San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

April 15, 2026

Rick Pitman
Pitman Family Farms Huffmon Ranch
16433 Laurel Avenue
Stratford, CA 93266

Re: Notice of Preliminary Decision - Authority to Construct
Facility Number: C-10485
Project Number: C-1253757

Dear Mr. Pitman:

Enclosed for your review and comment is the District's analysis of Pitman Family Farms Huffmon Ranch's application for an Authority to Construct for the expansion of an existing broiler ranch to increase the maximum capacity from 250,000 birds to 910,950 birds, remove an existing poultry house, and install thirty new mechanically vented poultry houses, at 16433 Laurel Avenue in Stratford, CA.

The notice of preliminary decision for this project has been posted on the District's website (https://valleyair.org/). 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. Mohamed Muthana of Permit Services at (559) 230-5839.

Sincerely,

Brian Clements
Director of Permit Services

BC:MMM

Enclosures

Samir Sheikh
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

www.valleyair.org www.healthyairliving.com

San Joaquin Valley Air Pollution Control District

Authority to Construct and Permit to Operate Application Review

Expansion of an Existing Broiler Poultry Ranch

Facility Name:	Pitman Family Farms Huffmon Ranch	Date:	April 14, 2026
Mailing Address:	16433 Laurel Avenue Stratford, CA 93266	Engineer: Lead Engineer:	Mohamed Muthana Dustin Brown
Facility Contact Person:	Rick Pitman		
Contact Telephone:	(559) 250-0258		
Contact E-Mail:	rick@pitmanfarms.com		
Application #s:	ATCs C-10485-1-0, -2-0, 5-0, -6-0, -7-0, -8-0, and -9-0; and PTOs C-10485-3-0 and C-10485-4-0		
Project #s:	C-1253757 and C-1253758		
Date Deemed Complete:	February 2, 2026		

I. Proposal

Pitman Family Farms Huffman Ranch is an existing broiler ranch consisting of seven existing mechanically vented poultry houses and associated auxiliary equipment, including two poultry incinerators. The existing ranch is currently exempt from permits per District Rule 2020 Section 6.20, Exemptions. Section 6.20 states no permit is required for agricultural sources at a stationary source that, in aggregate, produces actual emissions less than one-half of the major source thresholds. Pitman Family Farms Huffmon Ranch (ATC) has proposed an expansion of the broiler ranch that will result in stationary source emissions exceeding the exemption threshold. Therefore, permits will be required for the expanded facility.

This engineering evaluation covers two District projects associated with the proposed ranch expansion. Project C-1253757 addresses the proposed new and modified equipment associated with the expansion, and project C-1253758 addresses the existing un-modified equipment that will lose permit exemption status. The two projects will be addressed concurrently within this application review.

Project Proposal for C-1253757 (New and Modified Equipment):

Pitman Family Farms Huffmon Ranch has requested Authority to Construct (ATC) permits for the expansion of an existing broiler ranch to increase the size of the flock from the current maximum capacity of 250,000 birds distributed between seven existing poultry houses to a maximum capacity of 910,950 birds distributed between six existing houses and 30 new mechanically vented houses. One of the existing houses will be removed as a part of the proposed expansion project. The remaining six existing houses will be re-designed with a reduce housing density to providing more space for the birds to maneuver. The pre and post project housing breakdown are shown in the tables below.

Pre-Project Poultry House Capacities (Permit-Exempt)						
Housing Design	# of Houses	Length (ft)	Width (ft)	Bird Area (ft^2)	Bird Space (ft^2/bird)	Max # of Birds per House
Existing Design #1	1	792	54	42,768	0.79	53,608
Existing Design #2	6	544	48	26,112	0.79	32,732
Total Houses	7	Total Bird Area		199,440	Max Total Flock Size	250,000

Post-Project Poultry House Capacities						
Housing Design	# of Houses	Length (ft)	Width (ft)	Bird Area (ft^2)	Bird Space (ft^2/bird)	Max # of Birds per House
Existing Design #1 (removed)	0	0	0	0	0	0
Existing Design #2	6	544	48	26,112	1.0	25,560
New Housing Units	30	600	43	25,800	1.0	25,253
Total Houses	36	Total Bird Area		199,440	Max Total Flock Size	910,950

In addition to the broiler housing expansion and increase bird housing capacity, the existing manure handling operation at the broiler ranch will also be modified to accommodate the increased quantity of manure produced at the facility.

The ranch currently has a few existing emergency IC engines powering electric generators that are approaching the end of their service life. The applicant intends to remove them from service prior to the ranch expansion. To replace these older engines and to ensure the there is sufficient backup power for the expanded facility, the applicant has proposed to install three new diesel-fired emergency IC engines powering electric generators.

Additionally, to manage the expected increase in the annual death toll associated with the larger broiler population, the applicant has proposed to install two new poultry incinerators to supplement the two existing poultry incinerators already in service.

The existing poultry ranch is currently a permit exempt agricultural source in accordance with Section 6.20.1 of District Rule 2020, Exemptions. Agricultural sources that in aggregate, produce actual emissions less than one-half of the major source thresholds are exempt from permits. The proposed increase in the flock size of the broiler ranch will result in an increase in emissions exceeding the exemption threshold. Since the facility will be subject to District permitting

requirements, ATC permits will be required for new and modified equipment proposed in this project.

In addition, based on the present poultry ranch capacity, the ranch is currently exempt from the requirements of District Rule 4570 *Confined Animal Facilities*. Pursuant to Section 4.0, the applicability threshold for chicken facilities is 400,000 chickens, and this threshold will be exceeded due to the proposed increase in flock size. Therefore, as part of this ATC application, the applicant is proposing to implement mitigation measures required for compliance with District Rule 4570.

Project Proposal for C-1253758 (Existing Equipment):

As discussed above, the facility will be subject to District permitting requirements as a result of the proposed expansion. Of the existing equipment units at broiler ranch that will lose permit exemption status following the expansion, only the two poultry incinerators will continue to operate in their current state. Pursuant to Rule 2020 Section 9.0, the permitting action for the two poultry incinerators is due to a loss of exemption and the permitting for these units will be processed as in-house Permit to Operate (PTO) applications (under project C-1253758), and will not be subject to the requirements of Rule 2201 *New and Modified Stationary Source Review Rule*.

The draft ATCs are included in Appendix A and the draft PTOs are included in Appendix B.

II. Applicable Rules

Rule 1070	Inspections (12/17/92)
Rule 2010	Permits Required (12/17/92)
Rule 2020	Exemptions (12/18/14)
Rule 2201	New and Modified Stationary Source Review Rule (4/20/23)
Rule 2410	Prevention of Significant Deterioration (11/26/12)
Rule 2520	Federally Mandated Operating Permits (6/20/24)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National Emissions 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 4202	Particulate Matter – Emission Rate (12/17/92)
Rule 4302	Incinerator Burning (12/16/93)
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 (8/19/21)
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 16433 Laurel Avenue in Stratford, 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

The primary function of a broiler ranch is to raise chickens for slaughter.

Poultry Ranch and Solid Manure Handling Operation (C-10485-1-0 and C-10485-2-0):

The production cycle of broilers is divided into two phases: brooding and grow-out. The brooding phase begins when day-old chicks are placed in a heated section of a broiler house known as the brood chamber. The brood chamber is maintained at over 100 °F when the birds are a day or two old. During the birds' first few weeks of growth, the temperature of the brood chamber is gradually decreased. Once the birds need floor space, the remainder of the house is opened and the chicks are fed until they reach market weight.

The length of the grow-out phase ranges from 28 to 63 days, depending on the size of the bird desired. Broilers are produced to meet specific requirements of the customer, which can be a retail grocery store, fast-food chain, or institutional buyer. For broilers, the typical grow-out period is 49 days, resulting in an average weight of 4.5 to 5.5 pounds. For producing roasters weighing 6 to 8 pounds, the grow-out period will be up to 63 days. Broiler houses are operated on an "all in-all out" basis and require time for cleaning and repair between flocks. For broilers, five to six flocks per house per year is typical. The number of flocks per year will be lower for roasters.

Broiler Housing

The broilers are housed in an enclosed mechanically ventilated building with a compacted soil floor covered with dry bedding. Dry bedding (litter) can be sawdust, wood shavings, rice hulls, chopped straw, peanut hulls, or other products, depending on availability and cost. The litter absorbs moisture in the manure excreted by the birds.

Mechanical ventilation is provided using a negative-pressure system. Exhaust fans draw air out of the house, and fresh air returns through ducts around the perimeter of the roof. The ventilation system uses exhaust fans to remove moisture and noxious gases during the winter season and excess heat during the summer. Advanced systems use thermostats and timers to control exhaust fans. Many houses have side curtains that are opened in warm weather for natural ventilation.

Broiler Manure Management

According to the National Chicken Council, a typical broiler house with a capacity of 22,000 birds at a time will produce up to 120 tons of litter per year. 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.

Broiler Manure Collection

Broiler houses are partially cleaned between flocks to remove cake and fully cleaned out less often. The remaining litter may be “top dressed” with an inch or so of new bedding material. The litter (bedding and manure) is typically completely cleaned out every three brood cycles at this facility. 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 litter 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.

Factors that affect emissions from broiler houses include the moisture content of the manure, time the manure is present in the broiler house, and the ventilation rate. The moisture content will affect the volatilization of compounds that are soluble in water, such as ammonia, hydrogen sulfide, and volatile organic compounds. The more moisture present the more likely these compounds will be emitted. Manure as excreted by the birds has a high water content, most of which evaporates, emitting ammonia as the manure dries out. Since broiler manure storage is integrated with the broiler house, ammonia emissions continue throughout the year.

The ventilation rate affects the amount of ammonia and particulate matter carried out of the broiler house. During the growth of the flock, continuous air flow removes ammonia and other gases and reduces the moisture content of the litter over that of freshly excreted manure. Because continuous air flow removes ammonia it results in lower nitrogen content of the litter.

Broiler Manure Storage

Once broiler manure has been collected, it is either immediately applied to cropland or stored for later land application. Because cake removal occurs after each grow-out cycle, cake storage is a necessity. Traditionally, cake from broiler production facilities has been stored in uncovered stockpiles until conditions permitted land application. However, water quality concerns have led to the increased use of storage structures known as litter sheds for cake storage. Litter sheds typically are partially enclosed pole type structures. Water quality concerns also have led to the recommendation that cake not stored in litter sheds be placed in well-drained areas and covered to prevent contaminated runoff and leaching. However, covering of stockpiles of cake is rare. Because of the larger volume involved, broiler manure and litter from a total facility clean-out is usually stored in open or covered stockpiles if immediate land application is not possible. Because of cost, litter sheds generally are sized only to provide capacity for cake storage. To avoid long-term storage of broiler manure and litter in stockpiles, the timing of total facility clean-outs are timed to match land application demand.

The litter and solid manure at this broiler ranch is removed from the facility within 72 hours of removal from housing. This broiler ranch hauls its litter off-site.

Propane-Fired Poultry Incinerators (C-10485-3-0, '-4-0, '-5-0, and '-6-0):

All four poultry incinerators, consists of a main chamber with a 0.3 MMBtu/hr propane-fired burner and a secondary chamber with a 0.1 MMBtu/hr propane-fired afterburner.

Poultry incineration is a batch process. The capacity of each incinerator is 500 lb-birds per batch. During incineration cycles, exhaust emissions from the primary chamber flow up into the secondary chamber and are incinerated by the afterburner. The full incineration cycle takes between 5 to 6 hours, depending on the load size. After each incineration cycle there is a mandatory 1-2 hour cool down period before the ash remains can be discarded. Based on the operational limitations of the incinerators, each unit can process no more than three full batches per day (1,500 pounds of bird carcasses).

Diesel-Fired Emergency Standby IC Engines (C-10485-7-0, '-8-0, and '-9-0):

The emergency standby engines power electrical generators that provide emergency power for raising poultry at the facility. Other than emergency standby operation, the engines will be allowed to operate up to 100 hours per year for maintenance and testing purposes.

