

**OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
GENERAL WASTEWATER PERMIT FOR DISCHARGING OF TREATED WASTEWATER RESULTING
FROM THE CLEANUP OF PETROLEUM UNDERGROUND STORAGE TANK SYSTEMS
INTO SURFACE WATERS OF THE STATE OF OKLAHOMA
GENERAL PERMIT NO. OKG83**

GENERAL PROVISIONS

As provided by the Oklahoma Pollutant Discharge Elimination System (OPDES) Act, Title 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 (DEQ), owners or operators of petroleum underground storage tank (UST) systems will be authorized to discharge only treated wastewater into surface waters of the State of Oklahoma in accordance with effluent limitations, monitoring requirements, and other conditions set forth in Parts I, II, III and IV hereof. This general permit (Permit) does not specify the treatment method(s) the permittee must use. This Permit will regulate any combination of wastewater treatment options, and it will cover only discharging facilities. This Permit shall not cover those facilities identified as major dischargers.

Each Petroleum UST System will require an Authorization to Discharge Wastewater (Authorization) obtained from the Executive Director of DEQ. Owners or operators of Petroleum UST Systems located within the boundaries of the State of Oklahoma must make a written request to DEQ that they be authorized to discharge wastewater under this Permit and receive an Authorization, prior to commencing such discharge. Owners or operators within the scope of this Permit who fail to make a written request to DEQ are not authorized to discharge wastewater under this Permit.

This Permit shall not cover those facilities discharging to the following waters: Outstanding Resource Waters; Appendix “B” Waters; High Quality Waters; Sensitive Public and Private Water Supplies [OAC 785:45-5-25(c)] and receiving streams included in Oklahoma’s “303(d) List” of impaired waterbodies caused by Organic Enrichment/DO, pH, and Oil and Grease for which a Total Maximum Daily Load (TMDL) has not been performed or the result of the TMDL indicates that more stringent discharge limits are required. Those facilities shall apply for coverage under an individual discharge permit in accordance with requirements to obtain a permit contained in Oklahoma Administrative Code (OAC), Title 252, Chapter 606: OPDES Standards.

The Oklahoma State Legislature has voted to move Water Quality Standards (WQS) from Oklahoma Water Resources Board (OWRB) to Oklahoma Department of Environmental Quality (DEQ). OAC 785:45 will be re-written as OAC 252:730 and OAC 785:46 will be re-written as OAC 252:740. OAC 252:690 will be incorporated into OAC 252:740 upon completion of permanent rulemaking by DEQ for WQS.

Wastewater discharges to lakes within 1 mile of a Public Water Supply intake structure or into a stream within 5 miles of a Public Water Supply intake are not covered by this Permit. Discharges within these distance limitations will need to be covered under an individual permit.

For new facilities applying for coverage under this General Permit, DEQ will determine whether the point of discharge is located in surface waters designated sensitive by the U.S. Fish and Wildlife Service. If the proposed discharge point for a new facility is located in a sensitive water, the facility will not be eligible for an Authorization under this Permit. For an existing facility applying for coverage under this Permit where the point of discharge is located in surface waters designated sensitive by the U.S. Fish and Wildlife Service (USFWS) for endangered species and there has been no increase in the discharge volume or change to the point of discharge, consultation with the USFWS is not required.

Petroleum UST Systems that are currently permitted by DEQ through individual wastewater disposal permits or have an authorization under the current general permit OKG83 may apply for coverage under this Permit no later than 180 days prior to the expiration of their current individual permits. Those systems with an individual permit may elect to continue coverage under their individual permits. Existing Petroleum UST Systems that are not currently permitted by DEQ through individual wastewater disposal permits shall apply for coverage under this Permit within 90 days of the effective date of this Permit. New Petroleum UST Systems shall apply for and obtain an Authorization prior to commencing any of the activities regulated by this Permit.

The written request for an Authorization shall include the name and legal address of the owner or operator, name of the facility, legal description of the facility location, general location, name of the receiving stream(s), listing of proposed outfalls, legal description down to ten (10) acres of each proposed outfall, latitude and longitude (using North America Datum 1983) of each proposed outfall, along with any other information specified in the application form.

Effluent limitations contained in Part I hereof will apply to discharges of treated wastewater which has been generated from the cleanup of Petroleum UST Systems. At no time shall the effluent cause a violation of Oklahoma's Water Quality Standards (OWQS) in the receiving stream.

Use of surface impoundment(s) and/or tank systems to treat and/or dispose of wastewater is not authorized by this Permit.

The permittee shall comply with all provisions of this Permit and any Authorization issued pursuant to it.

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 27A O.S. §2-6-201 *et seq.* and DEQ Rules to obtain an Authorization under this Permit.

This Permit shall have a five (5) year term. All Authorizations issued under this Permit shall expire on the expiration date of the Permit.

This Permit replaces and/or supersedes OPDES Permit No. OKG830000 that was issued November 3, 2017, and expires on December 31, 2022.

This Permit shall become effective on January 4, 2023.

This Permit and any Authorizations issued under it shall expire at midnight, on January 3, 2028.

This is to certify that the wastewater discharges set forth in this Permit comply with the requirements of Oklahoma's Water Quality Standards, as amended, provided the permittee does not exceed the effluent limitations set forth in this permit.

Issued on this 4th day of January, 2023.

For Oklahoma Department of Environmental Quality



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



Shellie Chard, Director
Water Quality Division

PART I
EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

SECTION A: EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

During the period beginning the effective date and lasting through the expiration date, the permittee is authorized to discharge treated wastewater from the outfall(s) as described in the Authorization. This Permit regulates wastewater generated from the cleanup of Petroleum UST Systems.

Such discharges shall be limited and monitored by the permittee as specified in Tables 1 and 2 below. Monitoring requirements contained in Table 2 shall become effective in conjunction with the effluent limitations listed in Table 1.

TABLE 1
EFFLUENT LIMITATIONS

PARAMETERS	CONCENTRATIONS	
	Monthly Average	Daily Maximum
Flow (in gpd) STORET: 50050	Report	Report
Benzene, total STORET: 34030	5 µg/L	5 µg/L
BTEX, total STORET: 30383	100 µg/L	100 µg/L
Polynuclear Aromatic Hydrocarbons (PAH's) STORET: 22456	10 µg/L	10 µg/L
Methyl Tertiary-Butyl Ether (MTBE) STORET: 22417	70 µg/L	70 µg/L
Phenols, total STORET: 32730	150 µg/L	250 µg/L
Total Organic Carbon (TOC) STORET: 00680	75 mg/L	95 mg/L
Oil & Grease STORET: 00556	15 mg/L	15 mg/L
Total Suspended Solids (TSS) STORET: 00530	---	45 mg/L
pH STORET: 00400	Between 6.5 – 9.0 s.u.	

TABLE 2
MONITORING REQUIREMENTS

Parameters	Measurement Frequency ⁽¹⁾	Sample Type
Flow (in gpd)	Daily	⁽²⁾
Benzene, total	1/Week	Grab
BTEX, total ⁽³⁾	1/Week	Grab
Polynuclear Aromatic Hydrocarbons (PAH's) ⁽⁴⁾	1/Month	Grab
Methyl Tertiary-Butyl Ether (MTBE) ⁽⁵⁾	1/Month	Grab
Phenols, total ⁽⁶⁾	1/Week	Grab
Total Organic Carbon (TOC)	1/Week	Grab
Oil & Grease ⁽⁷⁾	1/Week	Grab
Total Suspended Solids (TSS)	1/Week	Grab
pH	1/Week	Grab

⁽¹⁾ When discharging. In the event there is no discharge for any given calendar month during the effective period of these monitoring requirements, there shall be no monitoring required for that month.

⁽²⁾ The flow sample type shall be specified on the permittee's Authorization Page and Discharge Monitoring Reports.

⁽³⁾ BTEX shall be measured as the sum of benzene, toluene, ethylbenzene, and xylenes. EPA Method 624, 8021B or equivalent shall be used for the measurement of xylenes including ortho-, meta-, and para-xylenes.

⁽⁴⁾ The effluent limitations and monitoring requirements for polynuclear aromatic hydrocarbons (PAH's) do not apply to discharges from the cleanup of petroleum UST systems containing only gasoline, jet fuel, and/or kerosene. The Monthly Average and Daily Maximum values of any of the following PAH's shall not exceed 10 µg/L: acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, pyrene.

⁽⁵⁾ Methyl Tertiary-Butyl Ether (MTBE) sampling shall be performed in accordance with EPA Method 624, 8260, or equivalent. The concentration of MTBE in groundwater shall be determined by testing three consecutive samples. If three (3) consecutive tests show the presence of MTBE to be at or below the minimum quantification level (MQL) of 10 µg/L in all three samples, then the monitoring requirement for MTBE is not required for the life of the permit. The permit shall report "not required" on its DMR under MTBE effluent limitation. If MTBE is present above the MQL of 10 µg/L in any one or more of the three samples, then the MTBE effluent limitation does apply. The permittee shall report the value achieved during each calendar month on its DMR under MTBE effluent limitation.

⁽⁶⁾ EPA Method 625 or equivalent shall be used for the measurement of total phenols.

⁽⁷⁾ EPA Method 1664 shall be used for the measurement of oil and grease.

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, taste, and odors.

