SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

Preliminary Draft Staff Report
Proposed Amended Rule 223 – Requirements For Confined Animal Facilities

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EXECUTIVE SUMMARY

South Coast Air Quality Management District (South Coast AQMD) Rule 223 – Emission Reduction Permits For Large Confined Animal Facilities (Rule 223) controls ammonia and volatile organic compounds (VOCs) emissions from large confined animal facilities. Rule 223 requires the owner or operator of a Large Confined Animal Facility (LCAF) to submit a permit application, obtain a permit and implement specified emission mitigation measures.

The South Coast Air Basin portion of the South Coast AQMD exceeds State and federal ambient air quality standards for PM 2.5. Proposed Amended Rule 223 – Requirements for Animal Facilities (PAR 223) focuses on reducing ammonia emissions, a precursor to PM2.5, to comply with the federal Clean Air Act Most Stringent Measures requirements for the 2012 Annual PM2.5 National Ambient Air Quality Standard (NAAQS) by 2030. PAR 223 implements control measure (BCM-08 – Emissions Reductions from Livestock Waste at Confined Animal Facilities) from the 2024 PM2.5 Attainment Plan by lowering the rule applicability thresholds to align with the more stringent thresholds in San Joaquin Valley Air Pollution Control District (San Joaquin Valley APCD) and Imperial County Air Pollution Control District (Imperial County APCD).

PAR 223 would lower the applicability thresholds for dairy, poultry, and duck farms to 500 milking cows, 400,000 chickens, and 400,000 ducks, respectively. PAR 223 would subject 12 additional dairy facilities to South Coast AQMD permitting requirements. No additional poultry or duck farms currently exceed the proposed thresholds. LCAFs are required to select from a menu of mitigation measures to reduce emissions from its operations, many of which are already implemented as best practices or as required by other rules and regulations. PAR 223 is anticipated to have minimal cost impacts associated with permitting. It is estimated that PAR 223 will reduce ammonia emissions by 0.18 ton per day by 2029.

CHAPTER 1 – BACKGROUND

Introduction

Agricultural operations represent a significant source of air pollution throughout the state of California. Although the livestock industry in South Coast AQMD's jurisdiction is not growing, livestock waste emits significant amounts of ammonia that contributes to fine particulate emissions (PM2.5) via atmospheric reactions with NOx to form ammonium nitrate. It has been estimated that dairy cattle represent 80 percent of total livestock ammonia emissions.

Previously, Health and Safety Code Section 40724.6 mandated certain air districts to adopt a rule or regulation that required the owner or operator of a Large Confined Animal Facility (LCAF) to obtain a permit from the district to reduce, to the extent feasible, emissions of air contaminants from the facility. Rule 223 – Emission Reduction Permits for Large Confined Animal Facilities (Rule 223) was adopted in June 2006 to satisfy these statutory requirements.

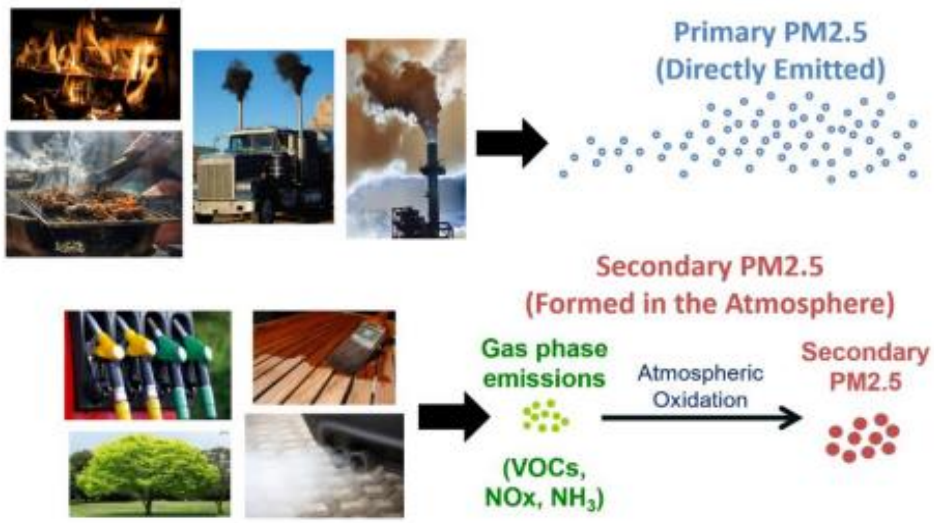
Rule 223 requires the owner or operator of an LCAF to submit a permit application and obtain a permit to operate from South Coast AQMD. The permit application is required to include facility information, including total animal and bird population capacity, sources of air pollution and an emissions mitigation plan. Rule 223 defines an LCAF as a confined animal facility that maintains certain animal number thresholds on any one day. Additional information on existing regulations applicable to livestock operations is included under the heading, Regulatory History.

Federal Clean Air Act Requirements

The South Coast Air Basin has the worst levels of ground-level ozone (smog) and among the highest levels of fine particulate matter, referred to as PM2.5 (**p**articulate **m**atter less than **2.5** microns in diameter). PM2.5 is an air pollutant that is either directly emitted into the atmosphere (primary particles) or formed in the atmosphere through chemical reactions (secondary particles). Primary PM2.5 includes road dust, diesel soot, combustion products, and other sources of fine particles. Secondary PM2.5 products, such as sulfates, nitrates, and complex organic compounds, are formed from reactions of oxides of sulfur (SOx), oxides of nitrogen (NOx), volatile organic compounds (VOCs), and ammonia (see Figure 1-1). High levels of particulate air pollution cause respiratory and cardiovascular disease, exacerbate asthma, and can lead to premature death.

Figure 1-1

PM2.5 Formation Mechanisms



The region continues to exceed state and federal air quality standards for PM2.5. The federal Clean Air Act requires areas that do not meet a National Ambient Air Quality Standard (NAAQS or air quality standards) to develop and implement strategies to reduce emissions so that healthful levels of air quality can be achieved in a timely manner. The strategy or attainment plan, along with other supporting elements, must be submitted to U.S. EPA for its review and approval into the State Implementation Plan. Regions must develop State Implementation Plan(s) to attain NAAQS by specific dates or face the possibility of sanctions by the federal government and other consequences under the federal Clean Air Act. California also has air quality standards for PM2.5 and under state law, the region is required to attain those standards as expeditiously as practicable.