V. Equipment Listing

ATCs for Modified Units (Project C-1253757)

C-10485-1-0: POULTRY RANCH CONSISTING OF 910,950 BROILER CHICKENS; THIRTY-SIX MECHANICALLY VENTILATED POULTRY HOUSES, INCLUDING ELECTRIC FANS/EQUIPMENT

C-10485-2-0: SOLID MANURE SYSTEM CONSISTING OF OPEN PILES; SOLID MANURE HAULED OFFSITE

PTOs for Existing Units Not Modified (Project C-1253758)

C-10485-3-0: NATIONAL INCINERATOR, INC. DESTRUCTOR S/C POULTRY INCINERATOR WITH A 0.3 MMBTU/HR MIDCO INTERNATIONAL MODEL J83-DS PROPANE FIRED BURNER AND A 0.1 MMBTU/HR AFTERBURNER

C-10485-4-0: NATIONAL INCINERATOR, INC. DESTRUCTOR S/C POULTRY INCINERATOR WITH A 0.3 MMBTU/HR MIDCO INTERNATIONAL MODEL J83-DS PROPANE FIRED BURNER AND A 0.1 MMBTU/HR AFTERBURNER

ATCs for New Units (Project C-1253757)

C-10485-5-0: NATIONAL INCINERATOR, INC. DESTRUCTOR S/C POULTRY INCINERATOR WITH A 0.3 MMBTU/HR MIDCO INTERNATIONAL MODEL J83-DS PROPANE FIRED BURNER AND A 0.1 MMBTU/HR AFTERBURNER

C-10485-6-0: NATIONAL INCINERATOR, INC. DESTRUCTOR S/C POULTRY INCINERATOR WITH A 0.3 MMBTU/HR MIDCO INTERNATIONAL MODEL J83-DS PROPANE FIRED BURNER AND A 0.1 MMBTU/HR AFTERBURNER

C-10485-7-0: 469 BHP (INTERMITTENT) VOLVO PENTA MODEL VD550-04FT4 TIER 4F CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

C-10485-8-0: 850 BHP (INTERMITTENT) VOLVO PENTA MODEL TWD1682GE TIER 4F CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

C-10485-9-0: 850 BHP (INTERMITTENT) VOLVO PENTA MODEL TWD1682GE TIER 4F CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICAL GENERATOR

VI. Emission Control Technology Evaluation

Poultry Ranch and Solid Manure System

PM_{10}, VOC, and ammonia (NH_3) are the major pollutants of concern from broiler ranches. The ventilation rate of the poultry houses affects the amount of VOC, PM_{10}, and NH_3 that is emitted from the poultry houses.

All pollutants emitted from the manure are expected to be included with the emissions from within the poultry houses. Mechanical ventilation will decrease the moisture content of the manure. As the moisture content of the manure decreases, volatilization of NH_3 from the manure will decrease. Once the manure is dry, emissions of VOC and NH_3 are expected to be negligible.

PM_{10} Emissions:

The poultry houses will be equipped with in-house air misting and sprinkler systems that will provide moisture to cool the birds. The moisture provided by these systems will also help reduce PM_{10} emissions from the houses.

VOC Emissions:

The maximum number of proposed birds that can be kept at the facility as a result of this project will cause all of the poultry houses at the facility to be subject to the requirements of District Rule 4570, *Confined Animal Facilities*.

The mitigation measures that the applicant has selected to comply with District Rule 4570 and VOC control efficiency for the measures selected are shown in the following table.

District Rule 4570 Mitigation Measures Proposed		
Mitigation Measure		**VOC Control Efficiency (%)**
Feed:		
1	Feed according to NRC guidelines.	10
2	Feed animals an amino acid supplemented diet to meet their nutrient requirements.	10
3	Feed animals feed additives such as amylase, xylanase, and protease, designed to maximize digestive efficiency according to manufacturer recommendations.	10
Housing:		
4	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
5	Use drinkers that do not drip continuously.	10
6 & 7	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
Total Control Efficiency		46.9%

Ammonia (NH_3) Emissions:

Many District Rule 4570 mitigation measures will also reduce NH_3 emissions. However, because of limited data, at this time this District cannot accurately apply control efficiencies to calculate the NH_3 emissions reductions attributed to the Rule 4570 mitigation measures.

In between flocks, the facility will be treating the litter with a product (amendment) called *Waste Away by CXI*, which is designed to control odor by transforming anaerobic conditions into aerobic conditions resulting in odorless byproducts such as O_2, CO_2, and H_2O; therefore, minimizing ammonia and hydrogen sulfide emissions[1].

Propane-Fired Poultry Incinerators

Each two chamber incinerator is equipped with an after burner in the secondary chamber that oxidizes CO and VOC emissions. The secondary chamber reduces PM10 emissions by ensuring complete combustion of waste and volatile organics, preventing the formation of soot.

1 https://www.cxinternational.com/products/waste-away/

Diesel-Fired Emergency IC Engines

The applicant has proposed to install Tier 4F certified diesel-fired emergency IC engines that will be fired on very low-sulfur diesel fuel.

The proposed engines meet the latest Tier Certification requirements for emergency standby engines; therefore, the engines meet the latest ARB/EPA emissions standards for diesel particulate matter, hydrocarbons, nitrogen oxides, and carbon monoxide.

The use of CARB certified diesel fuel (0.0015% by weight sulfur maximum) reduces SO_X emissions by over 99% from standard diesel fuel.

VII. General Calculations

A. Assumptions

Poultry Ranch and Solid Manure System (C-10485-1-0 and C-10485-2-0):

- Pre-Project, the facility was not required to implement any mitigation measures for any pollutants; therefore, the uncontrolled emission factors will be utilized.
- The Final Project Report on Southeastern Broiler Gaseous and Particulate Matter Emissions Monitoring (December 2009) by Iowa State University and University of Kentucky[2] gives a ratio of 0.40 for PM10/Total Suspended Particulate (TSP) and a ratio of 0.093 for PM2.5/PM10. Based on this information, TSP emissions from the poultry houses are assumed to be 250% (1/0.40) of PM10 emissions and PM2.5 emissions from poultry houses are assumed to be 10% of PM10 emissions for purposes of this evaluation unless otherwise noted.
- There is no liquid manure management at the existing broiler chicken ranch and there will be no liquid manure management after the proposed increase in the number of broiler chickens at the ranch.

Propane-Fired Poultry Incinerators (C-10485-3-0, '-4-0, '-5-0, and '-6-0):

- Each incinerator can incinerate no more than 3 batches of bird carcasses per day, which is equivalent 1,500 pounds of birds each day (per equipment specifications).
- The EPA F-Factor for propane is 8,578 dscf/MMBtu.
- The molar specific volume of an Ideal gas at 60 °F and 1 atm is 379.5 scf/mole.
- The molar weight of carbon monoxide is 28 lb/lb-mol.
- Atmospheric oxygen concentration is 20.95 %.

2 Final Project Report on Southeastern Broiler Gaseous and Particulate Matter Emissions Monitoring (December 2009) Submitted to Tyson Foods Inc. by Iowa State University and University of Kentucky. https://archive.epa.gov/airquality/afo2012/web/pdf/ky1bsummaryreport.pdf

Diesel-Fired Emergency IC Engines (C-10485-7-0, '-8-0 and '-9-0):

- Non-emergency operating schedule shall not exceed 100 hours/year (Rule 4702 limit).
- The diesel fuel heating value is 19,300 Btu/lb-fuel (AP 42 Table 3.4-1).
- The EPA F-factor for diesel fuel adjusted to 60°F is 9,051 dscf/MMBtu.
- The bhp to Btu/hr conversion is 2,542.5 Btu/bhp-hr.
- The kWh to bhp-hr conversion is 1.34 bhp/kWh.
- Thermal efficiency of a diesel engine is commonly ≈ 35%.
- PM_{10} fraction for diesel exhaust is 0.96 (CARB, 1988).

B. Emission Factors

Poultry Ranch Housing and Solid Manure Handling

Broiler Housing Emission Factors (EF)		
Pollutant	**EF (lb/bird-year)**	**Source**
PM_{10} - uncontrolled	0.02	Lacey, R. E., J. S. Redwine, and C. B. Parnell, Jr. "Particulate Matter and Ammonia Emissions Factors for Tunnel-Ventilated Broiler Production Houses in the Southern U.S". Transactions of the ASAE 46(4): 1203–1214.
VOC – uncontrolled	0.025	"Final Report: Quantification of Gaseous Emissions from California Broiler Production Houses" (May 6, 2005)[3] - Source tests were conducted on mechanically ventilated broiler houses during the spring and fall of 2004. The participants in the project included: AIRx Testing; California Air Resources Board; California Department of Food and Agriculture; California Poultry Federation; Foster Farms; & University of California, Davis - Animal Science.
NH_3 - uncontrolled	0.0958	
PM_{10} - controlled	0.019	See discussion below.
VOC - controlled	0.0133	
NH_3 - controlled	0.0479	

Controlled PM10 Emission Factor:

The expanded poultry ranch will comply broiler ranch PM10 mitigations listed in the table below.

3 Available at: https://downloads.regulations.gov/EPA-HQ-OAR-2010-0960-0005/attachment_1.pdf

Broiler House PM10 Mitigations		
Mitigation Measure		**PM_{10} Control Efficiency (%)**
Use of the following broiler house design and management practices:		
1	Weatherproof housing structure, AND	5
2	Minimum disturbance of manure/litter, AND	
3	Covered manure/litter piles, AND	

Based on the control efficiency of these mitigation measures, the controlled PM_{10} emission factor is calculated as follows:

PM_{10} EF = EF x (1 - CE)
= 0.02 lb-PM_{10}/bird-year x (1 - 0.05)
= 0.019 lb-PM_{10}/bird-year

Controlled VOC Emission Factor:

The poultry ranch will comply with all the broiler chicken ranch mitigation measures listed in the table below, as required by District Rule 4570.

Broiler Ranch VOC Mitigation Measure Requirements		
Mitigation Measure		**VOC Control Efficiency (%)**
Feed:		
1	Feed according to NRC guidelines.	10
2	Feed animals an amino acid supplemented diet to meet their nutrient requirements.	10
3	Feed animals feed additives such as amylase, xylanase, and protease, designed to maximize digestive efficiency according to manufacturer recommendations.	10
Housing:		
4	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
5	Use drinkers that do not drip continuously.	10
6 & 7	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

Based on the control efficiencies of these mitigation measures, the controlled VOC emission factor is calculated as follows:

VOC EF = EF x (1 - 0.1) x (1 - 0.1) x (1 - 0.1) x (1 - 0.1) x (1 - 0.1) x (1 - 0.1)
= 0.025 lb-VOC/bird-year x 0.531
= 0.0133 lb-VOC/bird-year

Controlled NH_3 Emission Factor:

The broiler ranch will apply the following NH_3 mitigation measures.

Broiler Ranch NH_3 Mitigation Measures		
Mitigation Measure		**NH_3 Control Efficiency (%)**
Use of the following broiler house design and management practices:		
1	a) Enclosed housing with mechanical ventilation and computerized control of environmental conditions using sensors, or b) Use of acidifying litter amendments; AND	50
2	Comply with applicable District Rule 4570 Feed and Housing Mitigation Measures; AND	
3	Houses completely cleaned out at least twice per year; AND	
4	All mortality removed from houses at least once per day	

Based on the control efficiency of these mitigation measures, the controlled NH_3 emission factor is calculated as follows:

NH_3 EF = EF x (1 - CE)
= 0.0958 lb-NH_3/bird-year x (1 - 0.50)
= 0.0479 lb-NH_3/bird-year

Propane-Fired Poultry Incinerators

The emission factors for NOx, VOC, and SOx were obtained from the application review for a similar poultry incinerator (see project N-1121619) and are based on source test data for a poultry incinerator produced by a competing manufacturer. The CO and PM10 emission factors are based on source test of the same model incinerator (see Appendix G).