There shall be no discharge of floating solids or visible foam in other than trace amounts, and there shall be no objectionable color in the discharge.

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.

The treatment works shall operate at the optimal average design flow rate for maximum groundwater cleanup. No backwash from any treatment unit(s) for maintenance purposes or any other reasons shall be discharged through the authorized outfall(s).

Samples taken in compliance with the specified monitoring requirements shall be taken at the discharge outfall(s) specified in the individual authorization at the nearest accessible point after final treatment but prior to actual discharge.

SECTION B: SCHEDULE OF COMPLIANCE

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

SECTION C: REPORTING OF MONITORING RESULTS

Monitoring results shall be reported in accordance with the provisions of Part III.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 15th 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 eDMR's, as well as how to prepare and submit eDMR's, can be found on DEQ's website at:

<https://www.deq.ok.gov/water-quality-division/electronic-reporting/>.

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

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 any actions under any-and-all applicable and relevant terms, conditions, provisions and requirements and any-and-all amendments to 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, the 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, provided, however, that the permittee further acknowledges that any and all amendments thereto shall become part of this permit.

B. REOPENER CLAUSE

This permit may be reopened for modification, revocation, and/or 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), a Total Maximum Daily Load is established for the receiving stream(s), or when required as technology advances. 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 into 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 less than the corresponding minimum quantification level listed in OAC 252:690 Appendix B, a value of zero (0) may be used for that individual result for the DMR calculations and reporting requirements.

F. INDIVIDUAL PERMITS

- a. Any permittee authorized by this Permit may request to be excluded from the coverage of this general Permit by applying for an individual permit. The permittee shall submit the appropriate OPDES application forms together with the reasons supporting the request to the Water Quality Division.

- b. When an individual OPDES permit is issued to a permittee otherwise subject to this general Permit, the applicability of this Permit to that owner or permittee is automatically terminated on the effective date of the individual permit.
- c. A source excluded from coverage under this general Permit solely because it already has an individual permit may request that its individual permit be revoked and that it be covered by this general Permit. Upon revocation of the individual permit, this general Permit shall apply to the source.

G. SURFACE IMPOUNDMENTS AND TANK SYSTEMS:

The use of surface impoundments and/or tank systems for treatment and/or disposal of wastewater at petroleum UST systems is not allowed by this Permit.

H. LAND APPLICATION:

Any permittee authorized by this Permit is not allowed to land-apply wastewater and/or sludge.

I. OTHER DISPOSAL METHODS

Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewater shall be disposed of in a State-approved industrial waste disposal site or to a company for recycling.

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.

Upon request, the above records shall be made available to the staff of the Department for inspection, review, and copying.

J. LAWS AND RULES APPLICABLE

DEQ Rules, as amended, are applicable to and are incorporated by reference into this Permit and any Authorizations under it. 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 all amendments to the laws of the State of Oklahoma and DEQ Rules. The absence of any express reference within this Permit to 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. By DEQ approval, grant, and issuance of this Permit, the permittee acknowledges the responsibility to obtain true, correct, and current copies of applicable DEQ Rules (as amended), provided; however, that the permittee further acknowledges that any and all amendments thereto shall become a part of this Permit.

APPENDIX A

OKLAHOMA SENSITIVE WATERS AND WATERSHEDS HARBORING ENDANGERED AND THREATENED SPECIES AND THEIR CRITICAL HABITAT OF CONCERN

A. Sensitive waters and watersheds for federally listed species, as defined by the U.S. Fish and Wildlife Service.

1. *Grand (Neosho) River* – A 2-mile corridor (1 mile from each bank) of the main stem of the Grand (Neosho) River above its confluence with Tar Creek. This corridor includes portions of Ottawa and Craig Counties.
2. *Cimarron River* – A 2-mile corridor (1 mile from each bank) of the main stem of the Cimarron River from the US Hwy-77 Bridge in Logan County upstream to and including Beaver County. This corridor includes river segments in Beaver, Harper, Kingfisher, Logan, Major, Woods, and Woodward Counties.
3. *South Canadian River* – A 2-mile corridor (1 mile from each bank) of the main stem from the Eufaula Reservoir flood pool upstream to the northern border of Custer County. This corridor includes river segments in Blaine, Caddo, Canadian, Cleveland, Custer, Grady, Hughes, McClain, McIntosh, Pittsburg, Pontotoc, Pottawatomie, and Seminole Counties.
4. *Muddy Boggy River* – A 2-mile corridor (1 mile from each bank) of the main stem of the Muddy Boggy River which includes portions of Choctaw, Atoka, and Coal Counties.
5. *Kiamichi River* – The watershed of the Kiamichi River upstream from the Hugo Reservoir. This watershed includes portions of Choctaw, Pushmataha, Atoka, Pittsburg, Latimer, and LeFlore Counties.
6. *Little River* – The watershed of the Little River includes portions of Choctaw, LeFlore, Pushmataha and McCurtain Counties.
7. *Glover River* – The watershed of the Glover River includes portions of Pushmataha and McCurtain Counties.
8. *Mountain Fork River* – The watershed of the Mountain Fork River is above the Broken Bow Reservoir and includes portions of LeFlore and McCurtain Counties.
9. *Northeast HUC-11 Watersheds* - The watersheds are identified by the following 11-digit Hydrologic Unit Codes: 1107020206030, 11070206060, 11070207190, 11070208070, 11070209020, 11070209030, 11070209040, 11070209050, 11070209060*, 11070209070, 11070209100, 11070209110 and 11070209120. These watersheds include portions of Ottawa, Craig, Delaware, and Mayes Counties.

* This HUC does not contain a known Ozark cavefish cave. It was included because it is entirely surrounded by 11 digit HUCs with known Ozark cavefish caves; therefore, we assume that Ozark cavefishes likely occupy this portion of the watershed as well.
10. *Elk River* – A 2-mile corridor (1 mile from each bank) of the Elk River which includes portions of Delaware County.
11. *Spring River* – A 2-mile corridor (1 mile from each bank) of the Spring River which includes portions of Ottawa County.
12. *Verdigris River* – A 2-mile corridor of the main stem from the dam of Lake Oologah to the confluence of the Arkansas River which includes river segments in Rogers, Wagoner, and Muskogee Counties.

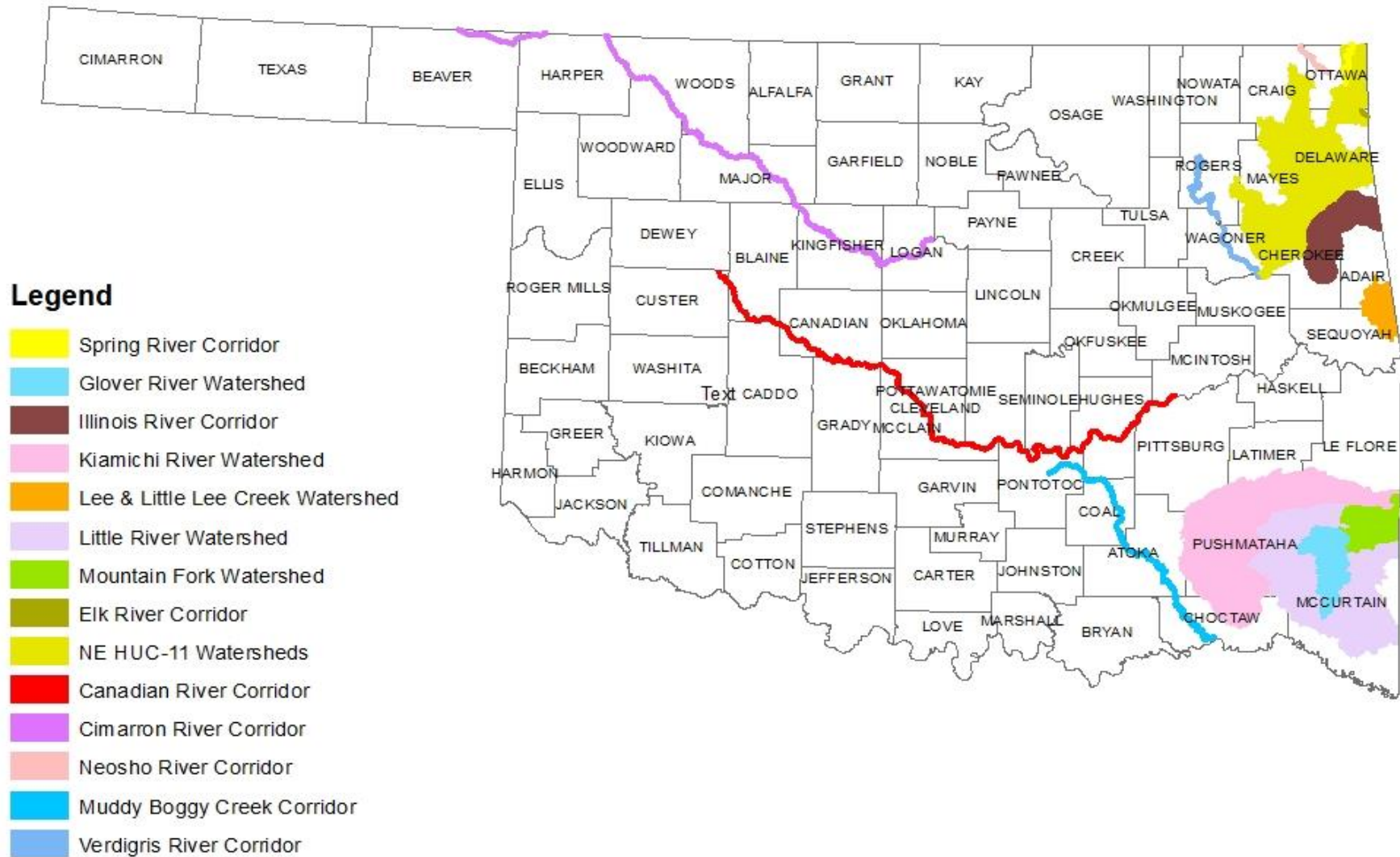
B. Sensitive waters and watersheds for State listed species, as defined by the Oklahoma Department of Wildlife Conservation.

