

**AUTHORIZATION TO DISCHARGE UNDER  
THE OKLAHOMA POLLUTANT DISCHARGE ELIMINATION SYSTEM**

**PERMIT NUMBER: OK0000108  
ID NUMBER: I-72000020**

In compliance with the Oklahoma Pollutant Discharge Elimination System (OPDES) Act, 27A O.S. § 2-6-201 *et seq.*, Oklahoma Uniform Environmental Permitting Act, 27A O.S. § 2-14-101 *et seq.*, and the rules of the Oklahoma Department of Environmental Quality promulgated thereunder,

Public Service Company of Oklahoma  
3600 S. Elwood Ave.  
Tulsa, OK 74107

is authorized to discharge from their Tulsa Power Station facility, located at:

NW¼, Section 24, Township 19N, Range 12EIM  
Tulsa County, Oklahoma  
or at 3600 South Elwood, Tulsa, OK 74107

to receiving waters identified as:

Arkansas River (Waterbody ID OK120420010010\_10) in Segment 120420 of the Middle Arkansas River Basin, from:

**Outfall 001:**  
Latitude 36.116833° N, Longitude 95.990215° W (GPS: NAD83)  
SE¼, NW¼, NW¼, Section 24, Township 19N, Range 12EIM,  
Tulsa County, Oklahoma

in accordance with effluent limitations, monitoring requirements and other conditions set forth in Parts I, II, and III, hereof.

The above-referenced facility is authorized to retain wastewater in one total retention surface impoundment (T01) and three (3) flow-through surface impoundments (F01–F03) as described in the Appendix. Direct discharge of wastewater from impoundment T01 to waters of the State is specifically prohibited. Surface impoundments shall be maintained in accordance with Parts I, II, and IV, hereof.

Issuance of this permit in no way or in any respect affects the permittee's civil or criminal responsibility regarding disposal of wastewater, except with respect to the permittee's legal responsibility under the OPDES Act and DEQ Rules.

This permit replaces and supersedes the previous permit issued on June 8, 2021.

The issuance date of this permit is Month Date Year.

This permit shall become effective Month Date Year.

This permit and authorization to discharge shall expire at midnight Month Date Year.

For the Oklahoma Department of Environmental Quality:

---

Carol Paden, P.E., Manager  
Industrial Permits Section  
Water Quality Division

---

George Russell IV, Director  
Water Quality Division

**PART I  
 EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

**SECTION A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS**

**1. Effluent Limitations and Monitoring Requirements for Outfall 001**

During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from Outfall 001. The discharge from Outfall 001 consists of cooling tower blowdown wastewater and low volume wastewater from the internal monitoring point (IMP) 101. Such discharge shall be limited and monitored by the permittee as specified below.

**Effluent Limitations – Outfall 001**

Parameters	Mass Loading Limits (lbs/day unless otherwise specified)		Concentration Limits (mg/L unless otherwise specified)	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Flow STORET: 50050	Report (MGD)	Report (MGD)	---	---
Free Available Oxidants <sup>(1)</sup> STORET: 34045	---	---	0.2	0.5
Total Residual Oxidants <sup>(1)</sup> STORET: 34044	---	---	---	ND <sup>(2)</sup>
pH STORET: 00400	Between 6.5 s.u. – 9.0 s.u.			

- <sup>(1)</sup> Neither free available chlorine (FAC) nor total residual chlorine (TRC) may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge FAC or TRC at any one time unless the utility can demonstrate to the Regional Administrator or the Oklahoma DEQ that the units in a particular location cannot operate at or below this level of chlorination. Since the facility may use halogens other than chlorine, FAC limits are expressed in terms of free available oxidants (FAO) and TRC limits are expressed in terms of total residual oxidants (TRO).
- <sup>(2)</sup> ND is not detectable (defined as <0.1 mg/L) as measured by an approved EPA 40 C.F.R. Part 136 method for Total Residual Chlorine. The <0.1 mg/L water quality-based limit for total residual oxidants (TRO) will satisfy the intent of the technology based FAC and TRC effluent limitations in 40 C.F.R. § 423.12, 40 C.F.R. § 423.13, and 40 C.F.R. § 423.15.

**Monitoring Requirements – Outfall 001**

Parameters	Measurement Frequency <sup>(1)</sup>	Sample Type
Flow	Continuous	Record
Free Available Oxidants	1/year	Grab
Total Residual Oxidants	2/month	Grab
pH	1/week	Grab

<sup>(1)</sup> When discharging.