Emission Factors for each Poultry Incinerator		
Pollutant	**EF**	**Source**
NO_X	0.205 lb/MMBtu	Project N-1121619
SOx	0.182 lb/MMBtu	
PM_{10}	PM_{10}	Sanders Engineering National Incinerator, Inc. 2004 Destructor Emissions Test
CO	0.008 lb/MMBtu	
VOC	0.182 lb/MMBtu	Project N-1121619

CO Emission Factor

Based on source test data provided by Sanders Engineering & Analytical Services, Inc., the highest test CO emission rate measured from this model incinerator is:

CO = 8.2 ppmvd @ 7% O_2

$$\text{CO} = \frac{\left(\text{Concentration} \times \text{Molar Weight} \times \text{F} - \text{Factor} \times \left(\frac{Atmospheric\ O_2\ \%}{Atmospheric\ O_2\ \% - Test\ O_2\ \%}\right)\right)}{(\text{Molar Specific Volume})}$$

$$\text{CO} = \frac{\left(8.2\ \text{ppmvd} \times 28\left(\frac{\text{lb}}{\text{lb} - \text{mol}}\right) \times 8578\left(\frac{\text{dscf}}{\text{MMBtu}}\right) \times \left(\frac{20.95}{20.95 - 7}\right)\right)}{(379.5 \times 10^6)} = 0.008\ \frac{lb}{MMBtu}$$

Diesel-Fired Emergency Standby IC Engines

The emission factors for the proposed IC engines were taken from the California Air Resource Board (CARB) Certifications of the engines and engine manufacturer emissions data sheet included in Appendix H.

Emission Factors for Diesel-Fired IC Engine Model VD550-04FT4 (C-10485-7-0)			
Pollutant	**Emission Factor (g/kWh)**	**Emission Factor (g/bhp-hr)**	**Source**
NO_X	0.40	0.30	CARB Certification
SO_X	-	0.0051	Ultra-Low Sulfur Fuel (15 ppm) See Mass Balance Equation Below
PM_{10}	0.02	0.01	CARB Certification
CO	3.5	2.61	CARB Certification
VOC	0.19	0.14	CARB Certification

$$\text{SOx} = \frac{0.000015\ \text{lb} - \text{S}}{\text{lb} - \text{fuel}} \times \frac{1\ \text{lb} - \text{fuel}}{19{,}300\ \text{btu}} \times \frac{2\ \text{lb} - SO_2}{1\ \text{lb} - \text{S}} \times \frac{1\ \text{bhp input}}{0.35\ \text{bhp output}} \times \frac{2{,}542.5\ \text{Btu}}{\text{bhp} - \text{hr}} \times \frac{453.6\ \text{g}}{\text{lb}} = 0.0051 \frac{\text{g}}{\text{bhp} - \text{hr}}$$

Emission Factors for Diesel-Fired IC Engine Model TWD1682GE (C-10485-8-0 and -9-0)			
Pollutant	**Emission Factor (g/kWh)**	**Emission Factor (g/bhp-hr)**	**Source**
NO_X	0.166	0.12	Engine Manufacturer Emissions Data Sheet
SO_X	-	0.0051	Ultra-Low Sulfur Fuel See Mass Balance Equation Above
PM_{10}	0.02	0.01	Engine Manufacturer Emissions Data Sheet
CO	0.056	0.04	Engine Manufacturer Emissions Data Sheet
VOC	0.011	0.01	Engine Manufacturer Emissions Data Sheet

C. Calculations

1. Pre-Project Potential to Emit (PE1)

Poultry Ranch and Solid Manure System (C-10485-1-0 and '-2-0)

The PE1 for each broiler chicken house is based on its maximum capacity of chickens per house and is calculated as follows:

$PE1_{Annual}$ = # of broiler chickens x EF (lb/bird-year)
$PE1_{Daily}$ = Annual PE1 (lb/year) ÷ 365 day/year

Each 54' x 670' (total of 1) House:

PE1 Calculations Summary for Each 50 ft x 670 ft Broiler House (#1)									
Pollutant	# of Broilers	x	EF Uncontrolled (lb/bird-yr)	=	Annual PE1 (lb/yr)	÷	365 day/yr	=	Daily PE1 (lb/day)
PM_{10}	53,610	x	0.02	=	**1,072**	÷	365	=	**2.9**
VOC	53,610	x	0.025	=	**1,340**	÷	365	=	**3.7**
NH_3	53,610	x	0.0958	=	**5,136**	÷	365	=	**14.1**

Each 48' x 544' (total of 6) House:

PE1 Calculations Summary for Each Existing 48 ft x 544 ft Broiler House (#2)									
Pollutant	# of Broilers	x	EF Uncontrolled (lb/bird-yr)	=	Annual PE1 (lb/yr)	÷	365 day/yr	=	Daily PE1 (lb/day)
PM_{10}	32,732	x	0.02	=	**655**	÷	365	=	**1.8**
VOC	32,732	x	0.025	=	**818**	÷	365	=	**2.2**
NH_3	32,732	x	0.0958	=	**3,136**	÷	365	=	**8.6**

Total PE1 From All Poultry Housing Units:

PE1 = ∑PE from each house
PE1 = PE of Unit #1 x (1 house) + PE of Unit #2 x (6 houses)

PE1 for Housing and Solid Manure Handling		
Pollutant	**Daily Emissions (lb/day)**	**Annual Emissions (lb/year)**
PM_{10}	13.7	5,002
VOC	16.9	6,248
NH_3	65.7	23,952

Propane-Fired Poultry Incinerators (C-10485-3-0 and '-4-0):

The PE1 for NOx, SOx, and CO for each poultry incinerator is based on the combined heat input of the incinerator burners. The PE1 for PM10 and VOC for each incinerator is based on the maximum throughput of birds incinerated. The potential to emit for each incinerator is calculated as follows:

NOx, SOx and CO:
PE1 (lb/day) = EF (lb/MMBtu) x Total Heat Input (MMBtu/hr) x 24 hr/day
PE1 (lb/year) = EF (lb/MMBtu) x Total Heat Input (MMBtu/hr) x 8,760 hr/yr

PM_{10} and VOC:
PE1 (lb/day) = EF (lb/100-lb poultry incinerated) x 1,500 lb/day
PE1 (lb/day) = EF (lb/100-lb poultry incinerated) x 1,500 lb/day x 365 day/year

PE1 for Each Existing Incinerator						
Pollutant	**Emissions Factor (lb/MMBtu or lb/100 lb-poultry incinerated)**	**Rating (MMBtu/hr)**	**Daily Process Rate (hrs/day or lb/day)**	**Annual Process Rate (hrs/year or lb/year)**	**Daily PE1 (lb/day)**	**Annual PE1 (lb/yr)**
NO_x	0.205	0.40	24	8,760	**2.0**	**718**
SO_x	0.182	0.40	24	8,760	**1.7**	**638**
PM_{10}	0.02	0.40	1,500	547,500	**0.3**	**110**
CO	0.008	0.40	24	8,760	**0.1**	**28**
VOC	0.02	0.40	1,500	547,500	**0.3**	**110**

2. Post-Project Potential to Emit (PE2)

Poultry Ranch and Solid Manure Handling (C-10485-1-0 and '-2-0):

The PE1 for each broiler chicken house is based on its maximum capacity of chickens per house and is calculated as follows:

$PE1_{Annual}$ = # of broiler chickens x EF (lb/bird-year)

$PE1_{Daily}$ = Annual PE1 (lb/year) ÷ 365 day/year

Each 48' x 544' (total of 6) House:

PE2 Calculations Summary for Each Existing 48 ft x 544 ft Broiler House (#2)									
Pollutant	# of Broilers	x	EF Controlled (lb/bird-yr)	=	Annual PE2 (lb/yr)	÷	365 day/yr	=	Daily PE2 (lb/day)
PM_{10}	25,559	x	0.019	=	**486**	÷	365	=	**1.3**
VOC	25,559	x	0.0133	=	**340**	÷	365	=	**0.9**
NH_3	25,559	x	0.0479	=	**1,224**	÷	365	=	**3.4**

Each New 43' x 600' (total of 30) House:

PE2 Calculations Summary for Each 43 ft x 600 ft Broiler House (New Units)									
Pollutant	# of Broilers	x	EF Controlled (lb/bird-yr)	=	Annual PE2 (lb/yr)	÷	365 day/yr	=	Daily PE2 (lb/day)
PM_{10}	25,253	x	0.019	=	**480**	÷	365	=	**1.3**
VOC	25,253	x	0.0133	=	**336**	÷	365	=	**0.9**
NH_3	25,253	x	0.0479	=	**1,210**	÷	365	=	**3.3**

Total PE2 From All Poultry Housing Units:

PE2 = ∑PE from each house
PE2 = PE2 of Unit #2 x (6 houses) + PE2 of New Units x (30 houses)

PE2 for Housing and Solid Manure Handling		
Pollutant	**Daily Emissions (lb/day)**	**Annual Emissions (lb/year)**
PM_{10}	46.8	17,316
VOC	32.4	12,120
NH_3	119.4	43,644

Propane-Fired Poultry Incinerators (C-10485-3-0, '-4-0, '-5-0, and '-6-0):

The facility is proposing two new additional poultry incinerators identical to the existing two on site, totaling four incinerators. The operating parameters for all four units will be equivalent. The potential to emit for each incinerator is calculated as follows:

NOx, SOx and CO:
PE2 (lb/day) = EF (lb/MMBtu) x Total Heat Input (MMBtu/hr) x 24 hr/day
PE2 (lb/year) = EF (lb/MMBtu) x Total Heat Input (MMBtu/hr) x 8,760 hr/yr

PM_{10} and VOC:
PE2 (lb/day) = EF (lb/100-lb poultry incinerated) x 1,500 lb/day
PE2 (lb/day) = EF (lb/100-lb poultry incinerated) x 1,500 lb/day x 365 day/year

PE2 for Each Existing Incinerator						
Pollutant	**Emissions Factor (lb/MMBtu or lb/100 lb-poultry incinerated)**	**Rating (MMBtu/hr)**	**Daily Process Rate (hrs/day or lb/day)**	**Annual Process Rate (hrs/year or lb/year)**	**Daily PE2(lb/day)**	**Annual PE2 (lb/yr)**
NO_x	0.205	0.40	24	8,760	**2.0**	**718**
SO_x	0.182	0.40	24	8,760	**1.7**	**638**
PM_{10}	0.02	0.40	1,500	547,500	**0.3**	**110**
CO	0.008	0.40	24	8,760	**0.1**	**28**
VOC	0.02	0.40	1,500	547,500	**0.3**	**110**

Diesel-Fired Emergency IC Engines (C-10485-7-0, '-8-0 and '-9-0):

The daily and annual PE2 are calculated as follows:

Daily PE2 (lb-pollutant/day) = EF (g-pollutant/bhp-hr) x rating (bhp)
x operation (hr/day) / 453.6 g/lb

Annual PE2 (lb-pollutant/yr) = EF (g-pollutant/bhp-hr) x rating (bhp)
x operation (hr/yr) / 453.6 g/lb

PE2 for C-10485-7-0						
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/yr)**
NO_x	0.30	469	24	100	**7.4**	**31**
SO_x	0.0051	469	24	100	**0.1**	**1**
PM_{10}	0.01	469	24	100	**0.2**	**1**
CO	2.61	469	24	100	**64.8**	**270**
VOC	0.14	469	24	100	**3.5**	**14**

PE2 for C-10485-8-0 and 9-0 (each)						
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/yr)**
NO_x	0.12	850	24	100	**5.4**	**22**
SO_x	0.0051	850	24	100	**0.2**	**1**
PM_{10}	0.01	850	24	100	**0.4**	**2**
CO	0.04	850	24	100	**1.8**	**7**
VOC	0.01	850	24	100	**0.4**	**2**

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, including all ERCs held as certificates and all emission reduction credits sold or transferred.