1. *Illinois River* – A 10 mile corridor (5 miles from each bank within the watershed) of the main stem of the Illinois River above Tenkiller Reservoir. This corridor includes portions of Cherokee, Delaware, and Mayes Counties.
2. *Lee and Little Lee Creeks* – The watershed of Lee Creek and Little Lee Creek which includes portions of Sequoyah and Adair Counties.

Note: No sensitive endangered or threatened species occur in the following counties: Alfalfa, Beckham, Carter, Cimarron, Comanche, Garfield, Garvin, Grant, Greer, Johnston, Kiowa, Lincoln, Murray, Nowata, Okfuskee, Oklahoma, Okmulgee, Rogers, Stephens, Texas, Washington, or Washita.

Oklahoma Aquatic Resources of Concern for Federal & State Listed Species

as identified by the U.S. Fish & Wildlife Service and the Oklahoma Department of Wildlife Conservation



FACT SHEET

FACT SHEET FOR THE DRAFT GENERAL WASTEWATER DISPOSAL PERMIT TO DISCHARGE TREATED WASTEWATER RESULTING FROM THE CLEANUP OF PETROLEUM UNDERGROUND STORAGE TANK SYSTEMS INTO SURFACE WATERS OF THE STATE OF OKLAHOMA

DEQ Permit No.: OKG83

Applicant: Owners or Operators of Petroleum Underground Storage
Tank Systems in the State of Oklahoma

Prepared and Issued by: Industrial Permits Section
Oklahoma Department of Environmental Quality
Water Quality Division
P.O. Box 1677
707 N. Robinson Ave
Oklahoma City, OK 73101-1677

Date Prepared: June 1, 2022

Prepared by: James Grim, P.E.
Industrial Permits Section
Water Quality Division

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

Permit Action: Renewal of a general permit for the discharge of treated
wastewater from petroleum underground storage tank
systems

I. SCOPE OF PERMIT

Coverage under this general Permit OKG83 (the Permit) is available for the discharges of treated wastewater resulting from the cleanup of petroleum Underground Storage Tank (UST) Systems into surface waters of the State of Oklahoma. Facilities that operate under Standard Industrial Classification (SIC) code 5171: Petroleum Bulk Stations and Terminals, SIC Code 5541: Gasoline Service Stations, and as well as any facility where petroleum products are stored in underground storage tanks and DEQ has jurisdiction, will be regulated by this permit.

This Permit will only cover discharging facilities. This Permit will not cover those facilities identified as major dischargers. Discharges of treated groundwater, potentially contaminated stormwater, and/or associated wastewater generated at sites where contamination has resulted from sources other than petroleum UST systems must obtain coverage under a different OPDES (Oklahoma Pollutant Discharge Elimination System) permit.

Petroleum UST Systems currently permitted by the Oklahoma Department of Environmental Quality (DEQ) through individual wastewater disposal permits or general permit authorizations may apply for coverage under this Permit no later than 180 days prior to the expiration of their current individual permits. Those systems with an individual permit may elect to continue coverage under their individual permits. New Petroleum UST Systems shall apply for and obtain an Authorization prior to commencing any of the activities regulated by this Permit.

This Permit shall not cover those facilities discharging to the following waters: Outstanding Resource Waters; Appendix “B” Waters; High Quality Waters; Sensitive Public and Private Water Supplies [OAC 785:45-5-25(c)]; and receiving streams included in Oklahoma’s “303(d) List” of impaired waterbodies caused by Organic Enrichment/DO, pH, and Oil and Grease for which a Total Maximum Daily Load (TMDL) has not been performed or the result of the TMDL indicates that more stringent discharge limits are required. Those facilities shall apply for coverage under an individual discharge permit in accordance with requirements to obtain a permit contained in Oklahoma Administrative Code (OAC), Title 252, Chapter 606: OPDES Standards.

The Oklahoma State Legislature has voted to move Water Quality Standards (WQS) from Oklahoma Water Resources Board (OWRB) to Oklahoma Department of Environmental Quality (DEQ). OAC 785:45 will be re-written as OAC 252:730 and OAC 785:46 will be re-written as OAC 252:740. OAC 252:690 will be incorporated into OAC 252:740 upon completion of permanent rulemaking by DEQ for WQS.

II. APPLICANT ACTIVITY

Wastewater discharges regulated by this Permit are treated wastewaters resulting from the cleanup of petroleum UST systems. This permit does not specify the disposal/treatment method(s) the permittee must use.

A “*Petroleum Underground Storage Tank System*” means any combination of tanks including associated pipes, lines, fixtures, and other related equipment, used to contain an accumulation of petroleum substances.

A “*tank*” is a stationary device designed to contain an accumulation of petroleum substances, which is constructed of non-earthen materials (for example, concrete, steel, plastic) that provide structural support.

“*Petroleum substance*” is defined as:

1. Motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents and used oils;
2. Petroleum products which are liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

III. DISCHARGE INFORMATION

A. DISCHARGE LOCATION

For each proposed Outfall, the discharge location shall be specified in the application and the Authorization to discharge under this Permit. The discharge location shall be specified to within ten acres by use of legal description and specified by latitudes and longitudes (using North American Datum of 1983).

In accordance with OAC 252:690, wastewater discharges to lakes within 1 mile of a public water supply intake structure or into streams within 5 miles of a public water supply intake are not covered by this permit. Discharges within these distance limitations will need to be covered under an individual permit.

B. DISCHARGE DESCRIPTION AND CHARACTERISTICS

Wastewater discharges from petroleum UST system cleanups can originate from one or more sources, including contaminated groundwater, contaminated stormwater, wastewaters from tank cleaning operations, and associated wastewater resulting from product recovery operations.

1. Conventional and Non-conventional Pollutants

Wastewater generated from a petroleum UST system has the potential to contain pH, oil & grease, total organic carbon (TOC), and total suspended solids (TSS).

2. Priority Pollutants

Wastewater generated from a petroleum UST system has the potential to contain high levels of benzene, total BTEX (benzene, toluene, ethylbenzene, xylenes), PAH's (polynuclear aromatic hydrocarbons), total phenols, and MTBE (methyl *tertiary*-butyl ether).

IV. TECHNOLOGY-BASED LIMITATIONS AND CONDITIONS

A. GENERAL

Regulations promulgated in 40 C.F.R. § 122.44(a) and OAC 252:606-5-2(a)(1) require technology-based effluent limitations to be placed in OPDES permits based on effluent limitations guidelines, where applicable; on Best Professional Judgment (BPJ) of the permit writer in the absence of guidelines; or on a combination of the two.

B. APPLICABLE EFFLUENT LIMITATIONS GUIDELINES

1. Technology-Based Effluent Guidelines

Technology-Based Effluent Guidelines establishing BPT, BCT, and BAT standards have not been promulgated for discharges from petroleum UST system cleanups.

2. Best Professional Judgment

Best Professional Judgment (BPJ) parameters included for all outfalls are benzene, total BTEX, PAH's, total phenols, MTBE, TOC, Oil & Grease, TSS, and pH. Permit limitations for these parameters are established based on either Best Available Technology Economically Achievable (BAT); Best Conventional Pollutant Control Technology (BCT); or the BPJ of the permit writer, as required by CWA section 402(a)(1), using the previous state permit and permits for facilities with similar wastewater discharges and treatment systems as guidance.

a. Benzene

Benzene was selected as a BAT indicator parameter for the removal of 1,3,5-trimethylbenzene, and naphthalene based on consideration of Henry's Law Constants and solubility in water. Henry's Law describes the ease with which specific compounds can be removed by air stripping. Compounds with lower Henry's Law Constants are more difficult to remove by air stripping than compounds with higher Henry's Law Constants. Where multiple volatile organic compounds are present, the compound with the lowest Henry's Law Constant will generally be the limiting compound. Benzene, toluene, ethylbenzene, xylenes, 1,3,5-trimethylbenzene, and naphthalene have relatively low Henry's Law Constants. While these compounds are the least strippable constituents of hydrocarbon fuels, all of the constituents are within the range where air stripping is considered effective.