The 2012 PM2.5 NAAQS level is set at 12 micrograms per cubic meter ($\mu g/m^3$). The South Coast Air Basin is classified as a "serious" PM2.5 non-attainment area for this standard, with an attainment date of December 31, 2025. In March 2023, South Coast AQMD withdrew the previous plan addressing the standard to avoid potential disapproval of the plan by U.S. EPA. Staff subsequently developed the South Coast Air Basin Attainment Plan for the 2012 Annual PM2.5 Standard (2024 PM2.5 Plan)[1] that requests a 5-year extension and demonstrates attainment of the standard by December 31, 2030. Under section 188(e) of the federal Clean Air Act, areas classified as serious non-attainment seeking an extension of the attainment date are required to demonstrate that the attainment plan includes the Most Stringent Measures (MSM). U.S. EPA defines MSM as:

> *"The maximum degree of emission reduction that has been required or achieved from a source or source category in any other attainment plans or in practice in any other states and that can feasibly be implemented in the area seeking the extension."*

[1] South Coast Air Quality Management District, South Coast Air Basin Attainment Plan for the 2012 Annual PM2.5 Standard, June 2024. Available https://www.aqmd.gov/docs/default-source/clean-air-plans/pm2.5-plans/final-pm2.5-plan/2012-annual-pm2-5-plan.pdf

South Coast Air Basin Attainment Plan for 2012 Annual PM2.5 Standard (2024 PM2.5 Plan)

The 2024 PM2.5 Plan describes the control strategy and provides a demonstration that the proposed control strategy meets federal Clean Air Act requirements to implement MSM (see Appendix III).[2] The 2024 PM2.5 Plan also included an analysis of precursor emissions that showed ammonia and NOx emissions are a significant contributor to PM2.5 (see Appendix VI – Precursor Demonstration).[3] South Coast AQMD Governing Board adopted the 2024 PM2.5 Plan in June 2024. The plan was subsequently approved by the California Air Resources Board (CARB) on June 27, 2024. CARB has submitted the plan to the U.S. EPA for approval and a request for incorporation into the State Implementation Plan.

Appendix IV-A of the 2024 PM2.5 Plan[4] identifies the South Coast AQMD's stationary source attainment strategy through source-specific control measures. Control measure BCM-08: Emission Reductions from Livestock Waste at Confined Animal Facilities describes the strategy to seek further ammonia emission reductions from livestock facilities. The control strategy is based on the 2024 PM2.5 Plan Most Stringent Measures analysis that identified two California air districts having livestock regulations with lower applicability thresholds than Rule 223. Table 1-1 includes a comparison of California air district livestock rule applicability thresholds.

Table 1-1

Comparison of Livestock Regulation Applicability Thresholds

Agency	Rule	Relevant Applicability Thresholds
South Coast AQMD	223	Dairy Cows – 1,000 milking cows Poultry – 650,000 chickens/laying hens Ducks – 650,000 ducks
Imperial County APCD	217	Dairy Cows – 500 milking cows Poultry – 400,000 chickens Ducks – 400,000 ducks
San Joaquin Valley APCD	4750	

As noted above, San Joaquin Valley APCD Rule 4570 and Imperial County APCD Rule 217 have more stringent applicability thresholds than South Coast AQMD Rule 223 (500 vs. 1,000 milking cows, and 400,000 vs. 650,000 birds). Proposed Amended Rule 223 (PAR 223) therefore seeks to lower LCAF applicability thresholds to match those in other adopted regulations, to meet federal Clean Air Act requirements by adopting the most stringent measures.

In addition to lowering Rule 223 applicability thresholds, control measure BCM-08 identified two other potential control strategies to further reduce livestock ammonia emissions: 1) incorporation of solid manure within 24 hours, and 2) acidifying poultry litter. Soil incorporation of the manure on agricultural lands reduces ammonia emissions by decreasing the exposed surface area of manure. Rule 223 currently requires land incorporation of all manure within 72 hours of removal as a mitigation measure for dairy farms. Decreasing the land incorporation time of solid manure from the current Rule 223 requirement of 72 hours to 24 hours could potentially reduce ammonia, however, dairy industry association representatives have noted that a significant portion of dairy manure is either transported out of the region or sent to composting facilities for processing. This

[2] https://www.aqmd.gov/docs/default-source/clean-air-plans/pm2.5-plans/final-pm2.5-plan/appendix-iii---bacm_msm.pdf

[3] https://www.aqmd.gov/docs/default-source/clean-air-plans/pm2.5-plans/final-pm2.5-plan/appendix-vi---precursor-demonstration.pdf

[4] https://www.aqmd.gov/docs/default-source/clean-air-plans/pm2.5-plans/final-pm2.5-plan/appendix-iv-a-control-measures.pdf

control strategy has also not been adopted into other California air district rules. Accordingly, this control strategy is not included in PAR 223.

Treating poultry litter to reduce ammonia emissions can be achieved by application of additives to poultry litter to reduce the pH level of the litter. Reducing the pH level binds ammonia and reduces its volatilization. Studies on this process have, however, focused on broiler poultry house facilities[5] (where chickens are raised for meat) while commercial poultry farms in the South Coast Air Basin are cage-free layer houses. Additionally, a 2023 California Air Resources Board (CARB) and San Joaquin Valley APCD report that evaluated adding amendments to poultry litter noted potential water quality concerns from additives that use salts to change pH level.[6] Due to these findings and because treating poultry litter at layer hen houses is not a requirement in other California air district livestock rules, PAR 223 does not include this control strategy. PAR 223 includes the most stringent control strategies identified for this source category.

Confined Animal Facility Operations

Dairy Facilities

Dairying practices differ throughout the state, country and world. In the San Joaquin Valley and northern California, the majority of the dairies are flush lane operations which means that the manure in the milking parlors and free stall barns are flushed with recycled lagoon water into the lagoons. Waste from the lagoons is land applied as a nutrient source to local farmland. Most dairy farms in South Coast AQMD are "dry lot corral" dairies. Dairy cows live in open corrals, with feed lanes usually along one side of the corral. Manure is generally cleared from the feed lane into the corral, and then periodically removed from the corral, either to on-site stockpiles or off-site. Under General Waste Discharge Requirements[7], farms are required to clear on-dairy manure twice a year. In addition, due to urbanization and economic reasons, some dairy and other livestock operations are leaving the South Coast AQMD area and are relocating to other areas such as the San Joaquin Valley, the northwestern United States, and Texas.

According to the Santa Ana Regional Water Quality Control Board's (SARWQCB) annual inventory of the dairy industry, in 2023, there were 63 dairy cattle farms in the South Coast Air Basin with a total of 40,446 milking cows, 9,048 dry cows, 16,480 heifers and 13,776 calves.[8] Of the 65 dairy cattle farms, 42 farms have milking cows. Based on 2023 data, 383,275 tons of manure (the primary source of ammonia emissions) was reported in the manure manifests submitted to the SARWQCB. There are 16 dairy farms that are currently permitted under Rule 223.