As discussed above, this facility operated an existing permit exempt poultry ranch, no valid ATCs and no ERCs. The SSPE1 values summarized in the table below represent the PE values from the existing equipment prior to the proposed expansion project:

SSPE1 (lb/year)						
Permit Unit	**NOx**	**SOx**	**PM10**	**CO**	**VOC**	**NH_3**
C-10485-1-0 (Existing Poultry Ranch)	0	0	5,002	0	6,248	23,952
C-10485-2-0 (Existing Solid Manure Handling Operation)						
C-10485-3-0 (Existing Incinerator)	718	638	110	28	438	0
C-10485-4-0 (Existing Incinerator)	718	638	110	28	438	0
SSPE1	**1,436**	**1,276**	**5,222**	**56**	**7,124**	**23,952**

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, except for emissions units proposed to be shut down as part of a Stationary Source Project, 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, including all ERCs held as certificates and all emission reduction credits sold or transferred.

For this project the change in emissions for the facility is due to the expansion of the poultry ranch, the installation of new emergency standby IC engines and the installation of a new poultry incinerator. Thus:

SSPE2 (lb/year)						
Permit Unit	**NOx**	**SOx**	**PM10**	**CO**	**VOC**	**NH_3**
C-10485-1-0 (Expanded Poultry Ranch)	0	0	17,316	0	12,120	43,644
C-10485-2-0 (Expanded Solid Manure Handling Operation)						
C-10485-3-0 (Existing Incinerator)	718	638	110	28	438	0
C-10485-4-0 (Existing Incinerator)	718	638	110	28	438	0
C-10485-5-0 (New Incinerator)	718	638	110	28	438	0
C-10485-6-0 (New Incinerator)	718	638	110	28	438	0
C-10485-7-0 (New IC Engine)	31	1	1	270	14	0
C-10485-8-0 (New IC Engine)	22	1	2	7	2	0
C-10485-9-0 (New IC Engine)	22	1	2	7	2	0
SSPE2	**2,947**	**2,555**	**17,761**	**396**	**13,890**	**43,644**

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), pursuant to the Clean Air Act, Title 3, Section 302, US Codes 7602(j) and (z)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

Rule 2201 Major Source Determination (lb/year)						
	NOx	**SOx**	**PM10**	**PM2.5***	**CO**	**VOC**
SSPE1	1,436	1,276	5,222	5,222	56	7,124
SSPE2	2,947	2,555	17,761	17,761	396	13,890
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	No	No

*Note: PM2.5 assumed to be equal to PM10.

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 (Prevention of Significant Deterioration) 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***	**PM10**
Estimated Facility PE before Project Increase	0.7	3.5	0.6	0.03	2.6	2.6
PSD Major Source Thresholds	250	250	250	250	250	250
PSD Major Source?	No	No	No	No	No	No

*PM assumed to be equal to PM10.

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 Quarterly Net Emissions Change (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 for each existing unit.

Existing Units (C-10485-1-0, '-2-0, '-3-0, and '-4-0):

As calculated in Section VII.C.1 above, PE1 is summarized in the following table:

BE (lb/year) for Existing and Modified Units						
	NOx	**SOx**	**PM10**	**PM2.5**	**CO**	**VOC**
'-1-0, Broiler Housing '-2-0, Manure Handling System	0	0	17,316	0	12,120	43,644
'-3-0 (Existing Incinerator)	718	638	110	110	28	438
'-4-0 (Existing Incinerator)	718	638	110	110	28	438

New Unis (C-10485-5-0, '-6-0, '-7-0, '-8-0 and '-9-0):

For new units BE = PE = 0

7. Senate Bill 288 Major Modification

A Senate Bill (SB) 288 Major Modification is a federal major modification under 40 CFR 51.165 as it existed on December 19, 2002. 40 CFR Part 51.165 (12/19/02) defines a Major Modification as any physical change in or change in the method of operation of *an existing major stationary source* that would result in a significant net emissions increase of any pollutant subject to regulation under the Act.

Per section VII.C.5 above, this facility is not a Major Source for any of the pollutants addressed in this project. Thus, this project does not constitute an SB 288 major modification and no further discussion is required.

8. Federal Major Modification / New Major Source

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.

As defined in 40 CFR 51.165, Section (a)(1)(v) and part D of Title I of the CAA, a Federal Major Modification is 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. The significant net emission increase threshold for each criteria pollutant is included in Rule 2201.

Per section VII.C.5 above, this facility is not a Major Source for any pollutants addressed in this project. Thus, this project does not constitute a Federal Major Modification and no further discussion is required.

New Major Source

Per section VII.C.5 above, this facility is not becoming a Major Source as a result of this project, therefore, this facility is not a New Major Source pursuant to Section 3.30 of District Rule 2201.

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 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). The PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination: Potential to Emit (tons/year)						
	NO_2	VOC	SO_2	CO	PM*	PM10
Total PE from New and Modified Units	0.8	6.5	0.6	0.2	21.8	8.8
PSD Major Source threshold	250	250	250	250	250	250
New PSD Major Source?	No	No	No	No	No	No

*Based on the Iowa Uniersity Broiler Emissions Report cited in Section VII.A, PM from poultry houses and manure is assumed to be 250% of PM_{10}. PM from the incineratrors and engines are assumed to be equal to PM_{10}.

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 C.

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 each ATC/PTO 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 applied for permits for the proposed expansion to the poultry ranch, manure handling system, emergency IC engines, and poultry incinerators. Therefore, compliance with this rule is expected.

Rule 2020 Exemptions

This rule specifies emissions units that are not required to obtain an Authority to Construct (ATC) or Permit to Operate (PTO). This rule also specifies the recordkeeping requirements to verify the exemption and outlines the compliance schedule for emissions units that lose the exemption after installation. This rule applies to any source that emits or may emit air contaminants.

Per Section 6.20 – Agricultural Sources, no permit is required for agricultural sources at a stationary source that, in aggregate, produce actual emissions less than one-half of the major source thresholds. For the purposes of determining permitting applicability, fugitive emissions, except fugitive dust emissions, are included in determining aggregate emissions. Section 6.20 also specifies that in no case shall the agricultural exemption apply to a stationary source required to obtain Title V permits according to Rule 2520 *Federally Mandated Operating Permits*.

As shown in section VII.C.2, the post-project facility emissions exceed ½ the major source threshold for one or more pollutants; therefore, this facility is not exempt from permitting requirements. The facility has applied for District permits for the new, modified, and existing equipment under projects C-1253757 and C-1253758; therefore, no further discussion is required.

Rule 2201 New and Modified Stationary Source Review Rule

<u>Project C-1253758 – Existing Poultry Incinerators (C-10485-3-0 and C-10485-4-0)</u>

The existing Incinerators did not require District permits at the time of installation. Pursuant to District Rule 2020, Section 9.0 - Compliance Schedule, the owner or operator of an emissions unit that was exempt from written permits at the time of installation, which becomes subject to the provisions of Rule 2010 (Permits Required), through loss of exemption, shall not be subject to Rule 2201 until such time that the emissions unit is modified. Therefore, the existing incinerators operating at this facility will not be subject to the requirements of this rule until they are modified.

Project C-1253757- New and Modified Equipment ((C-10485-1-0, '-2-0, '-5-0, '-6-0, '-7-0, '-8-0, and '-9-0)

The installation of new engines and incinerators, and the modifications to the poultry housing and manure handling operations are subject to District Rule 2201 requirements. An analysis of District Rule 2201 requirements for the new and modified equipment is provided below.

A. Best Available Control Technology (BACT)

1. BACT Applicability

Pursuant to District Rule 2201, Section 4.1, 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 2.0 pounds per day, or the relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding 2.0 pounds per day,
b. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an Adjusted Increase in Permitted Emissions (AIPE) exceeding 2.0 pounds per day, and/or
c. 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 or relocated emissions units – PE > 2.0 lb/day

Poultry Ranch New Housing Units (C-10485-1-0 and '-2-0):

As seen in Section VII.C.2 above, the applicant is proposing to install 30 new broiler housing units, each with a PE greater than 2.0 lb/day for NH3 only. Therefore, BACT is triggered for NH3 emissions.

Propane-Fired Poultry Incinerators (C-10485-5-0 and '-6-0)

As seen in Section VII.C.2 the PE from each incinerator is less than 2.0 lb/day for all pollutants. Therefore, BACT is not triggered for the either Incinerator.

Diesel-Fired Emergency IC Engine (C-10485-7-0)

As seen in Section VII.C.2 above, the applicant is proposing to install a new 469 bhp diesel-fired IC engine with a PE greater than 2.0 lb/day for NOx, VOC, and CO. Therefore, BACT is triggered for NOx and VOC since the PEs are greater than 2.0 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.

Diesel-Fired Emergency IC Engines (C-10485-8-0 and '-9-0)

As seen in Section VII.C.2 above, the applicant is proposing to install two new 850 bhp diesel-fired IC engines, each with a PE greater than 2.0 lb/day for NOx only. Therefore, BACT is triggered for NOx emissions from the two engines.

b. Modification of emissions units – AIPE > 2.0 lb/day

Poultry Ranch Modified Housing Units (C-10485-1-0 and '-2-0):

AIPE = PE2 – HAPE

Where,
AIPE = Adjusted Increase in Permitted Emissions, (lb/day)
PE2 = Post-Project Potential to Emit, (lb/day)
HAPE = Historically Adjusted Potential to Emit, (lb/day)

HAPE = PE1 x (EF2/EF1)

Where,
PE1 = The emissions unit's PE prior to modification or relocation, (lb/day)
EF2 = The emissions unit's permitted emission factor for the pollutant after modification or relocation. If EF2 is greater than EF1 then EF2/EF1 shall be set to 1
EF1 = The emissions unit's permitted emission factor for the pollutant before the modification or relocation

AIPE = PE2 – (PE1 ∗ (EF2 / EF1))

The AIPE for the six (6) existing broiler houses is summarized in the following table:

Pollutant	PE2 (lb/day)	PE1 (lb/day)	EF2 (lb/bird-year)	EF1 (lb/bird-year)	AIPE (lb/day)
PM_{10}	1.3	1.8	0.019	0.02	-0.4
VOC	0.9	2.2	0.0133	0.025	-0.3
NH_3	3.4	8.6	0.0479	0.0958	-0.9

As demonstrated above, the AIPE is not greater than 2.0 lb/day for any pollutant emitted from the modified broiler houses. Therefore, BACT is not triggered.

c. 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 for any pollutant. Therefore, BACT is not triggered for any pollutant.

2. BACT Guideline

Poultry Ranch New Housing Units (C-10485-1-0 and '-2-0):

BACT Guideline 5.7.1 applies to the poultry broiler housing units. A copy of the BACT guideline is included in Appendix D.

Diesel-Fired Emergency IC Engines (C-10485-7-0, '-8-0 and '-9-0):

BACT Guideline 3.1.1 applies to the three diesel-fired emergency IC engines. A copy of the BACT guideline is included in Appendix D.

3. Top-Down BACT Analysis

Per Permit Services Policies and Procedures for BACT, 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.

Pursuant to the attached Top-Down BACT Analysis (see Appendix E), BACT has been satisfied with the following:

Poultry Ranch New Housing Units (C-10485-1-0 and '-2-0):

To mitigate NH3 Emissions, use of the following broiler house design and management practices:

a) Enclosed housing with mechanical ventilation and computerized control of environmental conditions using sensors or use of acidifying litter amendments
b) Comply with applicable District Rule 4570 Feed and Housing Mitigation Measures
c) Houses completely cleaned out at least twice per year
d) All mortality removed from houses at least once per day

The facility has proposed to use comply with the mitigations listed above.