Generally, the higher the solubility of a constituent in water, the more difficult it is to remove the constituent from water using an air stripper. The two compounds of concern in hydrocarbon fuels with the highest solubilities are naphthalene (3,400 mg/L) and benzene (1,780 mg/L). Naphthalene,

however, is a minor constituent that is insoluble in water but is soluble in benzene and toluene, accounting for less than 1% of the total product. 1,3,5-trimethylbenzene is practically insoluble in water but may be soluble in benzene. Based on consideration of Henry's Law and the solubility of the gas in water, sufficient treatment of benzene will assure sufficient treatment of 1, 3, 5-trimethylbenzene and naphthalene. Benzene is, therefore, considered an appropriate indicator parameter for 1, 3, 5-trimethylbenzene and naphthalene.

The Environmental Protection Agency (EPA) Model Permit fact sheet states that influent concentrations of benzene, which have rarely exceeded 1 mg/L, would be stripped to 5 µg/L at 99.5% efficiency. Therefore, the BAT monthly average and daily maximum limits of 5 µg/L were chosen for benzene.

b. BTEX

A traditional approach to limiting effluents contaminated with gasoline or other fuel oils has been to limit BTEX (benzene, toluene, ethylbenzene, xylenes). This approach stems from petroleum industry practices for determining the quality of fuels by measuring BTEX. Monitoring and limitation of BTEX in discharges from petroleum hydrocarbon fuel corrective actions are prudent because the composition of petroleum hydrocarbon fuels is highly variable. For some products, any one of the four BTEX constituents can be the predominant constituent. Therefore, limitation of the aggregate parameter, BTEX, is provided in this Permit based on BAT.

EPA's Model Permit fact sheet estimates that under optimal operating conditions, 15 mg/L of dissolved product remains in groundwater following free product recovery. Case studies have documented dissolved hydrocarbon levels of 2 to 10 mg/L after free product recovery was completed. These values have been used to estimate that the potential influent levels of total BTEX into an air stripper (or other wastewater treatment system) varies from 2 to 15 mg/L. Vendors report that the potential removal efficiency of BTEX using a commercially available air stripper unit is 99.5%. If air stripping is applied to influent BTEX levels of 15 mg/L, the stripped effluent would contain 75 µg/L total BTEX. However, product recovery and air stripping technologies may not always occur under optimal conditions. Therefore, the BAT based discharge limit for total BTEX is 100 µg/L for both daily maximum and monthly average.

c. PAH's

There are several polynuclear aromatic hydrocarbons (PAH's) present in many refined petroleum products which are on the list of Clean Water Act section 307(a) toxic pollutants for which BAT controls must be established. The Development Document (1982) for the Petroleum Refining Point Source Category guidelines, defining BAT, discusses the toxic pollutants generated in the refining processes that were detected in refinery wastewater. Ten (10) PAH's were found in the untreated, partially treated, or fully treated wastewater from the group of refineries sampled. These PAH's are expected to be present in a number of refined petroleum products. PAH's are highly carcinogenic at relatively low levels and therefore are of potential concern.

Sixteen (16) PAH's have been selected to represent the nonvolatile components of petroleum UST systems other than those containing gasoline, jet fuel or kerosene. The PAH's being limited are: acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno (1,2,3-cd) pyrene, naphthalene, phenanthrene and pyrene. The monthly average and daily maximum limit being placed on each of these 16 PAH's is 10 µg/L.

These limits also represent the minimum analytical levels (or minimum quantification levels) for these pollutants as measured by EPA Method 625.

d. MTBE

Methyl *tertiary*-butyl ether (MTBE) is a fuel additive made by combining methanol and isobutylene. MTBE is added to increase the oxygen content. MTBE is used in “reformulated gasoline” throughout the United States to reduce carbon monoxide and ozone levels caused by auto emissions. MTBE has been used in place of lead as an octane enhancer since 1979. Currently, MTBE is classified as a potential human carcinogen, but as of yet there is no maximum contaminant level (MCL) for drinking water.

MTBE, a colorless and flammable liquid with a turpentine-like odor, is highly water soluble, highly flammable, and extremely volatile. MTBE is resistant to biodegradability in both aerobic and anaerobic conditions. MTBE does not adsorb to vadose zone materials and, along with its high vapor pressure, moves quickly through soil columns. MTBE partitions readily into groundwater. Groundwater that is in equilibrium with gasoline containing 15% MTBE could contain as much as 9600 ppm MTBE.

Because of its low Henry’s Law Constant, MTBE is difficult to remove once it becomes soluble in groundwater. The relatively high solubility of MTBE, in comparison with BTEX compounds, indicates that MTBE is not as easily stripped from water using air-stripping technology. However, it is technically feasible to remove MTBE from groundwater by air stripping if the air/water ratio is higher than for BTEX. Regarding granular activated carbon treatment, carbon adsorption as a standalone technology is not cost-effective for MTBE removal. The carbon required for removing equal concentrations of MTBE and BTEX would be at least three times higher for MTBE as for BTEX compounds.

Given the widespread use as a gasoline-blending component, its typical presence at high concentrations, and its treatability characteristics; effluent limitations and monitoring requirements have been imposed for MTBE. Based on BPJ, monthly average and daily maximum effluent levels of 70 µg/L are imposed on MTBE. This MTBE limit is the same as on the previous permit.

e. Phenols

Since phenols may be present in petroleum products, effluent limitations and monitoring requirements have been retained for total phenols based on BPJ. The monthly average and daily maximum permit limits of 150 µg/L and 250 µg/L for total phenols are BPJ-based on previously issued individual discharge and general permits for this type of system and for other facilities with similar discharges, and on data submitted by permittees through Discharge Monitoring Reports (DMR’s).

f. Organic Carbon

In order to maintain a reasonable treatment efficiency level and in order to protect against pollutants that may be present in various concentrations in the petroleum product discharges, but not assigned specific numerical limitations in this permit, the DEQ has imposed limitations for Total Organic Carbon (TOC). A monthly average and daily maximum permit limit of 75 mg/L and 95 mg/L, respectively, are retained from the previous general permit. These limits are BPJ-based on previously issued individual discharge and general permits for this type of system and for other facilities with similar discharges, and on data submitted by permittees through Discharge Monitoring Reports (DMR’s).

g. Suspended Solids

Total Suspended Solids (TSS) are a concern in the effluent discharges from UST cleaning wastewater, associated stormwater, and disturbed groundwater. Therefore, BPJ-based effluent limitations for TSS have been included in the draft permit based on previously issued individual discharge and general permits for this type of system and for other facilities with similar discharges. Based on BPJ, a daily maximum effluent limitation of 45 mg/L has been included in the draft permit for TSS.

h. Oil & Grease

BPJ-based daily maximum concentration limitations of Oil and Grease are included based on previously issued individual discharge and general permits for this type of system and for other facilities with similar discharges. Based on BPJ, monthly average and daily maximum effluent levels of 15 mg/L are imposed on Oil & Grease.

i. pH

Since the pH may be altered due to cleaning materials used and/or contaminants removed, effluent limitations and monitoring requirements have been retained for pH based on BPJ. Limits on pH of 6.0 daily minimum and 9.0 daily maximum Standard Units are based on available pH adjustment technologies.

3. Technology-Based Effluent Limitations**Technology-Based Effluent Limitations**

Parameters	Concentration ⁽¹⁾	
	Monthly Avg.	Daily Max.
Benzene	5 µg/L	5 µg/L
BTEX, total	100 µg/L	100 µg/L
PAH'S	10 µg/L	10 µg/L
MTBE	70 µg/L	70 µg/L
Phenols, total	150 µg/L	250 µg/L
TOC	75 mg/L	95 mg/L
Oil & Grease	15 mg/L	15 mg/L
TSS	---	45 mg/L
pH	Between 6.0 and 9.0 s.u.	

⁽¹⁾ Mass loading limits are not included in the draft permit, based on BPJ.

V. WATER QUALITY-BASED EFFLUENT LIMITATIONS AND CONDITIONS**A. GENERAL**

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..." A permit that contains technology-based permit limits alone may not adequately protect the quality of the receiving stream. Thus, additional water quality-based effluent

limitations and/or conditions are considered in the general permit using narrative and numerical standards contained in the Oklahoma's Water Quality Standards (OWQS), as amended in (OAC 785:45), and implementation criteria contained in OAC 785:46 and OAC 252:690 promulgated by the Oklahoma Water Resource Board (OWRB) and the Department of Environmental Quality (DEQ). This is to ensure that no point-source discharge results in instream aquatic toxicity, a violation of an applicable narrative or numerical state water quality standards, or aquatic bioaccumulation that threatens human health.

B. RECEIVING STREAM DESIGNATED USES AND ANTIDEGRADATION PROVISION

1. Designated Beneficial Uses

Petroleum UST systems covered by this Permit will be discharging treated wastewater to various surface waters of the State. These waters will have varying beneficial uses as designated by the Oklahoma Water Quality Standards (OWQS). This Permit will cover discharges to surface waters of the State with any or all of the following designated beneficial uses as listed in OAC 785, Chapter 45:

- Public and Private Water Supplies (OAC 785:45-5-10);
- Emergency Public and Private Water Supplies (OAC 785:45-5-11);
- Fish and Wildlife Propagation (OAC 785:45-5-12);
- Agriculture: livestock and irrigation (OAC 785:45-5-13);
- Primary Body Contact Recreation (OAC 785:45-5-16);
- Secondary Body Contact Recreation (OAC 785:45-5-17);
- Aesthetics (OAC 785:45-5-19); and
- Fish Consumption (OAC 785:45-5-20).