Poultry Facilities

In 2018, voters in California approved Proposition 12, also known as the Farm Animal Confinement Initiative. Proposition 12 requires that animals held in buildings, such as laying hens, breeding sows, or veal calves, "be housed in confinement systems that comply with specific

[5] https://www.ars.usda.gov/research/publications/publication/?seqNo115=283454 and https://www.nacaa.com/file.ashx?id=43e522f7-6583-4e60-bc0f-59eea5e2d1b0

[6] https://ww2.arb.ca.gov/sites/default/files/2023-04/AmmoniaSupplementalInformation.pdf

[7] https://www.waterboards.ca.gov/santaana/board_decisions/adopted_orders/orders/2018/r8-2018-0001.pdf

[8] Calves are cows up to 12 months old, heifers are cows from 12 to 24 months old, or until first breeding, milking cows are adult cows that are lactating and dry cows are adult cows that are not milked, generally 45 to 60 days before giving birth.

standards for freedom of movement, cage-free design, and minimum floor space."[9] Implementation of the law began on January 1, 2022, and as a result all eggs produced in California must be procured only from hens in cage-free housing. High-rise hen houses in which egg-laying hens are kept in cages are no longer legal in California.

According to the United States Department of Agriculture, there are approximately 1.8 million laying hens in Los Angeles, Orange, Riverside and San Bernardino Counties.[10] There is one poultry farm that is currently permitted under Rule 223.

Regulatory History

To minimize VOC and NH3 emissions from livestock operations, LCAFs are subject to South Coast AQMD Rule 223 and Rule 1127 – Emission Reductions from Livestock Waste.

Rule 223 - Emission Reduction Permits for Large Confined Animal Facilities

Agricultural operations represent a significant source of air pollution throughout the state. Senate Bill (SB) 700, which was enacted into law as of January 1, 2004, eliminated the exemption from air districts' permit systems for agricultural operations in the farming of crops or raising of fowl or animals. The bill amended air pollution control requirements in the Health and Safety Code to include requirements for agricultural sources of air pollution. In response to SB 700, the South Coast AQMD Governing Board adopted Rule 223 in June 2006. Rule 223 requires the owner or operator of a LCAF to submit an application for a permit that includes:

i. 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 CARB in a public hearing
ii. 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 CARB in a public hearing
iii. List of all equipment and the regulating South Coat AQMD rules
iv. List of all other sources of air pollution, including but not limited to animals, birds, and lagoons
v. Total capacity of the facility in terms of animal and bird population; and
vi. An emissions mitigation plan that demonstrates that the facility will use Best Available Retrofit Control Technology (BARCT) to reduce emissions of pollutants that contribute to the non-attainment of any ambient air quality standard, and that are within the South Coast AQMD's regulatory authority.

Appendix A of Rule 223 contains a list of the emission mitigation measures and LCAF operators select the applicable mitigation measures for implementation. The list of Rule 223 mitigation measures was developed in consultation with stakeholders, including Western United Dairymen, Milk Producers Council, Inland Empire Poultrymen, Inc., and Pacific Egg and Poultry Association. In addition, most of the measures are based on an extensive study conducted by the Dairy

[9] https://www.cdfa.ca.gov/AHFSS/AnimalCare/background.html

[10] United States Department of Agriculture, 2022 Census of Agriculture, Table 19. Poultry – Inventory

Permitting Advisory Group (DPAG) that identified and recommended emission mitigation measures for the San Joaquin Valley APCD during their rulemaking.

Rule 223 defines a LCAF as a confined animal facility as one that meets or exceeds the Table 1-2 thresholds on any one day.

Table 1-2

Large Confined Animal Facility Thresholds

Animal Facility Type	Population	Animal Facility Type	Population
Milk-producing dairy cows	1,000	Swine	3,000
Beef cattle	3,500	Sheep, lambs, or goats	15,000
Calves, heifers, or other cattle	7,500	Horses	2,500
Turkeys	100,000	Ducks	650,000
Chickens other than laying hens	650,000	Rabbits	30,000
Laying hens	650,000		

Presently, there are 16 dairy facilities and one poultry facility that are LCAFs subject to South Coast AQMD Rule 223.

A form has been prepared to assist facilities in providing the required facility information (see Appendix A of staff report). In addition to the Rule 223 emission mitigation measures, operators must also comply with Rule 1127 and any other applicable South Coast AQMD rules.

Rule 1127 - Emission Reductions from Livestock Waste

Rule 1127 applies to dairy and related operations such as heifer and calf farms. It also applies to manure processing operations, such as anaerobic digesters and composting facilities as it requires that manure is either processed through these operations or through land application. The Rule also requires on-dairy best management practices (BMPs) to reduce PM10 (particulate matter 10 microns or less in diameter) dust and excess corral water and, beginning in January 2005, removal of surplus manure from corrals and stockpiles four times per year.

Other Regulations for Large Confined Animal Facilities

National Pollutant Discharge Elimination System Permit and Waste Discharge Requirements

Manure and wastewater from confined animal facilities have the potential to contribute to water pollutants such as nitrogen, phosphorus, organic matter, sediments, pathogens, nutrients, salts, metals, and other constituents. The Santa Ana Regional Water Quality Control Board (SARWQB) has issued General Waste Discharge Requirements to regulate several types of confined animal facilities, including dairies, feedlots, horse facilities, and poultry facilities. The majority of the Santa Ana and San Jacinto watersheds, which comprise the SARWQCB jurisdiction, lie within the South Coast Air Basin. All of the dairy operations under the SARWQCB jurisdiction are located within the South Coast Air Basin.

Need for Proposed Amended Rule 223

Although farms and animal populations have declined in the region, ammonia emissions are still generated from livestock operations such as manure. The nitrogen in animal manure can be converted to ammonia by a combination of mineralization, hydrolysis, and volatilization. Once emitted, the ammonia can be rapidly converted to ammonium nitrate and ammonium aerosols by reactions with acidic species (nitric acid, sulfuric acid and ammonium bisulfate). Thus, the ammonia emissions contribute directly to the formation of secondary particulate PM2.5 in the air and can also impact atmospheric visibility. As described in Appendix VI of the 2024 PM2.5 Plan, air quality modeling indicates that ammonia emissions are a significant contributor to PM2.5 levels. Manure also emits VOCs through the processes of anaerobic and aerobic decomposition.

To meet Clean Air Act requirements, Appendix III of the 2024 PM2.5 Plan included a review of emission reduction strategies from livestock waste based on two components. The first component addressed lower applicability thresholds in South Coast AQMD Rule 223 to align with the more stringent thresholds found in San Joaquin Valley APCD Rule 4570 and Imperial County APCD Rule 217 (1,000 milk cows in South Coast AQMD vs. 500 milk cows in other air districts, and 650,000 birds in South Coast AQMD vs. 400,000 birds in other air districts). The second component considered more stringent requirements to reduce ammonia emissions at dairies and other Confined Animal Facilities (CAFs). The Appendix III discussion noted that it is not feasible for all CAFs to implement the same mitigation measures due to various factors, such as infrastructure, conditional use permits, water quality regulations, production contracts, and other limitations. Furthermore, CAFs in this region face unique challenges including hot, dry summers, drought conditions, and strict water regulations, which render some measures infeasible. It was also noted that the mitigation measures included in Rule 223 provide the owners and operators of CAFs much needed flexibility to choose the mitigation measures that make the best environmental and economic sense for their facility, while maximizing the amount of emission reductions.

