

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

**RULE 223 - EMISSION REDUCTION PERMITS FOR LARGE CONFINED ANIMAL FACILITIES**

*(Adopted June 2, 2006)*

(a) Applicability

This rule establishes the permitting requirements for agricultural sources subject to permit as a result of California Health & Safety Code Section 40724.6 as effective January 1, 2004. A written Permit to Operate shall be required for all Large Confined Animal Facilities.

(b) Definitions

For the purpose of this rule, the following definitions shall apply:

- (1) AERATED STATIC PILE means a system designed, constructed, maintained, and operated for decomposing organic material in which the material is placed on top of perforated plates that are connected to blowers that either push or pull air through the piles. The system shall operate under negative or positive pressure for not less than 90% of its blower operation cycle and the exhaust shall be vented to a VOC control device with an overall capture and control efficiency of at least 80%.
- (2) AEROBIC LAGOON means a lagoon designed, constructed, maintained, and operated in accordance with the Natural Resource Conservation Service (NRCS) Practice Standard 359 (Waste Treatment Lagoon), as of date of adoption of this rule, or more recent applicable standard.
- (3) ALTERNATIVE MITIGATION MEASURE means a mitigation measure that is determined by the Executive Officer, California Air Resources Board (CARB), and United States Environmental Protection Agency (U.S. EPA) to achieve reductions that are equal to or exceed the reductions that would be achieved by other mitigation measures listed in this rule.
- (4) ANAEROBIC TREATMENT means the decomposition of organic matter by microbes in the absence of oxygen.
- (5) ANAEROBIC TREATMENT LAGOON means a lagoon designed, constructed, maintained, and operated in accordance with NRCS Practice Standard 359 (Waste Treatment Lagoon), as of date of adoption of this rule, or more recent applicable standard.

- (6) ANIMAL WASTE means any animal excretion and mixtures containing animal excretions including, but not limited to, solids separated from animal excretions.
- (7) BEST AVAILABLE RETROFIT CONTROL TECHNOLOGY (BARCT) means an emission limitation that is based on the maximum degree of reduction achievable, taking into account environmental, energy, and economic impacts by each class or category of source.
- (8) CERTIFIED NUTRITIONIST means a nutritionist certified by the American Registry of Professional Animal Scientists.
- (9) CLASS ONE MITIGATION MEASURES: a mitigation measure or combination of measures for the specific source category that, at the time of rule adoption, are considered to be the best available retrofit control technology (BARCT), as defined in the California Health and Safety Code Section 40406.
- (10) CLASS TWO MITIGATION MEASURES: a mitigation measure or combination of measures for the specific source category that, at the time of rule adoption, are considered to be more stringent than best available retrofit control technology (BARCT) standards for existing facilities taking into account environmental, energy, economic, legal, social, and technological factors.
- (11) CONFINED ANIMAL FACILITY (CAF) means a source or group of sources of air pollution at an agricultural source for the raising of 3,360 or more fowl or 50 or more animals, including but not limited to, any structure, building, installation, farm, corral, coop, feed storage area, milking parlor, or system for the collection, storage, or distribution of solid and liquid manure; if domesticated animals, including but not limited to, cattle, calves, horses, sheep, goats, swine, rabbits, chicken, turkeys, or ducks are corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing.
- (12) DRY MANURE means animal waste with moisture content of less than 20%.
- (13) EMISSION MITIGATION PLAN means a document that lists and describes all mitigation measures to be implemented at the LCAF.

The description shall be sufficiently detailed, such that another person could duplicate the measure by reading the description.

