

JUN 20 2018

David Duke
Foster Farms, Jameson Ranch
1333 Swan St
Livingston, CA 95334

Re: Notice of Preliminary Decision - Authority to Construct
Facility Number: C-5434
Project Number: C-1173425

Dear Mr. Duke:

Enclosed for your review and comment is the District's analysis of Foster Farms, Jameson Ranch's application for an Authority to Construct for the replacement of 17 naturally ventilated broiler houses with 12 mechanically ventilated broiler houses and to install a 762 horsepower Tier 2 certified diesel engine to provide emergency power in the event of an electrical outage, at 8321 S Jameson Ave, Fresno, CA.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. After addressing all comments made during the 30-day public notice period, the District intends to issue the Authority to Construct. Please submit your written comments on this project within the 30-day public comment period, as specified in the enclosed public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Tim Bush of Permit Services at (559) 230-5913.

Sincerely,



Arnaud Marjollet
Director of Permit Services

AM:tb

Enclosures

cc: Tung Le, CARB (w/ enclosure) via email

Seyed Sadredin
Executive Director/Air Pollution Control Officer

Northern Region
4800 Enterprise Way
Modesto, CA 95356-8718
Tel: (209) 557-6400 FAX: (209) 557-6475

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
Tel: (559) 230-6000 FAX: (559) 230-6061

Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
Tel: 661-392-5500 FAX: 661-392-5585

San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Replace Broiler Houses and Add a Diesel-Fired Emergency
Standby IC Engine at a Poultry Ranch

Facility Name:	Foster Farms, Jameson Ranch	Date:	June 1, 2018
Mailing Address:	1333 Swan St Livingston, CA 95334	Engineer:	Tim Bush
Contact Person:	Dave Duke	Lead Engineer:	Jerry Sandhu
Telephone:	(209) 394-5343		
E-Mail:	duked@fosterfarms.com		
Application #:	C-5434-2-6 & -9-0		
Project #:	C-1173425		
Deemed Complete:	January 1, 2018		

I. Proposal

The primary business of Foster Farms, Jameson Ranch is the production of broiler chickens to provide meat for human consumption. Foster Farms is applying for Authority to Construct (ATC) permits for the following:

ATC C-5434-2-6 (Broiler Ranch)

The facility is proposing to modify their existing broiler operation, which consists of 29 broiler houses that house 906,667 birds (see Appendix B for current permit C-5434-2-5). The facility proposes to replace 17 older naturally ventilated broiler houses for 453,334 birds with 12 new mechanically ventilated broiler houses (37,778 birds/house). There will be no overall increase in birds at the ranch and no overall increase in emissions from the broiler houses.

The new broiler houses will perform the same function as the houses being replaced. All existing naturally ventilated broiler houses at the site are being replaced, and according to the cost information provided by the applicant, the related cost will not result in a Reconstructed Source. Additionally, the broiler houses are addressed by a BARCT Rule (District Rule 4570 - Confined Animal Facilities). Therefore, pursuant to Section 3.35 of District Rule 2201, the replacement of the broiler houses at the broiler ranch are replacement emissions units and all the new broiler houses are exempt from Best Available Control Technology (BACT) requirements.

ATC C-5434-9-0 (Emergency IC Engine)

The facility is also proposing to install a 762 bhp Perkins Tier 2 certified diesel-fired IC engine to provide emergency power for the new mechanically ventilated broiler houses.

II. Applicable Rules

Rule 1070	Inspections (12/17/92)
Rule 2010	Permits Required (12/17/92)
Rule 2201	New and Modified Stationary Source Review Rule (2/18/16)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National Emission Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)
Rule 4201	Particulate Matter Concentration (12/17/92)
Rule 4550	Conservation Management Practices (CMP) (8/19/04)
Rule 4570	Confined Animal Facilities (CAF) (10/21/10)
Rule 4701	Internal Combustion Engines – Phase 1 (8/21/03)
Rule 4702	Internal Combustion Engines (11/14/13)
Rule 4801	Sulfur Compounds (12/17/92)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice
Title 17 CCR, Section 93115	Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition (CI) Engines
Public Resources Code 21000-21177	California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387	CEQA Guidelines

III. Project Location

The facility is located at 8321 S Jameson Ave in Fresno, CA. The District has verified that the equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

Broiler Ranch

Broilers are produced to meet specific requirements of the customer, which can be a retail grocery store, fast-food chain, or an institutional buyer. The process of raising broiler chickens in the proposed houses is similar to the practices at modern broiler ranches. The production cycle of broilers is divided into two phases: brooding and grow-out.

The brooding phase begins when freshly hatched chicks from local hatcheries are delivered by truck and placed in a heated section of a broiler house known as the brood chamber. The brood chamber of the house is maintained above 90°F for newly hatched chicks.

About 37,778 chicks will be released into each new house at the beginning of each grow-out period. The chicks will be placed on fresh litter in the front half of the house opposite the tunnel-ventilation fans for 10 days. During the birds' first few weeks of growth, the temperature is gradually decreased. Once the birds need floor space, the remaining half of the house is opened and the chicks are fed out to market weight. After completion of the grow-out phase the broilers are transported by truck to a nearby processing plant. Typically, all of the houses within a ranch complex will be populated with chicks, and depopulated with mature birds within the same few days.

All broiler chickens in the house are the same age and will be removed from the house at the same time. Typically, about 4.5 to 5 percent of the broilers in a house will die (mortality) during the grow-out cycle. Mortality must be removed from each house at least daily during the grow-out cycle to prevent the spread of disease. The length of the grow-out phase for the broiler chickens is approximately 45 days, resulting in an average weight of 4.5 to 5.5 pounds. Broiler houses will be empty of chickens for approximately 10 days between flocks to allow for cleaning and maintenance. This results in a cycle time of about 55 days per flock. Typically, six flocks per year are grown in each broiler house.

Broiler Housing

Broilers are raised in either totally or partially enclosed housing with a compacted soil floor covered with dry bedding. The new broiler houses at this site will be constructed with earthen floors, wood framing, and corrugated metal roofing and siding. The ceiling and walls will be insulated. Each house will be 500 feet long and 48 feet wide. As stated above, about 37,778 chicks will be released into each new house at the beginning of each grow-out period. The birds will be able to move about freely in the heated front section of the house. As the birds grow and require less heat, the other half of the house is opened to allow them to have more space. Water and feed will be provided to the birds throughout the grow-out period. Propane heaters and evaporative cooling pads will be utilized to control temperature within the broiler houses.

In broiler houses, ventilation is used to remove moisture and ammonia from the houses during the winter season and to remove excess heat and ammonia from the houses during the summer season. Partially enclosed housing structures have open sidewalls with curtains that are opened and closed to control the house ventilation rate. All of the new houses will be totally enclosed. In totally enclosed housing, mechanical ventilation is used. Mechanical ventilation is typically provided by an induced draft or negative-pressure system. An induced draft system pulls fresh air into the house from one end and exhausts on the other. A negative-pressure system draws fresh air into the house from side vents and out through the exhaust fan. Totally enclosed mechanically ventilated housing is known as tunnel-type housing or environmental housing.

The proposed houses will have an advanced environmental control system that uses thermostats, sensors, and timers to more effectively control their exhaust fans. Environmental conditions (e.g. temperature, humidity, ventilation, lighting) within the proposed houses will be controlled by a computer system. The ranch staff will also monitor the conditions within the houses.

Broiler Manure Management

All broiler chickens are raised unconfined within the houses on dry bedding (litter). Litter can be sawdust, wood shavings, rice hulls, chopped straw, peanut hulls, or other products, depending on availability and cost. Foster Farms typically uses rice hulls for litter. Manure that is excreted by birds has a high water content. The main function of the litter is to absorb the moisture excreted by the birds.

Two kinds of manure are removed from broiler houses: litter and cake. Litter is a mixture of bedding and manure. Cake is a compacted and concentrated mixture of manure and litter that usually builds up on the surface of the litter around waterers and feeders, where much of the manure is deposited. Moisture from manure and waterers binds the mixture of litter and manure together forming cake. Broiler houses are partially cleaned between each flock to remove the cake. The remaining litter may be "top dressed" with an inch or so of new bedding material.

Typically, the litter (bedding and manure) is only completely cleaned from broiler houses every one to three years after at least 6 flocks, with a trend towards performing complete clean-outs less than annually. Barring unusual events (such as avian disease outbreaks), litter in the proposed houses will be completely cleaned out twice a year after only 3 flocks have been raised on the litter. At Foster Farms, Jameson Ranch used litter is completely cleaned out of the brood chamber and moved to the other half of the house before chicks are placed. In the proposed houses, chicks will always be placed on fresh litter in the brood chamber. After complete clean-outs and brood chamber clean-outs, the removed litter is replaced with fresh litter. When the broiler house is completely cleaned out, the litter is typically removed with a front-end loader. When the house is cleaned, the equipment (including slats) is removed from the house to allow a front-end loader to push all of the manure to the center section of the house. Then the front-end loader places the mixture of manure and litter into a spreader for land application. A thorough cleaning after each flock removes pathogens that could be transferred to the next flock. After removal of all organic matter, the house is disinfected. The manure handling system permit will not be modified in this project as there is no change in the manure handling process and total number of broilers at the ranch.

Emergency IC Engine

The proposed emergency engine will power an electric generator for the Foster Farms, Jameson Ranch. The electric generator is necessary to prevent catastrophic loss of broilers by maintaining ventilation in the enclosed broiler houses during power failures. Other than emergency operation, the engine may be operated up to 100 hours per year for maintenance and testing purposes.

V. Equipment Listing

Pre-Project Equipment Description:

C-5434-2-5: 906,667 BROILER RANCH CONSISTING OF 17 NATURALLY VENTILATED BROILER HOUSES AND 12 MECHANICALLY VENTILATED BROILER HOUSES, INCLUDING ELECTRIC FANS TOTALING 371 HP

Proposed Modification:

C-5434-2-6: MODIFICATION OF 906,667 BROILER RANCH CONSISTING OF 17 NATURALLY VENTILATED BROILER HOUSES AND 12 MECHANICALLY VENTILATED BROILER HOUSES, INCLUDING ELECTRIC FANS TOTALING 371 HP: REPLACE 17 NATURALLY VENTILATED BROILER HOUSES FOR 453,334 BIRDS WITH 12 MECHANICALLY VENTILATED BROILER HOUSES FOR 453,334 BIRDS (37,778 BIRDS/HOUSE), INCLUDING ELECTRIC FANS TOTALING 195 HP

Post-Project Equipment Description:

C-5434-2-6: 906,667 BROILER RANCH CONSISTING OF 24 MECHANICALLY VENTILATED BROILER HOUSES, INCLUDING ELECTRIC FANS TOTALING 390 HP

C-5434-9-0: 762 BHP (INTERMITTENT) PERKINS MODEL 2506C-E15TAG3 TIER 2 CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

VI. Emission Control Technology Evaluation

Broiler Ranch

The principle pollutants emitted from broiler houses are Volatile Organic Compounds (VOC), ammonia (NH₃), and particulate matter (PM) that is emitted through the ventilation system. Factors that affect emissions from broiler houses include the moisture content of the litter; the pH; the ventilation rate; the temperature; and the amount of manure and length of the time the manure is present in the broiler house.

The ventilation rate affects the amount of ammonia, VOC, and particulate matter carried out of the broiler house. During the growth of the flock, continuous airflow removes ammonia and other gases and reduces the moisture content of freshly excreted manure. The constant volatilization and removal of ammonia from the broiler houses results in lower nitrogen content of the litter.

The applicant has proposed the following management practices to reduce gaseous emissions from the new broiler houses: feeding the birds in accordance with NRC or other District approved guidelines to minimize nutrient excretion and implement mitigation measures to reduce VOC as required by District Rule 4570.

Emergency IC Engine

The applicant has proposed to install Tier 2 certified diesel-fired IC engine that will be fired on very low-sulfur diesel fuel.

The proposed engine meets the latest Tier Certification requirements; therefore, the engine meets the latest EPA emissions standards for diesel particulate matter, hydrocarbons, nitrogen oxides, and carbon monoxide (see Appendix C for a copy of the emissions data sheet).

