NPDES PERMIT NO. OK0044733
FACT SHEET

FOR THE DRAFT NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT TO DISCHARGE TO WATERS OF THE UNITED STATES

APPLICANT

New Gaming Enterprise
Kickapoo Casino Harrah Wastewater Treatment Plant
25230 E. Highway 62
Harrah, OK 73045

ISSUING OFFICE

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PREPARED BY

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DATE PREPARED

January 18, 2023

PERMIT ACTION

Renewal of a permit previously issued on July 30, 2018, with an effective date of September 1, 2018, and an expiration date of August 31, 2023.

RECEIVING WATER – BASIN

Quapaw Creek – Canadian River Basin (WBID 520700040260)

DOCUMENT ABBREVIATIONS

In the document that follows, various abbreviations are used. They are as follows:

7Q2	7-day, 2-year low flow
BAT	Best available technology economically achievable
BCT	Best conventional pollutant control technology
BPT	Best practicable control technology currently available
BMP	Best management plan
BOD	Biochemical oxygen demand (five-day unless noted otherwise)
BPJ	Best professional judgment
CBOD	Carbonaceous biochemical oxygen demand (five-day unless noted otherwise)
CD	Critical dilution
CFR	Code of Federal Regulations
cfs	Cubic feet per second
COD	Chemical oxygen demand
COE	United States Corp of Engineers
CWA	Clean Water Act
DMR	Discharge monitoring report
DO	Dissolved oxygen
ELG	Effluent limitation guidelines
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FWS	United States Fish and Wildlife Service
mg/l	Milligrams per liter
µg/l	Micrograms per liter
lbs	Pounds
MG	Million gallons
MGD	Million gallons per day
MQL	Minimum quantification level
NPDES	National Pollutant Discharge Elimination System
O&G	Oil and grease
OAC	Oklahoma Administrative Code
ODEQ	Oklahoma Department of Environmental Quality
OWRB	Oklahoma Water Resources Board
OWQS	Oklahoma Water Quality Standards
POTW	Publicly owned treatment works
RP	Reasonable potential
SS	Settleable solids
SIC	Standard industrial classification
s.u.	Standard units (for parameter pH)
TDS	Total dissolved solids
TMDL	Total maximum daily load
TRC	Total residual chlorine
TSS	Total suspended solids
UAA	Use attainability analysis
USGS	United States Geological Service
WLA	Waste Load allocation
WET	Whole effluent toxicity
WQMP	Water Quality Management Plan
WWTP	Wastewater treatment plant

As used in this document, references to State water quality standards and/or rules, regulations and/or management plans may mean the State of Oklahoma and/or Tribal or both

I. CHANGES FROM THE PREVIOUS PERMIT

- Per- and Polyfluoroalkyl Substances (PFAS) monitoring requirements have been established.

II. APPLICANT LOCATION and ACTIVITY

Under the Standard Industrial Classification (SIC) Code 4952, the applicant will operate a domestic wastewater treatment plant for a casino and houses located in the Kickapoo Indian trust land. New Gaming Enterprise operates the wastewater treatment plant serving the Kickapoo Casino Harrah, which is owned by the Kickapoo Tribe of Oklahoma. The facility is designed to treat 50,000 gallons per day serving a population of 1394. The facility consists of one 2.7 MG emergency overflow/sludge disposal lagoon prior to the headworks, one mechanical bar screen, one influent lift station, two-2-stage aeration tanks, two clarifiers, one WAS lift station, two aerobic digesters, and a 0.05 MGD chlorine contact chamber.

As described in the application, the facility is located northeast of the intersection of Highway 62 and Highway 102, Harrah, Lincoln County, Oklahoma. The single outfall of the facility is located at the following coordinates:

Latitude: 35º 29’ 36.47” North Longitude: 97º 04’ 29.66” West

The discharge is to an unnamed tributary flowing north on Kickapoo Trust land, thence to Quapaw Creek (WBID 520700040260 of the Canadian River Basin), which is approximately 1 mile stream length downstream of the outfall.

III. EFFLUENT CHARACTERISTICS

A quantitative description of the discharge(s) described in the EPA Permit Application Form 2A received on December 12, 2022, are presented below in Table 1:

Table 1: Discharge characteristics:

Parameter	Maximum	Average
pH, minimum, standard units (su)	6.70	NA
pH, maximum, standard units (su)	7.80	NA
Flow (MGD)	0.05	0.01
Temperature (°C), winter	10.8	---
Temperature (C), summer	25.40	---
Carbonaceous Biochemical Oxygen Demand, 5-day ($CBOD_5$)	---	3.20 (mg/L)
Fecal coliform (cfu/100 ml)	25	4.2
Total Suspended Solids (TSS)	---	1.1 (mg/L)
Ammonia (as N)	---	0.2 (mg/L)
Dissolved Oxygen	---	7.1 (mg/L)

A summary of DMR data, from December 31, 2019, to December 31, 2022, shows the facility did not violate any permit limitations.

IV. REGULATORY AUTHORITY/PERMIT ACTION

In November 1972, Congress passed the Federal Water Pollution Control Act establishing the NPDES permit program to control water pollution. These amendments established technology-based or end-of-pipe control mechanisms and an interim goal to achieve "water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water"; more commonly known as the "swimmable, fishable" goal. Further amendments in 1977 of the CWA gave EPA the authority to implement pollution control programs such as setting wastewater standards for industry and established the basic structure for regulating pollutants discharges into the waters of the United States. In addition, it made it unlawful for any person to discharge any pollutant from a point source into navigable waters, unless a permit was obtained under its provisions. Regulations governing the EPA administered the NPDES permit program are generally found at 40 CFR §122 (program requirements & permit conditions), §124 (procedures for decision making), §125 (technology-based standards) and §136 (analytical procedures). Other parts of 40 CFR provide guidance for specific activities and may be used in this document as required.

It is proposed that the permit be reissued for a 5-year term following regulations promulgated at 40 CFR §122.46(a).

