

STATEMENT OF BASIS
for
GENERAL WASTEWATER DISPOSAL PERMIT FOR
CLASS III TOTAL RETENTION SYSTEMS

DEQ Permit Number: OKGC3T

Applicant: Facilities having total retention surface impoundment and/or tank systems containing Class III wastewater.

Prepared and Issued by: Industrial Permits Section
Water Quality Division
Oklahoma Department of Environmental Quality
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I. SCOPE OF PERMIT

The activities regulated by General Permit Number OKGC3T include the construction, operation, maintenance, and closure of industrial wastewater surface impoundments and associated tank systems. The wastewater generated from routine operations covered by this permit must be classified as Class III wastewater in accordance with OAC 616-1-2(c).

This General Permit is applicable for total retention surface impoundments with Class III wastewaters. This General Permit does not specify the disposal/treatment method(s) that the permittee must use. If surface impoundments are used for wastewater treatment and/or disposal, the surface impoundments shall be regulated by this General Permit in accordance with DEQ Rules OAC 252:616.

This General Permit is also applicable for total retention meat processing facilities with wastewaters which typically contain high strength wastewater based on concentrations of BOD, COD, TSS, nitrogen, phosphorus and fecal coliform bacteria. The waste stream may contain domestic sanitary sewage from the facility. Any impoundment that receives domestic sanitary sewerage in addition to Class III industrial wastewater or wastewater from meat processing facilities shall be constructed, operated and maintained with a liner system having a permeability of less than 5.4×10^{-7} cm/s using OAC 252:656-11-3(c) as guidance. This permit does not authorize the use of lateral lines.

Commercial vehicle car washes are not eligible under this permit, but are covered under the general permit OKG75. However, car dealers with Class III wastewaters may be covered under this permit.

II. PERMIT SUMMARY

The purpose of this renewed General Wastewater Disposal Permit (General Permit) is an effort to implement the Oklahoma Department of Environmental Quality's (DEQ's) goals of continuing to expedite the permitting procedure to serve industries in Oklahoma. The General Permit will reduce the normal permitting time considerably while providing uniform measures to protect the environment.

This General Permit does not authorize any discharge to waters of the state from the permitted surface impoundments. This General Permit will regulate the construction, operation, maintenance and closure of surface impoundments that contain industrial wastewater and/or stormwater that is classified as Class III wastewater (OAC 252:616-1-2(c)). Configurations for surface impoundments covered under this General Permit are:

- Flow-through surface impoundment(s) and/or tank system(s) as part of the treatment train with a total retention surface impoundment for final disposal, and
- Total retention surface impoundment(s) for treatment and final disposal.

III. DRAFT PERMIT RATIONALE

General Permit conditions have been developed in accordance with the permitting procedures contained in OAC 252:606, 616, and 656 using information contained in the application, water quality standards, effluent guidelines, water quality criteria, waste/liner compatibility, waste loading guidance and best professional judgment (BPJ), as appropriate, to prevent, control, or abate pollution of any waters of the state and the environment.

A. WASTEWATER DESCRIPTION

Class III wastewater is defined in OAC 252:616-1-2 as “wastewater, including stormwater: containing or suspected to contain pollutants which do not pose a substantial risk of harm to humans, aquatic life, wildlife, or the environment because of a relative immobility in groundwater or a general lack of direct toxicity, and which are not likely, if discharged, to degrade the beneficial uses of the receiving water as designated in the Oklahoma Water Quality Standards.”

Meat processing wastestreams typically have high strength wastewater for BOD, COD, TSS, nitrogen, phosphorus, and fecal coliform bacteria. Meat processing wastestreams will be treated using a tank system prior to discharge to an impoundment to ensure that a Class III wastewater classification is justified.

The wastewater contained in any surface impoundment covered by the General Permit will be industrial process water classified as Class III wastewater (in accordance with OAC 252:616-1-2(c)) either with or without sewage/domestic/sanitary wastewater

B. TYPES OF TREATMENT/DISPOSAL UNITS

The treatment/disposal units covered by the General Permit are:

1. Total retention surface impoundments shall not have outfall structures which may allow or cause the release of wastewater to the environment (such as pipes, man-made trenches, erosion-induced trenches, or impoundment overflow) per OAC 252:616-7-1(10).
 2. Flow-through surface impoundment systems shall have a device that can immediately shut-off influent or effluent flows in the event of a spill, bypass, unit process failure, or other emergency.
 3. A tank system as specified in OAC 252:616-1-2 is “any subsurface disposal system which involves the storage and treatment of wastewater.”
 4. Tank systems shall conform to the requirements in OAC 252:616-9.
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A wastewater facility utilizing a tank system having lateral lines is ineligible for coverage under the Total Retention Surface Impoundment System Containing Class III Industrial Wastewater General Wastewater Disposal Permit.