The use of very low-sulfur diesel fuel (0.0015% by weight sulfur maximum) reduces SO_x emissions by over 99% from standard diesel fuel.

VII. General Calculations

A. Assumptions

Broiler Ranch (12 New Houses)

Pre-project ranch capacity:	906,667 broilers (per current permit)
Post-project ranch capacity:	906,667 broilers (per applicant)
Operating schedule:	24 hours/day
Total fan rating of each new house	16.25 hp/house (per applicant)
Max. number of birds in replaced house:	26,667 birds/house
Max. number of birds in new house:	37,778 birds/house
Min. broiler house ventilation rate:	25,700 cfm (per applicant)
50% of total particulate matter emitted from the houses are PM ₁₀	

Emergency IC Engine

Emergency operating schedule:	24 hours/day
Non-emergency operating schedule:	100 hours/year
Density of diesel fuel:	7.1 lb/gal
EPA F-factor (adjusted to 60 °F):	9,051 dscf/MMBtu
Fuel heating value:	137,000 Btu/gal
BHP to Btu/hr conversion:	2,542.5 Btu/bhp-hr
Thermal efficiency of engine:	commonly ≈ 35%
PM ₁₀ fraction of diesel exhaust:	0.96 (CARB, 1988)
Conversion factor:	1.34 bhp/kw

The engine has certified NO_x + VOC emissions of 3.73 g/bhp-hr. It will be assumed the NO_x + VOC emission factor is split 95% NO_x and 5% VOC (per the Carl Moyer program).

B. Emission Factors

C-5434-2-6 (Broiler Ranch)

The emission factors for a broiler ranch are on a per head basis, and account for multiple sources of emissions. That is, emissions from the broiler housing and solid manure handling are included in each emission factor. Therefore, when calculating emissions from the broiler ranch, the emissions from these distinct operations are calculated together, and the uncontrolled emissions factors are shown in the table below:

Uncontrolled Emission Factors for Broiler Ranch		
	(lb/bird-year)	Source
PM ₁₀	0.02	R.E. Lacey ¹
VOC	0.025	Rule 4570 Staff Report
NH ₃	0.0958	CARB Source Test Results for California Broiler Houses ²

The facility currently implements, and will continue to implement the following mitigation measures as originally proposed under project #C-1110647. The VOC control efficiency for each mitigation measure is shown in the table below:

Broiler House Mitigation Measure Requirements		VOC Control Efficiency (%)
Feed:		
1	Feed according to NRC guidelines.	10
Housing:		
2	Use a dry housing cleaning method at all times, except when a wet cleaning method is required for animal health or biosecurity issues, pursuant to Section 5.4.	10
3	Use drinkers that do not drip continuously.	10
4	Inspect drinkers at least once every seven (7) days and adjust the height, volume, and location of drinkers if necessary, and Inspect water pipes and drinkers and repair leaks daily.	10
Solid Manure/Separated Solids:		
5	Within seventy-two (72) hours of removal from housing: a. Remove all litter/manure from the facility. b. Cover litter/manure outside the housing with a weatherproof covering from October through May, except for times when wind events remove the covering, not to exceed twenty-four (24) hours per event.	0*

*No control efficiency has been established for this mitigation measure, although emissions reductions are expected.

¹ "Particulate Matter and Ammonia Emission Factors for tunnel-Ventilated broiler houses in the Southern US", R.E. Lacey, J.S. Redwine, C.B Parnell, Jr.

² "Quantification of Gaseous Emissions from California Broiler Production Houses" - Source tests were conducted on mechanically ventilated broiler houses during the spring and fall of 2004. The participants in the project include the following: AIRx Testing; California Air Resources Board; California Department of Food and Agriculture; California Poultry Federation; Foster Farms; & University of California, Davis - Animal Science.

Controlled Emission Factors

The control efficiencies for the selected mitigation measures as discussed above will only be applied to VOC emissions. Therefore, the VOC emission factor is calculated as follows:

$$\begin{aligned} \text{EF} &= \text{EF} \times (1 - \text{Total CE}) \\ &= (0.025 \text{ lb-VOC/hd-yr}) \times [(1 - 0.1) \times (1 - 0.1) \times (1 - 0.1) \times (1 - 0.1)] \\ &= 0.016 \text{ lb-VOC/hd-yr} \end{aligned}$$

There is no control applied to the NH₃ and PM₁₀ emission factors. The pre-project and post-project emission factors for the broiler ranch are summarized in the following table.

Controlled Emission Factors for Broiler Ranch		
	(lb/bird-year)	Source
PM ₁₀	0.02	R.E. Lacey
VOC	0.016	Rule 4570 Staff Report
NH ₃	0.0958	CARB Source Test Results for California Broiler Houses

C-5434-9-0 (Emergency IC Engine)

The pre-project emission factors are zero and post-project emission factors are as shown in the following table:

Emission Factors for Diesel-fired IC Engine		
Pollutant	Emission Factor (g/bhp-hr)	Source
NO _x	3.54	Engine Manufacturer (see Appendix C)
SO _x	0.0051	Mass Balance Equation Below
PM ₁₀	0.05	Engine Manufacturer (see Appendix C)
CO	1.06	
VOC	0.19	

$$\frac{0.000015 \text{ lb} - \text{S}}{\text{lb} - \text{fuel}} \times \frac{7.1 \text{ lb} - \text{fuel}}{\text{gallon}} \times \frac{2 \text{ lb} - \text{SO}_2}{1 \text{ lb} - \text{S}} \times \frac{1 \text{ gal}}{137,000 \text{ Btu}} \times \frac{1 \text{ bhp input}}{0.35 \text{ bhp out}} \times \frac{2,542.5 \text{ Btu}}{\text{hp} \cdot \text{hr}} \times \frac{453.6 \text{ g}}{\text{lb}} = 0.0051 \frac{\text{g} - \text{SO}_x}{\text{bhp} - \text{hr}}$$

C. Calculations

1. Pre-Project Potential to Emit (PE1)

C-5434-2-5 (Broiler Ranch)

The potential to emit for the existing broiler houses is calculated based on the maximum number of birds that can be housed at the ranch prior to the modification.

Pre-Project Potential to Emit (PE1) for Broiler Ranch									
Pollutant	# of Broilers	x	EF (lb/bird-year)	=	PE1 (lb/year)	÷	365 day/year	=	PE1 (lb/day)
PM ₁₀	906,667	x	0.02	=	18,133	÷	365	=	49.7
VOC	906,667	x	0.016	=	14,507	÷	365	=	39.7
NH ₃	906,667	x	0.0958	=	86,859	÷	365	=	238.0

C-5434-9-0 (Emergency IC Engine)

Since this is a new emissions unit, PE1 = 0 for all pollutants.

2. Post Project Potential to Emit (PE2)

C-5434-2-6 (Broiler Ranch)

New Broiler Houses (12 Total):

PE2 for each of the new broiler houses is calculated as shown below:

Post-Project Potential to Emit (PE2) for Each New Broiler House									
Pollutant	# of Broilers	x	EF (lb/bird-year)	=	PE2 (lb/year)	÷	365 day/year	=	PE2 (lb/day)
PM ₁₀	37,778	x	0.02	=	756	÷	365	=	2.1
VOC	37,778	x	0.016	=	604	÷	365	=	1.7
NH ₃	37,778	x	0.0958	=	3,619	÷	365	=	9.9

Broiler Ranch:

There is no change in the maximum number of birds that can be housed at the ranch after the modification; therefore, PE2 is calculated in the table on the following page:

Post-Project Potential to Emit (PE2) for Broiler Ranch									
Pollutant	# of Broilers	x	EF (lb/bird-year)	=	PE2 (lb/year)	÷	365 day/year	=	PE2 (lb/day)
PM ₁₀	906,667	x	0.02	=	18,133	÷	365	=	49.7
VOC	906,667	x	0.016	=	14,507	÷	365	=	39.7
NH ₃	906,667	x	0.0958	=	86,859	÷	365	=	238.0

C-5434-9-0 (Emergency IC Engine)

The daily and annual PE2 is calculated as follows:

$$\text{Daily PE2 (lb-pollutant/day)} = \text{EF (g-pollutant/bhp-hr)} \times \text{rating (bhp)} \\ \times \text{operation (hr/day)} / 453.6 \text{ g/lb}$$

$$\text{Annual PE2 (lb-pollutant/year)} = \text{EF (g-pollutant/bhp-hr)} \times \text{rating (bhp)} \\ \times \text{operation (hr/year)} / 453.6 \text{ g/lb}$$

Post-Project Emissions (PE2) for Diesel-fired IC Engine						
Pollutant	Emissions Factor (g/bhp-hr)	Rating (bhp)	Daily Hours of Operation (hrs/day)	Annual Hours of Operation (hrs/year)	Daily PE2 (lb/day)	Annual PE2 (lb/year)
NO _x	3.54	762	24	100	142.7	595
SO _x	0.0051	762	24	100	0.2	1
PM ₁₀	0.05	762	24	100	2.0	8
CO	1.06	762	24	100	42.7	178
VOC	0.19	762	24	100	7.7	32

3. Pre-Project Stationary Source Potential to Emit (SSPE1)

Pursuant to District Rule 2201, the SSPE1 is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of Emission Reduction Credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site.

SSPE1 (lb/year)						
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC	NH ₃
C-5434-2-5	0	0	18,133	0	14,507	86,859
C-5434-3-1*	0	0	0	0	0	0
C-5434-7-0**	311	1	15	70	16	0
C-5434-8-0***	311	1	15	70	16	0
SSPE1	622	2	18,163	140	14,539	86,859

*As discussed in Section VII.B, the potential emissions for the solid manure handling system (permit unit - 3) are included in the potential emissions from the broiler ranch (permit unit -2).

**Values are from project C-1152848.

***Values are from project C-1173192.

4. Post Project Stationary Source Potential to Emit (SSPE2)

Pursuant to District Rule 2201, the SSPE2 is the PE from all units with valid ATCs or PTOs at the Stationary Source and the quantity of ERCs which have been banked since September 19, 1991 for AER that have occurred at the source, and which have not been used on-site.

SSPE2 (lb/year)						
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC	NH ₃
C-5434-2-6	0	0	18,133	0	14,507	86,859
C-5434-3-1*	0	0	0	0	0	0
C-5434-7-0	311	1	15	70	16	0
C-5434-8-0	311	1	15	70	16	0
C-5434-9-0	595	1	8	178	32	0
SSPE2	1,217	3	18,171	318	14,571	86,859

*As discussed in Section VII.B, the potential emissions for the solid manure handling system (permit unit - 3) are included in the potential emissions from the broiler ranch (permit unit -2).

5. Major Source Determination

Rule 2201 Major Source Determination:

Pursuant to District Rule 2201, a Major Source is a stationary source with a SSPE2 equal to or exceeding one or more of the following threshold values. For the purposes of determining major source status the following shall not be included:

- any ERCs associated with the stationary source
- Emissions from non-road IC engines (i.e. IC engines at a particular site at the facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

Since agricultural operations do not fall under any of the specific source categories specified in 40 CFR 51.165, fugitive emissions are not counted when determining if an agricultural operation is a major source.

For pre-project emissions, since half of the birds at this facility are housed inside mechanically ventilated buildings, emissions could be reasonably collected and were not considered fugitive. Therefore, only the non-fugitive emissions from the birds housed in mechanically ventilated broiler houses at the broiler ranch will be used to determine if this facility is an existing major source.

Non-Fugitive Emissions from the Broiler Ranch Pre-Project					
Pollutant	# of Broilers	x	EF (lb/bird-year)	=	PE (lb/year)
PM ₁₀	453,334*	x	0.02	=	9,067
VOC	453,334*	x	0.016	=	7,253

*(906,667)/2 = 453,334 broilers in mechanically controlled houses

Rule 2201 Major Source Determination (lb/year)						
	NO _x	SO _x	PM ₁₀	PM _{2.5}	CO	VOC
SSPE1**	622	2	9,097	9,097	140	7,285
SSPE2	1,217	3	18,171	18,171	318	14,574
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	No	No

Note: PM_{2.5} assumed to be equal to PM₁₀

**SSPE1 is based on the total non-fugitive emissions from the broiler houses and from the emergency IC engines at the facility.