NOTE: See Parts II and III for Additional Requirements.

There shall be no discharge of a visible sheen of oil or globules of oil or grease on or in the water. Oil and grease shall not be present in quantities that adhere to stream banks and coat bottoms of water courses.

Surface waters of the State shall be maintained free from oil and grease and taste and odors.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

The discharge shall not contain chemical, physical, or biological substances in concentrations that are irritating to skin or sense organs or are toxic or cause illness upon ingestion by human beings.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location:

**Outfall 001:** At the flume prior to being discharged over the weir to the Arkansas River, in the SE¼, NW¼, NW¼, Section 24, Township 19N, Range 12EIM, Tulsa County, Oklahoma; or at Latitude 36.116833° N, Longitude 95.990215° W (GPS: NAD83).

During events in which the samples cannot be safely taken at the primary Outfall location, samples taken in compliance with the monitoring requirements specified above shall be taken at the following alternate location:

**Alternate:** At the manhole prior to being discharged to Outfall 001 to the Arkansas River, in the NW¼, NW¼, NW¼, Section 24, Township 19N, Range 12EIM, Tulsa County, Oklahoma; or at Latitude 36.117215° N, Longitude 95.990665° W (GPS: NAD83).

**2. Effluent Limitations and Monitoring Requirements for Internal Monitoring Point (IMP) 101**

During the period beginning on the effective date and lasting through the expiration date, the permittee is authorized to discharge from IMP 101. The discharge from IMP 101 consists of low volume wastewater. Such discharge shall be limited and monitored by the permittee as specified below.

**Final Effluent Limitations – IMP 101**

Parameters	Mass Loading Limits (lbs/day unless otherwise specified)		Concentration Limits (mg/L unless otherwise specified)	
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum
Flow STORET: 50050	Report (MGD)	Report (MGD)	---	---
Oil and Grease STORET: 00552	---	---	15	20
Total Suspended Solids STORET: 00530	---	---	30	100

**Monitoring Requirements – IMP 101**

Parameters	Measurement Frequency <sup>(1)</sup>	Sample Type
Flow	1/week	Estimate
Oil and Grease	2/month	Grab
Total Suspended Solids	2/month	Grab

<sup>(1)</sup> When discharging.

NOTE: See Parts II and III for Additional Requirements.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location:

**IMP 101:** At the southwest corner of impoundment F02 and prior to being commingled with cooling tower blowdown wastewater, in the NW¼, NW¼, NW¼, Section 24, Township 19N, Range 12EIM, Tulsa County, Oklahoma; or at Latitude 36.117906° N, Longitude 95.991692° W (GPS: NAD83).

**SECTION B. BACKGROUND MONITORING REQUIREMENTS – MONITORING DESIGNATION 999 (UPSTREAM)**

Not applicable.

**SECTION C. SCHEDULE OF COMPLIANCE**

The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule: None

**SECTION D. REPORTING OF MONITORING RESULTS**

Monitoring results shall be reported in accordance with the provisions of Part III, Section E(4) of the permit. Monitoring results obtained during the previous month shall be summarized and electronically reported on an electronic Discharge Monitoring Report (eDMR) form due to the Oklahoma Department of Environmental Quality, Water Quality Division, Wastewater Compliance Tracking Section no later than the 15<sup>th</sup> day of the month following the completed monthly test. If no discharge occurs during the reporting period, an eDMR form stating “No Discharge” shall be electronically submitted according to the above schedule. Instructions on how to register as a “Preparer” or “Signatory” for eDMRs, as well as how to prepare and submit eDMRs, can be found on DEQ’s website at:

<https://oklahoma.gov/deq/divisions/water-quality/wastewater-stormwater/electronic-reporting.html>.

Assistance is also available by contacting DEQ at (405) 702-8100 or [deqreporting@deq.ok.gov](mailto:deqreporting@deq.ok.gov).

The first report is due on \_\_\_\_\_.

