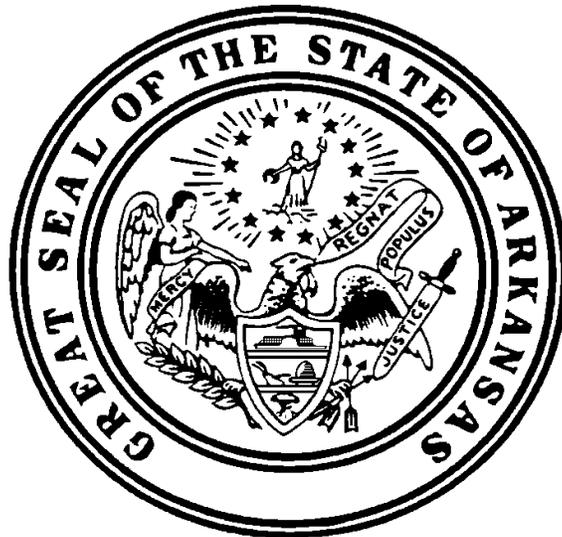


# Arkansas Pollution Control and Ecology Commission

## Regulation 5



## Liquid Animal Waste Management Systems

**Effective Date: March 23, 2000**

**Regulation Number 5  
Liquid Animal Waste Management Systems**

**Table of Contents**

CHAPTER ONE: TITLE, PURPOSE and APPLICABILITY .....	1-1
<u>Section 5.101</u> Title .....	1-1
<u>Section 5.102</u> Purpose .....	1-1
<u>Section 5.103</u> Applicability .....	1-1
 CHAPTER TWO: DEFINITIONS .....	 2-1
<u>Section 5.201</u> Definitions .....	2-1
 CHAPTER THREE: PERMITS, APPLICATIONS AND PROCEDURES .....	 3-1
<u>Section 5.301</u> Requirement for a Permit .....	3-1
<u>Section 5.302</u> Public Notification of Application .....	3-1
<u>Section 5.303</u> Discharge Prohibition .....	3-2
<u>Section 5.304</u> Educational Requirements .....	3-2
<u>Section 5.305</u> Permit Modification .....	3-3
 CHAPTER FOUR: TECHNICAL REQUIREMENTS .....	 4-1
<u>Section 5.401</u> Approval of Design .....	4-1
<u>Section 5.402</u> Design Requirements .....	4-1
<u>Section 5.403</u> Siting Requirements .....	4-1
<u>Section 5.404</u> Subsurface Investigation Requirements .....	4-1
<u>Section 5.405</u> Waste Management Plan .....	4-2
<u>Section 5.406</u> Land Application Requirements .....	4-2
<u>Section 5.407</u> Record Keeping Requirements .....	4-3
 CHAPTER FIVE: FACILITY CONSTRUCTION CERTIFICATION .....	 5-1
<u>Section 5.501</u> Facility Construction Certification .....	5-1
 CHAPTER SIX: ALTERNATIVE PERMITTING AND WASTE MANAGEMENT .....	 6-1
<u>Section 5.601</u> Permit for Land Application Site Only .....	6-1
<u>Section 5.602</u> Composting .....	6-1
 CHAPTER SEVEN: FACILITY CLOSURE .....	 7-1
<u>Section 5.701</u> Closure Plan .....	7-1
 CHAPTER EIGHT: EFFECTIVE DATE .....	 8-1
<u>Section 5.801</u> Effective Date .....	8-1

## **CHAPTER ONE: TITLE, PURPOSE AND APPLICABILITY**

### **Section 5.101**      Title

The following rules and regulations of the Arkansas Pollution Control and Ecology Commission (the "Commission"), adopted pursuant to the Arkansas Water and Air Pollution Control Act (Act 472 of the Acts of Arkansas for 1949, as amended, codified at A.C.A. § 8-4-101 et seq.) (the "Act"), shall be known as Regulation No. 5 - Liquid Animal Waste Management Systems (the "Regulation").

