

ROUTING SLIP

DATE: January 2, 2013
TO: Shellie Chard-McClary, Division Director
Water Quality Division
(signature required, permit only)

THRU: Sara Orwig, Division Secretary \$0 1/3/13
Water Quality Division

THRU: Carol Paden, P.E., Manager Comp 1/3/13
Industrial Permits Section
(signature required)

THRU: Alisha A. Barham AS 1-3-13

FROM: Ismat Esrar, P.E.
Industrial Permits Section

ATTACHED IS: OPDES Permit No. OKG830000
General Permit to discharge treated wastewater resulting
from the cleanup of Petroleum Underground Storage Tank Systems

TYPE PERMIT: TIER II - GENERAL PERMIT

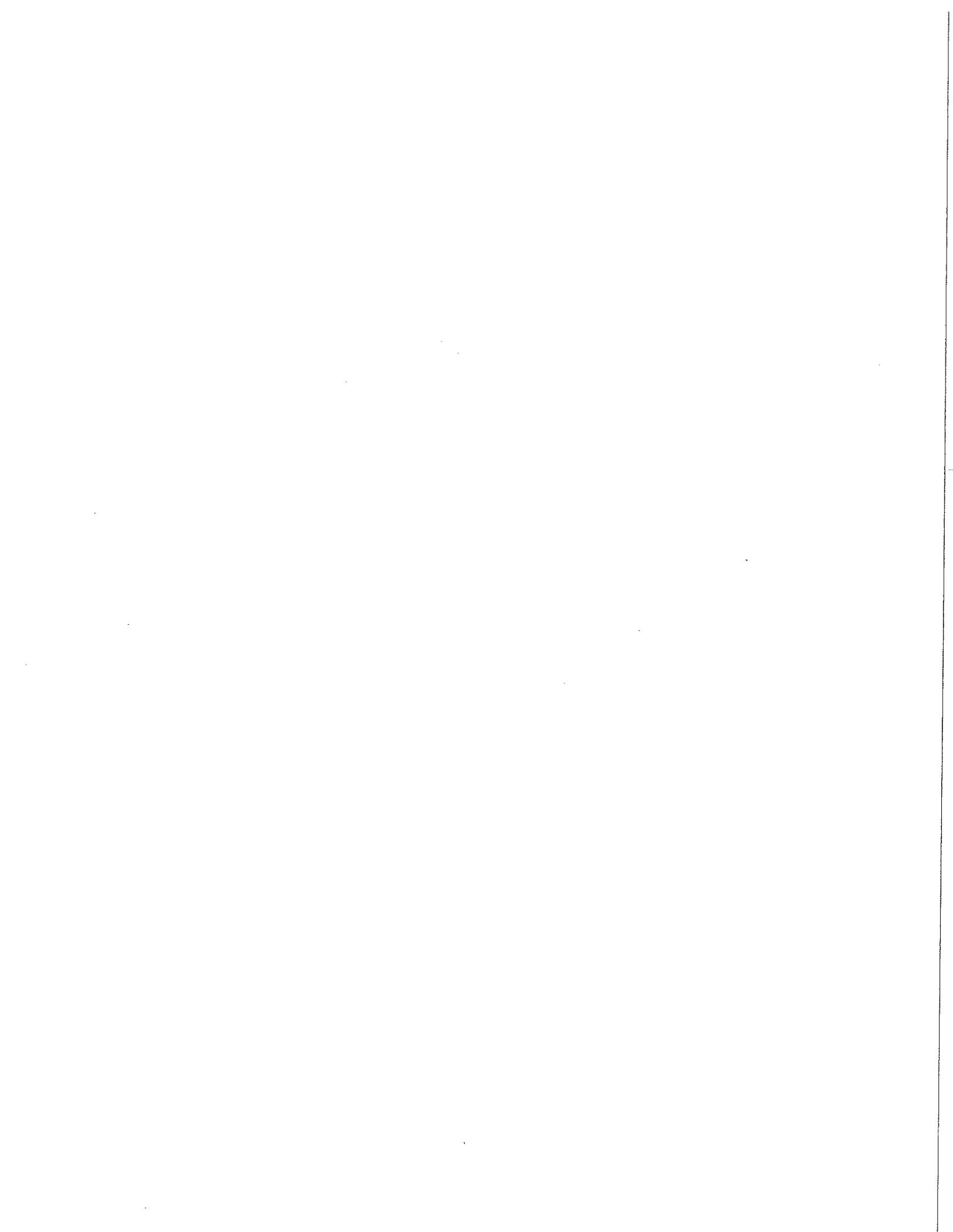
New Renewal Revoke/Reissue Major Mod

COMMENTS: FOR YOUR SIGNATURE (FINAL PERMIT).