- (14) FEED ALLEYWAY means the area where vehicles drive to distribute feed in the feed lane.
- (15) FEED APRON means the area where the animals stand to consume feed in non-poultry operations.
- (16) FEED LANE means the area where feed is placed and the area where animals stand to consume feed in non-poultry operations.
- (17) FREESTALL means a structure for housing animals in which the animals are contained in large pens under a roof and have free access to feed bunks, water containers, and stalls for resting.
- (18) IN-CORRAL MOUNDS means mounds of animal waste and/or soil which are constructed, designed, maintained, and operated by operators of LCAFs to allow animals to have a dry area to lay and rest during the wet season.
- (19) LAGOON means a basin designed, constructed, maintained, and operated to store and biologically treat organic waste, such as animal manure, in accordance with NRCS Agricultural Waste Management Field Handbook Chapter 10, Section 651.1004, as of date of adoption of this rule, or more recent applicable guidance.
- (20) LAND INCORPORATE means use of a method such as tilling, injecting, or plowing that covers animal waste with soil in accordance with NRCS Agricultural Waste Management Field Handbook Chapter 10, Section 651.1102, as of date of adoption of this rule, or more recent applicable guidance.
- (21) LARGE CONFINED ANIMAL FACILITY (LCAF) means any confined animal facility that maintains on any one day:
  - 1,000 or more milk-producing dairy cows; or
  - 3,500 or more beef cattle; or
  - 7,500 or more calves, heifers, or other cattle; or
  - 100,000 or more turkeys; or
  - 650,000 or more chickens other than laying hens; or
  - 650,000 or more laying hens; or
  - 3,000 or more swine; or
  - 15,000 or more sheep, lambs, or goats; or
  - 2,500 or more horses; or

650,000 or more ducks; or

30,000 or more rabbits or other animals.

- (22) LICENSED VETERINARIAN means a veterinarian licensed by the State of California.
- (23) LIVESTOCK means any domesticated animal kept or raised for the production of eggs, milk, or meat.
- (24) MILKING COW means a cow that is currently producing milk (lactating).
- (25) PHOTOTROPIC LAGOON means a lagoon where at least 10% of the bacteria in the lagoon are photosynthetic bacterium; the bacteriochlorophyll a concentration is above 1081  $\mu\text{g/L}$ ; or that is designed, constructed, maintained, and operated according to standards in a published NRCS guidance document for design and management of phototropic lagoons.
- (26) PRECURSOR EMISSIONS means any emissions of air contaminants that contribute to the formation of ozone or particulates, including but not limited to, emissions of volatile organic compounds, oxides of nitrogen, and ammonia.
- (27) SHADE STRUCTURE means a structure designed, constructed, maintained, and operated to provide shade for livestock that meets all of the standards listed in the NRCS Conservation Practice Standard for Livestock Shade Structure Code 717, as of date of adoption of this rule, or more recent applicable guidance
- (28) SOLID SEPARATOR SYSTEM means a system for separating solid manure from liquid manure products that is designed, constructed, maintained, and operated in accordance with NRCS Practice Standard 632 (Solid/Liquid Waste Separation Facility), as of date of adoption of this rule, or more recent applicable standard. These may include, but are not limited to, flat belt separators, roller press separators, vibrating screen separators, stationary screen separators, and settling basins.
- (29) SOURCE means any individual unit, piece of equipment, article, machine, process, contrivance, or combination thereof, which may emit or control an air contaminant. This includes any permit unit at any non-RECLAIM facility and any device at a RECLAIM facility.

- (30) STORAGE POND means a basin designed, constructed, maintained, and operated, to store manure and process water until utilization in accordance with NRCS Practice Standard 359 (Waste Treatment Lagoon), and does not meet the definition of a lagoon.