V. DRAFT PERMIT RATIONALE AND PROPOSED PERMIT CONDITIONS

A. OVERVIEW of TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Regulations contained in 40 CFR §122.44 NPDES permit limits are developed that meet the more stringent of either technology-based effluent limitation guidelines, numerical and/or narrative water quality standard-based effluent limits, or the previous permit. Technology based limitations for Secondary Treatment are established at 40 CFR §133.102.

Technology-based effluent limitations are established in the draft permit for $CBOD_5$ percent removal, TSS concentration, and TSS percent removal. Water quality-based effluent limitations are established in the draft permit for $CBOD_5$, ammonia nitrogen (NH_3-N), *E. coli* bacteria, (dissolved oxygen) DO, pH and TRC.

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS/CONDITIONS

1. General Comments

Regulations promulgated at 40 CFR §122.44 (a) require technology-based effluent limitations to be placed in NPDES permits based on ELGs where applicable, on BPJ in the absence of guidelines, or on a combination of the two. In the absence of promulgated guidelines for the discharge, permit conditions may be established using BPJ procedures. EPA establishes limitations based on the following technology-based controls: BPT, BCT, and BAT. These levels of treatment are:

BPT - The first level of technology-based standards generally based on the average of the best existing performance facilities within an industrial category or subcategory.

BCT - Technology-based standard for the discharge from existing industrial point sources of conventional pollutants, including BOD, TSS, *E. coli* bacteria, pH, and O&G.

BAT - The most appropriate means available on a national basis for controlling the direct discharge of toxic and non-conventional pollutants to navigable waters. BAT effluent limits represent the best existing performance of treatment technologies that are economically achievable within an industrial point source category or subcategory.

2. Effluent Limitation Guidelines

The Kickapoo Casino Harrah WWTP is a Tribally owned facility treating sanitary wastewater. Wastewater treatment plants have technology based ELG's established at 40 CFR Part 133, Secondary Treatment Regulation. Pollutants with ELG's established in this Chapter are $CBOD_5$, TSS and pH. $CBOD_5$ limits of 25 mg/L for the 30-day average and 40 mg/L for the 7-day average and 85% percent (minimum) removal are found at 40 CFR §133.102(a)(4). The technology based ELG's of 25/40 mg/L for $CBOD_5$ is consistent with DEQ's definition of secondary treatment for discharges to perennial streams (Quapaw Creek is a perennial stream) at OAC 252:606-5-2(B). However, in ODEQ permitting TBELs are established as 18/25 mg/L $CBOD_5$ based on the definition of secondary treatment for discharges to intermittent streams (the unnamed tributary is an intermittent stream) at OAC 252:606-5-2(C). TSS limits, 30 mg/L for the 30-day average and 45 mg/L for the 7-day average, and 85% percent (minimum) removal, are, also, found at 40 CFR §133.102(b). ELG's for pH are between 6-9 s.u. and are found at 40 CFR §133.102(c). Regulations at 40 CFR §122.45(f)(1) require all pollutants limited in permits to have limits expressed in terms of mass such as pounds per day. When determining mass limits for WWTP's, the plant's design flow is used to establish the mass load. Mass limits are determined by the following mathematical relationship:

Loading in lbs/day = pollutant concentration in mg/L * 8.345 lbs/gal * design flow in MGD

30-day average TSS loading = 30 mg/L * 8.345 lbs/gal * 0.05 MGD
30-day average TSS loading = 12.52 lbs/day

7-day average TSS loading = 45 mg/L * 8.345 lbs/gal * 0.05 MGD
7-day average TSS loading = 18.78 lbs/day

30-day average $CBOD_5$ loading = 25 mg/L * 8.345 lbs/gal * 0.05 MGD
30-day average $CBOD_5$ loading = 10.43 lbs/day

7-day average $CBOD_5$ loading = 40 mg/L * 8.345 lbs/gal * 0.05 MGD
7-day average $CBOD_5$ loading = 16.69 lbs/day

A summary of the technology-based limits for the facility is shown in Table 2.

Table 2: Effluent Limits (0.05 MGD Design Flow)

Parameter	**30-Day Avg.**	**7-Day Avg.**	**30-Day Avg.**	**7-Day Avg.**
Flow	N/A	N/A	Measure MGD	Measure MGD
$CBOD_5$	10.43 lbs/Day (2)	16.69 lbs/Day (2)	25 mg/L (2)	40 mg/L (2)
$CBOD_5$, % removal (1)	≥ 85	---	---	---
TSS	12.52 lbs/Day	18.78 lbs/Day	30 mg/L	45 mg/L
TSS, % removal (1)	≥ 85			
pH	N/A	N/A	6.0 – 9.0 standard units (3)	

Footnotes:

(1) % Removal is calculated using the following equation: [(average monthly influent concentration – average monthly effluent concentration) ÷ average monthly influent concentration] * 100.

(2) The $CBOD_5$ concentrations based on stream segment specific WQS are more stringent than $CBOD_5$ technology-based limits of 25mg/L (30-day Average) and 40 mg/L (7-day Average). Mass loadings will be recalculated based on the more stringent concentrations. See Part C.2.a below.

(3) The pH based on stream segment specific WQS are more stringent than pH technology-based limits of 6.0-9.0 standard units. See C.2.b below.

The facility will be required to monitor the influent of $CBOD_5$ and TSS on a once per month frequency for use to determine the removal percentage. The facility shall diligently maintain a log. The influent data is not required to be submitted but must be kept at the facility and made available to EPA or its agents upon request.