The final permit is now ready for issuance. The draft permit was publicly noticed on: **November 21, 2012** and **November 28, 2012** by the DEQ.

- No comments were received during the required public comment period.
- Comments were received during the required public comment period. The **Response to Comments (which also requires your signature)** is attached. The response has been discussed with the applicant. A change has been made in the Fact Sheet as a result of comments received during the public comment period is summarized in the Response to Comments.

RETURN TO: Permit writer for corrections, or
Alisha A. Barham for mail-out.



**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. OKG830000**

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 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 the DEQ. Owners or operators of petroleum UST systems located within the boundaries of the State of Oklahoma must make a written request to the 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 the 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 & 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 the requirements to obtain a permit contained in Oklahoma Administrative Code (OAC), Title 252, Chapter 606: OPDES Standards.

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 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 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 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.

Petroleum UST systems that are currently permitted by the DEQ through individual wastewater disposal permits or have an authorization under the current general permit OKG83000 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 the 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 disposal 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 on December 3, 2007 and expired on January 1, 2013.

This Permit shall become effective on January 3, 2013.

This Permit, and any Authorizations issued under it shall expire at midnight, on January 2, 2018.

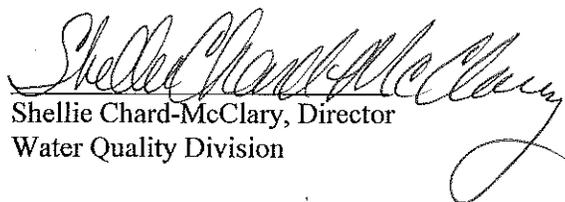
This is to certify that the wastewater discharges set forth in this Permit comply with the requirements of Oklahoma's Water Quality Standards, as amended, provided the permittee does not exceed the effluent limitations set forth in this permit.

Issued on this 3rd day of January, 2013.

For Oklahoma Department of Environmental Quality



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


Shellie Chard-McClary, 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. Wastewater discharges regulated by this Permit are 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
Polycyclic Aromatic Hydrocarbons (PAHs) 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: 00552	15 mg/L	15 mg/L
Total Suspended Solids (TSS) STORET: 00530	N/A	45 mg/L
pH STORET: 00400	Between 6.5 – 9.0 s.u.	

**TABLE 2
MONITORING REQUIREMENTS**

PARAMETERS	MEASUREMENT FREQUENCY ¹	SAMPLE TYPE
Flow (gpd)	Daily	Note-2
Benzene, total	1/Week	Grab
BTEX, total ³	1/Week	Grab
PAHs ⁴	1/Month	Grab
MTBE ⁵	1/Month	Grab
Phenols, total ⁶	1/Week	Grab
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 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, ethylbenzene, toluene, 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 polycyclic aromatic hydrocarbons (PAHs) 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 PAHs 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, fluorine, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, pyrene.

⁵ MTBE (methyl tertiary-butyl ether) sampling shall be performed in accordance with EPA Method 624, 8260 or equivalent. 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 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 phenol.

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

NOTE: See Parts II and III of this Permit for additional requirements.

There shall be no discharge of a visible sheen of oil or globules of oil or grease on or in the water. Oil and grease shall not be present in quantities that adhere to stream banks and coat bottoms of water courses. Surface waters of the State shall be maintained free from oil and grease and taste and odors.

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

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

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 specified above shall be taken at the 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 reported on the Discharge Monitoring Report (DMR) forms due to the Oklahoma Department of Environmental Quality, Water Quality Division, Wastewater Compliance Tracking Section postmarked or received no later than the 15th day of the following month. If no discharge occurs during the reporting period, DMR forms stating "No Discharge" shall be submitted according to the above schedule.