(c) Requirements

- (1) On or after January 15, 2007, an owner or operator of a LCAF shall not build, erect, install, alter, replace, or operate any LCAF without first obtaining written authorization from the Executive Officer. The permit application shall include:
- (A) The information that the Executive Officer determines is necessary to prepare an emissions inventory of all regulated air pollutants emitted from the operation, including, but not limited to, precursor and fugitive emissions, using emission factors approved by the Executive Officer; and
  - (B) List of all equipment and the regulating District rules; and
  - (C) List of all other sources of air pollution, including but not limited to, animals, birds, and lagoons; and
  - (D) Total capacity of the facility in terms of animal and bird population; and
  - (E) An emissions mitigation plan that demonstrates that the facility will use BARCT to reduce emissions of pollutants that contribute to the non-attainment of any ambient air quality standard, and that are within the District's regulatory authority. The emissions mitigation plan shall be based on the list of control measures outlined in Attachment A of this rule. At the time of application submittal, operators of LCAFs shall identify the control measures they plan to implement from the options available in Attachment A. Operators of LCAFs shall implement the identified control measures within one year of the date the measures are approved. For annual renewals, the measures must be implemented in accordance with the schedule approved by the Executive Officer.
- (2) The Executive Officer shall act upon an application for permit submitted pursuant to this rule within six months of receipt of a complete application.

- (3) Operators of LCAFs shall implement the control measures identified in their mitigation plan submitted pursuant to paragraph (c)(1) within one year of the date on which the permit is approved by the Executive Officer.
  - (4) On or before January 15, 2008, and each year thereafter, the owner or operator of a LCAF shall submit an annual compliance plan that updates the information required by sub-paragraphs (c)(1)(A) through (c)(1)(E) of this rule.
  - (5) Operators of LCAFs shall implement the new or amended emissions mitigation measures identified in their mitigation plan submitted pursuant to paragraph (c)(4) of this rule in accordance with the schedule approved by the Executive Officer.
- (d) Compliance Determination
- (1) Any violation of the permit conditions constitutes a violation of the this rule.
  - (2) Pursuant to District Rule 204, the Executive Officer may update LCAF permits upon annual renewal to include conditions necessary for compliance.
- (e) Annual Renewal
- (1) Permits to Operate for LCAF shall be renewed pursuant to Rule 204 and Rule 301(d).
  - (2) Plans submitted pursuant to paragraph (c)(4) shall not be subject to Rule 306 plan annual review/renewal fees unless the plan is modified or a new plan is submitted. For new and modified plans, owners shall remit the annual review/renewal fees pursuant to Rule 306.
- (f) Recordkeeping
- All owners of confined animal facilities, regardless of size, shall keep records that specify the monthly average number of animals maintained at the facility. Records shall be maintained and kept at the facility for three years or for five years if it is a Title V facility. These records shall be presented to the Executive Officer, or his designee, upon request.

- (g) Noticing  
Prior to issuing any permit for LCAF, the draft permit shall be available for public review and inspection for a period of not less than 30 calendar days.
- (h) Non-duplication  
Information required by paragraphs (c)(1) and (c)(4) that is submitted annually pursuant to other District Rules and Regulations, including annual emissions reporting (AER), may be excluded from the information requirements of this rule.
- (i) Existing Permitted Facilities  
Operators that have obtained a LCAF permit on or before June 2, 2006, or submitted a complete application to the District to obtain a LCAF permit on or before June 2, 2006, satisfy the information requirements of sub-clauses (c)(1)(A) through (c)(1)(D) of this rule for initial permitting.
- (j) Other Provisions
- (1) Any permit issued to a LCAF is subject to all applicable provisions of the California Health & Safety Code and the District Rules and Regulations.
  - (2) An LCAF operator may temporarily suspend implementation of a feed or animal housing mitigation measure provided:
    - (A) It is determined by a licensed veterinarian or certified nutritionist that the mitigation measure is detrimental to animal health, or that suspension of the mitigation measure is necessary for the animal to molt; and
    - (B) The operator notifies the District, within forty eight (48) hours of the determination that the mitigation measure is being temporarily suspended; the specific health condition requiring the mitigation measure to be suspended; and the duration that the measure must be suspended for animal health reasons; and
    - (C) The emission mitigation measure is not suspended for longer than recommended by the licensed veterinarian or certified nutritionist; and
    - (D) If such a condition exists, or is expected to exist for longer than thirty (30) days, the operator shall, within that thirty (30) day period, submit a new emission mitigation plan designating a

mitigation measure to be implemented in lieu of the mitigation measure that was suspended; and

- (E) The Executive Officer approves the temporary suspension of the mitigation measure for the time period requested by the operator.