2. Antidegradation Provisions

Implementation of the state's antidegradation policy, as described in OAC 785:46, Subchapter 13, requires Tier 2 level of protection for high-quality waters (HQW) and sensitive public and private water supply waters (SWS); and Tier 3 level of protection for outstanding resource water (ORW) for these receiving waters. In accordance with OAC 785:46-13-4, "increased load and concentration of any *specified pollutant* from any point source discharge existing as of June 11, 1989, shall be prohibited in any waterbody designated as HQW and SWS. OAC 785:46-13 also states, "increased load shall be prohibited in any waterbody designated as ORW and waterbodies within the boundaries listed in Appendix B of OAC 785:45." Pursuant to OAC 785:46-13-2, specified pollutants include: (A) Oxygen-demanding substances – measured as CBOD and/or BOD, (B) Ammonia as N and/or total organic nitrogen (TON), (C) Phosphorus, (D) TSS, and (E) Such other substances determined by the permitting authority.

This Permit will not authorize discharges to surface waters of the State designated with any of the following additional limitations:

- Outstanding Resource Waters (OAC 785:45-5-25(c)(1));
- Appendix B Waters (OAC 785:45-5-25(c)(2));
- High Quality Waters (OAC 785:45-5-25(c)(3)); or
- Sensitive Public and Private Water Supplies (OAC 785:45-5-25(c)(4)).

Petroleum UST systems located along receiving waters with these additional limitations shall apply for coverage under an individual discharge permit in accordance with requirements to obtain a permit contained in Oklahoma Administrative Code (OAC) at OAC 252:606. Depending on the additional

limitations applicable, petroleum UST systems located along these receiving waters may be prohibited from any new point source discharge in accordance with Oklahoma's implementation policies for the antidegradation policy statement (OAC 785:45-5-25).

C. WATER QUALITY-BASED LIMITATIONS

1. Public and Private Water Supplies Use

a. Raw Water Numerical Criteria

As stated in section III.B of this fact sheet, other than lead (discussed below), the treated wastewater generated from petroleum UST system cleanups, which will be discharged through the proposed outfalls, should not contain substances listed in raw water numerical criteria (Table-2 of Appendix G of OAC 785:45) at levels which would have reasonable potential to violate numerical criteria. Thus, additional permit action is not necessary for this beneficial use. Where actual or potential exceedance of state water quality criteria is determined to be the result of the facility's discharge to the receiving water(s), the DEQ may determine that the facility is no longer eligible for coverage under this Permit and will require the facility to apply for an individual discharge permit with additional chemical-specific limits or toxicity testing requirements as necessary to maintain the beneficial uses of the receiving stream.

However, lead in the form of tetraethyl lead was once used as a fuel additive in gasoline. Some remediation sites might have lead contamination as one of the potential pollutants of concern. Tetraethyl lead has a much lower solubility in water than benzene and BTEX, so the concentration of tetraethyl lead in the untreated ground water should be low. Since the lead at these sites will be in the form of tetraethyl lead and since tetraethyl lead has a Henry's Law Constant of 0.03; that is higher than the constant for benzene (0.00547), toluene (0.00665), xylenes (0.0052), and ethylbenzene (0.0087); it will be more easily stripped out of solution than benzene and BTEX. Therefore, this Permit does not contain limits or monitoring requirements for lead.

b. Radioactive Materials

Based on the nature of the wastewater, the wastewater discharged through the Outfalls is not expected to contain radioactive materials at levels that would have reasonable potential to violate numerical criteria. Therefore, no permit limits or monitoring requirements are imposed for radioactive materials.

c. Coliform Bacteria

Coliform bacteria are not expected to be present at significant levels in the untreated wastewater from a UST site. Therefore, no permit limits or monitoring requirements are imposed for coliform bacteria.

d. Oil and Grease

In addition to the technology-based numerical limitations for oil and grease, a narrative limitation will be placed in accordance with OAC 785:45-5-10(4), "surface waters of the state shall be maintained free of oil and grease and taste and odors."

e. Water Column Criteria to Protect for the Consumption of Fish Flesh and Water

Since the daily maximum and monthly average technology-based limitations for benzene, BTEX, PAH's, and phenols are more stringent than the long-term average numerical water column criteria, compliance with the technology-based limits for these pollutants will assure compliance with the water column criteria to protect for the consumption of fish flesh and water.

Since no pesticides are expected to be in the contaminated groundwater, a water quality-based limitation is not required to protect for the consumption of fish flesh and water.

2. Emergency Public and Private Water Supplies Use

In accordance with OAC 785:45-5-11, during emergencies, those waters designated Emergency Public and Private Water Supplies may be put to use. Each emergency will be handled on a case-by-case basis, and be thoroughly evaluated by the appropriate State agencies and/or local health authorities. No permit limits are established for this beneficial use.

3. Fish and Wildlife Propagation Use**a. Dissolved Oxygen**

Based on the nature of the wastewater, the wastewater should not contain oxygen-demanding substances at levels that would have reasonable potential to violate numerical criteria. Therefore, no permit limit or monitoring requirement is imposed for dissolved oxygen.

b. Temperature

According to OAC 785:45-5-12(f)(2)(A), at no time shall heat be added to any surface water in excess of the amount that will raise the temperature of the receiving water more than 2.8 °C at the edge of the mixing zone. However, OAC 785:46-11-1(c) applies specific antidegradation maximum limits of 52 °C to all waters of the state including privately owned cooling water reservoirs.

Since significant heat is not added to the wastewater being discharged and all discharges should essentially be at ambient temperature, there is no reasonable potential to violate temperature criteria. Therefore, no permit limit or monitoring requirement is imposed for temperature.

c. pH

According to OWQS, as amended, OAC 785:45-5-12(f)(3), "The pH values shall be between 6.5 and 9.0 in waters designated for fish and wildlife propagation; unless pH values outside that range are due to natural conditions." Therefore, permit limitations for pH of 6.5 to 9.0 standard units were placed in this permit.

d. Oil and Grease

According to OWQS, as amended, OAC 785:45-5-12(f)(4)(A), "All waters having the designated beneficial use of any subcategory of fish and wildlife propagation shall be maintained free of oil and grease to prevent 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 or which cause deleterious effects on the biota." The discharge from the clean-up of petroleum UST

systems is expected to contain pollutants that would require oil and grease limitations and/or monitoring. In addition to technology-based numeric limitations and monitoring requirements, a water quality-based narrative condition prohibiting the discharge of any visible sheen of oil or globules of oil or grease has been included in the draft permit.

e. Biological Criteria

Pursuant to OAC 785:45-5-12(f)(5), aquatic life in all water bodies with the beneficial use designation of Fish and Wildlife Propagation (excluding waters designated “Trout, put-and-take”) shall not exhibit degraded conditions. Based on the nature of the wastewater, after treatment it is not expected to degrade the diversity, similarity, community structure, species tolerance, trophic structure, dominant species, indices of biotic integrity, indices of well-being, or other measures. Therefore, no permit limit or monitoring requirement is imposed.

f. Toxic Substances

Based on the nature of the wastewater and on information contained in past applications for individual discharge permits and authorizations under the previous general permit, the wastewater which discharges through the proposed Outfalls may not contain substances listed in Toxic Substances (OAC 785:45-5-12(f)(6)) for protection of fish and wildlife propagation at levels which would have reasonable potential to violate numerical criteria.

Where actual or potential exceedances of State water quality criteria are determined to be the result of the facility’s discharge to the receiving water(s) DEQ may determine that the facility is no longer eligible for coverage under this Permit and require the facility to apply for an individual discharge permit with additional chemical-specific limits or toxicity testing requirements as necessary to maintain the beneficial uses of the receiving stream.

g. Turbidity

OAC 785:45-5-12(f)(7) states that turbidity from other than natural sources shall be restricted so as not to exceed the numeric limit of 50 NTU’s for surface waters that have a beneficial use of Warm Water Aquatic Community. The draft permit includes a technology-based limitation for TSS (a daily maximum limit of 45 mg/L) and a water quality-based narrative requirement for suspended solids. It is the BPJ of the permit writer that limitations on TSS and suspended solids should adequately control turbidity in the discharges.

4. Agriculture: Livestock and Irrigation Use

Based on the nature of the wastewater, the wastewater discharged through the proposed outfalls should not contain chlorides, sulfates, and total dissolved solids at levels that would have reasonable potential to violate numerical criteria. Thus, additional permit action is not necessary for this beneficial use.

5. Primary Body Contact Recreation Use

Based on the nature of the wastewater, the wastewater discharged through the proposed outfalls should not contain coliform bacteria, Escherichia coli, and Enterococci at significant levels. Thus, additional permit action is not necessary for this beneficial use. However, a narrative requirement is established in the draft permit that the discharge shall not contain chemical, physical, or biological substances in concentrations that are irritating to skin or sense organs, are toxic, or cause illness upon ingestion by human beings.

6. Secondary Body Contact Recreation Use

Based on the nature of the wastewater, the wastewater discharge should be free from human pathogens in numbers that may produce adverse health effect in humans. Thus, additional permit action is not necessary for this beneficial use.