As seen in the table above, the facility is not an existing Major Source and is not becoming a Major Source as a result of this project.

Rule 2410 Major Source Determination:

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(iii). Therefore the PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination (tons/year)						
	NO ₂	VOC	SO ₂	CO	PM	PM ₁₀
Estimated Facility PE before Project Increase*	0.3	3.6	0.0	0.1	4.5	4.5
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source ? (Y/N)	N	N	N	N	N	N

*Fugitive emissions from the broiler ranch as discussed on the previous page in the District Rule 2201 Major Source determination.

As shown above, the facility is not an existing PSD major source for any regulated NSR pollutant expected to be emitted at this facility.

6. Baseline Emissions (BE)

The BE calculation (in lb/year) is performed pollutant-by-pollutant for each unit within the project to calculate the QNEC, and if applicable, to determine the amount of offsets required.

Pursuant to District Rule 2201, BE = PE1 for:

- Any unit located at a non-Major Source,
- Any Highly-Utilized Emissions Unit, located at a Major Source,
- Any Fully-Offset Emissions Unit, located at a Major Source, or
- Any Clean Emissions Unit, located at a Major Source.

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to District Rule 2201.

As shown in Section VII.C.5 above, the facility is not a Major Source for any pollutant.

Therefore BE = PE1.

C-5434-2-6:

As calculated in Section VII.C.1 above BE is summarized in the following table:

BE (lb/year)						
	NO _x	SO _x	PM ₁₀	PM _{2.5}	CO	VOC
C-5434-2-6	0	0	18,133	18,133	0	14,507

C-5434-9-0:

Since this is a new emissions unit, BE = PE1 = 0 for all pollutants.

7. SB 288 Major Modification

SB 288 Major Modification is defined in 40 CFR Part 51.165 as "any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."

Since this facility is not a major source for any of the pollutants addressed in this project, this project does not constitute an SB 288 major modification.

8. Federal Major Modification

District Rule 2201 states that a Federal Major Modification is the same as a "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

Since this facility is not a Major Source for any pollutants, this project does not constitute a Federal Major Modification.

9. Rule 2410 – Prevention of Significant Deterioration (PSD) Applicability Determination

Rule 2410 applies to any pollutant regulated under the Clean Air Act, except those for which the District has been classified nonattainment. The pollutants which must be addressed in the PSD applicability determination for sources located in the SJV and which are emitted in this project are: (See 52.21 (b) (23) definition of significant)

- NO₂ (as a primary pollutant)
- SO₂ (as a primary pollutant)
- CO
- PM
- PM₁₀

I. Project Emissions Increase - New Major Source Determination

The post-project potentials to emit from all new and modified units are compared to the PSD major source thresholds to determine if the project constitutes a new major source subject to PSD requirements.

The equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(iii). The PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination: Potential to Emit (tons/year)						
	NO₂	VOC	SO₂	CO	PM	PM₁₀
Total PE from New and Modified Units*	0.3	7.3	0.0	0.1	9.1	9.1
PSD Major Source threshold	250	250	250	250	250	250
New PSD Major Source?	N	N	N	N	N	N

*Equivalent to the non-fugitive SSPE2 (lb/year) calculated in major source determination table in Section C.VII.5.

As shown in the table above, the potential to emit for the project, by itself, does not exceed any PSD major source threshold. Therefore Rule 2410 is not applicable and no further analysis is required.

10. Quarterly Net Emissions Change (QNEC)

The QNEC is calculated solely to establish emissions that are used to complete the District's PAS emissions profile screen. Detailed QNEC calculations are included in Appendix F.

VIII. Compliance Determination

Rule 1070 Inspections

This rule applies to any source operation, which emits or may emit air contaminants.

This rule allows the District to perform inspections for the purpose of obtaining information necessary to determine whether air pollution sources are in compliance with applicable rules and regulations. The rule also allows the District to require record keeping, to make inspections and to conduct tests of air pollution sources.

Therefore, the following conditions will be listed on the ATCs to ensure compliance:

- {3215} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 1070]
- {3216} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 1070]

Rule 2010 Permits Required

The provisions of this rule apply to any person who plans to or does operate, construct, alter, or replace any source operation, which may emit air contaminants or may reduce the emission of air contaminants.

Pursuant to Section 4.0, a written permit shall be obtained from the APCO. No Permit to Operate shall be granted either by the APCO or the Hearing Board for any source operation described in Section 3.0, constructed or installed without authorization as required by Section 3.0 until the information required is presented to the APCO and such source operation is altered, if necessary, and made to conform to the standards set forth in Rule 2070 (Standards for Granting Applications) and elsewhere in these rules and regulations.

The facility has obtained all required Air District permits and is in compliance with the requirements of this rule.

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis. Unless specifically exempted by Rule 2201, BACT shall be required for the following actions*:

- a. Any new emissions unit with a potential to emit exceeding two pounds per day,
- b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
- c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
- d. Any new or modified emissions unit, in a stationary source project, which results in an SB 288 Major Modification or a Federal Major Modification, as defined by the rule.

*Except for CO emissions from a new or modified emissions unit at a Stationary Source with an SSPE2 of less than 200,000 pounds per year of CO.

a. New emissions units – PE > 2 lb/day

As stated in Section I of this evaluation, the applicant is proposing to replace 17 older naturally ventilated broiler houses for 453,334 birds with 12 new mechanically ventilated broiler houses for 453,334 birds and to install a new diesel-fired IC engine at the existing broiler ranch.

C-5434-2-6 (Broiler Ranch)

Each individual broiler house operates independently and has separate exhaust ventilation; therefore, each house is a distinct emissions unit. Although each new broiler house will have a larger capacity than each house being replaced, there will be no increase in capacity since there will be five fewer broiler houses at the site after completion of the project.

District Rule 2201, 3.35 stipulates that the following conditions must be met for replacement of equipment with a valid District permit to qualify as a replacement emissions unit:

- 1) There is no increase in permitted emissions from the replacement units.
- 2) There is no increase in design capacity, unless an old part is no longer available in which case the replacement can result in a design capacity increase of up to 10%. No change to the permitted throughput or emission is authorized due to a change in design capacity as part of a replacement.
- 3) The replacement equipment performs the same function as the equipment being replaced.
- 4) The replacement does not constitute a Reconstructed Source (as defined by Rule 2201) or Reconstruction (as defined by any applicable New Source Performance Standard). Reconstructed Source cost shall include only the cost of all emission-producing equipment and associated integral activities at the stationary source.
- 5) When the entire emissions unit is replaced as a routine replacement action, the emissions unit shall either have been addressed by a BARCT rule or shall be equipped with a control device capable of at least 85% emission control.

After the proposed replacement of the broiler houses, there will be no increase in the capacity to hold birds at the site. The capacity before and after the modification will be 906,667 birds. Because there is no increase in bird holding capacity, there will be no increase in PM₁₀, VOC, or NH₃ emissions from the broiler houses. Additionally, the new broiler houses will perform the same function as the houses being replaced and the broiler houses are addressed by a BARCT Rule (District Rule 4570 - Confined Animal Facilities).

For the proposed project, less than half of the broiler houses at the facility will be replaced and the applicant has provided information demonstrating that cost of the proposed project will not result in a Reconstructed Source. According to the applicant, the construction cost for rebuilding a broiler house is approximately \$27.19 per square foot. The proposed project will require 334,080 square feet of broiler housing to be built. The facility has provided an estimated capitol cost of \$9,083,120 for the proposed project, and \$18,450,975 to rebuild the entire Stationary Source.

As can be seen, even when the costs of other integral activities at the site are not included, the cost of the proposed houses will be less than half of the cost of constructing a similar entirely new Stationary Source; therefore the facility will not be a Reconstructed Source.

Therefore, pursuant to Section 4.2.6 of District Rule 2201, BACT will not be required for the replacement of the broiler houses.

C-5434-9-0 (Emergency IC Engine)

The IC engine is a new emissions unit. As seen in Section VII.C.2 above, the applicant is proposing to install a new diesel-fired IC engine with a PE greater than 2 lb/day for NO_x, CO and VOC. BACT is triggered for NO_x and VOC only since the PEs are greater than 2 lb/day. However BACT is not triggered for CO since the SSPE2 for CO is not greater than 200,000 lb/year, as demonstrated in Section VII.C.5 above.

BACT Applicability for New Emergency IC Engine				
Pollutant	Daily Emissions for unit (lb/day)	BACT Threshold (lb/day)	SSPE2 (lb/yr)	BACT Triggered?
NO _x	142.7	> 2.0	n/a	Yes
SO _x	0.2	> 2.0	n/a	No
PM ₁₀	2.0	> 2.0	n/a	No
CO	42.7	> 2.0 and SSPE2 ≥ 200,000 lb/yr	318	No
VOC	7.7	> 2.0	n/a	Yes

b. Relocation of emissions units – PE > 2 lb/day

As discussed in Section I above, there are no emissions units being relocated from one stationary source to another; therefore BACT is not triggered for relocation of an emissions unit.

c. Modification of emissions units – AIPE > 2 lb/day

As discussed in Section I above, there are no modified emissions units associated with this project. Therefore BACT is not triggered for modification of an emissions unit.

d. SB 288/Federal Major Modification

As discussed in Sections VII.C.7 and VII.C.8 above, this project does not constitute an SB 288 and/or Federal Major Modification. Therefore BACT is not triggered for any pollutant.

2. BACT Guideline

C-5434-9-0 (Emergency IC Engine)

BACT Guideline 3.1.1, which appears in Appendix D of this report, covers diesel-fired emergency IC engines.

3. Top-Down BACT Analysis

Per District Policy APR 1305, Section IX, "A top down BACT analysis shall be performed as a part of the Application Review for each application subject to the BACT requirements pursuant to the District's NSR Rule for source categories or classes covered in the BACT Clearinghouse, relevant information under each of the following steps may be simply cited from the Clearinghouse without further analysis."

C-5434-9-0 (Emergency IC Engine)

Pursuant to the attached Top-Down BACT Analysis (see Appendix D), BACT for the proposed emergency IC engine has been satisfied with the following:

NO_x: Latest Available Tier Certification level for applicable horsepower*
VOC: Latest Available Tier Certification level for applicable horsepower*

*Note: The certification requirements for emergency engines are as follows: 50 ≤ bhp < 75 - Tier 4; 75 ≤ bhp < 750 - Tier 3; ≥ 750 bhp - Tier 2.

The facility has proposed to install a 762 bhp Tier 2 certified engine which is the latest Tier certification required to satisfy BACT. Therefore, BACT is satisfied for NO_x and VOC. The following conditions will be listed on the ATC to ensure compliance:

- {4771} Emissions from this IC engine shall not exceed any of the following limits: 3.54 g-NO_x/bhp-hr, 1.06 g-CO/bhp-hr, or 0.19 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]
- {4772} Emissions from this IC engine shall not exceed 0.05 g-PM₁₀/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115]

B. Offsets

1. Offset Applicability

Pursuant to Section 4.6.9 of this rule, offsets are not required for agricultural sources that are not major sources. As demonstrated in Section VII.C.5 above, the agricultural operation in this project is not a major source; therefore, this exemption is applicable to this project.

However, even when there is an applicable exemption, the SSPE2 values are compared to the offset threshold to determine if offsets are triggered. In its PAS database, the District keeps track of facilities where offsets are triggered but an exemption applies. The SSPE2 values are compared to the offset trigger thresholds in the following table:

Offset Determination (lb/year)					
	NO_x	SO_x	PM₁₀	CO	VOC
SSPE2	1,217	3	18,171	318	14,571
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	No	No	No	No	No

2. Quantity of Offsets Required

As shown in the table above, no offset thresholds are exceeded with this project. Further, as previously stated, the offset exemption from Section 4.6.9 of District Rule 2201 is applicable to this project; therefore, offset calculations are not necessary and offsets are not required.