**APPENDIX A: LARGE CAF MITIGATION MEASURES**

Owners/operators of a LCAF that is a Dairy shall also comply with the following applicable requirements:

**Table 1 - Dairy LCAF Mitigation Measure Requirements**

<b>(A). Feed and Silage Operations:</b> Owners/operators shall incorporate at least five (5) of the following feed and silage mitigation measures:	
<i>Class One Mitigation Measures</i>	
1.	Feed according to National Research Council (NRC) guidelines.
2.	Feed animals high moisture corn or steam-flaked corn and not feed animals dry rolled corn.
3.	Remove spoiled feed from feed lane at least once every seven (7) days
4.	Remove spilled feed from feed alleyways at least bi-weekly.
5.	Remove uneaten wet feed from feed bunks within twenty-four (24) hours of a rain event.
6.	Feed or dispose of rations within forty-eight (48) hours of grinding and mixing rations.
7.	Store grain in a weatherproof storage structure from October through May.
8.	Cover the horizontal surface of silage piles, except for the area where feed is being removed from the pile.
9.	Collect leachate from the silage piles and send it to a waste treatment system such as a lagoon at least once every twenty-four (24) hours.
10.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer.
<i>Class Two Mitigation Measures</i>	
11.	a. Enclose silage in a silage bag system designed for that purpose, or b. Enclose silage in a weatherproof structure and vent to a control device with at least 80% control efficiency, or c. Eliminate silage from animal diet.
<b>(B). Milk Parlor:</b> Owners/operations shall incorporate at least one (1) of the following mitigation measures in each milk parlor:	
<i>Class One Mitigation Measures</i>	
1.	a. Flush or hose milk parlor immediately prior to, immediately after, or during each milking in accordance with the recommendations in NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1002 or more recent NRCS guidance.
2.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer.
<i>Class Two Mitigation Measures</i>	
3.	a. Enclose and vent the milk parlor to a control device certified by the District to achieve at least 80% capture and control efficiency when animals are in the parlor.

<b>Table 1 - Dairy LCAF Mitigation Measure Requirements (Continued)</b>	
<b>(C). Freestall Barns:</b> Owners/operations housing animals in freestalls shall incorporate at least two (2) of the following mitigation measures in each freestall barn.	
<i>Class One Mitigation Measures</i>	
1.	Vacuum or scrape freestalls consistent with, during, after, or prior to each milking. Vacuum or scrape freestalls in accordance with NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1002 or more recent NRCS guidance.
2.	Inspect water pipes and troughs and repair leaks at least once a day.
3.	Use non-manure-based bedding for at least 90% of the bedding material, by weight, for freestalls (e.g. rubber mats, almond hulls, sand, or waterbeds).
4.	Remove wet manure from individual cow freestall beds at least once a day.
5.	Rake, harrow, scrape, or grade bedding in freestalls at least twice every seven (7) days.
6.	Use a dry manure handling system, such as scraping, instead of a liquid manure handling system such as a flush system.
7.	Have no animals in exercise pens, corrals, or dry lots at any time.
8.	Flush freestalls more frequently than the milking schedule. Flush in accordance with NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1002 or more recent NRCS guidance.
9.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer.
<b>(D). Corrals:</b> Owners/operators housing animals in corrals shall incorporate at least six (6) of the following mitigation measures in each corral where animals have been housed in the last thirty (30) days.	
<i>Class One Mitigation Measures</i>	
1.	<ul style="list-style-type: none"> <li>a. Clean manure from corrals at least four (4) times per year with at least sixty (60) days between cleaning, or</li> <li>b. Clean corrals at least once between April and July and at least once between October and December, or</li> <li>c. Clean concreted areas such that the depth of manure does not exceed twelve (12) inches at any point or time, except for in-corral mounding, or</li> <li>d. Manage corrals such that the manure depth in the corral does not exceed twelve (12) inches at any time or point, except for in-corral mounding.</li> </ul>
2.	Knockdown fence line manure build-up prior to it exceeding a height of twelve (12) inches at any time or point.
3.	Scrape or flush feed aprons in accordance NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1002, or more recent NRCS guidance in all corrals at least once every seven (7) days.
4.	Slope the surface of the pens at least 3% where the available space for each animal is 400 square feet or less. Slope the surface of the pens at least 1.5% where the available space for each animal is more than 400 sq. feet per animal.
5.	a. Maintain corrals to ensure drainage and prevent water from standing more than

