of hydrated lime per 1000 gallons (134 cubic feet) of sludge.
   c. The amount of sludge that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. 100 dry tons/acre of sludge may be left in the basin without testing for nitrogen. If 100 dry tons/acre or more will be left in the lagoon, test for nitrogen and determine the PAN using the calculation above.
      Allowable PAN loading is 300 pounds/acre.

5. Residuals left within the domestic lagoon shall be mixed with soil on at least a 1 to 1 ratio, the lagoon berm shall be demolished, and the site shall be graded and contain ≥70% vegetative density over 100% of the site so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.

6. Lagoons and/or earthen structure and/or ash pond closure activities shall obtain a storm water permit for land disturbance activities that equal or exceed one acre in accordance with 10 CSR 20-6.200

7. When closing a mechanical wastewater and/or industrial process wastewater plant; all sludge must be cleaned out and disposed of in accordance with the Department approved closure plan before the permit for the facility can be terminated.
   a. Land must be stabilized which includes any grading, alternate use or fate upon approval by the Department, remediation, or other work that exposes sediment to stormwater per 10 CSR 20-6.200. The site shall be graded and contain ≥70% vegetative density over 100% of the site, so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
   b. Per 10 CSR 20-6.015(4)(B)6, Hazardous Waste shall not be land applied or disposed during industrial and mechanical plant closures unless in accordance with Missouri Hazardous Waste Management Law and Regulations under 10 CSR 25.
   c. After demolition of the mechanical plant / industrial plant, the site must only contain clean fill defined in RSMo 260.200 (5) as uncontaminated soil, rock, sand, gravel, concrete, asphaltic concrete, cinderblocks, brick, minimal amounts of wood and metal, and inert solids as approved by rule or policy of the Department for fill or other beneficial use. Other solid wastes must be removed.

8. If sludge from the domestic lagoon or mechanical treatment plant exceeds agricultural rates under Section G and/or H, a landfill permit or solid waste disposal permit must be obtained if the permittee chooses to seek authorization for on-site sludge disposal under the Missouri Solid Waste Management Law and regulations per 10 CSR 80, and the permittee must comply with the surface disposal requirements under 40 CFR 503, Subpart C.
SECTION I – MONITORING FREQUENCY

1. At a minimum, sludge or biosolids shall be tested for volume and percent total solids on a frequency that will accurately represent sludge quantities produced and disposed. Please see the table below.

### TABLE 5

<table>
<thead>
<tr>
<th>Design Sludge Production (dry tons per year)</th>
<th>Monitoring Frequency (See Notes 1, 2, and 3)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Metals, Pathogens and Vectors</td>
</tr>
<tr>
<td>0 to 100</td>
<td>1 per year</td>
</tr>
<tr>
<td>101 to 200</td>
<td>biannual</td>
</tr>
<tr>
<td>201 to 1,000</td>
<td>quarterly</td>
</tr>
<tr>
<td>1,001 to 10,000</td>
<td>1 per month</td>
</tr>
<tr>
<td>10,001 +</td>
<td>1 per week</td>
</tr>
</tbody>
</table>

¹ Test total Kjeldahl nitrogen, if biosolids application is 2 dry tons per acre per year or less.
² Calculate plant available nitrogen (PAN) when either of the following occurs: 1) when biosolids are greater than 50,000 mg/kg TN; or 2) when biosolids are land applied at an application rate greater than two dry tons per acre per year.
³ Priority pollutants (40 CFR 122.21, Appendix D, Tables II and III) and toxicity characteristic leaching procedure (40 CFR 261.24) is required only for permit holders that must have a pre-treatment program.
⁴ One sample for each 1,000 dry tons of sludge.

Note 1: Total solids: A grab sample of sludge shall be tested one per day during land application periods for percent total solids.
This data shall be used to calculate the dry tons of sludge applied per acre.
Note 2: Total Phosphorus: Total phosphorus and total potassium shall be tested at the same monitoring frequency as metals.
Note 3: Table 5 is not applicable for incineration and permit holders that landfill their sludge.

2. If you own a wastewater treatment lagoon or sludge lagoon that is cleaned out once a year or less, you may choose to sample only when the sludge is removed or the lagoon is closed. Test one composite sample for each 100 dry tons of sludge or biosolids removed from the lagoon during the year within the lagoon at closing. Composite sample must represent various areas at one-foot depth.

3. Additional testing may be required in the special conditions or other sections of the permit. Permittees receiving industrial wastewater may be required to conduct additional testing upon request from the Department.