**PART II
OTHER PERMIT REQUIREMENTS**

A. REGULATORY NOTICE

The permittee is hereby given notice that this permit is in all respects subject to compliance with and actions under any and all applicable and relevant terms, conditions, provisions and requirements and any and all amendments of the laws of the State of Oklahoma, the rules of the Oklahoma Department of Environmental Quality, and Oklahoma's Water Quality Standards. The absence of any express reference within this permit of any particular statutory requirement, rule(s), regulation(s), or standard(s) shall in no respect be deemed or construed to exempt or preclude the application of such requirement, rule(s), regulation(s), or standard(s) to this Permit or the permittee. By the Director's approval, grant, and issuance of this Permit, the permittee acknowledges receipt of true, correct, and current copies of Oklahoma's Water Quality Standards and the rules of the DEQ, provided, however, that 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 or revocation and reissuance to require additional monitoring and/or effluent limitations where actual or potential exceedances of State water quality criteria are determined to be the result of the permittee's discharge to the receiving water(s), or a Total Maximum Daily Load is established for the receiving stream(s), or when required as technology advances. Modification or revocation and reissuance of the permit shall follow regulations listed at 40 CFR § 124.5.

C. LABORATORY CERTIFICATION

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

D. ANALYTICAL REQUIREMENTS

Unless otherwise specified in this Permit, monitoring shall be conducted according to analytical, apparatus and materials, sample collection, preservation, handling, etc., procedures listed at 40 CFR Part 136 in effect on the effective date of this permit. Appendices A, B, and C to 40 CFR Part 136 are specifically referenced as part of this requirement. Amendments to 40 CFR Part 136 promulgated after the effective date of this permit shall supersede these requirements as applicable.

E. 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 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 Permit solely because it already has an individual permit may request that its individual permit be revoked, and that it be covered by this Permit. Upon revocation of the individual permit, this Permit shall apply to the source.

F. MINIMUM QUANTIFICATION LEVEL (MQL)

If any individual analytical test result is undetectable at a detection limit less than the minimum quantification level (MQL) listed below, a value of zero (0) may be used for that individual result for the DMR calculations and reporting requirements. If a pollutant is found at a measurable level, however, it must be averaged with all samples for the reporting period. Non-detectable levels of such pollutants for the affected reporting period will be assumed to be present at one-half the analytical detection limit for averaging purposes.

<u>Parameter</u>	<u>MQL (µg/L)</u>
Benzene, total	2.5
BTEX, total	10.0
PAHs	10.0
MTBE	10.0
Phenols, total	10.0

Technical assistance in adapting 40 CFR Part 136 analytical methods to measuring hardness-dependent metals in very low hardness waters is available from the DEQ's State Environmental Laboratory.

The permittee may develop an effluent and/or upstream specific method detection limit (MDL) in accordance with Appendix B to 40 CFR Part 136. For any pollutant for which the permittee determines an effluent and/or upstream specific MDL, the permittee shall send to the DEQ, Water Quality Division, Industrial Permits Section, a report containing QA/QC documentation, analytical results, and calculations necessary to demonstrate that the effluent and/or upstream specific MDL was correctly calculated. An effluent and/or upstream specific minimum quantification level (MQL) shall be determined in accordance with the following calculation:

$$\text{MQL} = 3.3 \times \text{MDL}$$

Upon written approval by the Industrial Permits Section, the effluent and/or upstream specific MQL may be utilized by the permittee for all future DMR calculations and reporting requirements.

G. SURFACE IMPOUNDMENTS

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, sludge, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters 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 removed from the facility, the permittee shall keep accurate records, which include the following information:

- Name and address of company hauling waste.
- Time and date of hauling waste.
- The type and amount of waste hauled.

- 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 Department's staff for review.

J. LAWS AND RULES APPLICABLE

The 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 of the laws of the State of Oklahoma and the 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 responsibility to obtain true, correct, and current copies of applicable DEQ Rules (as amended), provided, however, that permittee further acknowledges that any and all amendments thereto shall become a part of this Permit.

FACT SHEET

GENERAL WASTEWATER PERMIT TO DISCHARGE TREATED WASTEWATER RESULTING FROM THE CLEANUP OF PETROLEUM UNDERGROUND STORAGE TANK SYSTEMS TO THE WATERS OF THE STATE UNDER THE OKLAHOMA POLLUTANT DISCHARGE ELIMINATION SYSTEM (OPDES)

DEQ Permit No.: OKG830000

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: May 30, 2012

Prepared By: Ismat Esrar, 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 OKG830000 (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 the DEQ has jurisdiction will be regulated by this Permit.