C. Public Notification

1. Applicability

Public noticing is required for:

- a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications,
- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Any project which results in the offset thresholds being surpassed,
- d. Any project with an SSPE2 of greater than 20,000 lb/year for any pollutant, and/or
- e. Any project which results in a Title V significant permit modification

a. New Major Sources, Federal Major Modifications, and SB 288 Major Modifications

New Major Sources are new facilities, which are also Major Sources. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

As demonstrated in Sections VII.C.7 and VII.C.8, this project does not constitute an SB 288 or Federal Major Modification; therefore, public noticing for SB 288 or Federal Major Modification purposes is not required.

b. PE > 100 lb/day

C-5434-2-6 (Broiler Ranch):

As stated above under Rule 2201 Compliance Section A.1.a (BACT Applicability), each individual broiler house is an emissions unit. The emissions from each new broiler house are calculated in the following table:

Daily Post-Project Potential to Emit (PE) for Each New Broiler House							
Pollutant	Capacity (bird/house)	x	Emissions Factor (lb/bird-yr)	÷	365 day/yr	=	PE (lb/day)
PM ₁₀	37,778	x	0.02	÷	365	=	2.1
VOC	37,778	x	0.016	÷	365	=	1.7
NH ₃	37,778	x	0.0958	÷	365	=	9.9

The PE₂ for each new broiler house is compared to the daily PE Public Notice thresholds in the following table:

PE > 100 lb/day Public Notice Thresholds (Broiler Houses)			
Pollutant	PE ₂ (lb/day)	Public Notice Threshold	Public Notice Triggered?
NO _x	0.0	100 lb/day	No
SO _x	0.0	100 lb/day	No
PM ₁₀	2.1	100 lb/day	No
CO	0.0	100 lb/day	No
VOC	1.7	100 lb/day	No
NH ₃	9.9	100 lb/day	No

Since the PE is below 100 lb/day for each pollutant, public noticing for PE > 100 lb/day purposes is not required for the new broiler houses.

C-5434-9-0 (Emergency IC Engine)

The PE₂ for the IC engine is compared to the daily PE Public Notice thresholds in the following table:

PE > 100 lb/day Public Notice Thresholds (IC Engine)			
Pollutant	PE ₂ (lb/day)	Public Notice Threshold	Public Notice Triggered?
NO _x	142.7	100 lb/day	Yes
SO _x	0.2	100 lb/day	No
PM ₁₀	2.0	100 lb/day	No
CO	42.7	100 lb/day	No
VOC	7.7	100 lb/day	No

As shown in the table on the previous page, public noticing for PE > 100 lb/day purposes is required.

c. Offset Threshold

The SSPE1 and SSPE2 are compared to the offset thresholds in the following table.

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	622	1,217	20,000 lb/year	No
SO _x	2	3	54,750 lb/year	No
PM ₁₀	18,163	18,171	29,200 lb/year	No
CO	140	318	200,000 lb/year	No
VOC	14,539	14,571	20,000 lb/year	No

As detailed above, there were no thresholds surpassed with this project; therefore public noticing is not required for offset purposes.

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE = SSPE2 – SSPE1. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

SSIPE Public Notice Thresholds					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO _x	1,217	622	595	20,000 lb/year	No
SO _x	3	2	1	20,000 lb/year	No
PM ₁₀	18,171	18,163	8	20,000 lb/year	No
CO	318	140	178	20,000 lb/year	No
VOC	14,571	14,539	32	20,000 lb/year	No
NH ₃	86,859	86,859	0	20,000 lb/year	No

As demonstrated above, the SSIPEs for all pollutants were less than 20,000 lb/year; therefore public noticing for SSIPE purposes is not required.

e. Title V Significant Permit Modification

Since this facility does not have a Title V operating permit, this change is not a Title V significant Modification, and therefore public noticing is not required.

2. Public Notice Action

As discussed above, public noticing is required for this project for NO_x emissions in excess of 100 lb/day. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC for this equipment.

D. Daily Emission Limits (DELs)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

C-5434-2-6 (Broiler Ranch)

For the broiler ranch, the DEL is based on the maximum number of broilers housed at the ranch and the management practices the facility will implement. The maximum number of broilers at the ranch will be listed in the equipment description for ATC C-5434-2-6. There are controls applied to the VOC emission factors; therefore, the following conditions will be listed on the ATC to ensure compliance:

- Permittee shall feed all animals according to National Research Council (NRC) guidelines. [District Rules 2201 and 4570]
- Permittee shall use a dry housing cleaning method at all times, except when a wet cleaning method is required for animal health or biosecurity issues. [District Rules 2201 and 4570]
- Permittee shall use drinkers that do not drip continuously. [District Rules 2201 and 4570]
- Permittee shall inspect drinkers at least once every seven (7) days and adjust the height, volume, and location of drinkers if necessary. [District Rules 2201 and 4570]
- Permittee shall inspect water pipes and drinkers and repair leaks daily. [District Rules 2201 and 4570]

C-5434-9-0 (Emergency IC Engine)

For the emergency IC engine, the DELs are stated in the form of emission factors, the maximum engine horsepower rating, and the maximum operational time of 24 hours per day. The following conditions will be listed on the ATC to ensure compliance:

- {4771} Emissions from this IC engine shall not exceed any of the following limits: 3.54 g-NOx/bhp-hr, 1.06 g-CO/bhp-hr, or 0.19 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]
- {4772} Emissions from this IC engine shall not exceed 0.05 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115]
- {4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115]

E. Compliance Assurance

1. Source Testing

Pursuant to District Policy APR 1705, source testing is not required to demonstrate compliance with Rule 2201.

2. Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201. Therefore, the following conditions will be listed on the ATCs to ensure compliance:

C-5434-2-6 (Broiler Ranch)

- Permittee shall maintain a record of the number of animals of each species and production group at the facility and shall maintain quarterly records of any changes to this information. [District Rules 2201 and 4570]
- Permittee shall maintain records of feed content, formulation, and quantity of feed additive utilized, to demonstrate compliance with National Research Council (NRC) guidelines. Records such as feed company guaranteed analyses (feed tags), ration sheets, or feed purchase records may be used to meet this requirement. [District Rules 2201 and 4570]

- Permittee shall maintain records to demonstrate that a dry housing cleaning method is maintained. For times when a wet cleaning method is required, the reason should be included as part of the records. [District Rules 2201 and 4570]
- Permittee shall record the date that drinkers are inspected dates adjustments were made to the height, volume, and location of drinkers. [District Rules 2201 and 4570]
- Permittee shall maintain records indicating that water pipes and drinkers are inspected daily and that any leaks are repaired. [District Rules 2201 and 4570]
- Permittee shall keep and maintain all records for a minimum of five (5) years and shall make records available to the APCO and EPA upon request. [District Rules 2201 and 4570]

C-5434-9-0 (Emergency IC Engine)

Recordkeeping requirements, in accordance with District Rule 4702, will be discussed in Section VIII, District Rule 4702, of this evaluation.

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

An AAQA shall be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The District's Technical Services Division conducted the required analysis. Refer to Appendix E of this document for the AAQA summary sheet.

The proposed location is in an attainment area for NO_x, CO, and SO_x. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for NO_x, CO, or SO_x.

The proposed location is in a non-attainment area for the state's PM₁₀ as well as federal and state PM_{2.5} thresholds. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for PM₁₀ and PM_{2.5}.

Therefore, the requirements for an AAQA are satisfied for this project.

Rule 2410 Prevention of Significant Deterioration

As shown in Section VII.C.9 above, this project does not result in a new PSD major source or PSD major modification. No further discussion is required.

Rule 2520 Federally Mandated Operating Permits

Since this facility's potential emissions do not exceed any major source thresholds of Rule 2201, this facility is not a major source, and Rule 2520 does not apply.

Rule 4001 New Source Performance Standards (NSPS)

40 CFR 60 Subpart IIII - Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

The requirements of 40 CFR Part 60, Subpart IIII – *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines* are applicable to stationary engines at agricultural and non-agricultural facilities. The District has not been delegated the authority to implement this NSPS regulations for non-Major Sources; therefore, compliance with the provisions of Subpart IIII will not be demonstrated for the engine in this project.

Rule 4002 National Emission Standards for Hazardous Air Pollutants

This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR; and applies to all sources of hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63.

40 CFR 63 Subpart ZZZZ - National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Emissions (RICE)

The requirements of 40 CFR Part 63, Subpart ZZZZ – *National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines* are applicable to stationary engines at agricultural and non-agricultural facilities. The District has not been delegated the authority to implement Area Source requirements from NESHAP regulations for non-Major Sources; therefore, compliance with the provisions of Subpart ZZZZ will not be demonstrated for the engine in this project.

Rule 4101 Visible Emissions

Section 5.0 stipulates that no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity).

C-5434-2-6 (Broiler Ranch)

Pursuant to Section 4.12, emissions subject to or specifically exempt from Regulation VIII (Fugitive PM10 Prohibitions) are considered to be exempt.

Pursuant to District Rule 8081, Section 4.1, on-field agricultural sources are exempt from the requirements of Regulation VIII.

An on-field agricultural source is defined in Rule 8011, Section 3.35 as the following:

Activities conducted solely for the purpose of preparing land for the growing of crops or the raising of fowl or animals, such as brush or timber clearing, grubbing, scraping, ground excavation, land leveling, grading, turning under stalks, disking, or tilling;

Therefore, the broiler houses are exempt from the requirements of Regulation VIII and Rule 4101.

C-5434-9-0 (Emergency IC Engine)

The following condition will be listed on the ATC to ensure compliance:

- {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]

Rule 4102 Nuisance

Rule 4102 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained.

C-5434-2-6 (Broiler Ranch)

Per Section 3.1, the provisions of this rule do not apply to odors emanating from agricultural operations in the growing of crops or raising of fowl or animals as defined in Rule 4103 (Open Burning).

Therefore, the broiler houses are exempt from the requirements of this Rule.

C-5434-9-0 (Emergency IC Engine)

The following condition will be listed on the ATC to ensure compliance:

- {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

Therefore, compliance with this rule is expected.

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 – *Risk Management Policy for Permitting New and Modified Sources* specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Risk Management Review (RMR) for this project (Appendix E), the total facility prioritization score including this project was greater than one. Therefore, an HRA was required to determine the short-term acute and long-term chronic exposure from this project. The District has performed an AAQA and a RMR for the proposed diesel-fired emergency IC engine (ATC C-5434-9-0) powering the mechanically ventilated broiler houses. The facility is also proposing to modify their existing broiler operation (ATC C-5434-2-6) by replacing the broiler houses with no overall increase in birds at the ranch, no overall increase in emissions from the broiler houses, and the proposed broiler houses will be built on the footprints of the existing houses. Per District policy APR 1905, routine replacement units are not subject of a RMR if there is no increase in permitted emissions. Therefore no HRA was performed for permit unit C-5434-2.

The RMR results for the project are summarized in the table below:

RMR Summary						
Units	Prioritization Score	Acute Hazard Index	Chronic Hazard Index	Maximum Individual Cancer Risk	T-BACT Required?	Special Permit Requirements?
Unit 2-6 (Broiler Housing)	NA ³	NA ³	NA ³	NA ³	No	No
Unit 9-0 (Emergency Diesel ICE)	NA ¹	NA ²	0.00	1.69E-07	No	Yes
Project Totals	NA ¹	NA ^{2,3}	0.00	1.69E-07		
Facility Totals	>1	0.00	0.00	3.55E-06		

¹Prioritization for this unit was not conducted since it has been determined that all diesel-fired IC engines will result in a prioritization score greater than 1.0.

²Acute Hazard Index was not calculated since there is no risk factor or the risk factor is so low that it has been determined to be insignificant for this type of unit.

³Per engineering staff, the modification for Unit 2-6 will be considered a routine replacement. Therefore, there will be no increase in emissions and no RMR/AAQA analysis is required or will be performed for this unit.

Discussion of T-BACT

Units C-5434-9-0 (Emergency IC Engine):

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As demonstrated above, T-BACT is not required for this project because the HRA indicates that the risk is not above the District's thresholds for triggering T-BACT requirements; therefore, compliance with the District's Risk Management Policy is expected.