4. At this time, the Department recommends monitoring requirements shall be performed in accordance with, “POTW Sludge Sampling and Analysis Guidance Document,” United States Environmental Protection Agency, August 1989, and the subsequent revisions.

SECTION J – RECORD KEEPING AND REPORTING REQUIREMENTS

1. The permittee shall maintain records on file at the facility for at least five years for the items listed in these standard conditions and any additional items in the Special Conditions section of this permit. This shall include dates when the sludge facility is checked for proper operation, records of maintenance and repairs and other relevant information.

2. Reporting period
   a. By January 28th of each year, an annual report shall be submitted for the previous calendar year period for all mechanical wastewater treatment facilities, sludge lagoons, and sludge or biosolids disposal facilities.
   b. Permittees with wastewater treatment lagoons shall submit the above annual report only when sludge or biosolids are removed from the lagoon during the report period or when the lagoon is closed.

3. Report Forms. The annual report shall be submitted on report forms provided by the Department or equivalent forms approved by the Department.

4. Reports shall be submitted as follows:

   Major facilities (those serving 10,000 persons or 1 million gallons per day) shall report to both the Department and EPA. Other facilities need to report only to the Department. Reports shall be submitted to the addresses listed as follows:

   DNR regional office listed in your permit
   (see cover letter of permit)
   ATTN: Sludge Coordinator

   EPA Region VII
   Water Compliance Branch (WACM)
   Sludge Coordinator
   11201 Renner Blvd.
   Lenexa, KS 66219
5. Annual report contents. The annual report shall include the following:
   a. Sludge and biosolids testing performed. Include a copy or summary of all test results, even if not required by the permit.
   b. Sludge or biosolids quantity shall be reported as dry tons for quantity generated by the wastewater treatment facility, the quantity stored on site at the end of the year, and the quantity used or disposed.
   c. Gallons and % solids data used to calculate the dry ton amounts.
   d. Description of any unusual operating conditions.
   e. Final disposal method, dates, and location, and person responsible for hauling and disposal.
      i. This must include the name, address for the hauler and sludge facility. If hauled to a municipal wastewater treatment facility, sanitary landfill, or other approved treatment facility, give the name of that facility.
      ii. Include a description of the type of hauling equipment used and the capacity in tons, gallons, or cubic feet.
   f. Contract Hauler Activities:
      If contract hauler, provide a copy of a signed contract from the contractor. Permittee shall require the contractor to supply information required under this permit for which the contractor is responsible. The permittee shall submit a signed statement from the contractor that he has complied with the standards contained in this permit, unless the contract hauler has a separate sludge or biosolids use permit.
   g. Land Application Sites:
      i. Report the location of each application site, the annual and cumulative dry tons/acre for each site, and the landowners name and address. The location for each spreading site shall be given as a legal description for nearest ¼, ¼, Section, Township, Range, and county, or UTM coordinates. The facility shall report PAN when either of the following occurs: 1) When biosolids are greater than 50,000 mg/kg TN; or 2) when biosolids are land applied at an application rate greater than two dry tons per acre per year.
      ii. If the “Low Metals” criteria are exceeded, report the annual and cumulative pollutant loading rates in pounds per acre for each applicable pollutant, and report the percent of cumulative pollutant loading which has been reached at each site.
      iii. Report the method used for compliance with pathogen and vector attraction requirements.
      iv. Report soil test results for pH, CEC, and phosphorus. If none was tested during the year, report the last date when tested and results.
April 9, 2020

Missouri Department of Natural Resources
1101 Riverside Drive
Jefferson City, MO 65102-0176

RE: Permit No. MO-0121827 St. Francis Power Plant NPDES Permit Modification

To Whom It May Concern:

On March 1, 2019, MDNR issued Associated Electric Cooperative, Inc. (AECI) an NPDES Permit which placed a schedule of compliance to achieve final effluent limitations for chloride and sulfate at Outfalls #003 and #007, effective March 1, 2021.

AECI is currently evaluating solutions to meet our final compliance limitations. We have attempted operating at a higher pH within the cooling tower to decrease the amount of sulfuric acid addition, but this has not resulted in a significant reduction in sulfate concentrations at the outfalls. The intake water (groundwater) at the plant is chloride-rich which, when cycled up in the cooling tower, results in significant concentrations of chloride in the facility’s discharge water. The feasibility of drawing water from a new aquifer is being considered, but it is uncertain at this time if a shallower aquifer can provide adequate flow for the plant’s operations.