## PART II OTHER PERMIT REQUIREMENTS

### A. REGULATORY NOTICE

The permittee is hereby given notice that this permit is in all respects subject to compliance with and actions under any and all applicable and relevant terms, conditions, provisions and requirements and any and all amendments of the laws of the State of Oklahoma, the rules of the Oklahoma Department of Environmental Quality, and Oklahoma's Water Quality Standards. The absence of any express reference within this permit of any particular statutory requirement, rule(s), regulation(s), or standard(s) shall in no respect be deemed or construed to exempt or preclude the application of such requirement, rule(s), regulation(s), or standard(s) to this permit or the permittee. By the Director's approval, grant and issuance of this permit, permittee acknowledges receipt of true, correct and current copies of Oklahoma's Water Quality Standards, and the rules of the Oklahoma Department of Environmental Quality.

### B. REOPENER CLAUSE

This permit may be reopened for modification or revocation and reissuance to require additional monitoring and/or effluent limitations where actual or potential exceedances of State water quality criteria are determined to be the result of the permittee's discharge to the receiving water(s), or a Total Maximum Daily Load is established for the receiving stream(s), or when required as technology advances. The permit may also be reopened to require modifications of the facility's cooling water intake structure as needed to meet the requirements of the 316(b) rules of the Clean Water Act. Modification or revocation and reissuance of the permit shall follow regulations listed at 40 C.F.R. § 124.5.

### C. LABORATORY ACCREDITATION

All laboratory analyses for the parameters specified in this permit must be performed by a laboratory accredited by the Oklahoma Department of Environmental Quality for those parameters.

### D. ANALYTICAL REQUIREMENTS

Unless otherwise specified in this permit, effluent and/or upstream monitoring shall be conducted according to analytical, apparatus and materials, sample collection, preservation, handling, etc., procedures listed in 40 C.F.R. Part 136 in effect on the effective date of this permit. Appendices A, B, and C to 40 C.F.R. Part 136 are specifically referenced as part of this requirement. Amendments to 40 C.F.R. Part 136 promulgated and incorporated by reference in OAC 252:606 after the effective date of this permit shall supersede these requirements as applicable.

### E. MINIMUM QUANTIFICATION LEVEL (MQL)

If any individual analytical test result taken for compliance with this permit is a non-detect, then the detection limit shall be used for DMR calculations. Any time a non-detect value is used for DMR calculations, the value reported on the DMR shall use the less than sign (<).

### F. POLYCHLORINATED BIPHENYL COMPOUNDS

There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid at any of the outfalls.

### G. LIMITS ON DISCHARGE OF CHLORINATED WASTEWATER

Neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available chlorine or total residual chlorine at any one time unless the permittee can demonstrate to the permitting agency that the units in a particular location cannot operate at or below this level of chlorination.

## H. PRIORITY POLLUTANTS IN COOLING TOWER BLOWDOWN

The permittee shall provide written notification to the Department at least 30 days prior to commencing the use of new cooling water treatment chemical(s). Safety Data Sheets (SDS's) for all such newly proposed cooling tower maintenance/treatment chemicals shall be furnished with the notification. If proposed new cooling water treatment chemicals contain any of the priority pollutants listed in 40 C.F.R. Part 423, Appendix A, the permittee shall also provide engineering calculations for the expected level of the pollutant in the cooling tower blowdown from each affected outfall or internal monitoring point, as appropriate.

## I. COOLING WATER INTAKE STRUCTURE (CWIS) REQUIREMENTS

1. The facility shall maintain and follow the Cooling System Maintenance and Operation Plan (CSMOP) for the cooling water intake structure and cooling system.

The plan must describe how the intake structure and associated cooling system will be maintained to ensure the facility continues to meet the final BTA determinations, must be reviewed annually and revised if necessary, and must be made available to DEQ on request. The plan must also include provisions relating to the following:

- a. Weekly visual monitoring in accordance with 40 C.F.R. § 125.96(e) (if weekly visual monitoring is not feasible given the location or nature of the intake, the plan should provide justification for why this monitoring is not feasible and include an appropriate alternative);
  - b. Recordkeeping in accordance with 40 C.F.R. § 125.97(d);
  - c. BTA monitoring as required by the selected compliance option.
2. DEQ has determined that the operation of a closed-cycle recirculating system is the Best Technology Available (BTA) for minimizing impingement mortality and entrainment at this facility. Therefore, the facility shall operate and maintain the system in accordance with the Cooling System Maintenance and Operation Plan.
  3. The permittee shall monitor daily actual intake flow, cooling water withdrawals, makeup water volume, and blowdown volume, and shall report the monitoring results once per year. The monitoring results shall be included with the annual certification statement described below. Any analytical testing that is performed for compliance with these monitoring requirements must be performed by a state-accredited laboratory. Additionally, DEQ has no objection to the use of either auto-sampling or manual sampling to meet any monitoring requirements.
  4. 40 C.F.R. § 125.97(c) requires permittees to submit an annual certification statement and report signed by a responsible corporate official, indicating whether or not the facility has substantially modified operation of any units at the facility that impacts cooling water withdrawal and/or CWIS operation. If no such changes have been made, the permittee may simply state as such in a letter to the DEQ. If such modifications have been made, the permittee must provide a summary of those changes in the report. Additionally, if such modifications have been made, the next permit application submitted by the permittee must include revisions to any applicable parts of the information required by 40 C.F.R. § 122.21(r).