This Permit will only cover discharging facilities. This Permit will not cover 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 & 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 the requirements to obtain a permit contained in Oklahoma Administrative Code (OAC), Title 252, Chapter 606: OPDES Standards.

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 petroleum UST systems has the potential to contain the pH, oil & grease, total organic carbon (TOC), and total suspended solids (TSS).

2. Priority Pollutants

Wastewater generated from petroleum UST systems has the potential to contain high levels of total benzene, total BTEX (benzene, toluene, ethylbenzene, and xylenes), PAHs (polycyclic aromatic hydrocarbons), total phenols, and MTBE (methyl *tertiary*-butyl ether).

IV. TECHNOLOGY-BASED LIMITATIONS AND CONDITIONS

A. GENERAL

Regulations promulgated in 40 CFR § 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, PAHs, 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) or Best Conventional Pollutant Control Technology (BCT) using 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 system 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 Constant 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, the xylenes, 1,3,5-trimethylbenzene, and naphthalene have the lowest Henry's Law Constants. While these compounds are the least strippable constituents of hydrocarbon fuels, all of the gasoline constituents are within the range where air stripping is considered to be 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 insoluble in water but soluble in both 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 Constant and the solubility of these pollutants in water, sufficient treatment of benzene will assure sufficient treatment of 1, 3, 5-trimethylbenzene and naphthalene. Therefore, benzene is

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 percent efficiency. Therefore, a monthly average and daily maximum limit of 5 µg/L has been 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, and 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 is prudent because the composition of petroleum hydrocarbon fuels is highly variable and 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 waste water 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 percent. 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. PAHs

There are several polycyclic aromatic hydrocarbons (PAHs) present in many refined petroleum products which are on the list of Clean Water Action 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 which were detected in refinery wastewater. Ten (10) PAHs were found in the untreated, partially treated or fully treated wastewater from the group of refineries sampled. These PAHs are expected to be present in a number of refined petroleum products. PAHs are highly carcinogenic at relatively low levels and are, therefore, of potential concern.

Sixteen (16) PAHs have, therefore, been selected to represent the nonvolatile components of petroleum UST systems other than those containing gasoline, jet fuel or kerosene. The PAHs 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, fluorine, indeno (1,2,3-cd) pyrene, naphthalene, phenanthrene, and pyrene.

The monthly average and daily maximum limits being placed on each of these 16 PAHs 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 fuel to increase its oxygen content. MTBE is used in 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. MTBE is considered as a potential human carcinogen, but as yet there is no maximum contaminant level (MCL) for drinking water.

MTBE, a colorless, flammable liquid with a turpentine-like odor, is highly water soluble, highly flammable and extremely volatile. MTBE is resistant to biodegradability in either aerobic or 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 where groundwater 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 than for BTEX compounds.

Given the widespread use of MTBE 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, a Monthly Average and Daily Maximum effluent level of 70 µg/L is imposed on MTBE. This MTBE limit is the same as on the previous permit. Effluent sampling for MTBE shall be performed with EPA Method 624 as indicated on the effluent limitations table.

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 permits and the previous general permits for this type of facility and for other facilities with similar discharges, and data submitted by permittees through Discharge Monitoring Reports (DMRs).

f. Organic Carbon

In order to maintain a reasonable treatment efficiency level and in order to protect against pollutants which 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 and are BPJ-based on previously issued individual discharge permits for this type of facility and for other facilities with similar discharges, and data submitted by permittees through Discharge Monitoring Reports (DMRs).

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 permits for this type of facility and for other facilities with similar discharges and the previous general permits. Based on BPJ, a daily maximum of 45 mg/L effluent limitation has been included in the draft permit for TSS.

h. Oil & Grease

BPJ-based daily maximum concentration limit of Oil & Grease has been included based on previously issued individual discharge permits for this type of facility and for other facilities with similar discharges and the previous general permits. Based on BPJ, a monthly average and daily maximum effluent level of 15 mg/L is 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 average 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, total	5 µg/L	5 µg/L
BTEX, total	100 µg/L	100 µg/L
PAHs	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	N/A	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 containing technology-based permit limitations alone may not adequately protect the quality of a specific receiving stream. Thus, additional water quality-based effluent limitations and/or conditions are considered in the draft permit using narrative and numerical standards contained in the Oklahoma Water Quality Standards (OWQS), as amended (OAC 785:45), and implementation criteria contained in OACs 785:46 and 252:690, promulgated by the Oklahoma Water Resources Board (OWRB) and Department of Environmental Quality (DEQ), respectively. This is to ensure that no point-source discharge results in instream aquatic toxicity, a violation of applicable narrative or numerical State water quality standards, or aquatic bioaccumulation which threatens human health.