7. Aesthetics Use

Aesthetics use is determined in accordance with OAC 785:45-5-19(a), which states, “the surface waters of the state must be free from floating materials and suspended substances that produce objectionable color and turbidity.” A narrative requirement has been established in the draft permit to prohibit the discharge of floating solids or visible foam in the water other than trace amounts. In addition, the technology-based numerical effluent limitations for TSS should also help to maintain the narrative water quality criteria for aesthetics use.

In accordance with OAC 785:45-5-19(c)(1), surface waters of the state shall be virtually free from all coloring materials that produce an aesthetically unpleasant appearance. A narrative requirement has been placed in the draft permit to prohibit objectionable color in discharges. Based on the nature of the wastewater, the discharge should be free from nutrients that could cause excessive growth of periphyton, phytoplankton, or aquatic macrophyte communities. Therefore, no permit limit or monitoring requirement has been imposed for nutrients.

8. Fish Consumption Use

Since the technology-based daily maximum and daily average limits for benzene, BTEX, PAH's, and total phenols are more stringent than the long-term average numerical water column criteria, it is the BPJ of the permit writer that compliance with these limitations will assure compliance with the water column criteria to protect human health for the consumption of fish flesh.

Since no pesticides are expected to be in the contaminated groundwater, there exists no reasonable potential to violate water quality standards for water column criteria for pesticides.

D. 303(D) LIST EVALUATION

This general permit shall not cover those facilities discharging to the receiving streams included in Oklahoma's 303(d) List of impaired water bodies caused by pH and Oil and Grease for which a Total Maximum Daily Load (TMDL) has not been performed or the result of the TMDL indicates that more stringent discharge limits are required. Those facilities shall apply for coverage under an individual discharge permit in accordance with requirements to obtain a permit contained in OAC 252:606.

E. ENDANGERED SPECIES

For new facilities applying for coverage under this General Permit, the DEQ will determine whether the point of discharge is located in surface waters designated sensitive by the U.S. Fish and Wildlife Service (USFWS). If the proposed discharge point for a new facility is located in sensitive water, the facility will not be eligible for an Authorization under this permit. For an existing facility applying for coverage under this Permit where the point of discharge is located in surface waters designated sensitive by the USFWS for endangered species and there has been no increase in the discharge volume or change to the point of discharge, consultation with the USFWS is not required.

F. ANTIDegradation REQUIREMENTS

Appendix A of OAC 252:690 describes the processes, procedures, and methodologies utilized to ensure that programs within jurisdictional areas of environmental responsibility comply with antidegradation standards and lead to: (A) maintenance of water quality where beneficial uses are supported; (B) removal of threats to water quality where beneficial uses are in danger of not being supported; and (C) restoration of water quality where beneficial uses are not being supported.

The antidegradation policy in the OWQS also prohibits an increase in loading that would impair or further impair an existing use. In addition, the policy prohibits degradation of outstanding resource waters and high-quality waters, even if existing and designated uses would still be attained. To ensure that these requirements are met, discharge of wastewater to streams identified as ORW, Appendix B Waters, HQW, and SWS is prohibited under this permit. These uses are identified in OAC 785:46-13-4 and 13-5 as requiring Tier 2 and Tier 3 levels of protection respectively by the OWQS. For all other beneficial uses identified in Part III, OAC 785:46-13 states that the beneficial uses will be maintained and protected. This level of protection is identified as Tier I by the OWQS.

VI. NON-DISCHARGE REQUIREMENTS**A. SURFACE IMPOUNDMENTS**

The use of surface impoundments for treatment and/or disposal of wastewater at petroleum underground storage tank systems is not allowed by this Permit.

B. TANK SYSTEMS

The use of tank systems to treat and/or dispose of wastewater at petroleum UST systems is not allowed by this Permit.

C. LAND APPLICATION OF INDUSTRIAL WASTEWATER AND/OR SLUDGE

This permit does not allow Land application of industrial wastewater and/or sludge.

D. OTHER DISPOSAL METHODS

The following requirement has been included in Part II of the draft permit: Solids, sludge, filter backwash, or other pollutants removed in the course of treatment or control of wastewater shall be disposed of in a state-approved industrial waste disposal site or to a company for recycling. Disposal shall be in a manner such as to prevent any pollutant from such materials from entering water of the state or waters of the United States. If any such industrial wastewater and/or sludge 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 five (5) years. Upon request, the above records shall be made available to the DEQ's staff for review.

VII. DRAFT PERMIT LIMITS AND OTHER REQUIREMENTS

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

The effluent limitations listed in Table 1 will apply to wastewater generated from the cleanup of petroleum UST systems.

TABLE 1
EFFLUENT LIMITATIONS

Parameters	Technology/BPJ-Based		Water Quality Standard-Based		Draft Permit	
	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.	Monthly Avg.	Daily Max.
Flow (in gpd)	Report	Report	--	--	Report	Report
Benzene, Total	5 µg/L	5 µg/L	--	--	5 µg/L	5 µg/L
BTEX, Total	100 µg/L	100 µg/L	--	--	100 µg/L	100 µg/L
PAH's	10 µg/L	10 µg/L	--	--	10 µg/L	10 µg/L
MTBE	70 µg/L	70 µg/L	--	--	70 µg/L	70 µg/L
Phenols, total	150 µg/L	250 µg/L	--	--	150 µg/L	250 µg/L
TOC	75 mg/L	95 mg/L	--	--	75 mg/L	95 mg/L
Oil & Grease	15 mg/L	15 mg/L	--	--	15 mg/L	15 mg/L
TSS	---	45 mg/L	--	--	---	45 mg/L
pH	Between 6.0 - 9.0 s.u.		Between 6.5 - 9.0 s.u.		Between 6.5 - 9.0 s.u.	

TABLE 2
MONITORING REQUIREMENTS

Parameters	Measurement Frequency ⁽¹⁾	Sample Type	MLL (µg/L)
Flow (in gpd)	Daily	⁽²⁾	--
Benzene, Total	1/Week	Grab	2.5
BTEX, Total ⁽³⁾	1/Week	Grab	10
PAH's ⁽⁴⁾	1/Month	Grab	10
MTBE ⁽⁵⁾	1/Month	Grab	10
Phenols, total ⁽⁶⁾	1/Week	Grab	10
TOC	1/Week	Grab	--
Oil & Grease ⁽⁷⁾	1/Week	Grab	--
TSS	1/Week	Grab	--
pH	1/Week	Grab	--

⁽¹⁾ When discharging. In the event there is no discharge for any given calendar month during the effective period of these monitoring requirements, there shall be no monitoring required for that month.

⁽²⁾ The flow sample type shall be specified on the permittee's Authorization Page and Discharge Monitoring Reports.

- (3) BTEX shall be measured as the sum of benzene, toluene, ethylbenzene, and xylenes. EPA Method 624, 8021B, or equivalent shall be used for the measurement of xylenes including ortho-, meta-, and para-xylenes.
- (4) The effluent limitations and monitoring requirements for PAH's do not apply to discharges from the cleanup of petroleum UST systems containing only gasoline, jet fuel, and/or kerosene. The monthly average and daily maximum values of any of the following PAH's shall not exceed 10 µg/L: acenaphthene, acenaphthylene, anthracene, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(ghi)perylene, benzo(a)pyrene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, pyrene.
- (5) MTBE sampling shall be performed in accordance with EPA Method 624, 8260 or equivalent. The concentration of MTBE in groundwater shall be determined by testing three consecutive samples. If three (3) consecutive tests show the presence of MTBE to be at or below the MQL of 10 µg/L in all three samples, then the monitoring requirement for MTBE is not required for the life of the permit. The permittee shall report "not required" on its DMR under MTBE effluent limitation. If MTBE is present above the MQL of 10 µg/L in any one or more of the three samples, then the MTBE effluent limitation does apply. The permittee shall report the value achieved during each calendar month on its DMR under MTBE effluent limitation.
- (6) EPA Method 625 or equivalent shall be used for the measurement of total phenols.
- (7) EPA Method 1664 shall be used for the measurement of oil and grease.

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 watercourses. Surface waters of the state shall be maintained free from oil and grease, taste, and odors.

There shall be no discharge of floating solids or visible foam in other than trace amounts, and there shall be no objectionable color in the discharge.

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. The treatment works shall operate at the optimal average design flow rate for maximum groundwater cleanup. No backwash from any treatment unit(s) for maintenance purposes or any other reasons shall be discharged through the authorized outfall(s).

Samples taken in compliance with the specified monitoring requirements shall be taken at the discharge outfall(s) specified in the individual authorization at the nearest accessible point after final treatment but prior to actual discharge.

B. REPORTING OF MONITORING RESULTS

Monitoring results shall be reported in accordance with the provisions of Part III.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 15th 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 eDMR's, as well as how to prepare and submit eDMR's, can be found on DEQ's website at:

<https://www.deq.ok.gov/water-quality-division/electronic-reporting/>.

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

VIII. SUMMARY OF CHANGES FROM THE PREVIOUS PERMIT

Minor wording and formatting changes were made relative to the previous permit.

IX. ADMINISTRATIVE RECORD

The following sources were used to prepare the draft permit and constitute a part of its administrative record.

A. APPLICATIONS

Industrial Permit files containing permits, applications and monitoring data. The current petroleum UST systems general Permit OKG83.

B. CLEAN WATER ACT CITATIONS

Sections 301(a), 303(d), 304(b), 306, and 402(a).