<b>Table 1 - Dairy LCAF Mitigation Measure Requirements (Continued)</b>	
	forty-eight (48) hours after a storm, or b. Maintain corrals and drylots so that there are no indentions in the surface where puddles may form and remain for more than forty-eight (48) hours.
6.	Install floats on the troughs or use another method approved by the Executive Officer to ensure that the water in the troughs does not intentionally or unintentionally overflow or spill onto an earthen ground.
7.	Inspect water pipes and troughs and repair leaks at least once a day.
8.	Harrow, rake, or scrape pens sufficiently to maintain a dry surface, unless the corrals have not held animals in the last thirty (30) days.
9.	a. Use lime or a similar absorbent material in the pens according to the manufacturer's recommendations to minimize moisture in the pens, or b. Apply thymol to corral soil in accordance with the manufacturer's recommendation, or c. Apply eugenol to corral soil in accordance with the manufacturer's recommendation.
10.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer
<i>Class Two Mitigation Measures</i>	
11.	Install shade structures.
12.	House animals in an enclosure vented to a control device certified by the District to achieve at least 80% control efficiency.

(E).	<b>Handling of Solid Manure or Separated Solids:</b> Owners/operators that handle or store solid manure or separated solids outside the animal housing shall incorporate at least two (2) of the following mitigation measures:
<i>Class One Mitigation Measures</i>	
1.	Cover dry manure piles outside the pens with a waterproof covering from October through May, except for times, not to exceed twenty-four (24) hours per year, when wind events remove the covering. The covering shall be in accordance with applicable recommendations in NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1003, or more recent NRCS guidance.
2.	Cover dry separated solids outside the pens with a waterproof covering from October through May, except for times, not to exceed twenty-four (24) hours each, when wind events remove the covering. The covering shall be in accordance with NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1003 or more recent NRCS guidance.
3.	Remove manure from the facility within seventy-two (72) hours of removal from the pens or corrals.
4.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer.
<i>Class Two Mitigation Measures</i>	
5.	Compost manure removed from pens with an aerated static pile vented to a biofilter or other control device with at least 80% control efficiency designed, constructed, operated, and maintained in accordance with NRCS Practice

<b>Table 1 - Dairy LCAF Mitigation Measure Requirements (Continued)</b>	
	Standard 317 (Composting Facility), or more recent NRCS standard.
6.	Store all removed manure in an enclosure vented to a control device with at least 80% control efficiency.
7.	Send at least 51% of the animal waste removed from site to a digester, with a control device with a control efficiency of at least 80%, within seventy-two (72) hours of removal from the housing. The digester shall be designed, constructed, maintained, and operated in accordance with NRCS Practice Standard 365 (Anaerobic Digester – Ambient Temperature and Practice Standard 366 (Anaerobic Digester – Controlled Temperature), or more recent NRCS standard.