### **Section 5.102**      Purpose

The purpose of this Regulation is to establish the minimum qualifications, standards and procedures for issuance of permits for confined animal operations using liquid animal waste management systems within the state and for the issuance of permits for land application sites within the state. This Regulation provides management, operational and maintenance procedures necessary to prevent point source pollution and minimize nonpoint source pollution to the waters of the state and control to the degree practicable the generation of offensive odors by regulated confined animal operations. The siting and separation requirements set forth in this Regulation are intended to protect water quality, to protect public health, and to abate odor. In order to minimize odor, the Commission's policy is to encourage permittees to adopt a good neighbor policy and consider the use of chemical or biological additives or other best management practices in the operation of liquid animal waste management systems.

### **Section 5.103**      Applicability

The provisions of this Regulation are applicable to the operation of hog, poultry or dairy farms or other confined animal operations using liquid animal waste management systems.

## CHAPTER TWO: DEFINITIONS

The following definitions shall apply:

**Act** means the Arkansas Water and Air Pollution Control Act (Act 472 of 1949, as amended).

**Best Management Practices** means schedules of activities, prohibited activities, maintenance procedures and management practices that prevent or reduce pollution of the waters of the state as set forth in this regulation and the General Permit.

**Commission** means the Arkansas Pollution Control and Ecology Commission

**Confined Animal Operation** means any lot or facility where livestock, fowl, or other animals have been, are or will be stabled or confined and fed or maintained and where crops, vegetation, forage growth or post-harvest residues are not sustained in the normal growing season over significant portions of the lot or facility.

**Department** means the Arkansas Department of Environmental Quality, or its successor.

**Director** means the Director of the Arkansas Department of Environmental Quality or his designated representative.

**Liquid Animal Waste Management System** means any system used for the collection, storage, distribution or disposal of animal waste in liquid form generated by a confined animal operation.

**Site Management Plan** means a plan prepared by the USDA Natural Resource Conservation Service, an Arkansas Soil and Water Conservation District water quality technician, the University of Arkansas Cooperative Extension Service, or a professional engineer registered in the state of Arkansas which includes a detailed map of the land application site showing all buffer zones, a description of the land use and the crops grown on the site, and a land use agreement if the site is not owned by the permittee.

**Waste Management Plan** means a plan prepared by the USDA Natural Resource Conservation Service, an Arkansas Soil and Water Conservation District water quality technician, the University of Arkansas Cooperative Extension Service, or a professional engineer registered in the state of Arkansas detailing the management and disposal of liquid wastes generated in a confined animal operation.

**Waters of the state** means all streams, lakes, marshes, ponds, watercourses, waterways, wells, springs, irrigation systems, drainage systems, and all other bodies or accumulations of water, surface and underground, natural or artificial, public or private, which are contained within, flow through, or border upon this state or any portion of this state as defined by the Act.

Unless manifestly inconsistent with this Regulation, other words and phrases used in this Regulation shall have the same meaning as used in the Act.

## **CHAPTER THREE: PERMIT, APPLICATIONS AND PROCEDURES**

### **Section 5-301**      Requirement for a Permit

No confined animal operation using a liquid waste disposal system shall be constructed or operated unless the owner has first obtained a permit from the Department.

### **Section 5-302**      Public Notice of Application

(A) Prior to submission of an application to construct or operate a hog, poultry, or dairy farm or other facility involving liquid animal waste handling, or prior to submission of an application to modify any existing permit under this regulation, the applicant shall cause to be published in a newspaper having general circulation in the county or counties where the operation(s) is to be located a public notice of the application. The Department shall be provided a copy of this notice. All notices shall be published no less than weekly for two (2) consecutive weeks on a form provided by the Department. The notice shall call upon all interested persons having questions or objections pertaining to the application to file their questions or objections with the Department in writing, including their names and addresses. The Department shall provide a copy of the public notice or similar written notification of the operation to the county quorum court or, if located within an area zoned by a city, the city zoning authority. Proof of publication shall be submitted to the Department with the permit application. All notices shall be at the applicant's expense and shall provide the following information:

- (1) The type of facility to be constructed or operated;
- (2) The type of waste to be generated, and a description of the waste treatment, handling or disposal processes;
- (3) The legal description by quarter, section, township, and range indicating the location of all properties to be used in the treatment, handling or disposal of wastes; and
- (4) The road and street description indicating the location of all properties to be used in the treatment, handling or disposal of wastes.