District policy APR 1905 also specifies that the increase in emissions associated with a proposed new source or modification not have acute or chronic indices, or a cancer risk greater than the District's significance levels (i.e. acute and/or chronic indices greater than 1 and a cancer risk greater than 20 in a million). As outlined by the HRA Summary in Appendix E of this report, the emissions increases for this project was determined to be less than significant.

To ensure that human health risks will not exceed District allowable levels; the following conditions shall be included on ATC C-5434-9-0:

- {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap, roof overhang, or any other obstruction. [District Rule 4102]
- {4772} Emissions from this IC engine shall not exceed 0.05 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115]
- This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rules 2201, 4102 and 4702]

Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot.

C-5434-2-6 (Broiler Ranch)

Particulate matter concentration from the broiler houses is not expected to exceed the applicable limit as demonstrated below:

$$\text{PM Conc. (gr/scf)} = \frac{(\text{PM emission rate}) \times (7,000 \text{ gr/lb})}{(\text{Air flow rate}) \times (60 \text{ min/hr}) \times (24 \text{ hr/day})}$$

$$\begin{aligned} \text{PM}_{10} \text{ emission rate for each house} &= 24.9 \text{ lb-PM}_{10}/\text{day} \div 12 \text{ houses} \\ &= 2.1 \text{ lb-PM}_{10}/\text{house-day (worst-case emissions)} \end{aligned}$$

PM emission rate for each house (Assuming 50% of PM is PM₁₀):

$$\begin{aligned} &= 2.1 \text{ lb-PM}_{10}/\text{house-day} \times 2 \text{ lb-PM}/\text{lb-PM}_{10} \\ &= 4.2 \text{ lb-PM}/\text{day} \end{aligned}$$

Minimum house ventilation rate = 25,700 scfm (per applicant)

$$\text{PM Conc. (gr/scf)} = [(4.2 \text{ lb/day}) \times (7,000 \text{ gr/lb})] \div [(25,700 \text{ ft}^3/\text{min}) \times (60 \text{ min/hr}) \times (24 \text{ hr/day})]$$

$$\text{PM Conc.} = 0.0007 \text{ gr/scf} < 0.1 \text{ gr/scf}$$

As shown above, PM emissions concentration is below the applicable limit for new and existing houses. Therefore, compliance with the requirements of this rule is expected.

C-5434-9-0 (Emergency IC Engine)

Rule 4201 limits particulate matter emissions from any single source operation to 0.1 g/dscf, which, as calculated below, is equivalent to a PM₁₀ emission factor of 0.4 g-PM₁₀/bhp-hr.

$$0.1 \frac{\text{grain-PM}}{\text{dscf}} \times \frac{\text{g}}{15.43 \text{ grain}} \times \frac{1 \text{ Btu}_{in}}{0.35 \text{ Btu}_{out}} \times \frac{9,051 \text{ dscf}}{10^6 \text{ Btu}} \times \frac{2,542.5 \text{ Btu}}{1 \text{ bhp-hr}} \times \frac{0.96 \text{ g-PM}_{10}}{1 \text{ g-PM}} = 0.4 \frac{\text{g-PM}_{10}}{\text{bhp-hr}}$$

The proposed engine has a PM₁₀ emission factor less than 0.4 g/bhp-hr, compliance with Rule 4201 is expected.

The following condition will be listed on the ATCs to ensure compliance:

- {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

Rule 4550 Conservation Management Practices (CMP)

This rule applies to agricultural operation sites located within the San Joaquin Valley Air Basin. The purpose of this rule is to limit fugitive dust emissions from agricultural operation sites.

Pursuant to Section 5.1, effective on and after July 1, 2004, an owner/operator shall implement the applicable CMPs selected pursuant to Section 6.2 for each agricultural operation site.

Pursuant to Section 5.2, an owner/operator shall prepare and submit a CMP application for each agricultural operation site to the APCO for approval.

The facility received District approval for its CMP plan on August 29, 2005. Continued compliance with the requirements of District Rule 4550 is expected.

Rule 4570 Confined Animal Facilities (CAF)

C-5434-2-6 (Broiler Ranch)

This rule applies to Confined Animal Facilities (CAF) located within the San Joaquin Valley Air Basin. The purpose of this rule is to limit emissions of volatile organic compounds (VOC) from Confined Animal Facilities (CAF).

Pursuant to Section 5.1, owners/operators of any CAF shall submit, for approval by the APCO, a permit application for each Confined Animal Facility.

Pursuant to Section 5.1.3, owners/operators of any CAF shall include an emission mitigation plan within the permit application that lists the VOC mitigation measures that the facility will use to comply with all applicable requirements of Sections 5.5 or 5.6.

Pursuant to Section 5.3, owners/operators of any CAF shall implement all VOC emission mitigation measures, as contained in the permit application, on and after 365 days from the date of issuance of either the Authority-to-Construct or the Permit-to-Operate whichever is sooner. Since the facility is building new poultry houses, they will be required to implement all VOC emission mitigation measures at the time of initial operation.

Pursuant to Section 5.5, owners/operators of large CAFs shall comply with the Phase I Mitigation Measures in Section 5.5 until compliance with all applicable Phase II Mitigation Measures in Section 5.6 is demonstrated in accordance with the compliance schedule in Section 8.0.

Pursuant to Section 5.6, owners/operators of CAFs subject to the regulatory threshold in Table 2 shall comply with all applicable Phase II Mitigation Measures in accordance with the compliance schedule in Section 8.0.

Pursuant to Section 8.2 any owner/operator of new or modified facilities that become subject to the Regulatory Threshold requirements of this rule under Table 2 shall comply with the Phase II requirements of Section 6.0.

Pursuant to Table 2, this facility with a maximum bird capacity of 906,667 is a large CAF and is subject to Section 5.6 of the rule.

Based on initial permit application form processed under project #C-1110647, the applicant has selected the following Phase II mitigation measures to comply with the requirements of this Rule (only the mitigation measures selected by the applicant are shown from Table 4.6 below):

Table 4.6 – Broiler, Duck, or Turkey Phase II Mitigation Measure Requirements	
A. Feed: Owners/operators of a broiler, duck, or turkey CAF shall implement at least one (1) of the following feed mitigation measures:	
1.	a. Feed according to NRC guidelines; or
B. Housing:	
1.	Use a dry housing cleaning method at all times, except when a wet cleaning method is required for animal health or biosecurity issues, pursuant to Section 5.4.
2.	Use drinkers that do not drip continuously.
3.	Inspect drinkers at least once every seven (7) days and adjust the height, volume, and location of drinkers if necessary.
4.	Inspect water pipes and drinkers and repair leaks daily.
C. Solid Manure/Separated Solids:	
1.	Within seventy-two (72) hours of removal from housing: a. Remove all litter/manure from the facility.
	b. Cover litter/manure outside the housing with a weatherproof covering from October through May, except for times when wind events remove the covering, not to exceed twenty-four (24) hours per event.

Based on the mitigation measures selected by the applicant, the following conditions will be included on the ATC to ensure compliance:

- {4452} If a licensed veterinarian, a certified nutritionist, the California Department of Food and Agriculture (CDFA), or the United States Department of Agriculture (USDA) determines that any VOC mitigation measure (with a Rule 4570 reference) is detrimental to animal health and needs to be suspended, the Permittee must notify the District in writing within forty-eight (48) hours of the determination including the duration and the specific health condition requiring the mitigation measure to be suspended. If the situation is expected to exist longer than a thirty-day (30) period, the owner/operator shall submit a new emission mitigation plan designating a mitigation measure to be implemented in lieu of the suspended mitigation measure. [District Rule 4570]
 - Permittee shall maintain a record of the number of animals of each species and production group at the facility and shall maintain quarterly records of any changes to this information. [District Rules 2201 and 4570]
 - Permittee shall keep and maintain all records for a minimum of five (5) years and shall make records available to the APCO and EPA upon request. [District Rules 2201 and 4570]
- Feed according to National Research Council (NRC) guidelines.
- Permittee shall feed all animals according to National Research Council (NRC) guidelines. [District Rules 2201 and 4570]
 - Permittee shall maintain records of feed content, formulation, and quantity of feed additive utilized, to demonstrate compliance with National Research Council (NRC) guidelines. Records such as feed company guaranteed analyses (feed tags), ration sheets, or feed purchase records may be used to meet this requirement. [District Rules 2201 and 4570]
- Use a dry housing cleaning method at all times, except when a wet cleaning method is required for animal health or biosecurity issues
- Permittee shall use a dry housing cleaning method at all times, except when a wet cleaning method is required for animal health or biosecurity issues. [District Rules 2201 and 4570]
 - Permittee shall maintain records to demonstrate that a dry housing cleaning method is maintained. For times when a wet cleaning method is required, the reason should be included as part of the records. [District Rules 2201 and 4570]
- Use drinkers that do not drip continuously
- Permittee shall use drinkers that do not drip continuously. [District Rules 2201 and 4570]
- Adjust the height, volume, and location of drinkers, if necessary, at least once every seven (7) days

- Permittee shall inspect drinkers at least once every seven (7) days and adjust the height, volume, and location of drinkers if necessary. [District Rules 2201 and 4570]
 - Permittee shall record the date that drinkers are inspected dates adjustments were made to the height, volume, and location of drinkers. [District Rules 2201 and 4570]
- Inspect water pipes and drinkers and repair leaks daily
- Permittee shall inspect water pipes and drinkers and repair leaks daily. [District Rules 2201 and 4570]
 - Permittee shall maintain records indicating that water pipes and drinkers are inspected daily and that any leaks are repaired. [District Rules 2201 and 4570]

Since the facility has proposed all the required mitigation measure required by this rule, compliance with this rule is expected.

Rule 4701 Internal Combustion Engines - Phase 1

The purpose of this rule is to limit the emissions of nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC) from internal combustion engines. Except as provided in Section 4.0, the provisions of this rule apply to any internal combustion engine, rated greater than 50 bhp, that requires a PTO.

Section 4.1 of the rule specifically exempts IC engines in agricultural operations used for the growing of crops or raising of fowl or animals. Since the engine is used for the growing of crops or raising of fowl or animals, it is exempt from the requirements of this rule. Therefore, the following condition will be listed on the ATC C-5434-9-0 to ensure compliance.

- {4002} This IC engine shall only be used for the growing and harvesting of crops or the raising of fowl or animals for the primary purpose of making a profit, providing a livelihood, or conducting agricultural research or instruction by an educational institution. [District Rule 4701 and 17 CCR 93115]

Rule 4702 Internal Combustion Engines

C-5434-9-0 (Emergency IC Engine)

The purpose of this rule is to limit the emissions of nitrogen oxides (NO_x), carbon monoxide (CO), volatile organic compounds (VOC), and sulfur oxides (SO_x) from internal combustion engines. This rule applies to any internal combustion engine rated at 25 brake horsepower or greater.