(F).	<b>Handling Manure in Liquid Form:</b> Owners/operators that handle manure in a liquid form shall incorporate at least one (1) of the following mitigation measures:
<i>Class One Mitigation Measures</i>	
1.	Manage the facility such that lagoons only contain waste from the milking parlor and storm water.
2.	a. Use phototrophic lagoons, or b. Use an anaerobic treatment lagoon
3.	Remove solids from the waste system with a solid separator system, prior to the waste entering the lagoon.
4.	Maintain lagoon at a pH between 6.5 and 7.5.
5.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer.
<i>Class Two Mitigation Measures</i>	
6.	a. Use an aerobic lagoon, or b. Use a mechanically aerated lagoon designed, constructed, maintained, and operated in accordance with the recommendations in NRCS Practice Standard 559 (Waste Treatment Lagoon), or more recent NRCS standard, or c. Maintain organic loading in the lagoon such that the total solids is less than 3.5 mg (dry weight)/mL, or total volatile solids is less than 3.5 mg/mL.
7.	Use additional non-standard equipment or chemicals on the solid separator system, such as roller or screw presses or chemical coagulants and flocculants, that increase the percent of solid separation achieved by the separator and that is approved by the Executive Officer.
8.	Cover the lagoon or storage pond and vent to a control device with at least 80% control efficiency.
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<b>Table 1 - Dairy LCAF Mitigation Measure Requirements (Continued)</b>	
<b>(G). Land Application of Liquid or Dry Manure:</b> Owner/operators who land apply dry or liquid manure to crop land on the facility shall incorporate at least two (2) of the following mitigation measures:	
<i>Class One Mitigation Measures</i>	
1.	a. Land incorporate all manure within seventy-two (72) hours of removal in accordance with the recommendations of NRCS Agriculture Waste Management Field Handbook Chapter 11 Section 651.1102, or more recent NRCS standards, or b. Only apply manure that has been treated with an anaerobic digestion process or aerobic lagoon or digester system designed, constructed, maintained, and operated in accordance with the appropriate NRCS Practice Standard 629 (Waste Treatment), Practice Standard 359 (Waste Treatment Lagoon), Practice Standard 365 (Anaerobic Digester – Ambient Temperature and Practice Standard 366 (Anaerobic Digester – Controlled Temperature), or more recent NRCS standard.
2.	Allow liquid manure to stand in the fields no more than twenty-four (24) hours after irrigation and apply liquid manure in accordance with the recommendations of NRCS Agriculture Waste Management Field Handbook Chapter 11 Section 651.1102, or more recent NRCS standards.
3.	Only apply solid manure that has a moisture content of less than 50% in accordance with the recommendations of NRCS Agriculture Waste Management Field Handbook Chapter 11 Section 651.1102, or more recent NRCS standards.
4.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer.

**Note:**

1. An owner/operator may temporarily suspend utilization of a mitigation measure provided all of the following requirements are met:
  - (a) It is determined by a certified veterinarian or nutritionist that the mitigation measure may be detrimental to animal health or that suspension of the mitigation measure is necessary for the animal to molt, and
  - (b) The operator notifies the District, within forty-eight (48) hours of the veterinarian's or nutritionist's determination, that a measure is being temporarily suspended, and
  - (c) If such a situation exists, or is expected to exist for longer than thirty (30) days, the owners/operators shall, within that thirty (30) day period, submit a new mitigation measure to be implemented in lieu of the mitigation measure that was suspended.

2. An owner/operator may substitute a mitigation measure from one section in the applicable table (tables 2 through 6) for a mitigation measure in another section of the applicable table, provided it is demonstrated, to the satisfaction of the Executive Officer, that the substitution would result in equal or greater emission reductions. Substituted measures shall be requested by submittal of an application to modify the mitigation plan required by Rule 223(c)(4) with remittance of fees pursuant to Rule 306 and shall be included as permit requirements.
3. For the purposes of this attachment, the term “Executive Officer” when used for the approval of alternate mitigation measures means the Executive Officer of the SCAQMD, CARB, and U.S. EPA.

