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**TITLE 252. DEPARTMENT OF ENVIRONMENTAL QUALITY  
CHAPTER 619. OPERATION AND MAINTENANCE OF NON-INDUSTRIAL TOTAL  
RETENTION LAGOON SYSTEMS AND LAND APPLICATION**

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## SUBCHAPTER 1. GENERAL PROVISIONS

### Section

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### **252:619-1-1. Purpose and authority**

(a) **Purpose.** This Chapter establishes the operating and closure requirements for total retention lagoon systems that:

(1) are permitted or qualify to be permitted under Oklahoma Administrative Code (OAC) 252:656; and

(2) are not classified as a "small public sewage system" as defined in 27A O.S. § 2-6-101(8).

(b) **Authority.** This Chapter is authorized by 27A O.S. §§ 2-6-101 through 2-6-105, and 27A O.S. §§ 2-6-401 through 2-6-403.

(c) **Applicability.** The rules in this Chapter apply to any person or entity that owns, operates and/or has been permitted to construct a total retention lagoon system.

### **252:619-1-2. Definitions**

In addition to the definitions contained in the Environmental Quality Code (27A O.S. § 2-1-101 *et seq.*), the following words and terms, when used in this Chapter, shall have the following meaning, unless the context clearly indicates otherwise:

**"Bypass"** means the intentional or unintentional diversion of wastes or wastewater from any portion of a total retention lagoon system.

**"Cell"** means an individual basin of a total retention lagoon system.

**"Collection system"** means pipelines or conduits, manholes, pumping stations, force mains and all other structures used to collect and conduct wastewater to a total retention lagoon.

**"DEQ"** means the Oklahoma Department of Environmental Quality.

**"Dike"** means a bank, usually composed of earth, which is constructed to control or confine wastewater within a lagoon.

**"Discharge"** means any intentional or unintentional release by leaking, pumping, pouring, emitting, emptying, dumping, escaping, seeping, overflowing, leaching or other means of release of wastes or wastewater into any waters of the State or into or on any location where they may enter waters of the State.

**"Domestic wastewater"** means wastewater that generally originates as human waste from certain activities including using toilet facilities, washing, bathing, preparing foods and washing laundry.

**"Freeboard"** means the vertical distance from the surface water level in the lagoon to a point that is even with the top of the dike.

**"Lagoon"** means a soil or lined basin, either below or above ground level, that is designed, maintained and operated to store, recycle and/or treat municipal/domestic wastewater.

**"Land application"** means the application of treated wastewater to a vegetated land surface with the applied wastewater being further treated as it flows through the plant-soil matrix.

**"Liner"** means a barrier that is designed, constructed and installed in a lagoon and which has appropriate chemical and physical properties to control the seepage or release of wastes and wastewater from the lagoon.

**"Municipal wastewater"** means wastewater originating from a community that is composed primarily of domestic wastewater.

**"Operator"** means the individual who is properly certified by DEQ and who is responsible for the maintenance and operation of a total retention lagoon system.

**"Person"** means any individual, company, corporation, government agency, municipality, or any other entity whatsoever.

**"Septic"** means bacterial activity in the absence of oxygen. This condition may cause enhancement of the growth of anaerobic bacteria and production of unpleasant odors.

**"Total retention lagoon"** means a non-industrial wastewater lagoon that is designed and constructed without a discharge structure. A lagoon that was originally designed and constructed to discharge but has since had the discharge structure permanently sealed may be considered a total retention lagoon.

**"Total retention lagoon system"** includes the collection system, the total retention lagoon and the land application site.

### **252:619-1-3. Permit requirements**

Pursuant to OAC 252:656, permits are required for the construction or modification of any non-industrial wastewater total retention lagoon system.

### **252:619-1-4. General requirements for total retention lagoon systems**

(a) **Operational requirements.** The permittee shall ensure that the total retention lagoon system is operated in compliance with the terms of the DEQ-issued construction permit and the requirements of this Chapter. When in conflict, the terms of the permit shall supersede the requirements of this Chapter.