The period for the annual certification statement and BTA compliance monitoring data shall be the calendar year, January 1 through December 31. The first report is due on January 31, 2027.

5. In accordance with 40 C.F.R. § 125.95(c), the permittee may submit a request to reduce the amount of CWIS-related information required by 40 C.F.R. § 122.21(r) that will be submitted with the next permit application. Such a request must identify each element of the 40 C.F.R. § 122.21(r) information that has not substantially changed since the previous data submittal. The request must be submitted at least 2 years and 6 months prior to the expiration date of the permit. If a timely request is not received, the permittee shall submit all 40 C.F.R. § 122.21(r) information with the next permit renewal application.
6. Nothing in this permit authorizes take for the purposes of a facility's compliance with the Endangered Species Act.

#### J. SURFACE IMPOUNDMENT REQUIREMENTS

1. A minimum freeboard of 2 feet shall be maintained for surface impoundments F01 and F03. A minimum freeboard of 3 feet shall be maintained for surface impoundment T01. A minimum freeboard of 1 foot shall be maintained for impoundment F02. Freeboard requirements shall be temporarily waived during and after excessive rainfall and/or plant upsets.
2. The permit may be reopened to implement and/or require impoundment modifications, additions, extensions, and/or operational changes; monitoring and reporting; reclassification of wastes; sludge management plans; best management practices; closure plans; and/or other appropriate actions.
3. At such time as any of the impoundments (F01-F03 and T01) are to be permanently taken out of service or at such time as the contents of any of the impoundments (F01-F03 and T01) pose a risk to the environment or waters of the state, the owner or operator of the facility shall be required to follow all closure requirements contained in OAC 252:616-13.
4. The facility shall maintain a written IMOP that discusses maintenance, operational, and monitoring procedures as specified in OAC 252:616-5-2 for impoundments F02 and F03 that contain Class II wastewater. The IMOP shall be kept on site and made available to DEQ upon request. The IMOP must be followed and updated annually, if necessary. The following shall be addressed in the IMOP.
  - a. Maintenance procedures including methods to protect impoundments and liner integrity
  - b. Operation procedures used to protect surface impoundments and liner integrity
  - c. The name and telephone number of personnel responsible for maintenance, operation and monitoring
5. In all other respects, surface impoundments F01 through F03 and T01 shall be subject to standard conditions for surface impoundments contained in OAC 252:616, Subchapters 5, 7, and 13, including but not limited to requirements for construction, operation, maintenance, monitoring and closure.

#### K. TANK SYSTEM REQUIREMENTS

Not applicable since there are no tank systems that contain industrial wastewater at this facility.

#### L. OTHER DISPOSAL METHODS

##### 1. General Rules

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewater shall be disposed of at a state-approved industrial waste disposal site or to a company for recycling. Disposal of any waste or wastewater shall be in a manner such as to prevent any pollutant from such materials from entering waters of the State or waters of the United States.

If any such industrial wastes are removed from the facility, the permittee shall keep accurate records which include the following information:

- a. Name and address of company hauling waste.
- b. The type and amount of waste hauled.
- c. The final disposal site of waste hauled.

The permittee shall retain the above records for a period of at least 5 years. Upon request, the above records shall be made available to the staff of DEQ for inspection, review, and copying.