Owners/operators of a LCAF that is a Poultry Operation shall also comply with the following applicable requirements:

**Table 2 – Poultry Operations LCAF Mitigation Measure Requirements**

(A). <b>Poultry House:</b> Each poultry house shall incorporate at least four (4) of the following mitigation measures:	
<i>Class One Mitigation Measures</i>	
1.	a. Remove cake manure daily in accordance with the recommendation of NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1002, or more recent NRCS guidance, or b. Clean under poultry cages daily in accordance with the recommendation of NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1002, or more recent NRCS guidance.
2.	Use poultry litter additives designed to reduce air emissions or moisture content in litter, such as aluminum sulfate or sodium bisulfate, according to manufacturer recommendations.,,
3.	Use a dry housing cleaning method at all times, except when a wet cleaning method is required for animal health or biosecurity issues.
4.	Use drinkers that do not drip.
5.	Adjust the height, volume, and location of drinkers daily.
6.	Use evaporative cooling pad or tunnel ventilation with no foggers in houses.
7.	Slope the ground of the houses or pens a minimum of 3%.
8.	Install mounds or berms up gradient to prevent the runoff of stormwater into pens (only an option for animals allowed to freely move between indoor housing structures and outdoor pens)
9.	Inspect water pipes and drinkers and repair leaks at least once a day.
10.	Maintain the roof structure and manage roof runoff in accordance with the recommendations of NRCS Practice Standard 561 – Heavy Use Area Protection, or more recent NRCS standards.
11.	Only use fogger systems designed, operated and maintained according to manufacturer recommendations that provide water droplets with an average size of 50 microns or less.
12.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer.
<i>Class Two Mitigation Measures</i>	
13.	Vent housing to a VOC control device with an overall VOC capture and control efficiency of at least 80%.
14.	a. Use a belt litter removal system that dries the litter, or b. House animals in a tunnel ventilated houses with mechanical ventilation, or c. Use a litter drying system, such as a flat bed drying system.
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**Table 2 – Poultry Operations LCAF Mitigation Measure Requirements (Continued)**

<b>(B). Feed Operations:</b>	
Owners/operators shall incorporate at least five (5) of the following feed mitigation measures:	
<i>Class One Mitigation Measures</i>	
1.	a. Feed according to NRC guidelines, or b. Feed animals probiotics designed to improve digestion according to manufacturer recommendations, or c. Feed animals an amino acid supplemented diet to meet their nutrient requirements, or d. Feed animals feed additives such as amylase, xylanase, and protease, designed to maximize digestive efficiency according to manufacturer recommendations.
2.	Remove spilled feed from housing at least once every seven (7) days.
3.	Enclose grain in a weatherproof storage structure from October through May.
4.	Feed or dispose of feed within forty-eight (48) hour of grinding and mixing feed.
5.	Remove wet feed from animal housing within twenty-four (24) hours of a rain event.
6.	Remove spilled feed from facility at least once every seven (7) days.
7.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer.
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**Table 2 – Poultry Operations LCAF Mitigation Measure Requirements (Continued)**