(b) **Unauthorized wastes.** The permittee shall take reasonable measures to prevent the introduction of unauthorized industrial wastewater, hazardous substances, chemicals or wastes into the total retention lagoon system.

(c) **Protection of potable water supplies.** The permittee shall prevent cross-connections between wastewater and potable water supplies.

(d) **Discharges prohibited.** The permittee shall operate and maintain the total retention lagoon system so that no part of the system bypasses or discharges wastes or wastewater. All such bypasses and/or discharges shall be considered a violation of this Chapter and be subject to enforcement as an unpermitted discharge to waters of the State in violation of the Oklahoma Pollutant Discharge Elimination System Act.

(1) **Reporting requirement.** The permittee shall ensure that any and all bypasses and/or discharges from a total retention lagoon system are reported to DEQ at (800) 522-0206 within 24-hours of the incident and that a completed and signed DEQ Form 605-011 "Self Reporting Wastewater Bypass Form" is submitted to DEQ within five (5) days of the incident.

(2) **Required response.** Whenever a bypass or discharge occurs, the permittee shall ensure that immediate action is taken to stop, contain, clean up and prevent recurrence of the bypass or discharge.

(e) **Certified operator required.** The permittee shall ensure that an operator, who is certified pursuant to OAC 252:710 to operate that size and type of total retention lagoon system, is employed

to operate the total retention lagoon system.

(f) **Monthly operating report.** The permittee shall complete a DEQ Form 619-001 "Total Retention Lagoon Monthly Operation Report" ("MOR") each month. The permittee shall ensure that the MOR is kept current, is retained for three (3) years and is made available for review upon request by DEQ. Each MOR shall include:

- (1) the estimated monthly flow to the total retention lagoon;
- (2) the size of the population served by the total retention lagoon system;
- (3) the date of each site visit to the total retention lagoon system;
- (4) any maintenance performed on the total retention lagoon system; and
- (5) the results of any voluntary or DEQ-ordered sampling and analyses of the wastewater in the total retention lagoon system.

(g) **Additional reporting and/or sampling.** DEQ may require additional reporting and/or sampling in any administrative order, closure plan, or other official document issued by DEQ.

(h) **Use of certified laboratories.** All laboratory analyses required to be conducted pursuant to this Chapter shall be performed by laboratories certified by DEQ.

#### **252:619-1-5. Annual fees for total retention lagoon systems**

(a) **Fee.** The permittee of a total retention lagoon system shall submit an annual fee to DEQ. The annual fee shall be in accordance with the following:

- (1) Population range 0-100 - \$500
- (2) Population range 101-500 - \$600
- (3) Population range 501-1,000 - \$1,000
- (4) Population range 1,001-2,500 - \$2,000
- (5) Population range 2,501-5,000 - \$3,000
- (6) Population range 5,001-10,000 - \$6,000
- (7) Population range >10,000 - \$9,000

(b) **Due date.** The permittee shall submit payment of the fee within thirty (30) days of receipt of an invoice mailed by DEQ.

(c) **Waiver of fees.** DEQ will waive fifty-percent (50%) of the annual fee listed in (a) of this Section for public entities.

#### **252:619-1-6. Fee escalator based on Consumer Price Index (CPI)**

To assist in meeting rising costs to DEQ associated with the total retention lagoon program, the fees set out in 252:619-1-5 shall be automatically adjusted on July 1, 2012, and every year to correspond to the percentage, if any, by which the Consumer Price Index (CPI) for the most recent calendar year exceeds the CPI for the previous calendar year. DEQ may round the adjusted fees up to the nearest dollar. DEQ may waive collection of an automatic increase in a given year if it determines other revenues, including appropriated state general revenue funds, have increased sufficiently to make the funds generated by the automatic adjustment unnecessary in that year. A waiver does not affect future automatic adjustments.