2. Disposal of Dredge Material From Impoundment F01.

In the letter dated September 16, 2025, DEQ gave approval to the request to dispose of dredge material from settling basin F01. This material is to be used as fill material on AEP property. The use of this material for such purposes is contingent upon the following:

- a. The pollutant concentrations in the settling basin dredge material must be below the EPA's ceiling concentration limits for all biosolids applied to land. It is required that an analysis of the dredge material be completed and retained whenever dredge material is removed from the settling basin F01 and used by AEP as filler material. This information must be made accessible to DEQ upon request.
- b. Use of the settling basin dredge material must only be used on property owned by AEP.
- c. The dredge material must be used in a manner, and only in areas, that can be properly managed and maintained through the practices laid out in the facility's stormwater prevention plan, so as to prevent contact stormwater from entering any nearby waters of the State.

**M. DEFINITIONS**

1. The term "once through cooling water" means water passed through the main cooling condensers in one or two passes for the purpose of removing waste heat.
2. The term "total residual chlorine" (or "total residual oxidants" for intake water with bromides) means the value obtained using any of the "chlorine—total residual" methods in Table IB in 40 C.F.R. § 136.3(a), or other methods approved by the permitting authority.
3. The term "free available chlorine" means the value obtained using any of the "chlorine—free available" methods in Table IB in 40 C.F.R. § 136.3(a) where the method has the capability of measuring free available chlorine, or other methods approved by the permitting authority.
4. The term "low volume waste sources" means, taken collectively as if from one source, wastewater from all sources except those for which specific limitations or standards are otherwise established in this part. Low volume waste sources include, but are not limited to, the following: wastewaters from ion exchange water treatment systems, water treatment evaporator blowdown, laboratory and sampling streams, boiler blowdown, floor drains, cooling tower basin cleaning wastes, recirculating house service water systems, and wet scrubber air pollution control systems whose primary purpose is particulate removal. Sanitary wastes, air conditioning wastes, and wastewater from carbon capture or sequestration systems are not included in this definition.
5. The term "chemical metal cleaning waste" means any wastewater resulting from the cleaning of any metal process equipment with chemical compounds, including, but not limited to, boiler tube cleaning.
6. The term "metal cleaning waste" means any wastewater resulting from the cleaning [with or without chemical cleaning compounds] any metal process equipment including, but not limited to, boiler tube cleaning, boiler fireside cleaning, and air preheater cleaning.
7. The term "recirculated cooling water" means water which is passed through a cooling device for the purpose of removing such heat from the water and then passed again, except for blowdown, through the main condenser.
8. The term "blowdown" means the minimum discharge of recirculating water for the purpose of discharging materials contained in the water, the further buildup of which would cause concentration in amounts exceeding limits established by best engineering practices.

**APPENDIX**

**DESCRIPTION OF WASTEWATER TREATMENT/DISPOSAL SURFACE IMPOUNDMENTS (S.I.s)**

S.I. <sup>(1)</sup>	Impoundment Description and Wastewater Classification OAC 252:616-1-2	Liner Description	Holding Capacity OAC 252:616-7-1(6) <sup>(2)</sup>	Wastewater Destination
F01	<b>Settling basin:</b> Arkansas River water, boiler drains, and treated wastewater from F03— Class III	Excavated soil/clay	15,540,000 gallons Irregular shaped 298' x 790' x 10'	Cooling Towers
F02	<b>North Holding Basin:</b> Low volume plant wastes – Class II	Concrete	561,000 gallons 50' x 150' x 10'	To Outfall 001 via IMP 101
F03	<b>Neutralization Basin:</b> wastewater needing treatment – Class II	Glazed Brick	21,201 gallons 20' diameter x 15'	F01
T01	<b>Total Retention Basin:</b> Currently not being used, and it only contains directly accumulated stormwater. – Class III	Synthetic	620,800 gallons 240' x 330' x 5'	evaporation

<sup>(1)</sup> Designation F refers to flow through surface impoundment. Designation T refers to total retention surface impoundment.

<sup>(2)</sup> Based on information provided in the application.

**LOCATION OF SURFACE IMPOUNDMENTS**

S.I.	Legal Description	General Location and Description
F01	NE¼, NW¼, NW¼, Section 24, Township 19N, Range 12EIM, Tulsa County, Oklahoma	Northeast corner of property
F02	NW¼, NW¼, NW¼, Section 24, Township 19N, Range 12EIM, Tulsa County, Oklahoma	West of the bottom half of F01
F03	SW¼, NW¼, NW¼, Section 24, Township 19N, Range 12EIM, Tulsa County, Oklahoma	Southwest of F02
T01	NW¼, NW¼, NW¼, Section 24, Township 19N, Range 12EIM, Tulsa County, Oklahoma	West of F02