C. WATER QUALITY BASED LIMITATIONS

1. General Comments

Water quality-based requirements are necessary where effluent limits more stringent than technology-based limits are necessary to maintain or achieve federal, state or tribal water quality limits. Under Section 301(b)(1)(C) of the CWA, discharges are subject to effluent limitations based on Federal, State or Tribal WQS. Effluent limitations and/or conditions established in the draft permit are following applicable State/Tribal WQS and applicable State/Tribal water quality management plans to assure that surface WQS of the receiving waters are protected and maintained or attained. The Kickapoo Tribe of Oklahoma, which is not approved as Treatment as a State, does not have WQS. ODEQ is authorized to pursuant to SAEETEA to implement the CWA 303 and 402 programs within the Reservation, except in areas excluded from that approval such as tribal trust lands. The discharge is to an unnamed tributary within the boundary of the Kickapoo Tribe of Oklahoma trust lands. Oklahoma Water Quality Standards do not apply directly to the discharge. Due to proximity of facility point of discharge to the waters under State of Oklahoma NPDES program authority (i.e., 1 mile), the discharge from this facility will have a reasonable potential to impact the waters where Oklahoma has NPDES permitting authority. The 40 CFR §122.4(d) requires NPDES permits be protective of a downstream state's water quality standards. Therefore, limitations of the discharge must be made to protect WQS established by the State of Oklahoma. The general and specific stream standards are provided in the Oklahoma Water Quality Standards ((OAC 785:45-5), amended September 13, 2020). Applying the Oklahoma WQS would also serve to protect the quality of the waters on the Kickapoo Tribe of Oklahoma tribal trust lands. Effluent limitations and/or conditions established in the draft permit are following applicable State WQS and

applicable State water quality management plans to assure that WQS of the receiving waters are protected and maintained or attained.

2. Permit Action - Water Quality-Based Limits

Regulations promulgated at 40 CFR §122.44(d) require limits in addition to, or more stringent than effluent limitation guidelines (technology-based). State WQS that are more stringent than effluent limitation guidelines are as follows:

a. Dissolved Oxygen (DO)

The discharge enters downstream waters under the State of Oklahoma authority named Quapaw Creek, listed in the Oklahoma WQS (WBID 520700040260 of the Canadian River Basin). Quapaw Creek is listed in the Oklahoma Water Quality Standards (OAC 785:45) as having the following beneficial uses: public and private water supply, fish, and wildlife propagation-warm water aquatic community (WWAC), agriculture, aesthetics, and primary body contact recreation. According to the Oklahoma 2020 303(d) list, Quapaw Creek was impaired for WWAC, and the cause of impairment is Macroinvertebrate Bioassessment.

The EPA used a 2007 wasteload allocation provided by ODEQ to derive WQ-based $CBOD_5$, NH_3-N, and DO limitations to protect downstream waters (see Table 3). The draft permit will maintain these limits.

Table 3: Water Quality-Based $CBOD_5$, NH_3-N, and DO Effluent Limits

Season	$CBOD_5$ (mg/l)	NH_3-N (mg/l)	DO (mg/l)
Summer (Jun 1 – Oct 15)	10	2(1)	4
Winter (Oct 16 – Feb 28)	18	6(1)	4
Spring (Mar 1 – May 31)	12	6(1)	4

Footnotes:

(1) The DO-based monthly average ammonia limits of 2 mg/L (Summer), 6 mg/L (Spring), and 6 mg/L (Winter) is more stringent than the NH_3-N concentrations based on stream segment specific WQS. See Part C.2.d below. The draft permit will maintain these limits.

b. pH

To protect the warm water aquatic community designated use of downstream state waters, criteria for pH is between 6.5 and 9.0 s.u. pursuant to OAC 785:45-5-12. The draft permit will maintain these limits.

c. Bacteria

To protect the primary body contact recreation designated use of downstream State waters, the monthly geometric mean criterion for *E. coli* bacteria is 126 cfu/100 ml and the single sample criterion is 406 cfu/100 ml pursuant to OAC 785:45-5-16. The draft permit will maintain these limits.

d. Ammonia Toxicity

(1) Criterion and Implementation

Interim implementation for controlling ammonia toxicity is described in OAC 785:46 and OAC 252:690. OAC 785:46-5-3(b)(3) states "For regulatory purposes, there is a reasonable potential for chronic toxicity if concentrations of ammonia outside the chronic regulatory mixing zone exceed 6 mg/l." For municipal wastewater treatment plants, OAC 252:690-3-20 through 3-23 requires that where seasonal DO-based monthly average ammonia limits are established, those limits must be compared with toxicity-based monthly average ammonia limits determined using the interim 6 mg/l chronic toxicity criterion, the conservative substance mixing zone equations for chronic toxicity, and a monitoring frequency of 4 per month.

(2) Toxicity-Based Ammonia Limits

Toxicity-based ammonia limits are determined in accordance with OAC 252:690-3-22.

(a) Wasteload Allocation and Criterion Long Term Average Concentration

The chronic numerical criterion for ammonia (C_C) is 6 mg/l and ammonia background concentration (C_B) is assumed to be zero. The chronic toxicity wasteload allocation equations for ammonia are as follows:

i) $WLA_{NH3} = 6(1+Q^*)/(1.94Q^*)$, for $Q^* \leq 0.1823$

ii) $WLA_{NH3} = 6(6.17-15.51Q^*)$, for $0.1823 < Q^* < 0.3333$

iii) $WLA_{NH3} = 6$ mg/L, for $Q^* \geq 0.3333$.

Where Q^* is the ratio of the regulatory effluent flow to the regulatory receiving water flow. The Q^* for this application is 0.077, so the equation **i)** is used. Thus, $WLA_{NH3} = 43.068$ mg/l. WLA_{NH3} is a short-term value and must be converted to a long-term average for development of permit limits. LTA_{NH3} is calculated on a 99% probability basis, and the equation is as follows:

$$LTA_{NH3} = WLA_{NH3} \times EXP\left(0.5\ln\left(1+\frac{CV^2}{4}\right) - 2.326\left(\ln\left(1+\frac{CV^2}{4}\right)\right)^{0.5}\right)$$

where a CV value of 0.6 is assumed. Thus, $LTA_{NH3} = 22.716$ mg/l.

(b) Permit Limits

The toxicity-based monthly average limit (MAL_{NH3}) is calculated on a 95% probability basis, and the daily maximum limit (DML_{NH3}) is calculated on a 99% probability basis. The monitoring frequency basis is 2/month. The limits equations are as follows:

$$MAL_{NH3} = LTA_{NH3} \times EXP\left(1.645\left(\ln\left(1+\frac{CV^2}{N_m}\right)\right)^{0.5} - 0.5\ln\left(1+\frac{CV^2}{N_m}\right)\right)$$

where N_m is the per month monitoring frequency. Thus, based on $N_m = 4$, $MAL_{NH3} = 35.264$ mg/l.

$$DML_{NH3} = LTA_{NH3} \times EXP\left(2.326\left(\ln\left(1+CV^2\right)\right)^{0.5} - 0.5\ln\left(1+CV^2\right)\right)$$

Thus, $DML_{NH3} = 70.747$ mg/l.