Diesel-Fired Emergency IC Engines (C-10485-7-0, '-8-0 and '-9-0)

NOx and VOC: EPA Tier 4 Final certification level or equivalent for the applicable horsepower range.

The facility has proposed to install Tier 4 Final certified emergency IC engines.

B. Offsets

1. District Emission Offset Requirements

a. District Offset Applicability

Pursuant to District Rule 2201, Section 4.5, District offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the SSPE2 equals or exceeds the offset threshold levels in Table 4-1 of District Rule 2201.

The SSPE2 is compared to the offset thresholds in the following table.

Offset Determination (lb/year)					
	NOx	**SOx**	**PM10**	**CO**	**VOC**
SSPE2	2,947	2,555	17,761	396	13,890
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets Triggered?	No	No	No	No	No

b. District Offset Quantity (DOQ) Required

As shown above, the SSPE2 is not greater than the offset thresholds for all pollutants, therefore District offsets are not triggered. In conclusion, offsets will not be required for this project and no further discussion is required.

2. Federal Emission Offset Requirements

a. Federal Offset Applicability

Pursuant to District Rule 2201, Section 4.8, federal offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the project is a New Major Source or a Federal Major Modification.

As demonstrated in section VII.C.8 above, this project is not a New Major Source or a Federal Major Modification for any pollutant addressed in this project. Thus, federal offsets are not triggered for this project.

b. Federal Offset Quantity (FOQ) Required

As discussed above, this project does not trigger Federal Major Modification or New Major Source requirements; therefore, in conclusion, federal offsets will not be required for this project and no further discussion is required.

3. Federal Offset Equivalency Demonstration

Section 7.0 of District Rule 2201 provides the requirements for the District to demonstrate on an individual ATC issuance basis that the number of creditable emission reductions collected by the District equals or exceeds the amount of creditable emission reductions that would otherwise be required as offsets under a federal non-attainment NSR program meeting the applicable requirements of 40 CFR 51.165 and the CAA. As demonstrated above, this project does not require federal offsets; therefore, a federal offset equivalency demonstration is not required for this project and no further discussion is required.

C. Public Notification

1. Applicability

Pursuant to District Rule 2201, Section 5.4, 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 SSIPE of greater than 20,000 lb/year for any pollutant,
e. Any project at a minor source which results in an SSPE exceeding 80% of the major source threshold for any pollutant, and/or
f. Any project which results in a Title V significant permit modification.

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

As shown in Section VII.C.5 above, this existing minor source facility is not becoming a Major Source as a result of this project. Therefore, this facility is not a New Major Source and this project does not constitute an SB 288 or a Federal Major Modification. Consequently, public noticing for this project for New Major Source, Federal Major Modification, or SB 288 Major Modification purposes is not required.

b. PE > 100 lb/day

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. As seen in Section VII.C.2 above, this project does not include a new emissions unit which has daily emissions greater than 100 lb/day for any pollutant, therefore public noticing for PE > 100 lb/day purposes is not required.

c. Offset Threshold

Public notification is required if the pre-project Stationary Source Potential to Emit (SSPE1) is increased to a level exceeding the offset threshold levels. The following table compares the SSPE1 with the SSPE2 in order to determine if any offset thresholds have been surpassed with this project.

Offset Thresholds (lb/year)					
	NOx	**SOx**	**PM10**	**CO**	**VOC**
SSPE1	1,436	1,276	5,222	56	7,124
SSPE2	2,947	2,555	17,761	396	13,890
Offset Threshold	20,000	54,750	29,200	200,000	20,000
Public Notice Required?	No	No	No	No	No

As demonstrated 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 and negative values are equated to zero. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table.

SSIPE Public Notice Thresholds (lb/year)						
	NOx	**SOx**	**PM10**	**CO**	**VOC**	**NH_3**
SSPE2	2,947	2,555	17,761	396	13,890	43,664
SSPE1	1,436	1,276	5,222	56	7,124	23,952
SSIPE	1,511	1,279	12,539	340	6,766	19,692
SSIPE Public Notice Threshold	20,000	20,000	20,000	20,000	20,000	20,000
Public Notice Required?	No	No	No	No	No	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. Minor Sources with SSPE Exceeding 80% of Major Source Threshold

Public notification is required for any project for new and/or modified stationary sources at minor source facilities that results in a SSPE exceeding 80% of the major source threshold.

As shown in Section VII.C.5 above, the facility is not a Major Source for any pollutant. The following table compares the SSPE1 with the SSPE2 in order to determine if 80% of any major source thresholds have been surpassed with this project.

80% of Major Source Thresholds (lb/year)					
	NOx	**SOx**	**PM10**	**CO**	**VOC**
SSPE1	1,436	1,276	5,222	56	7,124
SSPE2	2,947	2,555	17,761	396	13,890
80% of Major Source Threshold	16,000	112,000	112,000	160,000	16,000
Public Notice Required?	No	No	No	No	No

As demonstrated above, the SSPE2 did not surpass 80% of the major source threshold for any pollutant; therefore, public noticing for this purpose is not required.

f. 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, this project will not result in emissions, for any pollutant, which would subject the project to any of the noticing requirements listed above. Therefore, a District Rule 2201 public notice will not be required for this project.

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.

Poultry Ranch (C-10485-1-0):

- Emissions from the broiler chicken operation shall not exceed any of the following limits: 0.019 lb-PM10/bird/year; 0.0133 lb-VOC/bird/year; and 0.0479 lb-NH3/bird/year. [District Rule 2201]

- The number of birds housed in each of the six 48 ft x 544 ft broiler house shall not exceed 25,560 birds at any one time. The number of birds housed in each of the thirty 600 ft x 43 ft broiler houses shall not exceed 25,253 birds at any one time. The total number of birds housed at any given time shall not exceed 910,950 birds. [District Rule 2201]

- {4454} Permittee shall feed all animals according to National Research Council (NRC) guidelines. [District Rules 2201 and 4570]

- {3661} Permittee shall feed animals an amino acid supplemented diet. [District Rules 2201 and 4570]

- {3663} Permittee shall feed animals additives such as amylase, xylanase, and protease, designed to maximize digestive efficiency. [District Rules 2201 and 4570]

- {3675} 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]

- {4567} Permittee shall use drinkers that do not drip continuously. [District Rules 2201 and 4570]

- Permittee shall use acidifying litter amendments in each broiler house. The amendments shall be applied in accordance with the manufacturer's recommendations. [District Rule 2201]

- All mortality in each broiler house shall be removed at least once per day. [District Rule 2201]

- Each broiler house shall be completely cleaned out at least twice per year. [District Rule 2201]

Solid Manure Handling Operation (C-10485-2-0):

- {4573} Within seventy two (72) hours of removal of solid manure from housing, permittee shall either 1) remove all litter/manure from the facility, or 2) 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. [District Rules 2201 and 4570]

Propane-Fired Poultry Incinerators (C-10485-5-0 and '-6-0)

- The incinerator shall be fired on LPG/Propane fuel. [District Rules 2201 and 4801]

- The quantity of poultry incinerated shall not exceed 1,500 pounds in any one day. [District Rule 2201]

- Emissions from this incinerator shall not exceed any of the following limits: 0.205 lb-NOx /MMBtu, 0.182 lb-SOx/MMBtu, or 0.008 lb-CO/MMBtu. [District Rules 2201 and 4801]

- Emissions from this incinerator shall not exceed either of the following limits: PM10 - 0.02 pounds per 100 pounds of poultry incinerated, or VOC - 0.02 pounds per 100 pounds of poultry incinerated. [District Rule 2201]

Diesel-Fired Emergency IC Engine (C-10485-7-0)

- {4771} Emissions from this IC engine shall not exceed any of the following limits: 0.30 g-NOx/bhp-hr, 2.61 g-CO/bhp-hr, or 0.14 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]

- {4772} Emissions from this IC engine shall not exceed 0.01 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]

Diesel-Fired Emergency IC Engines (C-10485-8-0 and '-9-0)

- {4771} Emissions from this IC engine shall not exceed any of the following limits: 0.12 g-NOx/bhp-hr, 0.04 g-CO/bhp-hr, or 0.01 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]

- {4772} Emissions from this IC engine shall not exceed 0.01 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 Frequency), source testing is not required to demonstrate compliance with Rule 2201.

2. Monitoring

Poultry Ranch and Solid Manure Handling (C-10485-1-0 and C-10485-2-0):

The poultry houses and associated manure handling systems are subject to District Rule 4570. The monitoring requirements of District Rule 4570 will be discussed in Section VIII, District Rule 4570, of this evaluation. No additional monitoring is required to demonstrate compliance with Rule 2201.

Propane-Fired Poultry Incinerators (C-10485-5-0 and '-6-0) and Diesel-Fired Emergency IC Engines (C-10485-7-0, '-8-0 and '-9-0):

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. The following conditions will be listed on the permits to assure continued compliance:

Poultry Ranch (C-10485-1-0):

- {4455} 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). [District Rules 2201 and 4570]

- {3662} Permittee shall maintain records to demonstrate animals are fed an amino acid supplemented diet. Records such as feed company guaranteed analyses (feed tags), ration sheets, or feed purchase records may be used to meet this. [District Rules 2201 and 4570]

- {3664} Permittee shall maintain records that demonstrate animals are fed feed additives such as amylase, xylanase, and protease. Records such as feed company guaranteed analyses (feed tags), ration sheets, or feed purchase records may be used to meet this. [District Rules 2201 and 4570]

- {3676} 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]

- {4569} 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]

- {4571} 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 maintain records that acidifying litter amendments are used per the manufacturer's recommendations. [District Rule 2201]

- Permittee shall maintain daily records of mortality removal in each broiler house. [District Rule 2201]

- Permittee shall maintain annual records that the broiler housing is completely cleaned out at least twice per year. [District Rule 2201]

- 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 Rules 2201 and 4570]

Solid Manure Handling Operation (C-10485-2-0):

- {4574} Permittee shall keep records of dates when litter/manure is removed from the facility; manure hauling invoices may be used to meet this requirement, or permittee shall maintain records to demonstrate that litter/manure piles outside the pens are covered with a weatherproof covering from October through May. [District Rules 2201 and 4570]

- 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 Rules 2201 and 4570]

Propane-Fired Poultry Incinerators (C-10485-5-0 and '-6-0):

- The permittee shall keep a daily record of the quantity of poultry incinerated in pounds. The permittee may assume the loading capacity of the incinerator, 500 lb-birds, for each incineration cycle. [District Rules 1070 and 2201]

- 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 Rules 1070 and 2201]

Diesel-Fired Emergency IC Engines (C-10485-7-0, '-8-0, and '-9-0)

Recordkeeping requirements for the IC engines, 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.

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)

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60.

Poultry Ranch and Solid Manure Handling Operation (C-10485-1-0 and C-10485-2-0):

No subparts of 40 CFR Part 60 apply to broiler houses or broiler manure management operations. Therefore, the requirements of Rule 4001 are not applicable to the operation.

Propane-Fired Poultry Incinerators (C-10485-3-0 through C-10485-5-0):

No subparts of 40 CFR Part 60 apply to poultry incinerators. Therefore, the requirements of Rule 4001 are not applicable to the permits

Diesel-Fired Emergency IC Engines (C-10485-7-0, '-8-0, and '-9-0):

40 CFR Part 60, Subpart IIII applies to Stationary Compression Ignition Internal Combustion Engines. The District has not been delegated the authority to implement NSPS regulations; therefore, no requirements shall be included on the permit.

Rule 4002 National Emission Standards for Hazardous Air Pollutants (NESHAPs)

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.

This rule incorporates NSPS from Part 60, Chapter 1, Title 40, Code of Federal Regulations (CFR); and applies to all new sources of air pollution and modifications of existing sources of air pollution listed in 40 CFR Part 60.