Accordingly, the focus of PAR 223 is to lower the applicability thresholds to align with applicability thresholds in other California air district rules to reduce ammonia emissions while providing facilities with compliance options.

Affected Facilities

The facilities subject to PAR 223 were identified by reviewing information obtained from South Coast AQMD databases, the local Santa Ana Regional Water Quality Control Board (Region 8), and trade group representatives, such as the Milk Producers Council. PAR 223 will affect facilities with animal populations that are within the proposed lower thresholds for LCAFs. Rule 223 also requires facilities that are classified as CAFs to conduct animal population recordkeeping. CAFs are defined as facilities with 3,360 or more fowl or 50 or more animals that are corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing. PAR 223 does not change the existing requirements for CAFs.

Based on the search process described above, it is estimated that out of 63 dairy cattle farms, 12 dairy farms would be newly subject to PAR 223 requirements. Of the estimated 12 dairy farms, five are within Riverside County and seven are located within San Bernardino County. As mentioned above, no poultry farms have been identified that would be affected by the updated PAR 223 animal thresholds.

Public Process

The development of PAR 223 has been conducted through a public process. A Working Group was formed to allow the public and stakeholders to discuss details of PAR 223 and provide South Coast AQMD staff with input during the rule development process. The Working Group includes business representatives, environmental and community groups, public agencies, and consultants. As part of the public process, staff consulted with an industry association for dairy farms (the Milk Producers Council) to help notify their members of the working group meeting. Staff also mailed a notice about the PAR 223 rule development process to local dairies identified through South Coast AQMD permits and data provided by the Santa Ana Regional Water Quality Control Board. South Coast AQMD has held a Working Group Meeting on January 8, 2025, via Zoom videoconference and teleconference. A Public Workshop is scheduled for March 26, 2025, via Zoom to present preliminary draft rule language for PAR 223 and receive public comment.

CHAPTER 2 – SUMMARY OF PROPOSED AMENDED RULE 223

Overall Approach

Rule 223 addresses emissions from confined animal facilities and establishes requirements for large confined animal facilities to obtain a permit to operate and implement an emission mitigation plan. PAR 223 will lower applicability thresholds by redefining what constitutes a large confined animal facility. For this chapter, when referring to PAR 223 specific terms that are defined in the rule language, the terminology will be capitalized.

The following is a summary for the proposed amendments to Rule 223.

Rule Title

The title of the rule will be changed from Emission Reduction Permits for Large Confined Animal Facilities to Requirements for Confined Animal Facilities. The proposed change clarifies that there are additional requirements other than permitting requirements and better summarizes the broader scope of the rule.

Applicability – Subdivision (a)

A minor clarification is added to subdivision (a) as PAR 223 is necessary to meet State and federal Clean Air Act provisions.

Definitions – Subdivision (b)

Large Confined Animal Facility

PAR 223 will amend the definition of Large Confined Animal Facility (LCAF) to lower the applicability threshold for three categories of livestock: dairy, poultry, and ducks. This definition is proposed to align with the thresholds used by San Joaquin APCD Rule 4570 – Confined Animal Facilities and Imperial County APCD Rule 217 – Large Confined Animal Facilities (LCAF) Permits Required.

Dairy

The applicability threshold will be amended from 1,000 milk-producing dairy cows to 500 milking cows. The term milking cow will be used for consistency and clarity.

Poultry

The applicability threshold will be amended from 650,000 chickens other than laying hens; or 650,000 or more laying hens to 400,000 chickens including laying hens. This aligns with San Joaquin APCD Rule 4570 and Imperial County APCD as they do not differentiate between laying hens and boiler chickens raised for meat.

Ducks

The applicability threshold will be amended from 650,000 ducks to 400,000 ducks.

PAR 223 also includes other amendments to subdivision (b) to improve rule clarity.

Requirements – Subdivision (c)

Paragraph (c)(1) originally required that after January 15, 2007, an owner or operator of an LCAF could not operate without first obtaining a permit to operate. PAR 223 would lower the livestock

animal applicability thresholds resulting in additional dairy facilities required to obtain a permit to operate. In order to allow time for these dairy facilities to obtain a permit, paragraph (c)(6) establishes a separate compliance timeline so that these facilities can have a reasonable timeframe to prepare and submit the permit application. Paragraph (c)(1) has been updated to remove the January 15, 2007 date and reference paragraph (c)(6) provisions.

Subparagraphs (c)(1)(B) to (c)(1)(E) list what is required along with the permit application. Subparagraph (c)(1)(B) is clarified for owners or operators to only list applicable equipment that requires a South Coast AQMD permit to operate and applicable South Coast AQMD rules. Additional proposed changes include administration changes and clarifications.

Paragraph (c)(3) requires mitigation measures to be implemented within one year of the date the measures are approved. To improve clarity, paragraph (c)(3) is updated to require implementation of control measures identified in the Emissions Mitigation Plan within 12 months from the date the permit is approved.

Paragraph (c)(4) requires that on or before January 15, 2008, the owner or operator of a LCAF submit an annual compliance plan to provide updates regarding information required in paragraph (c)(1). This existing provision was intended to meet Health and Safety Code 40724.6 provisions that require air districts to periodically review and update the permits to reflect changes in the operation or the feasibility of mitigation measures. South Coast AQMD is required by state and federal statues to review stationary source emission inventories, including emission inventories for confined animal facilities. Additionally, permits issued to livestock operations include a permit condition that requires operations to be in accordance with all data included in the permit application unless otherwise noted in subsequent permit conditions. A review of existing dairy facility permits indicates there are additional permit conditions that limit the maximum number of animals maintained at the facility on a daily basis and require recordkeeping of the number of animals maintained at the facility. If an owner or operator wants to change facility operations that result in an increase in emissions from what is specified by an existing permit, a permit modification is required. As such, the mandated programs combined with existing permitting practices achieve the intent of Health and Safety Code 40724.6 provisions to periodically review livestock control strategies. Accordingly, PAR 223 updates this provision to remove the annual compliance plan submittal requirements and instead is proposing to require facilities to submit an updated Emissions Mitigation Plan if there are changes in the facility operation or in the mitigation measures implemented.