(c) Comparison of Toxicity-Based Ammonia Limits with DO-Based Ammonia Limits

In accordance with OAC 252:690-3-23, the most stringent monthly average limit for each season and its associated weekly average or daily maximum limit, as appropriate, is established in the permit. The DO-based monthly average ammonia limits of 2 mg/L (Summer), 6 mg/L (Spring), and 6 mg/L (Winter) are more stringent than the NH_3-N concentrations based on stream segment specific WQS (see Table 3). The draft permit will maintain these limits.

Table 3: Seasonal effluent limits for Ammonia

Type of Limit	Spring (Mar 1 – May 31)			Summer (Jun 1 – Oct 15)			Winter (Oct 16 – Feb 28)		
	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum	Monthly Average	Weekly Average	Daily Maximum
DO-Based	6 mg/L	9 mg/L	---	2.0 mg/L	3 mg/L	---	6 mg/L	9 mg/L	---
Toxicity-Based	35.264 mg/L	---	70.747 mg/L	35.264 mg/L	---	70.747 mg/L	35.264 mg/L	---	70.747 mg/L
Draft Permit	6 mg/L	9 mg/L	---	2.0 mg/L	3 mg/L	---	6 mg/L	9 mg/L	---

3. Post Third Round Policy and Strategy

Section 101 of the Clean Water Act (CWA) states that "...it is the national policy that the discharge of toxic pollutants in toxic amounts be prohibited..." To ensure that the CWA's prohibitions on toxic discharges are met, EPA has issued a "Policy for the Development of Water Quality-Based Permit Limitations for Toxic Pollutants 49 FR 9016-9019, 9 March 1984." In support of the national policy, Region 6 adopted the "Policy for Post Third Round NPDES Permitting" and the "Post Third Round NPDES Permit Implementation Strategy" on October 1, 1992. The Regional policy and strategy are designed to ensure that no source will be allowed to discharge any wastewater which (1) results in instream aquatic toxicity; (2) causes a violation of an applicable narrative or numerical State water quality standard resulting in nonconformance with the provisions of 40 CFR 122.44(d); (3) results in the endangerment of a drinking water supply; or (4) results in aquatic bioaccumulation which threatens human health.

(a) Reasonable Potential

All applicable facilities are required to fill out appropriate sections of the Form 2A and 2S, to apply for an NPDES permit or reissuance of an NPDES permit. The new form is applicable not only to Publicly Owned Treatment Works (POTWs), but also to facilities that are like POTWs, but which do not meet the regulatory definition of "publicly owned treatment works" (like private domestics, or similar facilities on Federal property). The forms were designed and promulgated to "make it easier for permit applicants to provide the necessary information with their applications and minimize the need for additional follow-up requests from permitting authorities," per the summary statement in the preamble to the Rule. These forms became effective December 1, 1999, after publication of the final rule on August 4, 1999, Volume 64, Number 149, pages 42433 through 42527 of the FRL.

The amount of information required for minor facilities was limited to specific sections of these forms, because they are unlikely to discharge toxic pollutants in amounts that would impact state water quality standards. Supporting information for this decision was published as "Evaluation of the Presence of Priority Pollutants in the Discharges of Minor POTW's", June 1996, and was sent to all state NPDES coordinators by EPA Headquarters. In this study, EPA collected and evaluated data on the types and quantities of toxic pollutants discharged by minor POTWs of varying sizes from less than 0.1 MGD to just under 1 MGD. The Study consisted of a query of the EPA Permit Compliance System (PCS) database from 1990 to present, an evaluation of minor POTW data provided by the State agencies, and on-site monitoring for selected toxics at 86 minor facilities across the nation.

The facility is designated as a minor and does not need to fill out the expanded pollutant testing section Part D of Form 2A. There are no toxics that need to be placed in the draft permit except for Total Residual Chlorine (TRC) and Per- and Polyfluoroalkyl Substances (PFAS).

(b) Total Residual Chlorine (TRC)

The facility indicated that they use chlorine to control bacteria. For facilities that use chlorine, the limits may be expressed as total residual chlorine (TRC). Total Residual Chlorine shall be monitored any time chlorine is used within the treatment plant for disinfection, equipment cleaning, maintenance, or any other purpose. TRC limitations are added to this permit consistent with the State WQS for the protection of freshwater aquatic organisms. The draft permit maintains a limitation of 19 µg/l for TRC. The implementation to protect WQS in Oklahoma from chlorine toxicity is to limit chlorine as "no measurable amount". The effluent shall contain NO MEASURABLE TRC at any time. NO MEASURABLE will be defined as no detectable concentration of TRC as determined by any approved method established in 40 CFR 136. If any TRC analytical test result is less than the TRC MQL of 33 µg/l, or the more sensitive Method Detection Limit, a value of zero (0) may be reported.

(c) Per- and Polyfluoroalkyl Substances (PFAS)

As explained at https://www.epa.gov/pfas, PFAS are a group of synthetic chemicals that have been in use since the 1940s. PFAS are found in a wide array of consumer and industrial products. PFAS manufacturing and processing facilities, facilities using PFAS in production of other products, airports, and military installations can be contributors of PFAS releases into the air, soil, and water. Due to their widespread use and persistence in the environment, most people in the United States have been exposed to PFAS. Exposure to some PFAS above certain levels may increase risk of adverse health effects (EPA,

EPA's Per- and Polyfluoroalkyl Substances (PFAS) Action Plan, EPA 823R18004, February 2019). The EPA is collecting information to evaluate the potential impacts that discharges of PFAS from wastewater treatment plants may have on downstream drinking water, recreational and aquatic life uses.

Since PFAS chemicals are persistent in the environment and may lead to adverse human health and environmental effects, the draft permit requires that the facilities conduct influent, effluent, and sludge sampling for PFAS according to the frequency outlined in the permit.