(B) An applicant for a new or modification of an existing liquid animal waste disposal permit shall make a reasonable effort to notify all adjacent land owners that a complete application for a liquid animal waste disposal permit is on file with the Department. This notice shall also contain the permittee's name, mailing address, type of permit action, type of facility, size of facility and location. The land owners shall be notified at the same time that the permit application is submitted to the Department. The applicant must provide a copy of the letter sent to each adjacent

land owner with the application.

- (C) Should a hearing be deemed necessary by the Department, or in the event the Department desires such a hearing, the Department shall schedule a public hearing and shall by certified mail, return receipt requested, notify the applicant and all persons who have submitted comments of the date, time, and place thereof.

**Section 5.303**            Prohibition

The operator of a confined animal operation constructed and operated as authorized by permit in accordance with the provisions of this Regulation shall not allow or cause a point source discharge from any part of the liquid animal waste management system.

**Section 5.304**            Educational Requirements

- (A) Applicants for permits and all managing owners or managing operators of the proposed operation must provide certification of satisfactory completion of formal education or training in the areas of waste management and odor control. Proof of certification of a minimum of four (4) hours of individualized training and education must be submitted to the Department prior to operation of the facility. Appropriate curricula and course content must be developed under the supervision of the University of Arkansas Cooperative Extension Service which shall provide certification to the Department.
- (B) All managing owners or managing operators of all permitted liquid animal waste disposal systems subject to this Regulation must provide certification of satisfactory completion of annual refresher training in the areas of waste management and odor control as described in and in addition to the educational requirements provided in paragraph (A) of this Section. Appropriate curricula and course content must be developed under the supervision of the University of Arkansas Cooperative Extension Service which shall provide certification to the Department.
- (C) Failure to obtain the prerequisite and annual training and education as provided in this Section shall be deemed a violation of this Regulation.

**Section 5.305**      Permit Modification

- (A) The operator must notify and describe to the Department in writing prior to any change in operational procedures of the permitted facility, including, but not limited to, the following:
  - (1) A greater than ten percent increase in the volume of animal waste, as excreted, generated by the facility over what was allowed by the previous permit;
  - (2) Change in land application sites;
  - (3) Change in waste treatment, handling or disposal.
- (B) Any changes in procedures as described in paragraphs 5.305(A)(1) or 5.305(A)(2) above shall require a permit modification. The Department in its discretion may require the operator to modify its permit with regard to paragraph 5.305(A)(3) above.
- (C) All permit modifications will follow the requirements of Section 5.302 and the Commission's Regulation No. 8.
- (D) The Department may in its discretion require the operator to provide construction plans and specifications, amended plans of operation or any other information required by the Regulation.

## **CHAPTER FOUR: TECHNICAL REQUIREMENTS**

### **Section 5.401**      Approval of Design

No liquid animal waste management system shall be constructed, modified, or placed into operation unless in accordance with final design plans and specifications approved by the Department.

### **Section 5.402**      Design Requirements

Designs and waste management plans shall be in accordance with this Chapter and the following USDA Natural Resource Conservation Service technical publications:

- (A) Field Office Technical Guide, as amended.
- (B) Animal Waste Management Field Handbook, as amended.