(1) Any automatic fee adjustment under this subsection may be averted or eliminated, or the adjustment percentage may be modified, by rule promulgated pursuant to the Oklahoma Administrative Procedures Act. The rulemaking process may be initiated in any manner provided by law, including a petition for rulemaking pursuant to 75 O.S. §305 and 252:4-5-3 by any person affected by the automatic fee adjustment.

(2) If the United States Department of Labor ceases to publish the CPI or revises the methodology or base years, no further automatic fee adjustment shall occur until a new

automatic fee adjustment rule is promulgated pursuant to the Oklahoma Administrative Procedures Act.

(3) For purposes of the subsection, "Consumer Price Index" or "CPI" means the Consumer Price Index - All Urban Consumers (U.S. All Items, Current Series, 1982-1984=100, CUUR0000SA0) published by the United States Department of Labor. The CPI for a calendar year is the figure denoted by the Department of Labor as the "Annual" index figure for that calendar year.

### **SUBCHAPTER 3. OPERATION AND MAINTENANCE**

#### Section

252:619-3-1. Collection systems serving total retention lagoons

252:619-3-2. Total retention lagoons

252:619-3-3. Land application sites serving total retention lagoons

#### **252:619-3-1. Collection systems serving total retention lagoons**

(a) **Maintenance.** The permittee shall maintain the structural integrity of all parts of the collection system and maintain it in good working order.

(b) **Connections.** The permittee shall maintain the integrity of the collection system by:

- (1) inspecting all new connections of private service lines to the collection system; and
- (2) restricting new private service line connections to those serving one piece of property.

(c) **Erosion control.** The permittee shall provide erosion protection for all parts of the collection system located in or near waterways or flood plains.

(d) **Pump stations.** The permittee shall ensure that pump stations are properly maintained and operated by doing the following:

- (1) Securing pump stations to prevent unauthorized access.
- (2) Maintaining the pumps in working condition.
- (3) Keeping the screens free of debris to prevent clogging.
- (4) Maintaining the required alarms in working order.
- (5) Maintaining the required back-up generators and/or portable engine driven pumps in working order.
- (6) Maintaining a complete set of operational instructions, emergency procedures and maintenance schedules.

#### **252:619-3-2. Total retention lagoons**

(a) **Erosion control.** The permittee shall prevent erosion of the lagoon by:

- (1) Maintaining a 1:3 slope on the inner and outer dikes of the lagoon, unless permitted otherwise;
- (2) Using soil, gravel, concrete pads, shallow-root vegetation or other methods of erosion control as needed;
- (3) Removing trees and deep-root vegetation from the dikes and bottom of the lagoon in a timely manner to maintain the integrity and stability of the lagoon;
- (4) Protecting the inner dikes from wave action;
- (5) Protecting the outer dikes from stormwater runoff and floodwaters;
- (6) Protecting the dikes from burrowing animals; and
- (7) Repairing any damage promptly.

(b) **Freeboard.** The permittee shall ensure that the lagoon has a minimum of three feet (3') of freeboard, unless otherwise specified in the permit.