<b>(C). Handling of Solid Manure or Separated Solids:</b>	
Owners/operators that handle or store solid manure or separated solids outside the animal housing shall incorporate at least one (1) of the following mitigation measures:	
<i>Class One Mitigation Measures</i>	
1.	a. Remove all animal waste from site within seventy-two (72) hours of removal from housing, or b. Send all animal waste to a storage facility designed, constructed, maintained, and operated to the recommendations in NRCS Practice Standard 313 (Waste Storage Facility) or more recent NRCS standard.
2.	Cover animal waste outside the housing with a waterproof covering from October through May, except for times, not to exceed twenty-four (24) hours per year, when wind events remove the covering, the covering shall be in accordance with applicable recommendations in NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1003, or more recent NRCS guidance.
3.	Use a dry manure handling system in housing, such as stockpiles, solid land application, or a thin bed manure drying system, instead of a wet system such as flushing, manure storage ponds, or manure treatment lagoons.
4.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer.
<i>Class Two Mitigation Measures</i>	
5.	Store all removed animal waste in an enclosure vented to a control device with at least 80% control efficiency.
6.	Send at least 51% of the animal waste removed from site to a digester, with a control device a control efficiency of at least 80%, within seventy two (72) hours of removal from housing. The digester shall be designed, constructed, maintained, and operated in accordance with NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1006, or more recent NRCS guidance.
7.	Compost animal waste removed from the housing with an aerated static pile vented to a control device with at least 80% control efficiency designed, constructed, operated, and maintained in accordance with NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1004, or more recent NRCS guidance.
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**Table 2 – Poultry Operations LCAF Mitigation Measure Requirements (Continued)**

<b>(D). Handling of Manure in Liquid Form:</b> Owners/operators that handle manure in a liquid form shall incorporate at least one (1) of the following mitigation measures:	
<i>Class One Mitigation Measures</i>	
1.	Manage the facility such that only storm water and water used to wash eggs enters the lagoon.
2.	a. Use phototrophic lagoons, or b. Use an anaerobic treatment lagoon designed, constructed, maintained, and operated in accordance with NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1004, or more recent NRCS guidance.
3.	Remove solids from the waste system with a solid separator system, prior to the waste entering the lagoon that is designed, constructed, operated, and maintained in accordance with NRCS Practice Standard 629 (Waste Treatment), or more recent NRCS standard.
4.	Maintain lagoon at a pH between 6.5 and 7.5.
5.	Implement alternative mitigation measure(s), not listed above, subject to approval of the Executive Officer.
<i>Class Two Mitigation Measures</i>	
6.	a. Use aerobic lagoons designed, constructed, maintained, and operated to the recommendations in NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1004 or more recent NRCS guidance, or b. Use a mechanically aerated lagoon designed, constructed, maintained, and operated according to the recommendations in NRCS Agricultural Waste Management Field Handbook Chapter 10 Section 651.1004 or more recent NRCS guidance, or c. Maintain organic loading in the lagoon that is less than 3.5 mg (dry weight)/mL, or total volatile solids is less than 3.5 mg/mL.
7.	Use additional non-standard equipment or chemicals on the solid separator system, such as roller or screw presses or chemical coagulants and flocculants that increase the percent of solid separation achieved by the separator and is approved by the Executive Officer.
8.	Cover the lagoon or storage pond and vent to a biofilter or a control device with at least 80% control efficiency.

**Note:**

1. An owner/operator may temporarily suspend utilization of a mitigation measure provided all of the following requirements are met:
  - (a) It is determined by a certified veterinarian or nutritionist that the mitigation measure may be detrimental to animal health or that suspension of the mitigation measure is necessary for the animal to molt, and
  - (b) The operator notifies the District, within forty-eight (48) hours of the veterinarian's or nutritionist's determination, that a measure is being temporarily suspended, and

- (c) If such a situation exists, or is expected to exist for longer than thirty (30) days, the owners/operators shall, within that thirty (30) day period, submit a new mitigation measure to be implemented in lieu of the mitigation measure that was suspended.
2. An owner/operator may substitute a mitigation measure from one section in the applicable table (tables 2 through 6) for a mitigation measure in another section of the applicable table, provided it is demonstrated, to the satisfaction of the Executive Officer, that the substitution would result in equal or greater emission reductions. Substituted measures shall be requested by submittal of an application to modify the mitigation plan required by Rule 223(c)(4) with remittance of fees required by Rule 306, and shall be included as permit requirements.
  3. For the purposes of this attachment, the term “Executive Officer” when used for the approval of alternate mitigation measures means the Executive Officer of the SCAQMD, CARB, and U.S. EPA.