Poultry Ranch and Solid Manure Handling Operation (C-10485-1-0 and C-10485-2-0):

No subparts of 40 CFR Part 61 or 40 CFR Part 63 apply to broiler houses or broiler manure management operations. Therefore, the requirements of Rule 4002 are not applicable to the operation.

Propane-Fired Poultry Incinerators (C-10485-3-0 through C-10485-5-0):

No subparts of 40 CFR Part 61 or 40 CFR Part 63 apply to poultry incinerators. Therefore, the requirements of Rule 4002 are not applicable to these permits.

Diesel-Fired Emergency IC Engines (C-10485-7-0, '-8-0, and '-9-0):

40 CFR Part 63, Subpart ZZZZ applies to Stationary Reciprocating Internal Combustion Engines. The District has not been delegated the authority to implement NESHAP regulations; therefore, no requirements shall be included on the permit.

Rule 4101 Visible Emissions

Rule 4101 states 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).

Poultry Ranch and Solid Manure Handling Operation (C-10485-1-0 and C-10485-2-0):

Pursuant to Section 4.12, emissions subject to or specifically exempt from Regulation VIII *Fugitive PM_{10} Prohibitions* are exempt from this regulation. According to District Rule 8011, Section 4.0 – *Exemptions*, On-field agricultural sources are exempt from the provisions of Regulation VIII.

District Rule 8011, Section 3.34 defines an Off-field Agricultural Source as any agricultural source that meets the definition of: outdoor handling, storage and transport of bulk material; paved road; unpaved road; or unpaved vehicle/equipment traffic area. District Rule 8011, Section 3.35 defines an On-field Agricultural Source as any agricultural source that is not an off-field agricultural source. Therefore, this rule does not apply to the activities conducted solely for the raising of poultry.

Propane-Fired Poultry Incinerators (C-10485-3-0, '-4-0, '-5-0, and '-6-0) and Diesel-Fired Emergency IC Engines (C-10485-7-0, '-8-0 and '-9-0):

The following condition will be listed on each permit 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.

Poultry Ranch and Solid Manure Handling Operation (C-10485-1-0 and C-10485-2-0):

Pursuant to 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. Therefore, the provisions of this rule are not applicable to odors emanating from the poultry ranch.

Propane-Fired Poultry Incinerators (C-10485-3-0, '-4-0, '-5-0, and '-6-0) and Diesel-Fired Emergency IC Engines (C-10485-7-0, '-8-0 and '-9-0):

Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected. The following condition will be listed on each permit to ensure compliance:

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

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.

District policy APR 1905 also specifies that the increase in emissions associated with a proposed new source or modification of an existing source shall not result in an increase in cancer risk greater than the District's significance level (20 in a million) and shall not result in acute and/or chronic risk indices greater than 1.

An HRA is not required for a project with a total facility prioritization score of less than or equal to one. According to the Technical Services Memo for this project, the total facility prioritization score including this project was less than or equal to one.

According to the Technical Services Memo for this project, 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 resulting prioritization score, acute hazard index, chronic hazard index, and cancer risk for this project is shown below.

Health Risk Assessment Summary	
	Worst Case Potential
Prioritization Score	64.82
Cancer Risk	0.23
Acute Hazard Index	0.23
Chronic Hazard Index	0.05
T-BACT Required?	No

Discussion of T-BACT

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

In accordance with District policy APR 1905, no further analysis is required, and compliance with District Rule 4102 requirements is expected.

The following permit conditions are required to ensure compliance with the assumptions made for the risk management review:

Propane-Fired Poultry Incinerators (C-10485-5-0 and C-10485-6-0):

- {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]

- All emissions and vapors from the primary chamber shall be incinerated in the afterburner (secondary chamber) at a minimum temperature of 1,600 degrees Fahrenheit and a minimum retention time of 0.5 seconds. [District Rules 4320 and 4302]

Diesel-Fired Emergency IC Engines (C-10485-7-0, '-8-0, and '-9-0):

- {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]

- {4772} Emissions from this IC engine shall not exceed 0.01 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, and 17 CCR 93115]

- {4920} 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, and 17 CCR 93115]

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.

Poultry Ranch and Solid Manure Handling Operation (C-10485-1-0 and C-10485-2-0):

Each of the proposed broiler poultry houses will be equipped with the following:

- Twelve (12) 24,300 cfm (1 hp motor) end ventilation tunnel 54" fans
- At least three (3) 9,560 cfm (3/4 hp motor) side wall 36" fans

Although multiple fans will always be operating for the health of the birds, for the purpose of Rule 4201 compliance calculations, it will conservatively be assumed that only one ventilation tunnel fan is operating in each house, resulting in a minimum air flow rate of 24,300 cfm per house.

PM emission rate = 3.3 lb/day[4] (assuming PM from the broiler houses is 250% of PM_{10})
Exhaust Gas Flow = 24,300 dscf/minute

4 The 48 ft x 544 ft broiler house containing 25,559 birds will result in the greatest amount of PM_{10}/PM emitted per day.

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

$$PM\ Conc\ \frac{gr}{scf} = \frac{3.3\ \frac{lb-PM}{day}\ \times 7{,}000\ \frac{gr}{lb}}{24{,}300\ \frac{dscf}{minute} \times 60\ \frac{min}{hr}\ \times 24\ \frac{hr}{day}}$$

= 0.0007 gr/scf

As shown above, each of the broiler houses has a PM concentration less than 0.1 grain/scf. Therefore, compliance with the requirements of this rule is expected and the following condition will be listed on each ATC:

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

Propane-Fired Poultry Incinerators (C-10485-3-0 through C-10485-6-0):

In accordance to the source test included in Appendix F. PM emission rates of the proposed model incinerator never exceed 0.03 grain/dscf. Therefore, compliance with the requirements of this rule is expected and the following condition will be listed on each ATC:

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

Diesel-Fired Emergency IC Engine (C-10485-7-0, '-8-0, and '-9-0):

$$0.015\ \frac{g}{hp\cdot hr} \times \frac{1\,hp\cdot hr}{2{,}542.5\,Btu} \times \frac{10^6\,Btu}{9{,}051\,dscf} \times \frac{0.35\,Btu_{out}}{1\,Btu_{in}} \times \frac{15.43\,grain}{g} = \ 0.004\ \frac{grain}{dscf}$$

Since 0.004 grain/dscf is less than 0.1 grain/dscf, compliance with this rule is expected.

Rule 4202 Particulate Matter Emission Rate

Per section 4.1, particulate matter (PM) emissions from any source operation shall not exceed the allowable hourly emission rate (E) as calculated using the following applicable formula:

Poultry Ranch and Solid Manure Handling Operation (C-10485-1-0 and C-10485-2-0):

No specified material process weight is associated with the poultry ranch and solid manure handling operations. Therefore, this rule is not applicable to these operations.

Propane-Fired Poultry Incinerators (C-10485-3-0, '-4-0, '-5-0, and '-6-0):

The poultry incinerators can incinerate up to 500 lbs. of bird carcasses within five hours.

$E = 3.59\ P^{0.62}$ (when, P = process weight rate ≤ 30 tons/hr)

P = 0.05 tons/incinerator-hr (500 lb capacity and five hour burn time)

Therefore:

$E_{max} = 3.59\ (0.05)^{0.62} = 0.56$ lb/incinerator-hr
E_{actual}= 0.5 lb-PM/incinerator-day ÷ 24 hour/day = 0.02 lb/incinerator-hr

Each incinerator is limited to a total of 0.02 lb/hr, which is less than the maximum allowed of 0.56 lb/hr. Therefore, compliance with District Rule 4202 is expected.

Diesel-Fired Emergency IC Engine (C-10485-7-0, '-8-0, and '-9-0):

Section 3.1 of this rule states liquid fuels and combustion air do not contribute to the total process weight. Therefore this rule is not applicable to diesel-fired IC engines.

Rule 4302 Incinerator Burning

This rule is applicable to incinerators. Section 3.0 states that no person may burn in any incinerator within the District except in a multi-chamber incinerator as defined in District Rule 1020, or in equipment found by the APCO to be equally effective for the purpose of air pollution control. District Rule 1020 defines a multi-chamber incinerator as

> "*any source operation, structure, or any part of a structure used to dispose of combustible refuse by burning, consisting of three (3) or more refractory lined combustion furnaces in series, physically separated by refractory walls, interconnected by gas passage ports or ducts, and employing adequate design parameters necessary for maximum combustion of the material to be burned. The refractories shall have a pyrometric cone equivalent of at least 17, tested according to the method described in the American Society for Testing Materials, Method C-24"*

Propane-Fired Poultry Incinerators (C-10485-3-0 through C-10485-6-0):

The District has previously determined that a dual chamber incinerator that is operated with the second chamber operating at 1,600 degrees Fahrenheit, or more, and with secondary chamber retention time of at least 0.5 seconds to be equally effective at controlling emissions. As stated earlier in this evaluation, All four incinerators are rated to achieve a minimum chamber temperature of 1,600 degrees Fahrenheit and to achieve a minimum secondary chamber retention time of at least 0.5 seconds during normal operation. Therefore, compliance with this requirement is expected and the following condition will be added to each ATC:

- All emissions and vapors from the primary chamber shall be incinerated in the afterburner (secondary chamber) at a minimum temperature of 1,600 degrees Fahrenheit and a minimum retention time of 0.5 seconds. [District Rules 4302]

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.

Poultry Ranch and Solid Manure Handling (C-10485-1-0 and C-10485-2-0):

Pursuant to Section 4.0, the provisions of this rule apply to agricultural sources where the total acreage of all agricultural parcels is 100 or more acres (excluding the animal feeding operation and exempted lands) and to animal feeding operations with at least 125,000 chickens (other than laying hens). This facility is proposing to house 910,950 chickens at this facility. Therefore, this rule applies to the poultry ranch.

Pursuant to Section 5.1, an owner/operator shall implement the applicable CMPs selected pursuant to Section 6.2.

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.

Pursuant to Section 6.3.3, an owner/operator shall submit a CMP application to the APCO within 90 days for an agricultural operation site or an agricultural parcel that is acquired or becomes subject to the provisions of Section 5.0 after October 31, 2004.

The facility submitted a CMP plan application on November 12, 2025, which was reviewed under project C-1253876. In accordance with project C-1253876, compliance with the requirements of District Rule 4550 is expected.

Rule 4570 Confined Animal Facilities (CAF)

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).

Poultry Ranch and Solid Manure Handling (C-10485-1-0 and C-10485-2-0):

Section 5.0 Requirements

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 5.1.2, a thirty-day public noticing and commenting period shall be required for all large CAF's receiving their initial Permit-to-Operate or Authority-to-Construct.

The facility's current housing capacity is less than 650,000 poultry head, and therefore, does not meet the definition of a large poultry CAF. However, upon expansion of the poultry ranch, the facility will have a permitted capacity of 910,950 head, which is above the District's threshold for a large CAF of 650,000 poultry head. Therefore, public noticing is required for this project. Since public noticing is required for this project, public notice documents will be electronically published on the District's website prior to the issuance of these ATC's.

Pursuant to Section 5.1.3, owners/operators shall submit a facility emissions mitigation plan of the Permit-to-Operate application or Authority-to-Construct application. The mitigation plan shall contain the following information:

- The name, business address, and phone number of the owners/operators responsible for the preparation and the implementation of the mitigation measures listed in the permit.
- The signature of the owners/operators attesting to the accuracy of the information provided and adherence to implementing the activities specified in the mitigation plan at all times and the date that the application was signed.
- A list of all mitigation measures shall be chosen from the application portions of Sections 5.5 or 5.6.

Pursuant to Section 5.1.4 through 5.1.6, the Permit-to-Operate or Authority-to-Construct application shall include the following information, which is in addition to the facility emission mitigation plan:

- The maximum number of animals at the facility in each production stage (facility capacity).
- Any other information necessary for the District to prepare an emission inventory of all regulated air pollutants emitted from the facility as determined by the APCO.
- The approved mitigation measures from the facility's mitigation plan will be listed on the Permit to Operate or Authority-to-Construct as permit conditions.
- The District shall act upon the Authority to Construct application or Permit to Operate application within six (6) months or receiving a complete application.