C. FEDERAL RULES AND REGULATION

40 C.F.R., Parts 122, 124, 136 and 280.

D. STATE LAW, STANDARDS, AND RULES AND REGULATIONS

Oklahoma Pollutant Discharge Elimination System (OPDES) Act, 27A O.S. §2-14-305 and §2-6-201 *et seq.*
OAC 252:606, OPDES Standards (DEQ).
OAC 252:690, Water Quality Standards Implementation (DEQ).
OAC 785:45, Oklahoma Water Quality Standards (OWRB).
OAC 785:46, OWQS Implementation (OWRB).
Oklahoma Continuing Planning Process Document (CPP), (DEQ).

E. MISCELLANEOUS

303(d) List.

X. REVIEW BY OTHER AGENCIES AND FINAL DETERMINATION

A draft permit, fact sheet, and draft public notice will be sent to the District Engineer, Corps of Engineers, Oklahoma Conservation Commission, and to the Regional Director of the U.S. Fish and Wildlife Service upon publication of that notice. If comments are received from these agencies or other State or Federal agencies with jurisdiction over fish, wildlife, or public health, the permit may be denied or additional conditions may be included in accordance with regulations promulgated under 40 C.F.R. Part § 124.59.

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

APPENDIX A

OKLAHOMA SENSITIVE WATERS AND WATERSHEDS HARBORING ENDANGERED AND THREATENED SPECIES AND THEIR CRITICAL HABITAT OF CONCERN

A. Sensitive waters and watersheds for federally listed species, as defined by the U.S. Fish and Wildlife Service.

1. *Grand (Neosho) River* – A 2-mile corridor (1 mile from each bank) of the main stem of the Grand (Neosho) River above its confluence with Tar Creek. This corridor includes portions of Ottawa and Craig Counties.
2. *Cimarron River* – A 2-mile corridor (1 mile from each bank) of the main stem of the Cimarron River from the US Hwy-77 Bridge in Logan County upstream to and including Beaver County. This corridor includes river segments in Beaver, Harper, Kingfisher, Logan, Major, Woods, and Woodward Counties.
3. *South Canadian River* – A 2-mile corridor (1 mile from each bank) of the main stem from the Eufaula Reservoir flood pool upstream to the northern border of Custer County. This corridor includes river segments in Blaine, Caddo, Canadian, Cleveland, Custer, Grady, Hughes, McClain, McIntosh, Pittsburg, Pontotoc, Pottawatomie, and Seminole Counties.
4. *Muddy Boggy River* – A 2-mile corridor (1 mile from each bank) of the main stem of the Muddy Boggy River which includes portions of Choctaw, Atoka, and Coal Counties.
5. *Kiamichi River* – The watershed of the Kiamichi River upstream from the Hugo Reservoir. This watershed includes portions of Choctaw, Pushmataha, Atoka, Pittsburg, Latimer, and LeFlore Counties.
6. *Little River* – The watershed of the Little River includes portions of Choctaw, LeFlore, Pushmataha and McCurtain Counties.
7. *Glover River* – The watershed of the Glover River includes portions of Pushmataha and McCurtain Counties.
8. *Mountain Fork River* – The watershed of the Mountain Fork River is above the Broken Bow Reservoir and includes portions of LeFlore and McCurtain Counties.
9. *Northeast HUC-11 Watersheds* - The watersheds are identified by the following 11-digit Hydrologic Unit Codes: 1107020206030, 11070206060, 11070207190, 11070208070, 11070209020, 11070209030, 11070209040, 11070209050, 11070209060*, 11070209070, 11070209100, 11070209110 and 11070209120. These watersheds include portions of Ottawa, Craig, Delaware, and Mayes Counties.

* This HUC does not contain a known Ozark cavefish cave. It was included because it is entirely surrounded by 11 digit HUCs with known Ozark cavefish caves; therefore, we assume that Ozark cavefishes likely occupy this portion of the watershed as well.
10. *Elk River* – A 2-mile corridor (1 mile from each bank) of the Elk River which includes portions of Delaware County.
11. *Spring River* – A 2-mile corridor (1 mile from each bank) of the Spring River which includes portions of Ottawa County.
12. *Verdigris River* – A 2-mile corridor of the main stem from the dam of Lake Oologah to the confluence of the Arkansas River which includes river segments in Rogers, Wagoner, and Muskogee Counties.

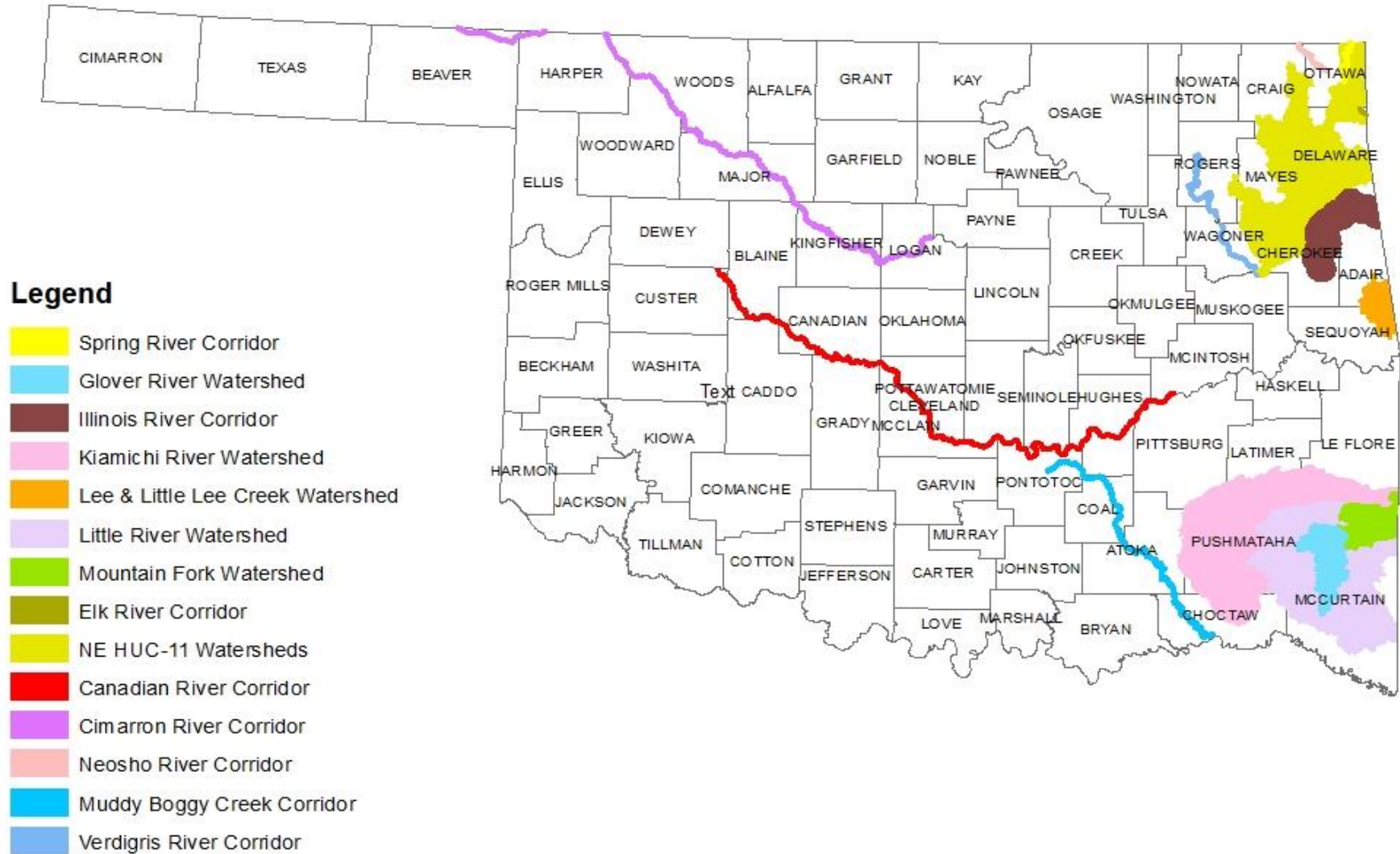
B. Sensitive waters and watersheds for State listed species, as defined by the Oklahoma Department of Wildlife Conservation.

1. *Illinois River* – A 10 mile corridor (5 miles from each bank within the watershed) of the main stem of the Illinois River above Tenkiller Reservoir. This corridor includes portions of Cherokee, Delaware, and Mayes Counties.
2. *Lee and Little Lee Creeks* – The watershed of Lee Creek and Little Lee Creek which includes portions of Sequoyah and Adair Counties.

Note: No sensitive endangered or threatened species occur in the following counties: Alfalfa, Beckham, Carter, Cimarron, Comanche, Garfield, Garvin, Grant, Greer, Johnston, Kiowa, Lincoln, Murray, Nowata, Okfuskee, Oklahoma, Okmulgee, Rogers, Stephens, Texas, Washington, or Washita.

Oklahoma Aquatic Resources of Concern for Federal & State Listed Species

as identified by the U.S. Fish & Wildlife Service and the Oklahoma Department of Wildlife Conservation



RESPONSE TO COMMENTS

This is the Department's response to comments received on the subject draft permit in accordance with regulations promulgated at 40 C.F.R. § 124.17.