- (c) **Seepage.** The permittee shall, at all times, maintain the integrity of the liner or seal of the total retention lagoon to prevent seepage in excess of five hundred gallons per acre per day (500 gal/acre/day). No action shall take place during the use, maintenance, or operation of the lagoon that would destroy or diminish the effectiveness of any liner or seal, or increase the permeability of the liner or seal. Whenever seepage in excess of five hundred gallons per acre per day (500 gal/acre/day) from the lagoon is suspected or discovered, the permittee shall ensure that the discharge is reported to DEQ at (800) 522-0206 within 24-hours of the incident and that a completed and signed DEQ Form 605-011 "Self Reporting Wastewater Bypass Form" is submitted to DEQ within five (5) days of the incident.
- (d) **Influent lines.** The permittee shall maintain influent lines to minimize short-circuiting by terminating influent lines at the center of the cell or a point at least one hundred feet (100') from the inside toe of any dike.
- (e) **Wastewater depth control structures.** The permittee shall maintain control structures so that they properly control the wastewater depth in cells and route wastewater through the system.
- (f) **Piping.** The permittee shall take steps to prevent turtles from clogging lagoon piping.
- (g) **Flow measurement.** The permittee shall maintain flow measurement devices in proper working order.
- (h) **Treatment.** The permittee shall operate and maintain the lagoon to produce optimum treatment results.
- (i) **Fencing.** The permittee shall prevent unauthorized access to the lagoon by maintaining a fence around the lagoon. The fence may not interfere with the wind action to the lagoon's surface or shade the lagoon. Fences must have a lockable gate and must not obstruct maintenance vehicles or equipment. When the lagoon is located within three hundred fifty feet (350') of existing or platted residential or recreational areas, the permittee shall ensure that the lagoon is surrounded by a 6-foot high woven wire fence or equivalent.
- (j) **Signs.** The permittee shall maintain a sign near or on the fence on each side of the lagoon site that designates the nature of the facility and advises against trespassing.
- (k) **Wind action.** The permittee shall prevent any obstructions to wind action of the lagoon by:
- (1) removing trees, weeds, cattails, and all other obstructions whenever they appear on or around the dikes or in the lagoon itself; and
  - (2) mowing the grass around the lagoons and on the dikes frequently enough to prevent the development of any obstructions to wind action.
- (l) **Access road.** The permittee must maintain the access road to the lagoon so that it is passable during all weather conditions.
- (m) **Other maintenance requirements.** The permittee shall maintain all structures of the lagoon in proper working order.
- (n) **Septic conditions prohibited.** The permittee shall operate and maintain the total retention lagoon so that it does not become septic. If a lagoon becomes septic, the permittee shall take immediate steps to correct the condition without violating DEQ rules.
- (o) **Vector control.** The permittee shall control vectors. In particular, mosquitoes and flies shall be controlled by:
- (1) Maintaining an adequate lagoon depth;
  - (2) Preventing obstructions to wind action; and
  - (3) Taking steps to correct septic conditions.
- (p) **Surfactants.** The use of surfactants or other chemicals or additives that would increase the seepage rate through a lagoon bottom is specifically prohibited.

**252:619-3-3. Land application sites serving total retention lagoons**

(a) **Operation and maintenance.** The following operation and maintenance requirements shall apply to land application sites serving total retention lagoons:

(1) **Fencing.** The permittee shall prevent unauthorized access to the land application site by maintaining the required fencing around the site. Public use areas where wastewater is disinfected prior to land application are exempt from the fencing requirements.

(2) **Signs.** The permittee shall maintain a sign, which describes the nature of the facility and advises against trespassing, on or near the fence on each side of the land application site. Public use areas where wastewater is disinfected prior to land application are exempt from the signage requirements.

(3) **Legal access to site.** The permittee shall only land apply wastewater to sites for which the permittee has legal access to the property for that purpose.

(4) **Public use area.** The permittee shall ensure that wastewater is not applied to a public use area that has a *high potential* for skin to ground contact (e.g. football field). The permittee shall ensure that wastewater applied to a public use area that has a *low potential* for skin to ground contact (e.g. golf course) is:

(A) disinfected before application by maintaining a detectable chlorine residual; and

(B) applied during times when the public is not present.

(5) **Equipment maintenance.** The permittee shall maintain all land application equipment in working order.

(b) **Restrictions.** The permittee shall not land apply wastewater:

(1) from the cell that receives raw sewage;

(2) from any cell other than the one specified in the permit;

(3) to any food crop that may be consumed raw;

(4) to crops such as corn, wheat and oats, less than thirty (30) days before harvest;

(5) at rates that allow a discharge from the permitted land application site;

(6) within one hundred feet (100') of the permitted boundary of the site;

(7) at a rate that exceeds the nitrogen and phosphorus rates for the crop grown at the site or that results in phytotoxicity;

(8) that has a dissolved oxygen concentration of less than 2.0 mg/l;

(9) in areas in which it is likely to adversely affect a threatened or endangered species listed under Section 4 of the federal Endangered Species Act, 16 U.S.C. 1533(c), or the critical habitat of such species;

(10) during periods of precipitation or while the soil is saturated or frozen; and/or

(11) on land having a slope greater than five percent (5%) unless erosion or runoff controls are implemented, but in no case on land with greater than ten percent (10%) slope.