Changes in the facility operation include an increase in the number of animals as identified in the permit to operate or changes to the mitigation measures. For example, if a dairy operator is no longer able to implement the two selected mitigation measures under the Handling of Solid Manure or Separate Solids source category, an updated Emissions Mitigation Plan would need to be submitted.

Paragraph (c)(5) is updated with administrative changes for clarity.

Subparagraph (c)(6)(A) is a new provision that specifies that an owner/operator of a LCAF that maintains 500 to 999 Milking Cows or 400,000 to 649,999 chickens including laying hens, or 400,000 to 649,999 ducks, is required to submit a completed permit application no later than January 1, 2027, that includes the information required by subparagraphs (c)(1)(A) through (c)(1)(E). Subparagraph (c)(6)(B) specifies that a permit to operate is required no later than January 1, 2029. Under existing Rule 223 paragraph (c)(3), the facilities required to obtain a permit as a

result of PAR 223 would be required to implement the mitigation measures within one year of the permit approval date.

Paragraph (c)(7) is a new paragraph added to clarify that the facilities required to obtain a permit as a result of PAR 223 would become subject to paragraph (c)(4) requirements to submit an updated Emissions Mitigation Plan if there are changes in the facility operation or in the mitigation measures implemented beginning January 1, 2030.

Compliance Determination – Subdivision (d)

Administrative changes are proposed for clarity.

Annual Permit Renewal – Subdivision (e)

A clarification is proposed to revise the name of this subdivision from Annual Renewal to Annual Permit Renewal. Administrative changes are proposed for clarity.

Recordkeeping – Subdivision (f)

Subdivision (f) is updated to clarify all owners or operators of a CAF shall keep records and the records shall be maintained and kept at the facility for a minimum of three years or a minimum of five years if it is a Title V facility.

Existing Permitted Facilities

Subdivision (i) required that operators that have obtained a LCAF permit on or before June 2, 2006, or submitted a complete application to South Coast AQMD to obtain a LCAF permit on or before June 2, 2006 satisfy the information requirements of subparagraphs (c)(1)(A) through (c)(1)(D) of this rule. This subdivision is being removed as it no longer applies.

Other Provisions – Subdivision (i)

Administrative changes are proposed for clarity.

Exemptions – Subdivision (j)

Paragraph (c)(2) and subdivision (g) were originally crafted to comply with Health and Safety Code Section 40724.6 provisions. However, PAR 223 is not being developed pursuant to Health and Safety Code Section 40724.6. Instead, PAR 223 is being developed to meet federal Clean Air Act requirements. Accordingly, subdivision (j) is added to exempt facilities subject to the permitting requirements in PAR 223 from paragraph (c)(2) and subdivision (g).

CHAPTER 3 – IMPACT ASSESSMENT

Affected Sources

It is estimated that 12 dairy farms with 500 to 999 dairy cows will become subject to PAR 223 as a result of the new proposed definition of Large Confined Animal Facility (LCAF). No poultry facilities have been identified that will become subject to PAR 223. Facilities that primarily engage in the milking of dairy cattle are classified by North American Industry Classification System (NAICS) as Dairy Cattle and Milk Production (NAICS 112120). Some of the facilities subject to PAR 223 may be classified as small businesses. Of the currently identified facilities anticipated to be subject to PAR 223, five are located in Riverside County, and seven are located in San Bernardino County.

Emissions and Emissions Reductions

Ammonia Emissions from PAR 223 Facilities

There are four types of dairy cattle: milking cows, dry cows, heifers, and calves. Emissions can either be estimated for each type of cattle or using a single weighted emission factor. For the purposes of this analysis, the single weighted emission factor is used. This is because the 12 affected LCAFs have more than one type of cattle in addition to milking cows. As shown in Table 3-1, the weighted emission factor was calculated by dividing the total ammonia emissions (2,093.52 tons per year) from all dairy cattle in the South Coast Air Basin by the total number of dairy cattle (79,750 dairy cattle) and multiplying it by 2000 to convert from tons to pounds. Table 3-1 depicts the emission factors for each cattle type, throughput of all dairy cattle in South Coast Air Basin, and total ammonia emissions in tons per day. Based on the data included in Table 3-1, the weighted emission factor is 52.5 pounds of ammonia per head per year.

Table 3-1

Dairy Farm Emissions

Type	Emission Factor (lb/hd/yr)*	2023 Throughput For All Dairy Cattle in South Coast Air Bain	2023 Emissions (tons per year)	Weighted Emission Factor (lb/hd/yr)
Milking Cows	74	40,446	1,496.50	
Dry Cows	45.4	9,048	205.39	
Heifers	27.8	16,480	229.07	
Calves	23.6	13,776	162.56	
	Total:	**79,750**	**2,093.52**	**52.5**

* Based on South Coast AQMD October 2011 Technical Assessment report.[11]

[11] South Coast Air Quality Management District, TECHNOLOGY ASSESSMENT– 2007 AQMP CM# MCS-05: Updated Emissions Inventory and Recommendations Regarding Implementation of 2007 AQMP Control Measure MCS-05 – Emission Reductions from Livestock Waste, October 2011

The next step involves calculating ammonia emissions for the 12 facilities affected by PAR 223. Ammonia emissions can be calculated by the following equation:

Emission = Throughput × Weighted Emission Factor / 2000 / 365

The 12 affected facilities are currently subject to South Coast AQMD Rule 1127. With the implementation of Rule 1127, ammonia emissions from these facilities are estimated to be reduced by 26 percent based on the South Coast AQMD October 2011 Technical Assessment.[11] To ensure the emission reductions achieved through PAR 223 will not overlap with emission reductions achieved through Rule 1127, emissions are adjusted downward by 26 percent to account for emission reductions from Rule 1127. Table 3-2 depicts the throughput for each dairy cattle type from the 12 affected facilities based on the data provided by the Santa Ana Regional Water Quality Control Board, baseline ammonia emissions per day, and total ammonia emissions after reducing it by 26 percent due to implementation of Rule 1127.

Table 3-2

Impacted Facilities Emissions

Type	2023 Throughput For the 12 Affected Facilities (Number of Heads)	2023 Emissions based on Weighted Emission Factor of 52.5 lbs/head (tons per day)	2023 Emissions with Rule 1127 Implementation (tons per day)
Milking Cows	9,387	0.675	0.499
Dry Cows	1,517	0.109	0.08
Heifers	4,582	0.329	0.243
Calves	575	0.041	0.03
Total	**16,061**	**1.154**	**0.852**

As shown in Table 3-2, the 12 impacted farms currently estimated to emit 0.852 tons per day of ammonia emissions.