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.

Pursuant to Section 5.4, an owner/operator may temporarily suspend use of mitigation measures provided all of the following requirements are met:

- It is determined by a licensed veterinarian, certified nutritionist, CDFA, or USDA that any mitigation measure being suspended is detrimental to animal health or necessary for the animal to molt, and a signed written copy of this determination shall be retained on-site and made available for inspection upon request.
- The owner/operator notifies the District, within forty-eight (48) hours of the determination that the mitigation measure is being temporarily suspended; the specific health condition requiring the mitigation measure to be suspended; and the duration that the measure must be suspended for animal health reasons,

- The emission mitigation measure is not suspended for longer than recommended by the licensed veterinarian or certified nutritionist for animal health reasons,
- If such a situation exists, or is expected to exist for longer than thirty (30) days, the owners/operators shall, within that thirty (30) day period, submit a new emission mitigation plan designating a mitigation measure to be implemented in lieu of the mitigation measure that was suspended, and
- The APCO, ARB, and EPA approve the temporary suspension of the mitigation measure for the time period requested by the owner/operator and a signed written copy of this determination shall be retained on site.

The following condition will be placed on each permit:

- {4452} 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 permittee shall submit a new emission mitigation plan designating a mitigation measure to be implemented in lieu of the suspended mitigation measure. [District Rule 4570]

Section 5.5 lists Phase I mitigation measures. Per the compliance schedule listed in Section 8 of this rule, the facility is subject to the Phase II mitigation measures listed in Section 5.6. Therefore, Section 5.5 no longer applies.

Section 5.6 requires operators of a broiler CAF to choose and implement at least one feed mitigation measure, at least four housing mitigation measures, at least one solid manure mitigation measure if the broiler CAF handles or stores solid litter/manure or separated solids outside the animal housing, and at least one liquid manure mitigation measure if the broiler CAF handles manure in liquid form from Table 4.6. Pitman Family Farms Huffman Ranch is proposing to implement three feed mitigation measures rather than one to reduce VOCs further. As discussed above, the ranch does not handle any manure in liquid form; therefore, it is not required to implement a mitigation measure for liquid manure.

The facility has chosen the following mitigation measures to comply with Section 5.6. All conditions required for compliance with Rule 4570 for the mitigation measures selected by the applicant are shown immediately below the selected mitigation measure. These conditions will be placed on the appropriate permits.

<u>Broiler Feed</u>

- {4454} Permittee shall feed all animals according to National Research Council (NRC) guidelines. [District Rules 2201 and 4570]

- {4455} 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). [District Rules 2201 and 4570]

- {3661} Permittee shall feed animals an amino acid supplemented diet. [District Rules 2201 and 4570]

- {3662} Permittee shall maintain records to demonstrate animals are fed an amino acid supplemented diet. Records such as feed company guaranteed analyses (feed tags), ration sheets, or feed purchase records may be used to meet this. [District Rules 2201 and 4570]

- {3663} Permittee shall feed animals additives such as amylase, xylanase, and protease, designed to maximize digestive efficiency. [District Rules 2201 and 4570]

- {3664} Permittee shall maintain records that demonstrate animals are fed feed additives such as amylase, xylanase, and protease. Records such as feed company guaranteed analyses (feed tags), ration sheets, or feed purchase records may be used to meet this. [District Rules 2201 and 4570]

Broiler Housing

- {3675} 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]

- {3676} 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]
- {4567} Permittee shall use drinkers that do not drip continuously. [District Rules 2201 and 4570]

- {4568} 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]

- {4569} 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]

- {4570} Permittee shall inspect water pipes and drinkers and repair leaks daily. [District Rules 2201 and 4570]

- {4571} Permittee shall maintain records indicating that water pipes and drinkers are inspected daily and that any leaks are repaired. [District Rules 2201 and 4570]

Solid Waste Management

- {4573} Within seventy two (72) hours of removal of solid manure from housing, permittee shall either 1) remove all litter/manure from the facility, or 2) 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. [District Rules 2201 and 4570]

- {4528} If weatherproof coverings are used, permittee shall maintain records, such as manufacturer warranties or other documentation, demonstrating that the weatherproof covering over dry manure are installed, used, and maintained in accordance with manufacturer recommendations and applicable standards listed in NRCS Field Office Technical Guide Code 313 or 367, or any other applicable standard approved by the APCO, ARB, and EPA. [District Rule 4570]

- {4574} Permittee shall keep records of dates when litter/manure is removed from the facility; manure hauling invoices may be used to meet this requirement, or permittee shall maintain records to demonstrate that litter/manure piles outside the pens are covered with a weatherproof covering from October through May. [District Rules 2201 and 4570]

Section 7.2 General Records for CAFs Subject to Section 5.0 Requirements:

- Copies of all of the facility's permits
- Copies of all laboratory tests, calculations, logs, records, and other information required to demonstrate compliance with all applicable requirements of this rule, as determined by the APCO, ARB, and EPA.
- Records of the number of animals of each species and production group at the facility on the permit issuance date. Quarterly records of any changes to this information shall also be maintained.

The following condition will be placed on the broiler housing permit:

- {4449} 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 Rule 4570]

Additional recordkeeping and monitoring conditions required to demonstrate compliance with this rule are shown above under Section 5.6 under the appropriate mitigation measures.

Pursuant to Section 7.9, owners/operators of a CAF subject to the requirements of Section 5.0 shall keep and maintain the required records in Sections 7.1 through 7.8.4, as applicable, for a minimum of five (5) years and the records shall be made available to the APCO and EPA upon request. Therefore, the following condition will be placed on the permit:

- 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 Rules 2201 and 4570]

Section 7.10 requires specific monitoring or source testing conditions for each mitigation measure. These conditions are shown above under Section 5.6 discussion under the appropriate mitigation measures.

Rule 4701 Internal Combustion Engines - Phase 1

The purpose of this rule is to limit the emissions of nitrogen oxides (NOx), 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.

Diesel-Fired Emergency IC Engines (C-10485-7-0, '-8-0, and '-9-0):

The purpose of this rule is to limit the emissions of nitrogen oxides (NOx), 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(s) are used for the growing of crops or raising of fowl or animals, they are exempt from the requirements of this rule. Therefore, the following condition will be listed on the ATC(s) 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

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

Diesel-Fired Emergency IC Engines (C-10485-7-0, '-8-0, and '-9-0):

Emergency standby engines are subject to District Rule 4702 requirements. Emergency standby engines are defined in Section 3.0 of District Rule 4702 as follows:

> *3.15 Emergency Standby Engine: an internal combustion engine which operates as a temporary replacement for primary mechanical or electrical power during an unscheduled outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the operator. An engine shall be considered to be an emergency standby engine if it is used only for the following purposes: (1) periodic maintenance, periodic readiness testing, or readiness testing during and after repair work; (2) unscheduled outages, or to supply power while maintenance is performed or repairs are made to the primary power supply; and (3) if it*

is limited to operate 100 hours or less per calendar year for non-emergency purposes. An engine shall not be considered to be an emergency standby engine if it is used: (1) to reduce the demand for electrical power when normal electrical power line service has not failed, or (2) to produce power for the utility electrical distribution system, or (3) in conjunction with a voluntary utility demand reduction program or interruptible power contract.

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 permits for each IC engine:

- {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]

- {modified 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]

Operation of emergency standby engines are limited to 100 hours or less per calendar year for non-emergency purposes. The following condition will be included on the permit for each IC engine:

- {modified 4920} 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]

The following exemption in Section 4.2 of District Rule 4702 applies to emergency standby engines:

4.2 Except for the requirements of Section 5.9 and Section 6.2.3, the requirements of this rule shall not apply to:
4.2.1 An emergency standby engine as defined in Section 3.0 of this rule, and provided that it is operated with a nonresettable elapsed operating time meter. In lieu of a nonresettable time meter, the owner of an emergency engine may use an alternative device, method, or technique, in determining operating time provided that the alternative is approved by the APCO. The owner of the engine shall properly maintain and operate the time meter or alternative device in accordance with the manufacturer's instructions.

Pursuant to the exemption in Section 4.2, the following requirements of Section 5.9 are applicable to emergency standby engines

Section 5.9 requires the owner to:

5.9.2 Properly operate and maintain each engine as recommended by the engine manufacturer or emission control system supplier.

5.9.3 Monitor the operational characteristics of each engine as recommended by the engine manufacturer or emission control system supplier.

5.9.4 Install and operate a nonresettable elapsed operating time meter. In lieu of installing a nonresettable time meter, the owner of an engine may use an alternative device, method, or technique, in determining operating time provided that the alternative is approved by the APCO and is allowed by Permit-to-Operate or Permit-Exempt Equipment Registration condition. The owner of the engine shall properly maintain and operate the time meter or alternative device in accordance with the manufacturer's instructions.

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 permit for each IC engine:

- {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]

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 permit for each IC engine:

- {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]

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 permit for each IC engine:

- {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]

The exemption in Rule 4702 Section 4.2 for emergency standby engines requires the engines to comply with Section 6.2.3, shown below.

> *6.2.3 An owner claiming an exemption under Section 4.2 or Section 4.3 shall maintain annual operating records. This information shall be retained for at least five years, shall be readily available, and provided to the APCO upon request. The records shall include, but are not limited to, the following:*
>
> > *6.2.3.1 Total hours of operation,*
> > *6.2.3.2 The type of fuel used,*
> > *6.2.3.3 The purpose for operating the engine,*
> > *6.2.3.4 For emergency standby engines, all hours of non-emergency and emergency operation shall be reported, and*
> > *6.2.3.5 Other support documentation necessary to demonstrate claim to the exemption.*

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 permit of each IC engine:

- {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 SO_2) shall not exceed 0.2% by volume. Using the ideal gas equation, the sulfur compound emissions are calculated as follows:

Propane-Fired Poultry Incinerators (C-10485-3-0, '-4-0, '-5-0, and '-6-0):

ppmv = (PE_{SOx} lb/day) ÷ (Flow x MW x MSV x min/day x 10^{-6})

Where: ppm is the exhaust SO_2 concentration
Flow is exhaust flow in ft^3/min
MW is the molecular weight of SO_2 (64 lb/lb-mol)
MSV is the molar specific volume (lb-mol/379.5 ft^3)

SO_X = (1.7 lb/day) ÷ (90 ft^3/min x 64 lb/lb-mol x lb-mol/379.5 ft^3 x 1,440 min/day x 10^{-6})
= 77.7 ppmv

Since 77.7 ppmv is ≤ 2000 ppmv, each incinerator is expected to comply with Rule 4801. Therefore, the following permit conditions will serve as a as a mechanism to ensure compliance.