The proposed 762 bhp emergency standby IC engine is subject to the requirements of this rule. The following summarizes District Rule 4702 Requirements for the emergency standby IC engine:

1. Operation of emergency standby engines is limited to 100 hours or less per calendar year for non-emergency purposes. The following condition will be included on the ATC:
 - {4775} This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rules 2201, 4102 and 4702]
2. Properly operate and maintain each engine as recommended by the engine manufacturer or emission control system supplier. The following condition will be included on the ATC:
 - {4261} This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702]
3. Monitor the operational characteristics of each engine as recommended by the engine manufacturer or emission control system supplier. The following condition will be included on the ATC:
 - {3478} During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702]
4. Install and operate a nonresettable elapsed time meter. In lieu of installing a nonresettable elapsed time meter, the operator may use an alternative device, method, or technique, in determining operating time provided that the alternative is approved by the APCO and EPA and is allowed by Permit-to-Operate condition. The operator shall properly maintain and operate the nonresettable elapsed time meter or alternative device in accordance with the manufacturer's instructions. The following condition will be included on the ATC:
 - {4749} This engine shall be equipped with a non-resettable hour meter with a minimum display capability of 9,999 hours, unless the District determines that a non-resettable hour meter with a different minimum display capability is appropriate in consideration of the historical use of the engine and the owner or operator's compliance history. [District Rule 4702 and 17 CCR 93115]
5. Emergency standby engines cannot be used to reduce the demand for electrical power when normal electrical power line service has not failed, or to produce power for the electrical distribution system, or in conjunction with a voluntary utility demand reduction program or interruptible power contract. The following conditions will be included on the ATC:
 - {3807} An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702]

- {3808} This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702]
6. Records of the total hours of operation, type of fuel used, purpose for operating the engine, all hours of non-emergency and emergency operation, and other support documentation must be maintained. All records shall be retained for a period of at least five years, shall be readily available, and be made available to the APCO upon request. The following conditions will be included on the ATC:
- {3496} The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702 and 17 CCR 93115]
 - {4263} The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115]
 - {3475} All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702 and 17 CCR 93115]

Rule 4801 Sulfur Compounds

Rule 4801 requires that sulfur compound emissions (as SO₂) shall not exceed 0.2% by volume. Using the ideal gas equation, the sulfur compound emissions for the proposed IC engine is calculated as follows:

$$\text{Volume SO}_2 = (n \times R \times T) \div P$$

n = moles SO₂

T (standard temperature) = 60 °F or 520 °R

$$R (\text{universal gas constant}) = \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot \text{°R}}$$

$$\frac{0.000015 \text{ lb-S}}{\text{lb-fuel}} \times \frac{7.1 \text{ lb}}{\text{gal}} \times \frac{64 \text{ lb-SO}_2}{32 \text{ lb-S}} \times \frac{1 \text{ MMBtu}}{9,051 \text{ scf}} \times \frac{1 \text{ gal}}{0.137 \text{ MMBtu}} \times \frac{\text{lb-mol}}{64 \text{ lb-SO}_2} \times \frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb-mol} \cdot \text{°R}} \times \frac{520 \text{ °R}}{14.7 \text{ psi}} \times 1,000,000 = 1.0 \text{ ppmv}$$

Since 1.0 ppmv is ≤ 2,000 ppmv, this engine is expected to comply with Rule 4801. Therefore, the following condition will be listed on the ATC C-5434-9-0 to ensure compliance:

- {4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115]

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this site is not located within 1,000 feet of a school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

Title 17 California Code of Regulations (CCR), Section 93115 - Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition (CI) Engines

C-5434-9-0 (Emergency IC Engine)

The following requirements apply to new engines (those installed after 1/1/05):

<p>Title 17 CCR Section 93115 Requirements for New Emergency IC Engines Powering Electrical Generators</p>	<p>Proposed Method of Compliance with Title 17 CCR Section 93115 Requirements</p>
<p>The requirements in Sections 93115.6, 93115.7, and 93115.10(a) do not apply to new stationary diesel-fueled CI engines used in agricultural operations.</p>	<p>The following condition will be added to the permit:</p> <ul style="list-style-type: none"> • This IC engine shall only be used for the growing and harvesting of crops or the raising of fowl or animals for the primary purpose of making a profit, providing a livelihood, or conducting agricultural research or instruction by an educational institution. [District Rule 4701 and 17 CCR 93115]
<p>Emergency engine(s) must be fired on CARB diesel fuel, or an approved alternative diesel fuel.</p>	<p>The applicant has proposed the use of CARB certified diesel fuel. The proposed permit condition, requiring the use of CARB certified diesel fuel, is included on the permit.</p> <ul style="list-style-type: none"> • {4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115]
<p>The engine(s) must meet Table 6 of the ATCM, which requires the Off-road engine certification standard for the specific power rating of the proposed engine on the date of acquisition (purchase date) or permit application submittal to the District, whichever is earliest.</p>	<p>For emergency engines, the Off-road engine certification standards are identified in Table 1 of the ATCM³. The applicant has proposed the use of an emergency engine that meets the Table 1 emission standards (Off-road engine certification standards) for the applicable horsepower range).</p>
<p>A non-resettable hour meter with a minimum display capability of 9,999 hours shall be installed upon engine installation, or by no later than January 1, 2005, on all engines subject to all or part of the requirements of sections 93115.6,</p>	<p>The following condition will be included on the permit:</p> <ul style="list-style-type: none"> • {4749} This engine shall be equipped with a non-resettable hour meter with a minimum display capability of 9,999 hours, unless the District determines that a non-resettable hour meter with a

³ Although Section 93115.8 of the ATCM states that new IC engines used in agricultural operations must meet the emissions limits in Table 6, the ATCM Staff Report clarifies that all new emergency standby IC engines must meet the emissions limits specified in Table 1 of the ATCM. This eliminates the requirement that new agricultural emergency standby IC engines would otherwise have to meet the after-treatment based Tier 4 standards specified in Table 6.

<p>93115.7, or 93115.8(a) unless the District determines on a case-by-case basis that a non-resettable hour meter with a different minimum display capability is appropriate in consideration of the historical use of the engine and the owner or operator's compliance history.</p>	<p>different minimum display capability is appropriate in consideration of the historical use of the engine and the owner or operator's compliance history. [District Rule 4702 and 17 CCR 93115]</p>
<p>An owner or operator shall maintain monthly records of the following: emergency use hours of operation; maintenance and testing hours of operation; hours of operation for emission testing; initial start-up testing hours; hours of operation for all other uses; and the type of fuel used. All records shall be retained for a minimum of 36 months.</p>	<p>The following condition will be included on the permit:</p> <ul style="list-style-type: none"> • {3496} The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702 and 17 CCR 93115]

California Environmental Quality Act (CEQA)

CEQA requires each public agency to adopt objectives, criteria, and specific procedures consistent with CEQA Statutes and the CEQA Guidelines for administering its responsibilities under CEQA, including the orderly evaluation of projects and preparation of environmental documents. The District adopted its *Environmental Review Guidelines* (ERG) in 2001. The basic purposes of CEQA are to:

- Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities;
- Identify the ways that environmental damage can be avoided or significantly reduced;
- Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Greenhouse Gas (GHG) Significance Determination

District is a Lead Agency and Project not Covered Under Cap-and-Trade

It is determined that no other agency has or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project.

The District's engineering evaluation (this document – Appendix G) demonstrates that the project would not result in an increase in project specific greenhouse gas emissions. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

Per District Policy, project specific greenhouse gas emissions less than or equal to 230 metric tons-CO₂e/year are considered to be zero for District permitting purposes and are exempt from further environmental review.

District CEQA Findings

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. Therefore, the District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15301 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

Indemnification Agreement/Letter of Credit Determination

According to District Policy APR 2010 (CEQA Implementation Policy), when the District is the Lead or Responsible Agency for CEQA purposes, an indemnification agreement and/or a letter of credit may be required. The decision to require an indemnity agreement and/or a letter of credit is based on a case-by-case analysis of a particular project's potential for litigation risk, which in turn may be based on a project's potential to generate public concern, its potential for significant impacts, and the project proponent's ability to pay for the costs of litigation without a letter of credit, among other factors.

The criteria pollutant emissions and toxic air contaminant emissions associated with the proposed project are not significant, and there is minimal potential for public concern for this particular type of facility/operation. Therefore, an Indemnification Agreement and/or a Letter of Credit will not be required for this project in the absence of expressed public concern.

To ensure that issuance of this permit does not conflict with any conditions imposed by any local agency permit process, the following permit condition will be listed on the ATCs:

- This permit does not authorize the violation of any conditions established for this facility in the Conditional Use Permit (CUP), Special Use Permit (SUP), Site Approval, Site Plan Review (SPR), or other approval documents issued by a local, state, or federal agency. [Public Resources Code 21000-21177: California Environmental Quality Act]

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue ATCs C-5434-2-6 & -9-0 subject to the permit conditions on the attached draft ATCs in Appendix A.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
C-5434-2-6	3020-01-E	390 hp electric motors	\$451.00
C-5434-9-0	3020-10-D	762 bhp IC engine	\$525.00

Appendixes

- A: Draft ATCs
- B: Current PTO C-5434-2-5
- C: Engine Exhaust Emission Data
- D: BACT Guideline and BACT Analysis – IC Engine
- E: HRA and AAQA Summary
- F: Quarterly Net Emissions Change
- G: Greenhouse Gas Emissions (GHG) Calculations

APPENDIX A

Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-5434-2-6

LEGAL OWNER OR OPERATOR: FOSTER FARMS, JAMESON RANCH
MAILING ADDRESS: 1333 SWAN ST
ATTN: ENVIRONMENTAL AFFAIRS
LIVINGSTON, CA 95334

LOCATION: 8321 S JAMESON AVE
FRESNO, CA 93706

EQUIPMENT DESCRIPTION:

MODIFICATION OF 906,667 BROILER RANCH CONSISTING OF 17 NATURALLY VENTILATED BROILER HOUSES AND 12 MECHANICALLY VENTILATED BROILER HOUSES, INCLUDING ELECTRIC FANS TOTALING 371 HP: REPLACE 17 NATURALLY VENTILATED BROILER HOUSES FOR 453,334 BIRDS WITH 12 MECHANICALLY VENTILATED BROILER HOUSES FOR 453,334 BIRDS (37,778 BIRDS/HOUSE), INCLUDING ELECTRIC FANS TOTALING 195 HP

CONDITIONS

1. {3215} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 1070]
2. {3216} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 1070]
3. {3658} This permit does not authorize the violation of any conditions established for this facility in the Conditional Use Permit (CUP), Special Use Permit (SUP), Site Approval, Site Plan Review (SPR), or other approval documents issued by a local, state, or federal agency. [Public Resources Code 21000-21177: California Environmental Quality Act]

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

DRAFT

Arnaud Marjolle, Director of Permit Services
C-5434-2-6 Jun 7 2016 8:35AM - BUSHHT Joint Inspection NOT Required

4. If a licensed veterinarian or a certified nutritionist determines that any VOC mitigation measure will be required to be suspended as a detriment to animal health or necessary for the animal to molt, the owners/operators must notify the District in writing within forty-eight (48) hours of the determination including the duration and the specific health condition requiring the mitigation measure to be suspended. If the situation is expected to exist longer than a thirty-day (30) period, the owner/operator shall submit a new emission mitigation plan designating a mitigation measure to be implemented in lieu of the suspended mitigation measure. [District Rule 4570]
5. Permittee shall feed all animals according to National Research Council (NRC) guidelines. [District Rules 2201 and 4570]
6. Permittee shall maintain records of feed content, formulation, and quantity of feed additive utilized, to demonstrate compliance with National Research Council (NRC) guidelines. Records such as feed company guaranteed analyses (feed tags), ration sheets, or feed purchase records may be used to meet this requirement. [District Rules 2201 and 4570]
7. Permittee shall use a dry housing cleaning method at all times, except when a wet cleaning method is required for animal health or biosecurity issues. [District Rules 2201 and 4570]
8. Permittee shall maintain records to demonstrate that a dry housing cleaning method is maintained. For times when a wet cleaning method is required, the reason should be included as part of the records. [District Rules 2201 and 4570]
9. Permittee shall use drinkers that do not drip continuously. [District Rules 2201 and 4570]
10. Permittee shall inspect drinkers at least once every seven (7) days and adjust the height, volume, and location of drinkers if necessary. [District Rules 2201 and 4570]
11. Permittee shall record the date that drinkers are inspected and the date adjustments were made to the height, volume, and location of drinkers. [District Rules 2201 and 4570]
12. Permittee shall inspect water pipes and drinkers and repair leaks daily. [District Rules 2201 and 4570]
13. Permittee shall maintain records indicating that water pipes and drinkers are inspected daily and that any leaks are repaired. [District Rules 2201 and 4570]
14. Permittee shall maintain a record of the number of animals of each species and production group at the facility and shall maintain quarterly records of any changes to this information. [District Rules 2201 and 4570]
15. Permittee shall keep and maintain all records for a minimum of five (5) years and shall make records available to the APCO and EPA upon request. [District Rules 2201 and 4570]

DRAFT

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: C-5434-9-0

LEGAL OWNER OR OPERATOR: FOSTER FARMS, JAMESON RANCH
MAILING ADDRESS: 1333 SWAN ST
ATTN: ENVIRONMENTAL AFFAIRS
LIVINGSTON, CA 95334