The purpose of this monitoring and reporting requirement is to better understand potential discharges of PFAS from this facility and to inform future permitting decisions, including the potential development of water quality-based effluent limits on a facility-specific basis. EPA is authorized to require this monitoring and reporting by CWA § 308(a), which states:

"SEC. 308. (a) Whenever required to carry out the objective of this Act, including but not limited to (1) developing or assisting in the development of any effluent limitation, or other limitation, prohibition, or effluent standard, pretreatment standard, or standard of performance under this Act; (2) determining whether any person is in violation of any such effluent limitation, or other limitation, prohibition or effluent standard, pretreatment standard, or standard of performance; (3) any requirement established under this section; or (4) carrying out sections 305, 311, 402, 404 (relating to State permit programs), 405, and 504 of this Act—

(A) the Administrator shall require the owner or operator of any point source to (i) establish and maintain such records, (ii) make such reports, (iii) install, use, and maintain such monitoring equipment or methods (including where appropriate, biological monitoring methods), (iv) sample such effluents (in accordance with such methods, at such locations, at such intervals, and in such manner as the Administrator shall prescribe), and (v) provide such other information as he may reasonably require;".

EPA notes that there is currently not an analytical method approved in 40 CFR Part 136 for PFAS. As stated in 40 CFR § 122.44(i)(1)(iv)(B), in the case of pollutants or pollutant parameters for which there are no approved methods under 40 CFR Part 136 or methods are not otherwise required under 40 CFR chapter I, subchapter N or O, monitoring shall be conducted according to a test procedure specified in the permit for such pollutants or pollutant parameters. Therefore, the draft permit specifies that until there is an analytical method approved in 40 CFR Part 136 for PFAS, monitoring shall be conducted using Draft Method 1633. The draft Adsorbable Organic Fluorine CWA wastewater method 1621 can be used in conjunction with draft method 1633, if appropriate. This is consistent with the December 5, 2022 USEPA Memorandum, Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs, from Radhika Fox.

In October 2021, EPA published a PFAS Strategic Roadmap that described EPA's commitments to action for 2021 through 2024. This roadmap includes a commitment to issue new guidance recommending PFAS monitoring in both state-issued and federally issued NPDES permits using EPA's recently published analytical method 1633. In anticipation of this guidance, EPA has included PFAS monitoring in the draft permit using draft analytical method 1633.

Draft Method 1633 is currently a single lab-validated method. EPA anticipates the method will be multi-lab validated in 2023. If the PFAS monitoring requirement begins before Draft Method 1633 is multi-lab

validated, the current single lab validated Draft Method 1633 shall be used at that time, and then the multi-lab validated Draft Method 1633 shall be used once it is available.

(d) Whole Effluent Toxicity Testing

In the Oklahoma Department of Environmental Quality "Continuing Planning Process", whole effluent toxicity (WET) testing is required for all major dischargers and those minor dischargers identified as posing a significant unaddressed toxic risk. This facility does not meet the design flow size, equal to or greater than 1.0 MGD, to be classified as a major discharger, and the discharge would not appear to pose a significant unaddressed toxic risk. Accordingly, the draft permit will not require WET testing.

D. MONITORING FREQUENCY FOR LIMITED PARAMETERS

Regulations require permits to establish monitoring requirements to yield data representative of the monitored activity, 40 CFR §122.48(b), and to assure compliance with permit limitations, 40 CFR §122.44(i)(1). The list of sample frequencies and types for limited parameters, some of which were established in the previous permit, shown in Table 4 is in the draft permit. The influent, effluent, and biosolids one time monitoring frequency for PFAS is based on the size of the discharge and lack of industrial users with a high risk of contributing PFAS to the POTW.

TABLE 4: Monitoring Requirements for Limited Parameters

Parameter	Frequency	Sample Type
Flow	Daily	Continuous recorder
pH	Five/week	Grab
DO	One/week	Grab
TRC	One/month	Grab
E. coli bacteria	One/month	Grab
$CBOD_5$/NH_3-N	One/week	24-hr Composite
TSS	One/month	24-hr Composite
$CBOD_5$/TSS, % Removal	One/month	Grab
PFAS Analytes	One/permit term	24-hr Composite

VI. 303(d) LIST

The facility discharges to an unnamed tributary on Kickapoo Tribal trust land, thence to Quapaw Creek (WBID 520700040260 of the Canadian River Basin). Quapaw Creek is listed in the Oklahoma Water Quality Standards (OAC 785:45) as having the following beneficial uses: public and private water supply, fish, and wildlife propagation-warm water aquatic community (WWAC), agriculture, aesthetics, and primary body contact recreation. Quapaw Creek is listed on the Category 5 303(d) list in, Appendix C of the 2020 Integrated Report "Water Quality in Oklahoma," as impaired for WWAC, and the cause of impairment is Macroinvertebrate Bioassessment.

The receiving stream, an unnamed tributary on Cherokee Nation tribal trust lands, is not listed on the 303(d) list. The facility has a low design flow of 0.05 MGD. Based on the engineering judgment of the permit writer, the facility discharge will not contribute to the degradation of its receiving waters. Therefore, there are no additional requirements, beyond the requirements discussed above, proposed in the permit.

VII. ANTIDEGRADATION

The proposed permit is for an existing discharge and not a new discharge. The State of Oklahoma has antidegradation requirements to protect existing uses through implementation of their WQS. However, the State antidegradation regulations do not apply on tribal land. The limitations and monitoring requirements set forth in the draft permit are developed from the State water quality standards and are protective of those designated uses. Furthermore, the policy sets forth the intent to protect the existing quality of those waters, whose quality exceeds their designated use. The permit requirements and the limits are protective of the assimilative capacity of the receiving water, which is protective of the designated uses of that water.

VIII. ANTI-BACKSLIDING

The draft permit is consistent with the requirements to meet anti-backsliding provisions of the Clean Water Act, Section 402(o) and 40 CFR 122.44(l)(1) or (l)(2)(i)(B)(1), which state in part that interim or final effluent limitations must be as stringent as those in the previous permit, unless information is available which was not available at the time of permit issuance. The draft permit maintains the effluent limitations of the previous permit for $CBOD_5$, and TSS average concentrations and loadings, NH_3-N, DO, TRC, pH and *E. coli* bacteria. See Part V.C above. In addition, the PFAS monitoring requirements were added in the draft permit.