(c) **Records.** The permittee must record on the DEQ Form 619-001 "Total Retention Lagoon Monthly Operation Report" ("MOR") the following information:

(1) Location, day and hour land application began and ended;

(2) Method of application;

(3) Volume of wastewater applied;

(4) When the conditions of the site require that the wastewater be disinfected before application, the chlorine residual of the wastewater applied;

(5) Weather conditions during the application period;

(6) Type of crop, grass or vegetation grown at the land application site; and

(7) If special analytical testing is required as a condition of the permit or an Administrative Order, the results of the analytical testing, including the name of the individual who collected

the samples, when the analysis began, and the name of the certified laboratory.

## **SUBCHAPTER 5. CLOSURE REQUIREMENTS**

### Section

252:619-5-1. Closure of total retention lagoons

252:619-5-2. Closure of land application sites associated with total retention lagoons

### **252:619-5-1. Closure of total retention lagoons**

(a) **Timing of closure.** Within six (6) months of permanently taking a total retention lagoon out of service, unless an extension is granted by DEQ, the permittee shall close the lagoon according to the requirements of this subchapter.

(b) **Closure plan.** The permittee shall submit a closure plan detailing the schedule of proposed closure activities to DEQ ninety (90) days prior to beginning closure activities. The closure plan must receive approval from DEQ prior to the permittee beginning closure activities. At a minimum, the closure plan must include:

- (1) A description of how the wastewater from lagoon will be disposed;
- (2) A description of how the sludge will be disposed;
- (3) A description of final grading and erosion control;
- (4) A description of how unauthorized discharges of wastewater and sludge will be prevented during closure activities;
- (5) A time schedule indicating:
  - (A) the major closure activities;
  - (B) the approximate time to complete each activity; and
  - (C) the estimated date of final completion of all closure activities; and
- (6) The name, address, and telephone number of all the owners of record of the land upon which the lagoon is located.

(c) **Closure Requirements.** The following are the closure requirements:

- (1) **Wastewater.** Wastewater from the lagoon must be either:
  - (A) land applied at a site permitted for the land application of wastewater; or
  - (B) disposed of at another permitted wastewater treatment facility.
- (2) **Sludge.** Sludge from the lagoon must be measured and if the average sludge thickness in the lagoon:
  - (A) exceeds six (6) inches, the sludge must be removed from the lagoon and either land applied or disposed of in a permitted landfill. Land application will require the approval by DEQ of a Sludge Management Plan pursuant to OAC 252:606. Disposal in a landfill must meet the requirements of OAC 252:515.
  - (B) is six (6) inches or less, the sludge does not need to be removed from the site.

(d) **Discharges prohibited.** Under no circumstance may wastewater or sludge be:

- (1) discharged to the waters of the State;
- (2) allowed to flow or be carried to adjacent properties; or
- (3) be disposed at any site not permitted by DEQ for that purpose.

(e) **Wastewater/sludge characterization.** When requested by DEQ, the permittee must provide a chemical analysis of representative sample(s) of the contents of the lagoon.

(f) **Additional requirements.** DEQ may require continuing monitoring, sampling, and reporting as deemed necessary.

(g) **Certificate of closure.** The permittee shall submit to DEQ written certification that the lagoon

was closed in accordance with the approved closure plan within forty-five (45) days of completing the closure of the lagoon.

**252:619-5-2. Closure of land application sites associated with total retention lagoons**

(a) **Closure.** A specific land application site may be closed at any time by the permittee or by requirement of DEQ.

(b) **Notice.** The permittee shall submit written notice of the proposed closure of the land application site to DEQ at least ninety (90) days prior to beginning closure activities.

(c) **Remediation plan.** When site-specific testing and monitoring indicates the presence of pollution or deterioration of a site, DEQ will require the permittee to submit, receive approval of and perform a remediation plan.