LOCATION: 8321 S JAMESON AVE
FRESNO, CA 93706

EQUIPMENT DESCRIPTION:

762 BHP (INTERMITTENT) PERKINS MODEL 2506C-E15TAG3 TIER 2 CERTIFIED DIESEL-FIRED EMERGENCY
STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

CONDITIONS

1. {3215} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 1070]
2. {3216} Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 1070]
3. {3658} This permit does not authorize the violation of any conditions established for this facility in the Conditional Use Permit (CUP), Special Use Permit (SUP), Site Approval, Site Plan Review (SPR), or other approval documents issued by a local, state, or federal agency. [Public Resources Code 21000-21177: California Environmental Quality Act]
4. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
6. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (559) 230-5950 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

Arnaud Marjolle, Director of Permit Services

C-5434-9-0 Jun 4 2018 2:48PM - BUSHHT Joint Inspection NOT Required

7. {4002} This IC engine shall only be used for the growing and harvesting of crops or the raising of fowl or animals for the primary purpose of making a profit, providing a livelihood, or conducting agricultural research or instruction by an educational institution. [District Rules 4701 and 4702, and 17 CCR 93115]
8. {1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102]
9. {4749} This engine shall be equipped with a non-resettable hour meter with a minimum display capability of 9,999 hours, unless the District determines that a non-resettable hour meter with a different minimum display capability is appropriate in consideration of the historical use of the engine and the owner or operator's compliance history. [District Rule 4702 and 17 CCR 93115]
10. {4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, and 17 CCR 93115]
11. Emissions from this IC engine shall not exceed any of the following limits: 3.54 g-NOx/bhp-hr, 1.06 g-CO/bhp-hr, or 0.19 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]
12. Emissions from this IC engine shall not exceed 0.05 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115]
13. {4261} This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702]
14. {3478} During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702]
15. {3807} An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702 and 17 CCR 93115]
16. {3808} This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702 and 17 CCR 93115]
17. {3496} The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702 and 17 CCR 93115]
18. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rules 2201, 4102 and 4702]
19. {4263} The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115]
20. {3475} All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rule 4702 and 17 CCR 93115]

DRAFT

APPENDIX B

Current PTO C-5434-2-5

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: C-5434-2-5

EXPIRATION DATE: 12/31/2020

EQUIPMENT DESCRIPTION:

906,667 BROILER RANCH CONSISTING OF 17 NATURALLY VENTILATED BROILER HOUSES AND 12 MECHANICALLY VENTILATED BROILER HOUSES, INCLUDING ELECTRIC FANS TOTALING 371 HP

PERMIT UNIT REQUIREMENTS

1. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to enter the permittee's premises where a permitted source is located or emissions related activity is conducted, or where records must be kept under condition of the permit. [District Rule 1070]
2. Upon presentation of appropriate credentials, a permittee shall allow an authorized representative of the District to have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit. [District Rule 1070]
3. This permit does not authorize the violation of any conditions established for this facility in the Conditional Use Permit (CUP), Special Use Permit (SUP), Site Approval, Site Plan Review (SPR), or other approval documents issued by a local, state, or federal agency. [Public Resources Code 21000-21177: California Environmental Quality Act]
4. If a licensed veterinarian or a certified nutritionist determines that any VOC mitigation measure will be required to be suspended as a detriment to animal health or necessary for the animal to molt, the owners/operators must notify the District in writing within forty-eight (48) hours of the determination including the duration and the specific health condition requiring the mitigation measure to be suspended. If the situation is expected to exist longer than a thirty-day (30) period, the owner/operator shall submit a new emission mitigation plan designating a mitigation measure to be implemented in lieu of the suspended mitigation measure. [District Rule 4570]
5. Permittee shall feed all animals according to National Research Council (NRC) guidelines. [District Rules 2201 and 4570]
6. Permittee shall maintain records of feed content, formulation, and quantity of feed additive utilized, to demonstrate compliance with National Research Council (NRC) guidelines. Records such as feed company guaranteed analyses (feed tags), ration sheets, or feed purchase records may be used to meet this requirement. [District Rules 2201 and 4570]
7. Permittee shall use a dry housing cleaning method at all times, except when a wet cleaning method is required for animal health or biosecurity issues. [District Rules 2201 and 4570]
8. Permittee shall maintain records to demonstrate that a dry housing cleaning method is maintained. For times when a wet cleaning method is required, the reason should be included as part of the records. [District Rules 2201 and 4570]
9. Permittee shall use drinkers that do not drip continuously. [District Rules 2201 and 4570]
10. Permittee shall inspect drinkers at least once every seven (7) days and adjust the height, volume, and location of drinkers if necessary. [District Rules 2201 and 4570]
11. Permittee shall record the date that drinkers are inspected dates adjustments were made to the height, volume, and location of drinkers. [District Rules 2201 and 4570]
12. Permittee shall inspect water pipes and drinkers and repair leaks daily. [District Rules 2201 and 4570]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

These terms and conditions are part of the Facility-wide Permit to Operate.

13. Permittee shall maintain records indicating that water pipes and drinkers are inspected daily and that any leaks are repaired. [District Rules 2201 and 4570]
14. Permittee shall maintain a record of the number of animals of each species and production group at the facility and shall maintain quarterly records of any changes to this information. [District Rules 2201 and 4570]
15. Permittee shall keep and maintain all records for a minimum of five (5) years and shall make records available to the APCO and EPA upon request. [District Rules 2201 and 4570]

These terms and conditions are part of the Facility-wide Permit to Operate.

APPENDIX C

Engine Exhaust Emission Data

STATEMENT OF EXHAUST EMISSIONS

2017 PERKINS DIESEL FUELED GENERATOR

The measured emissions values provided here are proprietary to Generac and its authorized dealers. This information may only be disseminated upon request, to regulatory governmental bodies for emissions permitting purposes or to specifying organizations as submittal data when expressly required by project specifications, and shall remain confidential and not open to public viewing. This information is not intended for compilation or sales purposes and may not be used as such, nor may it be reproduced without the expressed written permission of Generac Power Systems, Inc. The data provided shall not be meant to include information made public by Generac.

Generator Model:	SD/MD500	EPA Certificate Number:	HCPXL15.2NZS-001
kW _e Rating:	500	CARB Certificate Number:	Not Applicable
Engine Family:	HCPXL15.2NZS	SCAQMD CEP Number:	545376
Engine Model:	2506C-E15TAG3	Emission Standard Category:	Tier 2
Rated Engine Power (BHP)*:	762	Certification Type:	Stationary Emergency CI
Fuel Consumption (gal/hr)*:	31.2		(40 CFR Part 60 Subpart IIII)
Aspiration:	Turbo/Aftercooled		
Rated RPM:	1800		

*Engine Power and Fuel Consumption are declared by the Engine Manufacturer of Record and the U.S. EPA.

Emissions based on engine power of specific Engine Model.

(These values are actual composite weighted exhaust emissions results over the EPA 5-mode test cycle.)

CO	NOx + NMHC	PM	
1.43	5.02	0.07	Grams/kW-hr
1.06	3.73	0.05	Grams/bhp-hr

- The stated values are actual exhaust emission test measurements obtained from an engine representative of the type described above.
- Values based on 5mode testing are official data of record as submitted to regulatory agencies for certification purposes. Testing was conducted in accordance with prevailing EPA protocol, which is typically accepted by SCAQMD and other regional authorities.
- No emissions values provided above are to be construed as guarantees of emission levels for any given Generac generator unit.
- Generac Power Systems, Inc. reserves the right to revise this information without prior notice.
- Consult state and local regulatory agencies for specific permitting requirements.
- The emission performance data supplied by the equipment manufacturer is only one element required toward completion of the permitting and installation process. State and local regulations may vary on a case-by-case basis and local agencies must be consulted by the permit application/equipment owner prior to equipment purchase or installation. The data supplied herein by Generac Power Systems cannot be construed as a guarantee of installability of the generating set.



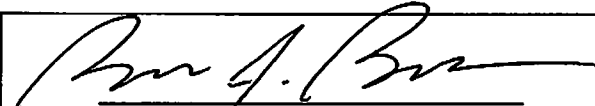
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
2017 MODEL YEAR
CERTIFICATE OF CONFORMITY
WITH THE CLEAN AIR ACT

OFFICE OF TRANSPORTATION
AND AIR QUALITY
ANN ARBOR, MICHIGAN 48105

Certificate Issued To: Caterpillar Inc.
(U.S. Manufacturer or Importer)
Certificate Number: HCPXL15.2NZS-001

Effective Date:
07/29/2016

Expiration Date:
12/31/2017


Byron J. Bunker, Division Director
Compliance Division

Issue Date:
07/29/2016

Revision Date:
N/A

Model Year: 2017
Manufacturer Type: Original Engine Manufacturer
Engine Family: HCPXL15.2NZS

Mobile/Stationary Indicator: Stationary
Emissions Power Category: 560<kW<=2237
Fuel Type: Diesel
After Treatment Devices: No After Treatment Devices Installed
Non-after Treatment Devices: Electronic Control, Engine Design Modification

Pursuant to Section 111 and Section 213 of the Clean Air Act (42 U.S.C. sections 7411 and 7547) and 40 CFR Part 60, and subject to the terms and conditions prescribed in those provisions, this certificate of conformity is hereby issued with respect to the test engines which have been found to conform to applicable requirements and which represent the following engines, by engine family, more fully described in the documentation required by 40 CFR Part 60 and produced in the stated model year.

This certificate of conformity covers only those new compression-ignition engines which conform in all material respects to the design specifications that applied to those engines described in the documentation required by 40 CFR Part 60 and which are produced during the model year stated on this certificate of the said manufacturer, as defined in 40 CFR Part 60.

It is a term of this certificate that the manufacturer shall consent to all inspections described in 40 CFR 1068 and authorized in a warrant or court order. Failure to comply with the requirements of such a warrant or court order may lead to revocation or suspension of this certificate for reasons specified in 40 CFR Part 60. It is also a term of this certificate that this certificate may be revoked or suspended or rendered void *ab initio* for other reasons specified in 40 CFR Part 60.

This certificate does not cover engines sold, offered for sale, or introduced, or delivered for introduction, into commerce in the U.S. prior to the effective date of the certificate.

APPENDIX D

BACT Guideline and BACT Analysis – IC Engine

San Joaquin Valley Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 3.1.1
Last Update: 9/10/2013
Emergency Diesel IC Engine

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
CO	Latest EPA Tier Certification level for applicable horsepower range*		
NOX	Latest EPA Tier Certification level for applicable horsepower range*		
PM10	0.15 g/bhp-hr or the latest EPA Tier Certification level for applicable horsepower range, whichever is more stringent (ATCM)		
SOX	Very low sulfur diesel fuel (15 ppmw sulfur or less)		
VOC	Latest EPA Tier Certification level for applicable horsepower range*		

***Note:** The certification requirements are as follows: for emergency engines $50 \leq \text{bhp} < 75$ - Tier 4 Interim; for emergency engines $75 \leq \text{bhp} < 750$ - Tier 3; for emergency engines ≥ 750 bhp - Tier 2.

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

Top Down BACT Analysis for the Emergency IC Engine

BACT Guideline 3.1.1 applies to emergency diesel IC engines. In accordance with the District BACT policy, information from that guideline will be utilized without further analysis.

1. BACT Analysis for NO_x and VOC Emissions:

a. Step 1 - Identify all control technologies

BACT Guideline 3.1.1 identifies only the following option:

- Latest EPA Tier Certification level for applicable horsepower range*

*Note: for emergency engines $50 \leq \text{bhp} < 75$, Tier 4 Interim certification is the requirement; for emergency engines $75 \leq \text{bhp} < 750$, Tier 3 certification is the requirement; for emergency engines ≥ 750 bhp, Tier 2 certification is the requirement.