IX. ENDANGERED SPECIES CONSIDERATIONS

According to the most recent county listing available at the US Fish and Wildlife Service (USFWS) website, https://ecos.fws.gov/ecp/report/species-listings-by-current-range-county?fips=40081, five species in Lincoln County are listed as endangered (E) or threatened (T). The five species include American burying beetle (*Nicrophorus americanus*) (T), Whooping crane (*Grus americana*) (E), Peppered chub (*Macrhybopsis tranema*) (E), Piping Plover (*Charadrius melodus*) (T) and Red Knot (*Calidris canutus rufa*) (T).

In accordance with requirements under section 7(a)(2) of the Endangered Species Act, EPA has reviewed this permit for its effect on listed threatened and endangered species and designated critical habitat. After review, EPA has no information determining that the reissuance of this permit will have "effect" on the listed threatened and endangered species nor will adversely modify designated critical habitat. EPA makes this determination based on the following:

1) In the previous permit issued July 30, 2018, EPA made a "no effect" determination for federally listed species mentioned above except for American burying beetle and Peppered chub. The EPA

has received no additional information since then which would lead to a revision of that "no effect" determination. The EPA determines that this reissuance will not change the environmental baseline established by the previous permit, and therefore, EPA concludes that reissuance of this permit will have "no effect" on the listed species and designated critical habitat.

2) The American burying beetle (Nicrophorus americanus) is the largest carrion beetle, or silphid, in North America. This species reaches 1.0 to 1.8 inches (25 to 35 centimeters) in length, as documented by R.S. Anderson in 1982 and later by D.C. Backlund and G.M. Marrone in 1997. The American burying beetle is native to at least 35 states in the United States, covering most of temperate eastern North America, as well as the southern borders of three eastern Canadian provinces. The species is believed to be extirpated from all but nine states in the United States and is likely extirpated from Canada. However, the current range is much larger than originally thought when the species was listed in 1989. Based on the last 15 years of surveys, the American burying beetle occurs in portions of Arkansas, Kansas, Oklahoma, Nebraska, South Dakota, and Texas; on Block Island off the coast of Rhode Island; and in reintroduced populations on Nantucket Island off the coast of Massachusetts and in southwest Missouri, where a nonessential experimental population was established in 2012 under section 10(j) of the Act (77 FR 16712; March 22, 2012). Risks such as habitat loss or alteration and artificial lights affect most populations. All remaining populations have some risks associated with areas of urban or suburban development, particularly in the New England Analysis Area, but most current American burying beetle populations are in rural areas and have potential risks associated with habitat loss due to agricultural land uses. All habitat alterations also have potential to affect carrion populations, competing scavenger populations, and carrion availability. Risks associated with the effects of changing climate, including increasing temperatures, are now the most significant threat for most populations. The permit does not authorize activities that may cause destruction of the American burying beetle habitat. Therefore, EPA concludes that reissuance of this permit will have "no effect" on the American burying beetle and designated critical habitat.

3) The peppered chub is a small freshwater minnow (less than 3 inches in overall length) belonging to the Cyprinidae family. This fish has a slender body nearly transparent in appearance, with small, dark dots scattered on its back. Their diet consists of aquatic and terrestrial invertebrates, and plant materials. Peppered chubs generally live for one to two years, and few fish survive past their third summer. Peppered chubs are members of a reproductive guild that broadcast spawns semi buoyant eggs, which remain suspended in flowing water until hatching. Without adequate stream flow, eggs sink to the bottom where they may be covered with silt and suffocate. The peppered chub was once widespread and common in the western portion of the Arkansas River basin in Kansas, New Mexico, Oklahoma, and Texas and has at least one historical detection in Colorado. Currently, the peppered chub is found in the South Canadian River between Ute Reservoir in New Mexico and Lake Meredith in the Texas panhandle The South Canadian River, containing the only extant population of the peppered chub, is known to periodically recede, leaving peppered chubs stranded in shorter river segments and isolated pools, especially during times of drought. The primary factors affecting the current and future conditions of the peppered chub are river fragmentation, alterations of the natural flow regime, and degradation of water quality. The source of these stressors is primarily related to dams and impoundments (bodies of water confined within enclosures), which alter stream flow and fragment streams. Additional sources of stressors include groundwater withdrawals, development, invasive vegetation, and

environmental conditions affected by large-scale climate change. The EPA determines that this reissuance will not change the environmental baseline established by the previous permit, and the permit does not authorize activities that may cause destruction of the peppered chub habitat. Therefore, EPA concludes that reissuance of this permit will have "no effect" on the peppered chub and designated critical habitat.

4) EPA has received no additional information since the previous permit issuance which would lead to revision of its determination.

5) The draft permit is consistent with the States WQS and does not increase pollutant loadings.

6) There is currently no information determining that the reissuance of this permit will have "effect" on the additional listed threatened and endangered species.

X. ENVIRONMENTAL JUSTICE

Executive Order 13985, *Advancing Racial Equity and Supporting for Underserved Communities through the Federal Government* signed on January 20, 2021, directs each federal agency to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities." The EPA strives to enhance the ability of overburdened communities to participate fully and meaningfully in the permitting process for EPA-issued permits, including NPDES permits. "Overburdened" communities can include minority, low-income, tribal, and indigenous populations or communities that potentially experience disproportionate environmental harms and risks. As part of an agency-wide effort, the EPA Region 6 will consider prioritizing enhanced public involvement opportunities for EPA-issued permits that may involve activities with significant public health or environmental impacts on already overburdened communities. For more information, please visit http://www.epa.gov/ejscreen.

As part of the Permit development process, the EPA conducted a screening analysis to determine whether this Permit action could affect overburdened communities. The EPA used EJScreen 2.1, a nationally consistent geospatial tool that contains demographic and environmental data for the United States at the Census block group level. This tool is used to identify permits for which enhanced outreach may be warranted.