### **Section 5.403**      Siting Requirements

Confinement buildings, settling basins, holding ponds, and other liquid animal waste containment structures shall not be constructed within 1,320 feet of the nearest existing occupied dwelling for confined animal operations in excess of the following numbers of animals: 600 beef cattle, 430 dairy cows, 1500 finishing hogs, 600 sows, 6000 nursery pigs, 33,000 turkeys, or 130,000 chickens. A buffer distance of 500 feet shall apply to all other facilities. These buffer distances shall not apply if the existing dwelling is owned by owners or operators of the liquid animal waste management system or if the adjoining property owner consents in writing. Confined animal operations existing as of the effective date of this regulation and proposing to construct a liquid animal waste containment structure in order to reduce waste/wastewater run-off to waters of the State may be considered exempt from these buffer distances by the Director. These buffer distances do not apply to confinement buildings, settling basins, holding ponds or other liquid animal waste containment structures existing as of the effective date of this regulation nor do they apply to existing structures when a liquid animal waste permit modification is required due to a change in ownership.

### **Section 5.404**      Subsurface Investigation Requirements

The subsurface investigation for earthen holding ponds and treatment lagoons suitability and liner requirements may consist of auger holes, dozer pits, or backhoe pits that should extend to at least two (2) feet below the planned bottom of the excavation. In those situations where this depth is not practical in the initial on-site subsurface investigation, the applicant shall provide additional subsurface investigation documentation to the Department.

**Section 5.405****Waste Management Plan**

- (A) The waste management plan shall be developed in accordance with the USDA Natural Resource Conservation Service Field Office Technical Guide and shall address the timing of land application of wastes with respect to the nutrient uptake cycle of the vegetation found on the land application site(s) and, to the extent practicable, shall include measures to minimize off-site obnoxious and offensive odors.
- (B) All permitted facilities must have a waste management plan for the farm and a site management plan for each land application site prepared by a professional engineer registered in the state of Arkansas, the USDA Natural Resource Conservation Service, the University of Arkansas Cooperative Extension Service or a water quality technician of the Arkansas Soil and Water Conservation District and approved by the Department. The Department shall require proof of land ownership or of contractual agreements for use of the land as a land application site.

**Section 5.406****Land Application Requirements**

- (A) Waste/wastewater shall be evenly distributed over application sites at the rates specified in site management plans.
- (B) Land application of waste/wastewater shall not be undertaken when soil is saturated, frozen, covered with ice or snow, or when significant precipitation is reasonably anticipated in the next twenty-four hours.
- (C) Waste/wastewater shall not be applied on slopes with a grade of more than 15 percent or in any manner that will allow waste to enter waters of the State or to run onto adjacent property without the written consent of the affected adjacent property owner.
- (D) Application of waste/wastewater shall not be made within 100 feet of streams including intermittent streams, ponds, lakes, springs, sinkholes, rock outcrops, wells and water supplies; or 300 feet of extraordinary resource waters as defined by the Department's Regulation No. 2. Buffer distances for streams, ponds and lakes shall be measured from the ordinary high water mark. The Department may require additional buffer distances deemed necessary to protect the waters of the state.
- (E) Application of waste/wastewater shall not be made within 50 feet of property lines or 500 feet of neighboring occupied buildings existing as of the date of the permit. The restrictions regarding property lines or neighboring occupied buildings shall not apply if the adjoining property is also approved as a land application site under a permit issued by the Department or if the adjoining property owner consents in writing.

- (F) Application of waste/wastewater shall not be made in areas where the land application of waste/wastewater is prohibited by Arkansas Department of Health regulations for the protection of public water supplies.