Emission Reductions from PAR 223

Mitigation measures in PAR 223 are broken down into seven source categories: feed and silage operations, milk parlor, freestall barns, corrals, handling of solid manure or separated solids, handling manure in liquid form, and land application of solid or liquid manure. Each mitigation measure was analyzed to determine what ammonia reductions can be achieved. Many of the assumptions reference existing South Coast AQMD permit data, and the ammonia reduction analysis conducted during the rulemaking of San Joaquin Valley APCD Rule 4570. PAR 223

allows facilities to choose mitigation measures from a menu of options, and emission reductions vary depending on the measures facilities choose to implement. Because it is uncertain which mitigation measures facilities will choose, the following analysis is based on a review of existing permitted facility data and the assumption that the 12 newly impacted facilities would follow the same approach.

Feed and Silage Operations

In San Joaquin Valley APCD's ammonia reduction analysis, it was assumed that the owner or operator will feed their animals based on the most recent National Research Council (NRC) guidelines to achieve ammonia reductions. NRC guidelines recommend feed formulations based on different requirements for nutrients such as vitamins, carbohydrates, and proteins, while considering environmental concerns, animal productivity, animal health, and energy concerns. Reducing protein content in feed is an example of implementing NRC guidelines. The analysis references a South Coast AQMD Tetra Tech Report which showed that there is approximately 28 percent reduction in ammonia emissions from reducing the protein content in feed by 4 percent. Another study, "Feeding High Moisture Corn Instead of Dry Rolled Corn Reduces Odor Production in Finishing Beef Cattle Manure Without Sacrificing Performance" by S.L. Archibeque et al showed that use of high moisture instead of dry rolled corn reduced emissions by 46 percent. When looking at existing permits, out of the 11 menu options, two out 11 facilities chose to implement feeding according to NRC Guidelines and three out of 11 facilities choose to feed cows with high moisture corn. Ammonia emission reductions for this mitigation measure were calculated using the following equations:

Emission reduction (NRC Guideline) = 28% × (portion of facilities using mitigation measure)

Emission reduction (NRC Guideline) = 28% × (2/11) = 5.1%

Emission reduction (high moisture corn) = 46% × (portion of facilities using mitigation measure)

Emission reduction (high moisture corn) = 46% × (3/11) = 12.5%

Total Emission Reduction = 5.1% + 12.5%

The estimated ammonia reductions if facilities choose to either feed according to NRC Guidelines or feed high moisture corn is 17.6 percent.

Milk Parlor

The ammonia emission reduction analysis conducted by San Joaquin Valley APCD's did not identify quantifiable ammonia reductions from these mitigation measures. Therefore, ammonia reductions are not estimated.

Freestall Barns

Dairy farm practices differ throughout the state. Based on information provided by an industry association, dairy farms in the South Coast AQMD jurisdiction do not utilize freestall barns. Therefore, these mitigation measures do not apply and there are no ammonia emission reductions to quantify.

Corrals

South Coast AQMD Rule 1127 applies to all dairy farms with at least 50 cows and establishes best management practices for corrals. It is expected that reductions in ammonia emissions from this source category are already accounted for in Rule 1127. Therefore, no additional ammonia emission reduction is expected from PAR 223.

Handling of Solid Manure or Separated Solids

In March 2023, CARB and San Joaquin Valley APCD[12] released a supplemental control strategy document for attainment of the 15 μg/m^3 Annual PM2.5 Standard which stated that storage of solid manure and separated solids constituted 2 percent of all dairy emissions. The document also identified that covering solid manure sources with sheeting can reduce ammonia emissions by up to 90 percent. When looking at existing South Coast AQMD permits, six out of 11 facilities opted to cover manure piles from October to May. Ammonia emission reductions for this mitigation measure were calculated using the following equations:

Emission Reduction = 2% × (control efficiency of mitigation measure) × (portion of facilities using mitigation measure)

Emission Reduction = 2% x 90% × (6/11) = 0.98%

The estimated ammonia reductions if facilities choose to cover dry manure or dry separated solids out the pen from October to May is 0.98 percent.

Handling Manure in Liquid Form

Ammonia emission reductions for handling manure in liquid form is dependent on how the farm manages its lagoons. Ammonia emission reductions can be achieved if the farm either utilizes a phototrophic lagoon system or a solid separator system prior to sending waste into the lagoon. Through a review of existing South Coast AQMD permits, no facilities utilize either of these methods. As such, it is assumed that none of the impacted facilities will choose to utilize a phototrophic lagoon system or solid separator system and no ammonia emission reductions are expected.

Land Application of Solid or Liquid Manure

Dairy farms can implement various strategies to handle manure: land incorporation, sending manure to a third party agricultural farm, or sending manure to a manure composting facility. The following control measures under Rule 223 would result in emission reductions in ammonia: rapidly land incorporate manure, only apply manure that has been anaerobically treated, or only apply manure with moisture content less than 50 percent. In the staff report for San Joaquin Valley APCD Rule 4570 it was previously estimated that these land application strategies would result in a 7 percent reduction in ammonia emissions. This is the assumption used for this analysis as well. Based on a review of existing South Coast AQMD permits, four out of 11 facilities chose to rapidly land incorporate manure within 72 hours and only apply manure with moisture content less than 50 percent. Ammonia emission reductions for this mitigation measure were calculated as follows:

[12] https://ww2.arb.ca.gov/sites/default/files/2023-04/AmmoniaSupplementalInformation.pdf

Emission reduction = 7% × (portion of facilities using mitigation measure)

Emission reduction = 7% × (4/11) = 2.55%

The estimated ammonia emission reductions are 2.55 percent if facilities choose to rapidly land incorporate manure within 72 hours and only apply manure with moisture content less than 50 percent.

Total Ammonia Emission Reductions

Based on the aforementioned detailed analysis, ammonia emission reductions can be achieved through three mitigation measures: feeding according to NRC guidelines or high moisture corn, covering manure piles, and rapidly land incorporating manure. The total ammonia emission reductions are calculated as follows:

Emission Reduction Percentage = 17.6% + 0.98% + 2.55% = 21.13%

To calculate ammonia emission reductions in tons per year and tons per day, the following equation was used:

Emission reduction = Ammonia Emission (PAR 223 Facilities) x Emission Reduction Percentage

The overall summary of calculations is shown in Table 3-3.

Table 3-3

Emissions Reductions

						223 Reduction Estimates		
Dairy Cattle (12 impacted Facilities))				Emissions (tons/yr)	Emissions (tons/day)	Reduction	Emissions Reduced (tons/yr)	Emissions Reduced (ton/day)
Types	Throughput (head/yr)	EF (lb/head)	CF	NH3		Percent Reduction	NH3	
All Dairy Cattle	16,061	52.5	0.74	311.98	0.85	0.2113	65.92	0.181

Table 3-2 Notes:
CF - control factor (represents 26 percent reduction in ammonia emissions due to implementation of South Coast AQMD Rule 1127 - Emissions Reductions from livestock Waste)
EF – emission factor
NH3 - ammonia

As shown in Table 3-3, PAR 223 is estimated to reduce ammonia emissions by 0.18 tons per day from the 2023 baseline emissions by 2029.