More complicated solutions involve significant operational changes, further vetting of potential chloride and sulfate treatment, and will require significant time and capital investment to accomplish. The adjacent St. Francis River has a low concentration of chloride + sulfate (~1mg/L), so another potential solution is to use the St. Francis River as the source water for the facility. However, this would also result in significant changes to the plant itself, requiring extensive water treatment in comparison to the groundwater being used now.

Any of these possible solutions will take a significant amount of time to properly test, design, and install. Additionally, AECI will continue to consider other solutions that might result in effective reduction in chloride and sulfate discharge concentrations. For these reasons, AECI requests an extension to the schedule of compliance, as any solutions will require significantly more time than the current deadline of March 1, 2021. We request to extend the effective date to at least the end of the Permit cycle (December 31, 2023) rather than March 1, 2021.

Form A is enclosed with this letter, please contact us at zcollette@aeci.org or 417-371-5899 if this request for an extension is incomplete in any way. Additionally, if there are any questions, or additional clarification is needed regarding this permit modification, do not hesitate to contact us.

Sincerely,

Zachary Collette,
Environmental Analyst
PLEASE READ ALL THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM.
SUBMITTAL OF AN INCOMPLETE APPLICATION MAY RESULT IN THE APPLICATION BEING RETURNED.

IF YOUR FACILITY IS ELIGIBLE FOR A NO EXPOSURE EXEMPTION:
Fill out the No Exposure Certification Form (Mo 780-2828): https://dnr.mo.gov/forms/780-2828-f.pdf

1. REASON FOR APPLICATION:
☐ a. This facility is now in operation under Missouri State Operating Permit (permit) MO – __________, is submitting an
application for renewal, and there is no proposed increase in design wastewater flow. Annual fees will be paid when
invoiced and there is no additional permit fee required for renewal.
☐ b. This facility is now in operation under permit MO – __________, is submitting an application for renewal, and there is a
proposed increase in design wastewater flow. Antidegradation Review may be required. Annual fees will be paid when
invoiced and there is no additional permit fee required for renewal.
☐ c. This is a facility submitting an application for a new permit (for a new facility). Antidegradation Review may be required. New
permit fee is required.
☑ d. This facility is now in operation under Missouri State Operating Permit (permit) MO – 0121827 and is requesting a
modification to the permit. Antidegradation Review may be required. Modification fee is required.

2. FACILITY
NAME
St. Francis Power Plant

ADDRESS (PHYSICAL)
40753 CR 101

CITY
Campbell

STATE
MO

ZIP CODE
63933

3. OWNER
NAME
Associated Electric Cooperative, Inc.

EMAIL ADDRESS
zcollette@aeci.org

ADDRESS (MAILING)
2814 S. Golden Ave.

CITY
Springfield

STATE
MO

ZIP CODE
65807

4. CONTINUING AUTHORITY
NAME
Associated Electric Cooperative, Inc.

EMAIL ADDRESS
kwilmot@aeci.org

ADDRESS (MAILING)
2814 S. Golden Ave.

CITY
Springfield

STATE
MO

ZIP CODE
65807

5. OPERATOR CERTIFICATION
NAME
Ryan Mayo

CERTIFICATE NUMBER

ADDRESS (MAILING)

CITY

STATE

ZIP CODE

6. FACILITY CONTACT
NAME
Ryan Mayo

TITLE
O&M Coordinator

EMAIL ADDRESS
rmayo@aeci.org

ADDRESS
Route 1, Box 430

CITY
Campbell

STATE
MO

ZIP CODE
63933

7. DOWNSTREAM LANDOWNER(S) Attach additional sheets as necessary.
NAME
Bader William B&G

ADDRESS
Route 1, Box 430

CITY
Campbell

STATE
MO

ZIP CODE
63933
8. ADDITIONAL FACILITY INFORMATION

8.1 Legal Description of Outfalls. (Attach additional sheets if necessary.)

For Universal Transverse Mercator (UTM), use Zone 15 North referenced to North American Datum 1983 (NAD83)

- UTM Coordinates Easting (X): 752343 Northing (Y): 4052539
- UTM Coordinates Easting (X): 752352 Northing (Y): 4052539

8.2 Primary Standard Industrial Classification (SIC) and Facility North American Industrial Classification System (NAICS) Codes.

- SIC 4911 and NAICS 221112
- SIC _______ and NAICS ________
- SIC _______ and NAICS ________
- SIC _______ and NAICS ________

9. ADDITIONAL FORMS AND MAPS NECESSARY TO COMPLETE THIS APPLICATION

A. Is this permit for a manufacturing, commercial, mining, solid/hazardous waste, or silviculture facility? YES ☐ NO ☑
 If yes, complete Form C.