The wastewater discharged from a flow-through surface impoundment or tank system ultimately be routed to a total retention surface impoundment for final disposal.

The sludge that results from the treatment process must be disposed of according to state law and cannot be discharged with the wastewater nor placed where it can contaminate stormwater runoff.

C. LINER REQUIREMENTS

A liner as specified in OAC 252:616-1-2 is “a barrier which is designed, constructed and installed in a surface impoundment and which has appropriate chemical and physical properties to ensure that such structures control the seepage or release of waste and wastewater from the impoundment.”

Facilities receiving Class III wastewater only may use any liner meeting the requirements found in OAC 252:616-7-2, OAC 252:616-7-3, OAC 252:616-7-4, OAC 252:616-7-5, OAC 252:616-7-6, or OAC 252:616-7-7.

Facilities receiving Class III wastewater commingled with sanitary sewage or facilities receiving wastewater from meat processing may use liners meeting the requirements found in OAC 252:616-7-4, OAC 252:616-7-5, or OAC 252:616-7-7. If the facility can show that the liner’s permeability is 5.4×10^{-7} cm/s or tighter, then they may also use liners meeting the requirements found in OAC 252:616-7-3 or OAC 252:616-7-6.

D. HOLDING CAPACITY

As specified in OAC 252:616-7-1(6) the total retention surface impoundment shall be sized to contain the design flow of wastewater (including sludge) plus expected rainfall plus 3 feet of freeboard. Where total retention is obtained by surface evaporation, the required impoundment surface area shall be based on the design flow plus the 90th percentile rainfall less the pan evaporation rates for the area where the impoundment will be (or is) located.

E. FREEBOARD REQUIREMENTS

As specified in OAC 252:616-7-1(7), maintain at least 3 feet of freeboard on all surface impoundments unless otherwise specified in a permit.

It is best professional judgment that the following freeboard requirements be maintained at all times for flow-through surface impoundments that are part of a total retention impoundment system.

- One (1) foot of freeboard is required for a concrete lined flow-through impoundment.
 - Two (2) feet of freeboard is required for a flow-through surface impoundment with any other type of liner.
 - Three (3) feet of freeboard is required for a total retention impoundment.
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F. DEPTH TO GROUNDWATER

As specified in OAC 252:616-7-1(4) “The bottom of any surface impoundment shall be a minimum of 15 feet above the historic maximum height of the groundwater table”, in OAC 252:616-7-1(4)(A) “Perched water is considered groundwater”, and in OAC 252:616-7-1(4)(B) “If a distance of (15) feet is not physically possible, a lesser distance may be approved by the DEQ depending on the wastewater and impoundment classification, use of liners or other means which will protect waters of the state.”

In no case will this permit authorize the disposal of wastewater in an impoundment where the highest seasonal groundwater elevation is higher than the bottom of the impoundment.

G. FLOOD PLAIN

As specified in OAC 252:616-5-1(a), impoundments shall not be constructed or operated in a floodway. Impoundments located in a floodplain must be constructed so that the elevation of berms or dikes is at least one (1) foot above the 100 year floodplain elevation.

If additional erosion controls are deemed necessary by the DEQ, the applicant is not eligible for the general permit.

H. MAINTENANCE AND OPERATION PLAN (MOP) (OPTIONAL)

OAC 252:616-5-2 states that for tanks and surface impoundments that contain Class I and Class II wastewater, there must be a written Maintenance and Operation Plan (MOP). A MOP may be required for other wastewater classifications based on site specific information. The MOP must be followed, updated annually, if necessary, kept on-site and be available to the DEQ. The MOP must contain the following items:

1. The MOP must discuss maintenance procedures including methods to protect impoundments and liner integrity, procedures for solids removal as well as other procedures (such as tank repair or control of soil erosion, removal of deep-root vegetation, and prevention of liner desiccation).
2. The MOP must discuss operation procedures used to protect tank or surface impoundment and liner integrity, as well as other procedures (e.g., influent and effluent flow, sludge removal, sludge storage, changes in waste composition, and freeboard control). Describe procedures to notify the DEQ at the time of a spill or bypass.
3. The MOP must discuss the scope and frequency of monitoring activities (such as parameters sampled, sampling frequency, sampling methods, and reporting schedule).
4. Include the name and phone number of all personnel responsible for maintenance, operation and monitoring activities.