In addition to ammonia, VOCs are also emitted from livestock operations. Although PAR 223 may result in a co-benefit of VOC emission reductions relative to its baseline, an analysis for VOC emission reductions was not conducted due to the small amount of VOC emissions from this universe.

Cost and Cost Effectiveness

Compliance Costs

Based on industry representative consultations, dairy farms are presently implementing best management practices that are comparable to the Rule 223 mitigation measures. Therefore, the operational costs from implementing PAR 223 mitigation measures are expected to be minimal. Since PAR 223 would require the 12 affected dairy farms to become permitted, the costs that the dairy farms would incur are associated with the preparation of the emissions mitigation plan and the associated permitting fees.

As previously described, the Rule 223 emissions mitigation plan consists of identification by the facility owner of the applicable mitigation measures for each source category. Since facility operators can select from a menu of applicable measures it is anticipated that preparation costs will be minimal. In addition to the mitigation plan, facility operators provide general facility information (see Appendix A) as part of the permitting process. To be conservative, it is estimated that preparation of the necessary forms and the emissions mitigation plan would involve 20 hours of staff time. Based on South Coast AQMD Rule 301 – Permitting and Associated Fees, confined animal facilities are subject to a Schedule A permit fee rate ($2,410.84 for fiscal year 2025-2026). Rule 301 includes provisions that fees are 50 percent of the Table Fee Rate-A for a permit application submitted by a small business as defined by South Coast AQMD Rule 102 – Definition of Terms.[13] A review of the 12 facilities that would be subject to PAR 223 indicates at least one facility would likely qualify as a small business and the information for seven facilities is not sufficient to make the determination. Rule 301 also establishes annual renewal fees and the amount for a Schedule A facility is $549.16 for fiscal year 2025-2026.

Cost-Effectiveness

The total first year (one-time) compliance cost for PAR 223 is based on permit preparation and processing fees. Permit preparation fees are estimated at $800 per facility, based on 20 hours of staff time at $40 per hour. Permit processing fees are estimated at approximately $2,411 per facility. As previously discussed, it is anticipated that at least one facility is likely classified as a small business and eligible for reduced permitting fees. Together, the one-time costs for all 12 facilities are estimated to be approximately $38,532. Total annual (recurring) costs for permit renewal fees are estimated at $6,600 ($550 per facility x 12 facilities).

As the emissions inventory for this source category has been developed using the emission factor approach (i.e., not actual emissions), and the control measures implemented under Rule 223 are enforceable through permit conditions, emissions reduction from the baseline emissions inventory can be quantified. It is estimated that PAR 223 will result of 0.18 tons per day of ammonia emission reductions from the 2023 baseline emissions based on the previously described methodology.

[13] SMALL BUSINESS means a business which is independently owned and operated and meets the following criteria, or if affiliated with another concern, the combined activities of both concerns shall meet these criteria: (A) the number of employees is 10 or less; and (B) the total gross annual receipts are $500,000 or less; or (C) not-for-profit training center.

An estimate of cost effectiveness is provided based on the methodology developed for South Coast AQMD Rule 1127, assuming a 10-year lifetime for a dairy farm.[14] The cost-effectiveness analysis uses the Discounted Cash Flow (DCF) method to compute the present value of the proposed rule amendment's costs over a 10-year period with a 4 percent real interest rate, which gives the present value factor of 8.111. DCF cost effectiveness can then be calculated as:

$$\textit{Cost Effectiveness} = \frac{\textit{One Time Costs + Recurring Cost} \times 8.111}{\textit{PAR223 Emission Reductions}_{tons/year} \times 10 \textit{ years}}$$

Where:

1. *One-time costs + Recurring cost × 8.11 = 37,000 + (6,600 × 8.11)*
   =$92,058
2. *PAR 223 Emission Reductions = (Annual Emission Reductions × 10 years)*
   =672.6 tons

The PAR 223 cost-effectiveness, as determined by the DCF method described above, is $136 per ton of ammonia reduced.

Incremental Cost Effectiveness

Health and Safety Code Section 40920.6(a)(3) requires the calculation of incremental cost effectiveness for potential control options, when South Coast AQMD adopts "rules or regulations to meet the requirements for best available retrofit control technology (BARCT) pursuant to Sections 40918, 40919, 40920 and 40920.5, or for a feasible measure pursuant to Section 40914…"

Incremental cost effectiveness is intended to measure the change in costs, in dollars per year, and emission reductions, in tons of emissions reduced per year, between two progressively more effective control technologies. As mentioned, Rule 223 establishes a menu of mitigation measures for facilities to implement. A more stringent PAR 223 control strategy could be to mandate each facility to implement all mitigation measures. However, recognizing that not all livestock facilities are the same, livestock waste regulations have been developed to provide the owners and operators of CAFs much needed flexibility to choose the appropriate mitigation measures for their facility. Accordingly, an incremental cost-effectiveness analysis was not conducted.

California Environmental Quality Act

Pursuant to the California Environmental Quality Act (CEQA) and South Coast AQMD's certified regulatory program (Public Resources Code Section 21080.5, CEQA Guidelines Section 15251(l) and South Coast AQMD Rule 110), the South Coast AQMD, as lead agency, is currently reviewing the proposed project (PAR 223) to determine if it will result in any potential adverse environmental impacts. Appropriate CEQA documentation will be prepared based on the analysis.

[14] South Coast AQMD, Draft Final Staff Report, Proposed Rule 1127 – Emissions Reductions from Livestock Waste, August 6, 2024.

Socioeconomic Impact Assessment

A socioeconomic impact assessment, to be included in the Draft Staff Report, will be prepared and released for public review and comment at least 30 days prior to the South Coast AQMD Governing Board Hearing for PAR 223, which is scheduled for June 6, 2025 (subject to change).

Draft Findings under Health and Safety Code Section 40727

Requirements to Make Findings

Health and Safety Code Section 40727 requires that prior to adopting, amending, or repealing a rule or regulation, the South Coast AQMD Governing Board shall make findings of necessity, authority, clarity, consistency, non-duplication, and reference based on relevant information presented at the public hearing and in the staff report.

Necessity

PAR 223 is needed to reduce ammonia emissions, a PM2.5 precursor, to meet the Most Stringent Measures requirement under the federal Clean Air Act by implementing Control Measure BCM-08: Emission Reduction from Livestock Waste at Confined Animal Facilities from the South Coast Air Basin Attainment Plan for the 2012 Annual PM2.5 Standard.

Authority

The South Coast AQMD Governing Board has authority to adopt PAR 223 pursuant to the Health and Safety Code Sections 40000, 40001, 40440, 40441 and 40702.