B. Is the facility considered a “Primary Industry” under EPA guidelines (40 CFR Part 122, Appendix A): YES ☐ NO ☑
 If yes, complete Forms C and D.

C. Is wastewater land applied? YES ☐ NO ☑
 If yes, complete Form I.

D. Are sludge, biosolids, ash, or residuals generated, treated, stored, or land applied? YES ☐ NO ☑
 If yes, complete Form R.

E. Have you received or applied for any permit or construction approval under the CWA or any other environmental regulatory authority? YES ☐ NO ☑
 If yes, please include a list of all permits or approvals for this facility.

F. Do you use cooling water in your operations at this facility? YES ☑ NO ☐
 If yes, please indicate the source of the water: Groundwater wells

G. Attach a map showing all outfalls and the receiving stream at 1” = 2,000’ scale.

10. ELECTRONIC DISCHARGE MONITORING REPORT (eDMR) SUBMISSION SYSTEM

Per 40 CFR Part 127 National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, reporting of effluent limits and monitoring shall be submitted by the permittee via an electronic system to ensure timely, complete, accurate, and nationally consistent set of data. One of the following must be checked in order for this application to be considered complete. Please visit http://dnr.mo.gov/env/wpp/edmr.htm to access the Facility Participation Package.

☐ - You have completed and submitted with this permit application the required documentation to participate in the eDMR system.
☑ - You have previously submitted the required documentation to participate in the eDMR system and/or you are currently using the eDMR system.
☐ - You have submitted a written request for a waiver from electronic reporting. See instructions for further information regarding waivers.

11. FEES

Permit fees may be paid by attaching a check, or online by credit card or eCheck through the JetPay system. Use the URL provided to access JetPay and make an online payment: https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/

12. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

NAME AND OFFICIAL TITLE (TYPE OR PRINT) Ken Wilmot
TELEPHONE NUMBER WITH AREA CODE 417-881-1204
SIGNATURE
DATE SIGNED 4/9/2020

MO 786:1474;98:199;7
DocuSign Envelope ID: 436BDD31-30BC-4FD8-8E58-9231FCF1A227
INSTRUCTIONS FOR COMPLETING FORM A - APPLICATION FOR NONDOMESTIC PERMIT

1. Check which option is applicable. Do not check more than one item. Nondomestic permit refers to permits issued by the Department of Natural Resources’ Water Protection Program for all nondomestic wastewater treatment facilities, including all industry, stormwater, and Class IA Concentrated Animal Feeding Operations (CAFO). This includes all nondomestic wastewater treatment facilities that incorporate domestic wastewater into the operating permit.

For some new or modified permits, a construction permit is required prior to beginning construction at the facility. For other permits, an exemption is provided from construction permit requirements. Please review the requirements at http://dnr.mo.gov/env/wpp/permits/ww-construction-permitting.htm. If the facility is for wastewater treatment and is designed for greater than 22,500 gallons per day, the engineering report must be submitted and approved prior to submittal of the application, fee, plans, and specifications. A summary of design data must be submitted with the engineering plans and specifications.

For new wastewater facilities, some wastewater permit modifications, and some permit renewals with proposed increase in design wastewater flow, an antidegradation review may be required. Please visit https://dnr.mo.gov/env/wpp/permits/antideg-implementation.htm for more information.

2. Facility - Provide the name by which this facility is known locally. Example: Southwest Sewage Treatment Plant, Country Club Mobile Home Park, etc. Also include the street address or location of the facility. If the facility lacks a street name or route number, give the names of the closest intersection, highway, county road, etc.

3. Owner - Provide the legal name and address of owner or company.

4. Continuing Authority – A continuing authority is a company, business, entity, or person(s) operating the facility and/or ensuring compliance with the permit requirements. A continuing authority is not, however, an entity or individual that is contractually hired by the permittee to sample or operate and maintain the system for a defined time period, such as a certified operator or analytical laboratory. To access the regulatory requirement regarding continuing authority, 10 CSR 20-6.010(2), please visit https://s1.sos.mo.gov/cmsimages/adrules/csr/current/10csr/10c20-6.pdf. A continuing authority’s name must be listed exactly as it appears on the Missouri Secretary of State’s (SoS’s) webpage: https://bsd.sos.mo.gov/BusinessEntity/BESearch.aspx?SearchType=0, unless the continuing authority is an individual(s), government, or otherwise not required to register with the SoS.