The study area was chosen at the proposed 001 discharge, 5-miles downstream path following the Trust Land thence to Quapaw Creek. A 3-mile buffer around the path was selected to study the area. The population of the study area is 3,373 persons aged 5 and above. No EJ Indexes score for the state percentile of the facility was above the 80 percentile (80%) (see Appendix 1). Furthermore, the ACS summary report indicates that 80% and 11% of the population in Kickapoo are white and American Indian, respectively. Also, the 99% of the population speak only English at home. These results indicate that all the percentiles are well below the 80 percentile and most of the population speak English at home (see Appendix 2). From the EJSCREEN guidelines and trainings, this area will not be a concern for Environmental Justice issues at this time.

XI. HISTORICAL and ARCHEOLOGICAL PRESERVATION CONSIDERATIONS

The reissuance of the permit should have no impact on historical and/or archeological sites since no construction activities are planned in the reissuance.

XII. PERMIT REOPENER

The permit may be reopened and modified during the life of the permit if relevant portions of the State WQS are revised or remanded. In addition, the permit may be reopened and modified during the life of the permit if relevant procedures implementing the State Water Quality Standards are either revised or promulgated. Should the State adopt a new WQS, and/or develop or amend a TMDL, this permit may be reopened to establish effluent limitations for the parameter(s) to be consistent with that approved State standard and/or water quality management plan, in accordance with 40 CFR 122.44(d). Modification of the permit is subject to the provisions of 40 CFR 124.5.

XIII. VARIANCE REQUESTS

None

XIV. CERTIFICATION

The Environmental Protection Agency has made a tentative determination to issue the permit for the discharge described in the application. Permit requirements are based on NPDES regulations (40 CFR Parts 122 and 124). The permit is in the process of certification by EPA Region 6 since Kickapoo Tribe of Oklahoma does not have authorization to be treated in a similar manner as a state (TAS) for water quality standards. The EPA intends to certify without conditions the draft permit proposed and will also accept comments on EPA's CWA 401 Certification of the permit. A draft permit and draft public notice will be sent to the State of Oklahoma, District Engineer, Corps of Engineers, U.S. Department of Agriculture, Rural Development, and to the Regional Director of the U.S. Fish and Wildlife Service prior to the publication of that notice.

XV. FINAL DETERMINATION

The public notice describes the procedures for the formulation of final determinations.

XVI. ADMINISTRATIVE RECORD

The following information was used to develop the proposed permit:

A. APPLICATION(s)

EPA Application Form 2A received December 12, 2022.

B. 40 CFR CITATIONS

Sections 122, 124, 125, 127, 131, 133, 136

C. STATE OF OKLAHOMA REFERENCES

Oklahoma Pollutant Discharge Elimination System (OPDES) Act, 27A O.S. Supp. 2000, §2-6-201 et seq.

Oklahoma's Water Quality Standards, Oklahoma Administrative Code (OAC 785:45), September 13, 2020, as amended.

Oklahoma's Water Quality Standards, Oklahoma Administrative Code (OAC 785:46), September 13, 2020, as amended.

Oklahoma Administrative Code (OAC) 252:606 and OAC 252:690.

Oklahoma Continuing Planning Process Document (CPP), December 2012 ed.

State of Oklahoma 2020 303(d) List of Impaired Waters, Appendix C.

D. MISCELLANEOUS REFERENCES

EPA Region 6 "Policy for Post Third Round NPDES Permitting" and "Post Third Round NPDES Permit Implementation Strategy," October 1, 1992.

EPA’s Per- and Polyfluoroalkyl Substances (PFAS) Action Plan, EPA 823R18004, February 2019

PFAS Strategic Roadmap: EPA's Commitments to Action 2021-2024

APPENDIX 1 - EJScreen Study Results

EPA United States Environmental Protection Agency

EJScreen Report (Version 2.1)

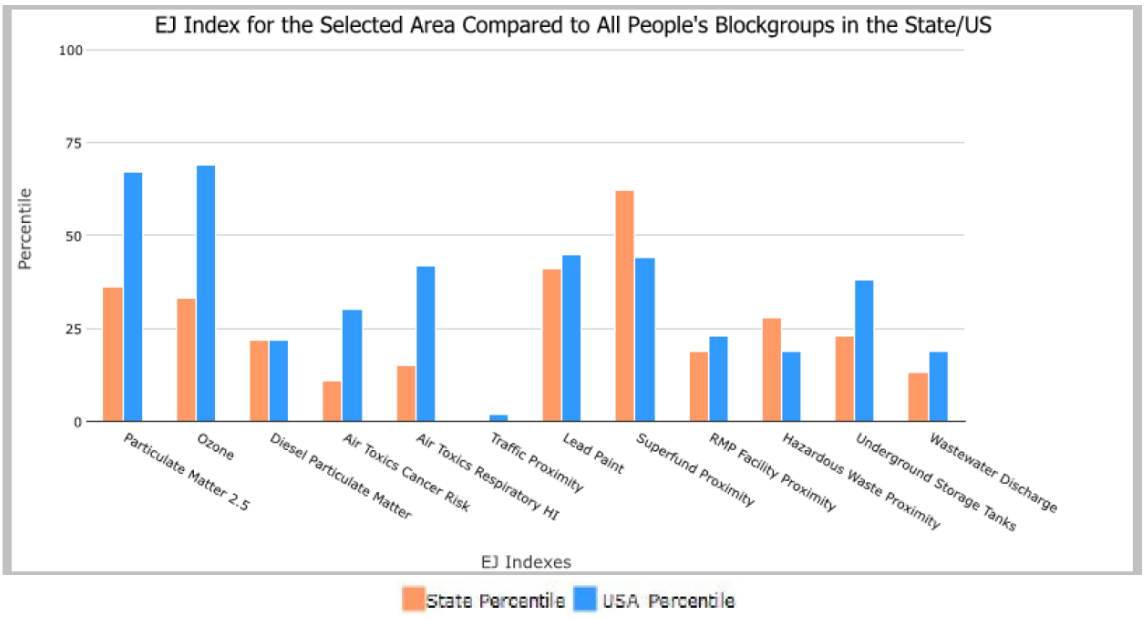
3 miles Ring around the Corridor, OKLAHOMA, EPA Region 6