**Section 5.407**            Record Keeping Requirements

- (A) Records shall be kept of all waste/wastewater applied. These records shall be kept in sufficient detail to determine the application rate. A log shall be kept of all land applied waste/wastewater. The log should include date, weight and/or volume, destination and acreage over which the load was spread. All records and logs shall be kept at the facility and provided to the Department upon request.
- (B) A representative sample of the waste/wastewater to be land applied shall be collected periodically, at a minimum of once each year, and analyzed for the following parameters: pH, Total Nitrogen, Ammonium, Potassium, Phosphorous and percent solids. The Department may require more frequent testing deemed necessary to protect waters of the state.
- (C) The soils of each field where liquid animal waste has been land applied shall be sampled and analyzed annually prior to the application of wastes for the following parameters: pH, Potassium, Phosphorous and Nitrates.
- (D) Methods and timing of sampling and analysis described in this Section shall be in accordance with the University of Arkansas Cooperative Extension Service guidelines.
- (E) Annual reports for the previous calendar year shall be submitted to the Department prior to May 30 of each year which must include the following: waste/wastewater analyses conducted under paragraph 5.407(B) of this Section; soils analyses conducted under paragraph 5.407(C) of this Section, locations, volumes, and nitrogen application rates for the previous year; methods of application; and types of crops grown on each land application site. Reports must be submitted on forms provided by the Department.

## **CHAPTER FIVE: FACILITY CONSTRUCTION CERTIFICATION**

### **Section 5.501**      Facility Construction Certification

The provisions of this Regulation No. 5 require all confined animal operations to be constructed in accordance with plans and specifications approved by the Department. Following completion of construction and prior to any operation commencing at the facility, certification that the facility was constructed in accordance with the approved plans and specifications must be submitted to the Department. This certification must be prepared by USDA Natural Resource Conservation Service, an Arkansas Soil and Water Conservation District water quality technician, the University of Arkansas Cooperative Extension Service or a Professional Engineer registered in the State of Arkansas. Authorization to operate the facility will not be issued until the certification is received by the Department.

## **CHAPTER SIX: ALTERNATIVE PERMITTING AND WASTE MANAGEMENT**

### **Section 5.601**      Permit for Land Application Site Only

A separate permit may be issued for a land application site if the owner submits an application which includes a site management plan for the land application site and a plan detailing nutrient application rates; the timing of waste application with respect to the nutrient uptake cycle of the vegetation found on the land application site(s); and waste storage and distribution method(s) prepared in accordance with the requirements of this Regulation. The applicant for such a permit shall notify the Department of any contractual agreement for the use of the land as a land application site by submitting a copy of the agreement. Records of waste/wastewater application shall be kept as specified in Section 5.407 and shall include information regarding the source of the waste, including location and permit number if applicable. Sampling, analysis and annual reporting as specified in Section 5.407 are required.

### **Section 5.602**      Composting

Waste management plans submitted in accordance with this Regulation may include composting as an alternative to land application of liquid waste. Any such plans may provide for composting at a permitted composting facility. If no such facility is referenced in the plan, it must include sufficient detail for a determination by the Department that point or nonpoint source pollution to the waters of the State will not result from the use of this alternative.

## **CHAPTER SEVEN: FACILITY CLOSURE**

### **Section 5.701**      Closure Plan Required

- (A) Should a permitted confined animal operation using a liquid waste management system cease operation, the permittee shall submit to the Department a closure plan for the liquid waste system storage/treatment structure(s) within sixty (60) days of the final day of operation for Department review and approval. Within ten (10) days of completion of closure activities, the permittee must submit certification that the facility was closed in accordance with the approved plan. The closure plan and closure certification shall be prepared by the USDA Natural Resource Conservation Service, an Arkansas Soil and Water Conservation District water quality technician, the University of Arkansas Cooperative Extension Service or a professional engineer registered in the State of Arkansas.
  
- (B) All new applications for a liquid animal waste disposal permit shall include a closure plan including an estimated cost for closure of the waste disposal system.

## **CHAPTER EIGHT: EFFECTIVE DATE**

### **Section 5.801**      Effective Date

This regulation and any amendment thereof shall be in full force and effect on March 23, 2000. It was filed with the Secretary of State on March 13, 2000 and took effect 10 days after filing. The Arkansas Pollution Control & Ecology Commission adopted the regulation on February 25, 2000.