B. RECEIVING STREAM DESIGNATED USES AND ANTIDEGRADATION PROVISION**a. 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).

b. Antidegradation Provisions

Implementation of the state's antidegradation policy, as described at 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 waters (*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 Jun 11, 1989, shall be prohibited in any waterbody designated as *HQW and SWS*. OAC 785:46-13 also states, "increase 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 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 the 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 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 used to be 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 groundwater 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 (0.03) that is higher than the constant for benzene (0.00547), toluene (0.00665), the xylenes (0.0052) and ethyl benzene (0.0087), it will be more easily stripped out of solution than benzene and BTEX. Therefore, this Permit does not contain limitations and/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 which would have reasonable potential to violate numerical criteria. Therefore, no permit limitations and/or monitoring requirement 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 requirement are imposed for coliform bacteria.

d. Oil and Grease

In addition to the technology-based numeric limitations for oil and grease, a narrative limitation will be placed in accordance with OAC 785:45-5-10(4) in the draft permit which states that – "for Public and Private Water Supplies, surface waters of the State shall be maintained free from 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, and phenols are more stringent than the long term average numerical water column criteria, compliance with the technology-based 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 which 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

Pursuant to 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 have been placed in the draft permit.

d. Oil and Grease

According to 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 to the biota." The discharge from clean-up of petroleum UST system is expected to contain pollutants which 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, the treated wastewater 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 for this criterion.

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 (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), the 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 NTUs for surface waters that have a beneficial use of Warm Water Aquatic Community. The draft permit includes technology-based limitations for TSS (a monthly average of 30 mg/L and 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 which would have reasonable potential to violate numerical criteria. Therefore, no additional permit action is 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. Therefore, 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 or 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 which 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 TSS.

In accordance with OAC 785:45-5-19(c)(1), surface waters of the State shall be virtually free from all coloring materials which 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 which 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 monthly average limits for benzene, BTEX, PAHs, 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, no reasonable potential exists to violate water quality standards for water column criteria for pesticides.

D. 303(d) LIST EVALUATION

This 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, Title 252, Chapter 606.

E. ENDANGERED SPECIES

For new facilities applying for coverage under this 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. 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 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.

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 to treat and/or disposal of wastewater at petroleum UST systems is not allowed by this Permit.

B. TANK SYSTEMS

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

C. LAND APPLICATION

Land application of industrial wastewater and/or sludge is not allowed by this Permit.

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 wastewaters 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 removed from the facility, the permittee shall keep accurate records, which include the following information:

- (1) Name and address of company hauling waste.
- (2) Time and date of hauling waste.
- (3) The type and amount of waste hauled.
- (4) 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 Department'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
PAHs	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	N/A	45 mg/L	--	--	N/A	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 (gpd)	Daily	Note-2	--
Benzene, total	1/Week	Grab	2.5
BTEX, total ³	1/Week	Grab	10
PAHs 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 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, ethylbenzene, toluene, 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 PAHs 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 PAHs 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, fluorine, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, pyrene.

5 MTBE sampling shall be performed in accordance with EPA Method 624, 8260 or equivalent. 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 phenol.

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

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

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

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 reported on the Discharge Monitoring Report (DMR) forms due to the Oklahoma Department of Environmental Quality, Water Quality Division, Wastewater Compliance Tracking Section, postmarked or received no later than the 15th day of the following month. If no discharge occurs during the reporting period, DMR forms stating "No Discharge" shall be submitted according to the above schedule.

VIII. SUMMARY OF CHANGES FROM PREVIOUS PERMIT

- Monitoring frequency for MTBE has been changed in the draft permit.
- Limitations and monitoring requirements of TSS have been included in the draft 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 OKG830000.

B. CLEAN WATER ACT CITATIONS

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

C. FEDERAL RULES AND REGULATION

40 CFR 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, Oklahoma PDES 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 (CPP) Document (DEQ)

E. MISCELLANEOUS

303(d) List.

X. REVIEW BY OTHER AGENCIES AND FINAL DETERMINATION

A draft permit 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 CFR § 124.59.

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