Even though OAC 252:616-5-2 applies to tanks and surface impoundments that contain Class I and Class II wastewater, the standard may also be applied to facilities that are covered under the OKGC3T for the purpose of ensuring proper maintenance of tank and impoundment facilities.

IV. OTHER PERMIT CONDITIONS AND REQUIREMENTS

- A.** The Permittee is hereby given notice that this General 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 DEQ, and Oklahoma's Water Quality Standards. The absence of any express reference within this
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General 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 General Permit or the Permittee.

- B.** This General Permit does not convey any exclusive privileges or authorize any injury to property or invasion of rights or any infringement of federal, state, or local laws or regulations nor does it obviate the requirement to obtain permission from any landowners whose property will be affected by this General Permit.
- C.** This General Permit may be reopened to implement and/or require impoundment modifications, additions, extensions, and/or operational changes; monitoring and reporting; reclassification of wastes; sludge management plans; best management practices; closure plans; and/or other appropriate actions.
- D.** At such time as any surface impoundment and/or tanks system(s) covered by this General Permit is to be permanently taken out of service or at such time as the contents of any surface impoundment covered by this General Permit pose a risk to the environment or waters of the state, the owner or operator of the facility shall follow all closure requirements contained in OAC 252:616-13.
- E.** 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 sent to a facility for recycling.
- F.** When any such industrial wastes are removed from surface impoundment and/or tanks system(s), the Permittee shall keep accurate records which include the following information:
1. Name and address of company hauling waste.
 2. The type and amount of waste hauled.
 3. The final disposal site of waste hauled.
 4. Copy of the approved sludge management plan issued by the DEQ (if applicable).
- Upon request, the above records shall be made available to the DEQ's staff for review.
- G.** The General Permit does not authorize any disposal of pollutants or wastes other than by the surface impoundment(s) and/or tank system(s) authorized in the General Permit.
- H.** In all other respects, surface impoundments and tank systems covered by the General Permit shall be subject to standard conditions for surface impoundments contained in OAC 252:616, Subchapters 3, 5, 7, 9, and 13, including but not limited to requirements for construction, operation, maintenance, monitoring and closure.
- I.** The following specific requirements are established for slaughterhouses and meat packing plants.
1. Segregate kill room and salt bath wastes to prevent or minimize the introduction of blood, intestinal materials, salt water (brine), and non-consumable animal parts into the surface impoundment(s);
 2. Sweep up meat and fat scraps from the packing area prior to washdown;
 3. Use screens on floor drains to prevent animal parts or other large solids from entering the surface impoundment(s); and
 4. Use disinfectants with care to prevent or minimize surge to the surface impoundment(s) that might interfere with biological treatment of wastewater.
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V. CHANGES FROM PREVIOUS PERMIT

Section III.H Maintenance and Operation Plan has been added as an option for use to ensure proper maintenance of facilities.

Section IV.J lists specific requirements for slaughterhouses and meat packing plants.

VI ADMINISTRATIVE RECORD

The following sources were used to prepare this General Permit and constitute a part of the administrative record for this General Permit:

A. DEQ RECORDS

- Industrial Permit files containing permits, applications, and monitoring data.
- The previous General Permit.

B. FEDERAL WATER POLLUTION CONTROL ACT (CLEAN WATER ACT), 33 U.S.C. 1251 *et seq.*

- Section 301 and 402(a).

C. FEDERAL RULES AND REGULATIONS

- 40 CFR, in particular, Parts 122, 124, 136.

D. STATE LAW, STANDARDS, AND RULES AND REGULATIONS

- Oklahoma Pollutant Discharge Elimination System (OPDES) Act, 27A O.S. §2-6-201 *et seq.*
 - OAC 252:606, OAC 252:616, and OAC 252:656.
 - Oklahoma's Water Quality Standards, as amended.
 - Oklahoma Continuing Planning Process Document (CPP), as amended.
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