Clarity

PAR 223 is written or displayed so that its meaning can be easily understood by the persons directly affected by it.

Consistency

PAR 223 is in harmony with and not in conflict with or contradictory to, existing statutes, court decisions, or state or federal regulations.

Non-Duplication

PAR 223 will not impose the same requirements as any existing state or federal regulations. The proposed rule is necessary and proper to execute the powers and duties granted to, and imposed upon, South Coast AQMD.

Reference

By adopting PAR 223, the South Coast AQMD Governing Board will be implementing, interpreting, and making specific provisions of the Health and Safety Code Section 40001 (rules to achieve ambient air quality standards) and 40440(a) (rules to carry out the AQMP).

Comparative Analysis

Under Health and Safety Code Section 40727.2, South Coast AQMD is required to perform a comparative written analysis when adopting, amending, or repealing a rule or regulation. The comparative analysis is relative to existing federal requirements, existing or proposed South Coast AQMD rules and air pollution control requirements and guidelines which are applicable to the same source. A comparative analysis will be prepared and released in the Draft Staff Report at least 30 days prior to the South Coast AQMD Governing Board Hearing on PAR 223, that is anticipated to be considered for approval on June 6, 2025 (subject to change).

APPENDIX A – FORM 400-E-21

South Coast Air Quality Management District

Form 400-E-21
Supplemental Permit Application for Dairy Farms

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Mail To:
SCAQMD
P.O. Box 4944
Diamond Bar, CA 91765-0944
Tel: (909) 396-3385
www.aqmd.gov

Section A - Operator Information

Facility Name (Business Name of Operator That Appears On Permit): _____

Valid AQMD Facility ID (Available On Permit Or Invoice Issued By AQMD): _____

Address where the equipment will be operated (for equipment which will be moved to various location in AQMD's jurisdiction, please list the initial location site): _____

○ Fixed Location ○ Various Locations

Section B - Number of Cows

	Milk Cows	Dry Cows	Heifers 15-24 Months	Heifers 7-14 Months	Heifers 4-6 Months	Calves	Total
Total Number of Cows Currently At Your Dairy							
Maximum Number of Cows That Your Farm Was Designed For							

Section C - Facility Information

Type of Dairy (check all that apply)
☐ Scrape ☐ Flush ☐ Vacuum ☐ Other_____

Type of Housing (check all that apply)
☐ Free Stalls ☐ Open Corrals ☐ Other_____

Other Housing/Operations (check all that apply)
☐ Special Needs ☐ Calf Housing ☐ Other_____

Waste Handling (check all that apply)
☐ Anaerobic Treatment Lagoon(s) ☐ Anaerobic Digester(s)
☐ Aerobic Treatment lagoon(s) ☐ Mechanical Separator
☐ Manure Stock Piles ☐ Land Application ☐ Storage Ponds
☐ Off-site Disposal ☐ Settling Basin ☐ Composting
☐ Other_____

Other Dairy Equipment (check all that apply)
☐ Feed Storage / Commodity Barns ☐ Silage Piles
☐ Other_____

Section D - Operation Information

Milking Center
How many times are the cows milked per day?_____

Open Corral
☐ Check here if this section does not apply.
How often is manure removed from the corrals?_____
Please state all measures used to control dust in the corrals:_____

Freestall
☐ Check here if this section does not apply.
How many times are the lanes flushed / scrapped per day?_____
What system(s) are used to feed the cows? (check all that apply)
☐ Mixer Feed Wagon ☐ Long Hay ☐ Milk Barn Grain ☐ Other_____

Treatment Lagoon / Storage Pond
☐ Check here if this section does not apply.
Number of Lagoons:_____ Number of Storage Ponds:_____
List dimensions for each (ft.): List dimensions for each (ft.):
1. L:_____ W:_____ D:_____ 1. L:_____ W:_____ D:_____
2. L:_____ W:_____ D:_____ 2. L:_____ W:_____ D:_____
3. L:_____ W:_____ D:_____ 3. L:_____ W:_____ D:_____
How many settling basins are on your farm?_____
How often is manure water applied to your land?_____ per year
What controls are associated with the lagoon?
☐ None ☐ Aerators ☐ Covered Lagoon ☐ Solids Separation
☐ Other_____

South Coast Air Quality Management District

Form 400-E-21

Supplemental Permit Application for Dairy Farms

This form must be accompanied by a completed Application for a Permit to Construct/Operate - Forms 400-A, Form 400-CEQA, and Form 400-PS.

Section D - Operation Information (cont.)

Solid Manure Management / Storage

☐ Check here if this section does not apply

How is solid manure stored on your farm? ☐ Open Piles ☐ Covered (tarp) Piles ☐ Other_____

Is solid manure applied to your crop land? ○ No ○ Yes

If Yes, how often?_____ per year Estimated tons/year?_____

Is solid manure hauled off-site? ○ No ○ Yes

If Yes, how often?_____ per year Estimated tons/year?_____

Where is the manure hauled off to?_____

What other practices are used to handle solid manure (e.g. composting, etc.)?_____

If your farm composts manure then what type of composting is done?

☐ None ☐ Windrow ☐ Aerated Static Pile (ASP) ☐ Enclosed ASP (e.g. Ag Bag, Gore, Cover, etc)

☐ Other_____

On-Field Activities

☐ Check here if this section does not apply

How many acres of cropland that you farm are contiguous to your dairy?
(Include crops separated by road & avenues.) _____

What method is used to apply manure to your land?

☐ Flood Irrigation ☐ Sold Spreading ☐ Liquid Injection ☐ Sprinkler Irrigation ☐ Furrow Irrigation

☐ Other_____

Other Equipment

☐ Check here if this section does not apply

Note: If your farm has any of the following equipment, please fill out the appropriate form(s)

☐ Grain Storage Silo (AQMD Form 400-E-16)

☐ Stationary IC Engines (AQMD Form 400-E-13)

☐ Gasoline Tanks (AQMD Form 400-E-11)

☐ Other_____

Section E - Authorization/Signature

I hereby certify that all information contained herein and information submitted with this application is true and correct.

Preparer Info	Signature:	Date:	Name:	
	Title:	Company Name:	Phone #:	Fax #:
			Email:	
Contact Info	Name:		Phone #:	Fax #:
	Title:	Company Name:	Email:	

THIS IS A PUBLIC DOCUMENT

Pursuant to the California Public Records Act, your permit application and any supplemental documentation are public records and may be disclosed to a third party. If you wish to claim certain limited information as exempt from disclosure because it qualifies as a trade secret, as defined in the District's Guidelines for Implementing the California Public Records Act, you must make such claim at the time of submittal to the District.

Check here if you claim that this form or its attachments contain confidential trade secret information. ☐