5. Operator - Provide the name, certificate number, mailing address and telephone number of the person operating the facility, if required by regulation (10 CSR 20-9.020(2)). Most industrial facilities will not be required to have a certified wastewater operator.

6. Provide the name, title, and work telephone number of a person who is thoroughly familiar with the operation of the facility, with the facts reported in this application, and who can be contacted by the department, if necessary. This person will need to be available to respond to emails which will include pre-public notice drafts of permits.

7. Please provide the name and address of the first downstream landowner, different from that of the permitted facility, through whose property the discharge will flow. Also, please indicate the location on the map. For discharges that leave the permitted facility and flow under a road or highway, or along the right-of-way, the downstream property owner is the landowner that the discharge flows to after leaving the right-of-way. For no discharge facilities, provide this information for the location where discharge would flow if there was one. For land application sites, include the owners of the land application sites and all adjacent landowners.

8.1 An outfall is the point at which wastewater or stormwater is discharged. Outfalls should be given in terms of the legal description of the facility. Global Positioning System, or GPS, is a satellite-based navigation system. The department prefers a GPS receiver is used at the outfall pipe and the displayed coordinates submitted. If access to a GPS receiver is not available, please use a mapping system to approximate the coordinates.

8.2 List only your primary Standard Industrial Classification (SIC), and North American Industry Classification System (NAICS) code for each outfall. The SIC system was devised by the U.S. Office of Management and Budget to cover all economic activities. To find the correct SIC code, an applicant may check his or her unemployment insurance forms or contact the Missouri Division of Employment Security, 573-751-3215. The primary SIC code is that of the operation that generates the most revenue. If this information is not available, the number of employees or, secondly, production rate may be used to determine your SIC code. Additional information for Standard Industrial Codes can be found at www.osha.gov/pls/imis/sicsearch.html and for the North American Industry Classification System at www.census.gov/naics or contact the appropriate Department of Natural Resources regional office.
9. If you answer yes to A, B, C, D, or E, then you must complete and file the supplementary form(s) indicated. 40 CFR 122.21(f) and (g) requires the facility to submit the information requested herein. For 9.E., please include all permits or approvals, including construction, issued under the Hazardous Waste Management Program (RCRA), the Safe Drinking Water Act, Clean Air Act, or any other permits issued under the Clean Water Act.

A U.S. Geological Survey 1” = 2,000’ scale map must be submitted with the permit application showing all outfalls, the receiving stream and the location of the downstream property owners. This type of map can be obtained from the Missouri Department of Natural Resources’ Geological Survey in Rolla at 573-368-2100 or various online mapping applications.

10. Electronic Discharge Monitoring Report (eDMR) Submission System – Visit the eDMR site at http://dnr.mo.gov/env/wpp/edmr.htm and click on the “Facility Participation Package” link. The eDMR Permit Holder and Certifier Registration Form and information about the eDMR system can be found in the Facility Participation Package.

Waivers from electronic reporting may be granted by the Department per 40 CFR 127.15 under certain, special circumstances. A written request must be submitted to the Department for approval. Waivers may be granted to facilities owned or operated by:

A. Members of religious communities that choose not to use certain technologies or
B. Permittees located in areas with limited broadband access. The National Telecommunications and Information Administration (NTIA) in collaboration with the Federal Communications Commission (FCC) have created a broadband internet availability map: http://www.broadbandmap.gov/. Please contact the department if you need assistance.

11. Please visit https://dnr.mo.gov/pubs/pub2564.htm for permit fees. This form must be submitted with the application fee if requesting a new permit, permit modification, or permit transfer.


Incomplete permit applications and/or related engineering documents will be returned by the department if they are not completed in the time frame established in a comment letter from the department to the owner. Permit fees for returned applications shall be forfeited. Permit fees for applications being processed by the department that are withdrawn by the applicant shall be forfeited.

12. Certification/Signature - All applications must be signed as follows and the signature must be original:

A. For a corporation, by an officer having responsibility for the overall operation of the regulated facility or activity or for environmental matters.
B. For a partnership or sole proprietorship, by a general partner or the proprietor.
C. For a municipal, state, federal or other public facility, by either a principal executive officer or by an individual having overall responsibility for environmental matters at the facility.

MAIL COMPLETED FORM AND FEES TO:

Missouri Department Of Natural Resources
Water Protection Program
Water Pollution Control Branch
ATTN: Operating Permits Section
P.O. BOX 176
JEFFERSON CITY, MO 65102-0176

If there are any questions concerning this form, contact the Department of Natural Resources’ Water Protection Program, Operating Permits Section at 800-361-4827 or 573-522-4502.