The proposed engine is rated at 762 hp. Therefore, the applicable control technology option is EPA Tier 2 certification.

b. Step 2 - Eliminate technologically infeasible options

The control option listed in Step 1 is not technologically infeasible.

c. Step 3 - Rank remaining options by control effectiveness

No ranking needs to be done because there is only one control option listed in Step 1.

d. Step 4 - Cost Effectiveness Analysis

The applicant has proposed the only control option remaining under consideration. Therefore, a cost effectiveness analysis is not required.

e. Step 5 - Select BACT

BACT for NO_x and VOC will be the use of an EPA Tier 2 certified engine. The applicant is proposing such a unit. Therefore, BACT will be satisfied.

APPENDIX E

HRA and AAQA Summary

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Tim Bush – Permit Services
 From: Cheryl Lawler – Technical Services
 Date: May 24, 2018
 Facility Name: Foster Farms, Jameson Ranch
 Location: 8265 S. Jameson Avenue, Fresno
 Application #(s): C-5434-2-6 & 9-0
 Project #: C-1173425

A. RMR SUMMARY

RMR Summary						
Units	Prioritization Score	Acute Hazard Index	Chronic Hazard Index	Maximum Individual Cancer Risk	T-BACT Required?	Special Permit Requirements?
Unit 2-6 (Broiler Housing)	NA ³	NA ³	NA ³	NA ³	No	No
Unit 9-0 (Emergency Diesel ICE)	NA ¹	NA ²	0.00	1.69E-07	No	Yes
Project Totals	NA ¹	NA ^{2, 3}	0.00	1.69E-07		
Facility Totals	>1	0.00	0.00	3.55E-06		

¹Prioritization for this unit was not conducted since it has been determined that all diesel-fired IC engines will result in a prioritization score greater than 1.0.

²Acute Hazard Index was not calculated since there is no risk factor or the risk factor is so low that it has been determined to be insignificant for this type of unit.

³Per engineering staff, the modification for Unit 2-6 will be considered a routine replacement. Therefore, there will be no increase in emissions and no RMR/AAQA analysis is required or will be performed for this unit.

Proposed Permit Requirements

To ensure that human health risks will not exceed District allowable levels; the following shall be included as requirements for:

Unit 9-0

1. The PM10 emissions rate shall not exceed 0.05 g/bhp-hr based on US EPA certification using ISO 8178 test procedure.
2. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction.
3. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year.

B. RMR REPORT

I. Project Description

Technical Services received a request on April 5, 2018, to perform a Risk Management Review (RMR) and an Ambient Air Quality Analysis (AAQA) for a broiler ranch proposing to modify their existing broiler operation (Unit 2-6) and install a new 762 bhp emergency Diesel IC engine (Unit 9-0).

Per engineering staff, the modification for Unit 2-6 will be considered a routine replacement. Therefore, there will be no increase in emissions and no RMR/AAQA analysis is required or will be performed for this unit.

II. Analysis

Toxic emissions for this unit were calculated and provided by the processing engineer for diesel particulate matter, and input into the San Joaquin Valley APCD's Hazard Assessment and Reporting Program (SHARP). Prioritization for this unit was not conducted since it has been determined that all diesel-fired IC engines will result in a prioritization score greater than 1.0. The prioritization score for this facility was greater than 1.0 (see RMR Summary Table). Therefore, a refined health risk assessment was required. The AERMOD model was used, with the parameters outlined below and meteorological data for 2007-2011 from Mendota to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. These dispersion factors were input into the SHARP Program, which then used the Air Dispersion Modeling and Risk Tool (ADMRT) of the Hot Spots Analysis and Reporting Program Version 2 (HARP 2) to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Analysis Parameters Unit 9-0			
Source Type	Point	Location Type	Rural
Stack Height (m)	2.44	Closest Receptor (m)	256
Stack Diameter (m)	0.13	Type of Receptor	Residential
Stack Exit Velocity (m/s)	111.32	Max Hours per Year	100
Stack Exit Temp. (°K)	823	Diesel PM10 (lb/yr)	8

Technical Services also performed modeling for criteria pollutants CO, NO_x, SO_x, and PM10 with the emission rates below:

Unit #	NO _x (Lbs.)		SO _x (Lbs.)		CO (Lbs.)		PM ₁₀ (Lbs.)	
	Hr.	Yr.	Hr.	Yr.	Hr.	Yr.	Hr.	Yr.
9-0	NA ¹	595	NA ¹	1	NA ¹	178	NA ¹	8

¹The project is an intermittent source as defined in APR-1920. In accordance with APR-1920, compliance with short-term (i.e., 1-hour, 3-hour, 8-hour and 24-hour) standards is not required.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

	Background Site	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Tranquillity (2016)	NA ¹	X	NA ¹	X	X
NO _x	Fresno-Foundry (2016)	NA ¹	X	X	X	Pass
SO _x	Fresno-Garland (2016)	NA ¹	NA ¹	X	NA ¹	Pass
PM ₁₀	Fresno-Drummond (2016)	X	X	X	NA ¹	Pass ²
PM _{2.5}	Fresno-Garland (2016)	X	X	X	NA ¹	Pass ³

*Results were taken from the attached PSD spreadsheet.

¹The project is an intermittent source as defined in APR-1920. In accordance with APR-1920, compliance with short-term (i.e., 1-hour, 3-hour, 8-hour and 24-hour) standards is not required.

²The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

³The court has vacated EPA's PM_{2.5} SILs. Until such time as new SIL values are approved, the District will use the corresponding PM₁₀ SILs for both PM₁₀ and PM_{2.5} analyses.

III. Conclusion

The Acute and Chronic Indices are below 1.0, and the Cancer Risk factor associated with the project is less than 1.0 in a million. **In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT).**

To ensure that human health risks will not exceed District allowable levels; the permit requirements listed on Page 1 of this report must be included for the proposed unit.

These conclusions are based on the data provided by the applicant and the project engineer. Therefore, this analysis is valid only as long as the proposed data and parameters do not change.

The emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS.

IV. Attachments

- A. RMR Request Form & Attachments
- B. Convert Calculations
- C. Facility Summary
- D. AAQA Summary Report

APPENDIX F

Quarterly Net Emissions Change

Quarterly Net Emissions Change (QNEC)

The Quarterly Net Emissions Change is used to complete the emission profile screen for the District's PAS database. The QNEC shall be calculated as follows:

QNEC = PE2 - PE1, where:

- QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.
- PE2 = Post-Project Potential to Emit for each emissions unit, lb/qtr.
- PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

Using the values in Sections VII.C.2 and VII.C.1 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

$$PE2_{quarterly} = PE2_{annual} \div 4 \text{ quarters/year}$$

$$PE1_{quarterly} = PE1_{annual} \div 4 \text{ quarters/year}$$

C-5434-2-6 (Broiler Ranch)

PE2 (lb/qtr) C-5434-2-6					
	PE2 (lb/year)	÷	4 qtr/year	=	PE2 (lb/qtr)
NO _x	0	÷	4 qtr/year	=	0
SO _x	0	÷	4 qtr/year	=	0
PM ₁₀	18,133	÷	4 qtr/year	=	4,533
CO	0	÷	4 qtr/year	=	0
VOC	14,507	÷	4 qtr/year	=	3,627

PE1 (lb/qtr) C-5434-2-6					
	PE1 (lb/year)	÷	4 qtr/year	=	PE1 (lb/qtr)
NO _x	0	÷	4 qtr/year	=	0
SO _x	0	÷	4 qtr/year	=	0
PM ₁₀	18,133	÷	4 qtr/year	=	4,533
CO	0	÷	4 qtr/year	=	0
VOC	14,507	÷	4 qtr/year	=	3,627

Quarterly NEC [QNEC] C-5434-2-6					
	PE2 (lb/qtr)	-	PE1 (lb/qtr)	=	NEC (lb/qtr)
NO _x	0	-	0	=	0
SO _x	0	-	0	=	0
PM ₁₀	4,533	-	4,533	=	0
CO	0	-	0	=	0
VOC	3,627	-	3,627	=	0

C-5434-9-0 (Emergency IC Engine)

PE1 (lb/qtr) C-5434-9-0					
	PE1 (lb/year)	÷	4 qtr/year	=	PE1 (lb/qtr)
NO _x	0	÷	4 qtr/year	=	0
SO _x	0	÷	4 qtr/year	=	0
PM ₁₀	0	÷	4 qtr/year	=	0
CO	0	÷	4 qtr/year	=	0
VOC	0	÷	4 qtr/year	=	0

PE2 (lb/qtr) C-5434-9-0					
	PE2 (lb/year)	÷	4 qtr/year	=	PE2 (lb/qtr)
NO _x	595	÷	4 qtr/year	=	148.75
SO _x	1	÷	4 qtr/year	=	0.25
PM ₁₀	8	÷	4 qtr/year	=	2.00
CO	178	÷	4 qtr/year	=	44.50
VOC	32	÷	4 qtr/year	=	8.00

Quarterly NEC [QNEC] C-5434-9-0					
	PE2 (lb/qtr)	-	PE1 (lb/qtr)	=	NEC (lb/qtr)
NO _x	148.75	-	0	=	148.75
SO _x	0.25	-	0	=	0.25
PM ₁₀	2.00	-	0	=	2.00
CO	44.50	-	0	=	44.50
VOC	8.00	-	0	=	8.00

APPENDIX G

Greenhouse Gas Emissions (GHG) Calculations

Greenhouse Gas Emissions (GHG) Calculations:

C-5434-2-6 (Broiler Ranch)

This permit unit involves with two pollutants that are classified as GHGs: Methane (CH₄) and Nitrous Oxide (N₂O). Based on the GHG emission factors from "Documentation of California's Greenhouse Gas Inventory (10th Edition – Last updated on 04/04/2017)", the increase in GHG is calculated as follows:

$$\begin{aligned}\text{Increase in birds capacity} &= \text{Post-project capacity} - \text{Pre-project capacity} \\ &= 906,667 - 906,667 \\ &= 0 \text{ birds}\end{aligned}$$

$$\begin{aligned}\text{Emission factor for CH}_4 &= 499 \text{ g of CO}_2\text{eq/head of broilers/year}^4 \\ \text{Emission factor for N}_2\text{O} &= 532 \text{ g of CO}_2\text{eq/head of broilers/year}\end{aligned}$$

$$\begin{aligned}\text{Total emissions (CH}_4\text{+N}_2\text{O)} &= 1,031 \text{ g of CO}_2\text{eq/head of broilers/year} \\ &= 1.031 \text{ Kg of CO}_2\text{eq/head of broilers/year}\end{aligned}$$

$$\begin{aligned}\text{Increase in GHG emissions} &= \text{Increase in bird capacity} \times \text{EF} \\ &= 0 \text{ birds} \times 1.031 \text{ Kg of CO}_2\text{eq/head of broilers/year} \\ &= \mathbf{0 \text{ metric ton of CO}_2\text{eq/year}}\end{aligned}$$

C-5434-9-0 (Emergency IC Engine)

Based on the GHG emission factors from "40 CFR Part 98 and California ARB Regulation for the Mandatory Reporting of GHG Emissions", the GHG from diesel-fired emergency IC engine is calculated as follows:

$$\begin{aligned}\text{GHG emissions} &= \text{Horsepower (bhp)} \times \text{Annual Operating Hours (hr/year)} \times \text{EF} \\ &\quad \text{CO}_2\text{e (metric ton/bhp-hrout)} \\ &= 762 \text{ bhp-hr} \times 100 \text{ hr/year} \times 0.00053964 \text{ CO}_2\text{e (metric ton/bhp-} \\ &\quad \text{hrout)} \\ &= \mathbf{41 \text{ metric ton of CO}_2\text{eq/year}}\end{aligned}$$

$$\begin{aligned}\text{Total GHG Emissions} &= 0 \text{ metric ton of CO}_2\text{eq/year} + 41 \text{ metric ton of CO}_2\text{eq/year} \\ &= \mathbf{41 \text{ metric ton of CO}_2\text{eq/year}}\end{aligned}$$

Per District Policy, project specific greenhouse gas emissions less than or equal to 230 metric tons-CO₂e/year are considered to be zero for District permitting purposes and are exempt from further environmental review.

GHG calculations above demonstrate that the project would not result in an increase in project specific greenhouse gas emissions. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

⁴ Emission factor taken from the following web address: http://www.arb.ca.gov/cc/inventory/doc/doc_index.php