OPDES Permit Number: OKG83

Applicant: Owners or Operators of Petroleum Underground Storage Tank Systems in Oklahoma

Issuing Office: Oklahoma Department of Environmental Quality
Water Quality Division
P.O. Box 1677
Oklahoma City, OK 73101-1677

Prepared By: James Grim
Industrial Permits Section
Water Quality Division

Date Prepared: December 7, 2022

Permit Action: Response to comments received on the proposed permit publicly noticed October 23, 2022 (by DEQ).

COMMENTS RECEIVED ON DRAFT PERMIT

The following comments were received on the draft permit:

- Comment from Evan Inman, received from DEQ's Permits for Public Review website, dated November 24, 2022.

RESPONSE TO COMMENTS

1. COMMENT

Clarification is needed where the GENERAL PERMIT NO. OKG83 states, "This Permit shall not cover those facilities discharging to the following waters: Outstanding Resource Waters; Appendix "B" Waters; High Quality Waters; Sensitive Public and Private Water Supplies [OAC 785:45-5-25(c)] and receiving streams included in Oklahoma's "303(d) List" of impaired waterbodies caused by Organic Enrichment/DO, pH, and Oil and Grease for which a Total Maximum Daily Load (TMDL) has not been performed or the result of the TMDL indicates that more stringent discharge limits are required. Those facilities shall apply for coverage under an individual discharge permit in accordance with requirements to obtain a permit contained in Oklahoma Administrative Code (OAC), Title 252, Chapter 606: OPDES Standards." as to whether the lack of a TMDL study is overdue under existing regulatory guidelines [length of time listed under category 5a/303(d)] and whether discharges under individual permits could be reasonably foreseen to compromise an existing ecosystem, a tributary of an impaired (or otherwise fragile or sensitive) water body.

RESPONSE

If a stream to which there is a proposed discharge is impaired for Organic Enrichment/DO, pH, and/or Oil and Grease, then the discharge may not be covered by the OK83 General Permit and an individual permit will need to be applied for. Individual permits would include permit limits that will ensure that the receiving stream does not receive pollutants at a concentration that would exceed water quality standards. The

standards are set at levels that would be protective of existing ecosystems. No changes have been made to the draft permit as a result of this comment.

2. COMMENT

How does ODEQ “determine whether the point of discharge is located in surface waters designated sensitive by the U.S. Fish and Wildlife Service”?

RESPONSE

DEQ will determine whether a point of discharge is located in surface waters designated sensitive by the US Fish and Wildlife Service using the "Oklahoma Aquatic Resources of Concern for Federal & State Listed Species" list and map consistent with the Multi-Sector General Permit for Industrial Activities (MSGP), OKR05. This list and map will be added as an appendix to the draft OKG83 general permit and fact sheet. No changes have been made to the draft permit as a result of this comment.

3. COMMENT

If a discharge point is determined to be “located in a sensitive water” how will ODEQ evaluate discharges on the impacted waterbody and enforce compliance for old, existing, or grandfathered permit holders?

RESPONSE

If a new discharge point is determined to be located in a waterbody that is determined sensitive by USFWS, then the discharge may not be covered under the OKG83 general permit and an individual permit will need to be applied for. The draft individual permit will be sent to the USFWS for review and comment. Existing permit holders that discharge to a waterbody that is designated sensitive by the USFWS will not need to have their permit reviewed by USFWS. No changes have been made to the draft permit as a result of this comment.

4. COMMENT

The permit states, “For an existing facility applying for coverage under this Permit where the point of discharge is located in surface waters designated sensitive by the U.S. Fish and Wildlife Service (USFWS) for endangered species and there have been no changes in the discharge volume or the point of discharge, consultation with the USFWS is not required.” Please explain how a change in discharge volume is measured and calculated and what mechanism exists for initiating a consultation with USFWS.

RESPONSE

The sentence (Page 1, 2nd to last paragraph of draft permit and on Page 11, Section V.E of the fact sheet) should have stated, “... has been no increase in the discharge volume or change to the point of discharge...” This has been corrected in the draft permit and fact sheet. An increase in discharge volume is determined by comparing the average daily flow on the renewal application to the average daily flow listed on the previous application. If the discharge point is located within an area considered sensitive by the USFWS and the flow has increased or the discharge point has changed, then an individual permit will need to be applied for and the draft individual permit will be sent to the USFWS during the public notice time period for review and comment.

5. COMMENT

How is wastewater discharge content determined and reported to the USFWS? Does ODEQ do this? What are the timelines for reporting and consulting with USFWS prior to issuing a new or renewed permit? What

happens if there is a violation which could or did impact the ecosystem/habitat under the purview of the USFWS? Are volume and location changes the only appropriate/relevant considerations for consultation with USFWS?

RESPONSE

Results for pollutants that have been analyzed (e.g. analytical test results submitted with an application) may be sent to the USFWS upon request. USFWS will typically have the length of the public comment period to comment on a draft permit (typically 30 days). If there is a violation which did impact the ecosystem/habitat under the purview of the USFWS, then the facility would be subject to enforcement actions. Volume and location changes are considered when the discharge is located in an area considered sensitive by the USFWS and the permit is being renewed. Since there are relatively stringent limits placed on the discharges under the OKG83 general permit, it is unlikely that the discharge would change much in composition from one permit cycle to the next (for discharges under the OKG83 general permit), therefore discharge location and flow volume are the significant changes which are considered when determining whether, or not, the USFWS needs to be consulted. No changes have been made to the draft permit as a result of this comment.

6. COMMENT

How will assurance be made that, “At no time shall the effluent cause a violation of Oklahoma’s Water Quality Standards (OWQS) in the receiving stream.” This is important because watersheds don’t exist on paper and water tables can’t be observed in charts on a monitoring report; how is compliance assured? A receiving stream or water body may be the unintended “beneficiary” of discharge.

RESPONSE

Permit limits are intended to ensure that pollutants in a discharge remain below a level which would violate water quality standards. It is, however, possible for a permitted discharge to contain pollutants at levels which would violate water quality standards, but this would be a violation of the permit and subject to enforcement actions. No changes have been made to the draft permit as a result of this comment.

7. COMMENT

If, at the sampling point indicated,
“The discharge [does] 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” but commingles with other permitted discharges within a given proximity culminating situation that does cause the prohibited reaction in people who are exposed, how does ODEQ measure each permitted discharger’s contribution?

RESPONSE

If the parameter in question is being monitored at each discharge point, the discharge monitoring reports will show the contribution levels of each permitted discharge. No changes have been made to the draft permit as a result of this comment.

8. COMMENT

In waters where the public recreates (or are encouraged to recreate) and will come in contact with receiving bodies of water, what measures are in place notify or warn people when discharges exceed permitted levels?

RESPONSE

The permittee is required to notify DEQ of an exceedance of a permit limit within 24 hours of becoming aware of the exceedance. This information usually is not determined until several weeks after the discharge has occurred, since that is how long it often takes to obtain test results. Currently, the public is not notified of these exceedances. No changes have been made to the draft permit as a result of this comment.

9. COMMENT

What downstream monitoring is performed?

RESPONSE

Typically, there is no downstream monitoring being performed. No changes have been made to the draft permit as a result of this comment.

10. COMMENT

How will the determination be made as to whether a general or individual permit is more appropriate/applicable to applicants?

RESPONSE

If the discharge is to an Outstanding Resource Water, Appendix "B" Water, High Quality Water, Sensitive Public and Private Water Supply, and receiving stream included in Oklahoma's "303(d) List" of impaired waterbodies caused by Organic Enrichment/DO, pH, and/or Oil and Grease for which a Total Maximum Daily Load (TMDL) has not been performed or the result of the TMDL indicates that more stringent discharge limits are required, then the facility shall apply for coverage under an individual discharge permit. If a new discharge is to surface waters designated sensitive by the USFWS, then the facility shall apply for coverage under an individual discharge permit. If special conditions are required in the permit, such as additional monitoring or a schedule of compliance, then an individual permit would be required. No changes have been made to the draft permit as a result of this comment.

11. COMMENT

What emergency management procedures are in place to notify the public and protect the health of people should excessive concentrations of regulated chemicals be released into the environment as the result of permitted activities??

RESPONSE

The public may use EPA's Enforcement and Compliance History Online (ECHO) website to retrieve Discharge Monitoring Report (DMR) data for a particular discharger. The website may be found at the following website location: <https://echo.epa.gov> If there is a spill of a hazardous substance, it must be reported right away on the DEQ hotline, phone number 1-800-522-0206. DEQ will determine if the spill is hazardous to the public and, if so, will provide necessary information to the news media. There will be an incident commander, who will be a member of public law enforcement, stationed at the site of the spill and if an evacuation is necessary, this will be coordinated by the public law enforcement agency. No changes have been made to the draft permit as a result of this comment.

12. COMMENT

How can members of the public report violations or ask for an investigation if they are impacted by a suspected violation?

RESPONSE

Members of the public may report violations or ask for an investigation if they are impacted by a suspected violation by calling the complaints hotline at 1 (800) 522-0206 or by using the online complaint form which may be found at the following website address: <https://www.deq.ok.gov/environmental-complaints/> No changes have been made to the draft permit as a result of this comment.

OTHER CHANGES FROM DRAFT PERMIT

No other changes from the draft permit have been made.