Approximate Population: 3,373

Input Area (sq. miles): 56.02

Kickapoo Tribe of OK

Selected Variables	State Percentile	USA Percentile
Environmental Justice Indexes		
EJ Index for Particulate Matter 2.5	36	67
EJ Index for Ozone	33	69
EJ Index for Diesel Particulate Matter*	22	22
EJ Index for Air Toxics Cancer Risk*	11	30
EJ Index for Air Toxics Respiratory HI*	15	42
EJ Index for Traffic Proximity	0	2
EJ Index for Lead Paint	41	45
EJ Index for Superfund Proximity	62	44
EJ Index for RMP Facility Proximity	19	23
EJ Index for Hazardous Waste Proximity	28	19
EJ Index for Underground Storage Tanks	23	38
EJ Index for Wastewater Discharge	13	19



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.

February 28, 2023 1/3

APPENDIX 2 - EJScreen Study Results

EJSCREEN ACS Summary Report

Location: User-specified linear location
Ring (buffer): 3-miles radius
Description: Kickapoo Tribe of OK

Summary of ACS Estimates	2016 - 2020
Population	3,373
Population Density (per sq. mile)	59
People of Color Population	776
% People of Color Population	23%
Households	1,179
Housing Units	1,295
Housing Units Built Before 1950	112
Per Capita Income	28,028
Land Area (sq. miles) (Source: SF1)	57.29
% Land Area	99%
Water Area (sq. miles) (Source: SF1)	0.69
% Water Area	1%

	2016 - 2020 ACS Estimates	Percent	MOE (±)
Population by Race			
Total	3,373	100%	403
Population Reporting One Race	3,089	92%	649
White	2,669	79%	354
Black	5	0%	51
American Indian	375	11%	165
Asian	10	0%	16
Pacific Islander	1	0%	11
Some Other Race	29	1%	52
Population Reporting Two or More Races	284	8%	125
Total Hispanic Population	147	4%	107
Total Non-Hispanic Population	3,226		
White Alone	2,597	77%	346
Black Alone	5	0%	51
American Indian Alone	369	11%	165
Non-Hispanic Asian Alone	10	0%	16
Pacific Islander Alone	0	0%	11
Other Race Alone	8	0%	11
Two or More Races Alone	238	7%	105
Population by Sex			
Male	1,746	52%	251
Female	1,627	48%	179
Population by Age			
Age 0-4	214	6%	68
Age 0-17	799	24%	117
Age 18+	2,575	76%	212
Age 65+	479	14%	113

Data Note: Detail may not sum to totals due to rounding. Hispanic population can be of any race.
N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2016 - 2020 .

EJSCREEN ACS Summary Report

Location: User-specified linear location
Ring (buffer): 3-miles radius
Description: Kickapoo Tribe of OK

	2016 - 2020 ACS Estimates	Percent	MOE (±)
Population 25+ by Educational Attainment			
Total	2,257	100%	257
Less than 9th Grade	59	3%	47
9th - 12th Grade, No Diploma	205	9%	54
High School Graduate	908	40%	123
Some College, No Degree	601	27%	143
Associate Degree	229	10%	71
Bachelor's Degree or more	254	11%	62
Population Age 5+ Years by Ability to Speak English			
Total	3,159	100%	363
Speak only English	3,117	99%	291
Non-English at Home[1+2+3+4]	43	1%	44
[1]Speak English "very well"	24	1%	37
[2]Speak English "well"	7	0%	16
[3]Speak English "not well"	9	0%	17
[4]Speak English "not at all"	3	0%	21
[3+4]Speak English "less than well"	11	0%	25
[2+3+4]Speak English "less than very well"	18	1%	25
Linguistically Isolated Households*			
Total	3	100%	16
Speak Spanish	3	100%	13
Speak Other Indo-European Languages	0	0%	10
Speak Asian-Pacific Island Languages	0	0%	10
Speak Other Languages	0	0%	10
Households by Household Income			
Household Income Base	1,179	100%	107
< $15,000	117	10%	60
$15,000 - $25,000	113	10%	40
$25,000 - $50,000	214	18%	79
$50,000 - $75,000	258	22%	69
$75,000 +	478	41%	86
Occupied Housing Units by Tenure			
Total	1,179	100%	107
Owner Occupied	1,045	89%	101
Renter Occupied	134	11%	40
Employed Population Age 16+ Years			
Total	2,649	100%	299
In Labor Force	1,616	61%	227
Civilian Unemployed in Labor Force	33	1%	28
Not In Labor Force	1,033	39%	157

Data Note: Datail may not sum to totals due to rounding. Hispanic population can be of anyrace.
N/A means not available. **Source:** U.S. Census Bureau, American Community Survey (ACS)
*Households in which no one 14 and over speaks English "very well" or speaks English only.

EJSCREEN ACS Summary Report

Location: User-specified linear location
Ring (buffer): 3-miles radius
Description: Kickapoo Tribe of OK

	2016 - 2020 ACS Estimates	Percent	MOE (±)
Population by Language Spoken at Home*			
Total (persons age 5 and above)	2,759	100%	443
English	2,721	99%	437
Spanish	23	1%	38
French, Haitian, or Cajun	0	0%	14
German or other West Germanic	4	0%	9
Russian, Polish, or Other Slavic	0	0%	14
Other Indo-European	0	0%	14
Korean	0	0%	14
Chinese (including Mandarin, Cantonese)	0	0%	14
Vietnamese	0	0%	14
Tagalog (including Filipino)	0	0%	14
Other Asian and Pacific Island	0	0%	14
Arabic	0	0%	14
Other and Unspecified	11	0%	22
Total Non-English	38	1%	622

Data Note: Detail may not sum to totals due to rounding. Hispanic popultion can be of any race.
N/A meansnot available. **Source:** U.S. Census Bureau, American Community Survey (ACS) 2016 - 2020.
*Population by Language Spoken at Home is available at the census tract summary level and up.