Existing Propane-Fired Poultry Incinerators (C-10485-3-0 and '-4-0)

- {285} Sulfur compound emissions shall not exceed 2000 ppmv as SO2. [District Rule 4801]

- The incinerator shall be fired on LPG/Propane fuel. [District Rule 4801]

New Propane-Fired Poultry Incinerators (C-10485-5-0, and '-6-0):

- Emissions from this incinerator shall not exceed any of the following limits: 0.205 lb-NOx /MMBtu, 0.182 lb-SOx/MMBtu, or 0.008 lb-CO/MMBtu. [District Rules 2201 and 4801]

- The incinerator shall be fired on LPG/Propane fuel. [District Rules 2201 and 4801]

Diesel-Fired Emergency IC Engines (C-10485-7-0, '-8-0, and '-9-0):

Volume SO_2 = (n x R x T) ÷ P
n = moles SO_2
T (standard temperature) = 60 °F or 520 °R
R (universal gas constant) = $\frac{10.73\,\text{psi}\cdot\text{ft}^3}{\text{lb}\cdot\text{mol}\cdot{}^\circ\text{R}}$

$$\frac{0.000015\ lb-S}{lb-fuel}\times\frac{7.1\text{ lb}}{\text{gal}}\times\frac{64\text{ lb}-SO_2}{32\text{ lb}-S}\times\frac{1\text{ MMBtu}}{9{,}051\text{ scf}}\times\frac{1\text{ gal}}{0.137\text{ MMBtu}}\times\frac{\text{lb}-\text{mol}}{64\text{ lb}-SO_2}\times\frac{10.73\text{ psi}-\text{ft}^3}{\text{lb}-\text{mol}-{}^\circ\text{R}}\times\frac{520{}^\circ\text{R}}{14.7\text{ psi}}\times 1{,}000{,}000 = \text{1.0 ppmv}$$

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 each permit as a mechanism to ensure compliance:

- {4258} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rule 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

Diesel-Fired Emergency IC Engines (C-10485-7-0, '-8-0, and '-9-0):

The purpose of this airborne toxic control measure (ATCM) is to reduce diesel particulate matter (PM) and criteria pollutant emissions from stationary diesel-fueled compression ignition (CI) engines. The following requirements apply to new engines proposed in this project.

Title 17 CCR Section 93115 Requirements for New Emergency IC Engines Powering Electrical Generators	Proposed Method of Compliance with Title 17 CCR Section 93115 Requirements
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.	The following condition will be added to the permit: • {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]
Emergency engine(s) must be fired on CARB diesel fuel, or an approved alternative diesel fuel.	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. • {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]
The engine(s) must meet the emission standards in Table 6 of the ATCM for the specific power rating and model year of the proposed engine.	The applicant has proposed the use of an engine that is certified to the latest EPA Tier Certification standards for the applicable horsepower range, guaranteeing compliance with the emission standards of the ATCM. Additionally, the proposed diesel PM emissions rate is less than or equal to 0.15 g/bhp-hr.

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, 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.	The following condition will be included on the permit: • {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]
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.	The following condition will be included on the permit: • {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)

The County of Kings (County) is the public agency having principal responsibility for approving the project. As such, the County served as the Lead Agency (CCR §15367). In approving the project, the Lead Agency prepared and adopted a Mitigated Negative Declaration. The Lead agency filed a Notice of Determination, stating that the environmental document was adopted pursuant to the provisions of CEQA and concluding that the project would not have a significant effect on the environment.

Pursuant to CEQA Guidelines §15250, the District is a Responsible Agency for the Project via its Permits Rule (Rule 2010) and New Source Review Rule (Rule 2201), (CEQA Guidelines §15381). As a Responsible Agency the District complies with CEQA by considering the environmental document prepared by the Lead Agency, and by reaching its own conclusion on whether and how to approve the project (CCR §15096).

The District has considered the Lead Agency's environmental document. Furthermore, the District has conducted an engineering evaluation of the project, this document, which

demonstrates that Stationary Source emissions from the project would be below the District's thresholds of significance for criteria pollutants. Thus, the District finds that through a combination of project design elements, compliance with applicable District rules and regulations, and compliance with District air permit conditions, project specific stationary source emissions will have a less than significant impact on air quality. The District does not have authority over any of the other project impacts and has, therefore, determined that no additional findings are required (CEQA Guidelines §15096(h)).

The following condition will be included on each permit:

- {3658} This permit does not authorize the violation of any conditions established for this facility (e.g. maximum number of animals or animal units, construction requirements, etc.) 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. Issue ATCs C-10485-1-0, '-2-0, '-5-0, '-6-0, '-7-0, '-8-0, and '-9-0 subject to the permit conditions on the attached draft ATCs in Appendix A. Issue In-house Permits to Operate C-10485-3-0 and C-10485-4-0 subject to the permit conditions on the attached draft PTOs in Appendix B.

X. Billing Information

Annual Permit Fees			
Permit Number	**Fee Schedule**	**Fee Description**	**Annual Fee**
C-10485-1-0	3020-01-F	707 electrical hp	$790
C-10485-2-0	3020-06	Miscellaneous	$139
C-10485-3-0	3020-02-C	0.4 MMBtu/hr	$259
C-10485-4-0	3020-02-C	0.4 MMBtu/hr	$259
C-10485-5-0	3020-02-C	0.4 MMBtu/hr	$259
C-10485-6-0	3020-02-C	0.4 MMBtu/hr	$259
C-10485-7-0	3020-10-D	469 Bhp IC Engine	$624
C-10485-8-0	3020-10-E	850 Bhp IC Engine	$781
C-10485-9-0	3020-10-E	850 Bhp IC Engine	$781

XI. Appendices

A*:* Draft ATCs C-10485-1-0, C-10485-2-0, and C-10485-5-0 through C-10485-9-0
B: Draft PTOs C-10485-3-0 and C-10485-4-0
C: Quarterly Net Emissions Change
D: BACT Guidelines 3.1.1 and 5.7.1
E: BACT Analysis
F: HRA Summary
G: National Incinerator, Inc. Destructor Emissions Test
H: IC Engine Emissions Data and Certifications

APPENDIX A

Draft ATCs C-10485-1-0, C-10485-2-0, and C-10485-5-0 through C-10485-9-0

San Joaquin Valley AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-10485-1-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: PITMAN FAMILY FARMS HUFFMON RANCH
MAILING ADDRESS: 1075 NORTH AVE
SANGER, CA 93657

LOCATION: 16433 LAUREL AVE
STRATFORD, CA 93266

EQUIPMENT DESCRIPTION:
POULTRY RANCH CONSISTING OF 910,950 BROILER CHICKENS; THIRTY-SIX MECHANICALLY VENTILATED POULTRY HOUSES, INCLUDING ELECTRIC FANS/EQUIPMENT

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. {4452} 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]
4. {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]
5. {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.

Samir Sheikh, Executive Director / APCO

DRAFT

Brian Clements, Director of Permit Services

Central Regional Office • 1990 E. Gettysburg Ave. • Fresno, CA 93726 • (559) 230-5900 • Fax (559) 230-6061

6. Emissions from the broiler chicken operation shall not exceed any of the following limits: 0.019 lb-PM10/bird/year; 0.013 lb-VOC/bird/year; and 0.0479 lb-NH3/bird/year. [District Rule 2201]
7. The number of birds housed in each of the six 48 ft x 544 ft broiler house shall not exceed 25,560 birds at any one time. The number of birds housed in each of the thirty 600 ft x 43 ft broiler houses shall not exceed 25,253 birds at any one time. The total number of birds housed at any given time shall not exceed 910,950 birds. [District Rule 2201]
8. 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]
9. 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]
10. Permittee shall inspect water pipes and drinkers and repair leaks daily. [District Rules 2201 and 4570]
11. Permittee shall maintain records indicating that water pipes and drinkers are inspected daily and that any leaks are repaired. [District Rules 2201 and 4570]
12. Permittee shall feed all animals according to National Research Council (NRC) guidelines. [District Rules 2201 and 4570]
13. 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]
14. Permittee shall feed animals an amino acid supplemented diet. [District Rules 2201 and 4570]
15. Permittee shall maintain records to demonstrate animals are fed an amino acid supplemented diet. Records such as feed company guaranteed analyses (feed tags), ration sheets, or feed purchase records may be used to meet this. [District Rule s 2201 and 4570]
16. Permittee shall feed animals additives such as amylase, xylanase, and protease, designed to maximize digestive efficiency. [District Rules 2201 and 4570]
17. Permittee shall maintain records that demonstrate animals are fed feed additives such as amylase, xylanase, and protease. Records such as feed company guaranteed analyses (feed tags), ration sheets, or feed purchase records may be used to meet this. [District Rules 2201 and 4570]
18. 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]
19. 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]
20. Permittee shall use drinkers that do not drip continuously. [District Rules 2201 and 4570]
21. Permittee shall use acidifying litter amendments in each broiler house. The amendments shall be applied in accordance with the manufacturer's recommendations. [District Rule 2201]
22. Permittee shall maintain records that acidifying litter amendments are used per the manufacturer's recommendations. [District Rule 2201]
23. All mortality in each broiler house shall be removed at least once per day. [District Rule 2201]
24. Permittee shall maintain daily records of mortality removal in each broiler house. [District Rule 2201]
25. Each broiler house shall be completely cleaned out at least twice per year. [District Rule 2201]
26. Permittee shall maintain annual records that the broiler housing is completely cleaned out at least twice per year. [District Rule 2201]
27. {4449} 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 Rule 4570]
28. 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 Rules 2201 and 4570]

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

AUTHORITY TO CONSTRUCT

PERMIT NO: C-10485-2-0

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: PITMAN FAMILY FARMS HUFFMON RANCH
MAILING ADDRESS: 1075 NORTH AVE
SANGER, CA 93657

LOCATION: 16433 LAUREL AVE
STRATFORD, CA 93266

EQUIPMENT DESCRIPTION:
SOLID MANURE SYSTEM CONSISTING OF OPEN PILES; SOLID MANURE HAULED OFFSITE

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. {4452} 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]
4. {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.

Samir Sheikh, Executive Director / APCO

Brian Clements, Director of Permit Services

C-10485-2-0 : 4/14/2026 2:59:08 PM -- MUTHANAM : Joint Inspection NOT Required

5. Within seventy two (72) hours of removal of solid manure from housing, permittee shall either 1) remove all litter/manure from the facility, or 2) 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. [District Rules 2201 and 4570]
6. Permittee shall keep records of dates when litter/manure is removed from the facility; manure hauling invoices may be used to meet this requirement, or permittee shall maintain records to demonstrate that litter/manure piles outside the pens are covered with a weatherproof covering from October through May. [District Rules 2201 and 4570]
7. {4528} If weatherproof coverings are used, permittee shall maintain records, such as manufacturer warranties or other documentation, demonstrating that the weatherproof covering over dry manure are installed, used, and maintained in accordance with manufacturer recommendations and applicable standards listed in NRCS Field Office Technical Guide Code 313 or 367, or any other applicable standard approved by the APCO, ARB, and EPA. [District Rule 4570]
8. {4449} 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 Rule 4570]
9. 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 Rules 2201 and 4570]

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

AUTHORITY TO CONSTRUCT

PERMIT NO: C-10485-5-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: PITMAN FAMILY FARMS HUFFMON RANCH
MAILING ADDRESS: 1075 NORTH AVE
SANGER, CA 93657

LOCATION: 16433 LAUREL AVE
STRATFORD, CA 93266

EQUIPMENT DESCRIPTION:
NATIONAL INCINERATOR, INC. DESTRUCTOR S/C POULTRY INCINERATOR WITH A 0.3 MMBTU/HR MIDCO INTERNATIONAL MODEL J83-DS PROPANE FIRED BURNER AND A 0.1 MMBTU/HR AFTERBURNER

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. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
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. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. {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]

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.

Samir Sheikh, Executive Director / APCO

Brian Clements, Director of Permit Services
C-10485-5-0 : 4/15/2026 10:33:58 AM -- MUTHANAM : Joint Inspection NOT Required

8. The incinerator shall only be fired on LPG/propane fuel. [District Rules 2201and 4801]
9. Emissions from this incinerator shall not exceed any of the following limits: 0.205 lb-NOx /MMBtu, 0.182 lb-SOx/MMBtu, or 0.008 lb-CO/MMBtu. [District Rules 2201 and 4801]
10. Emissions from this incinerator shall not exceed either of the following limits: PM10 - 0.02 pounds per 100 pounds of poultry incinerated, or VOC - 0.02 pounds per 100 pounds of poultry incinerated. [District Rule 2201]
11. The quantity of poultry incinerated shall not exceed 1,500 pounds in any one day. [District Rule 2201]
12. The permittee shall keep a daily record of the quantity of poultry incinerated in pounds. The permittee may assume the loading capacity of the incinerator, 500 lb-birds, for each incineration cycle. [District Rules 1070 and 2201]
13. All emissions and vapors from the primary chamber shall be incinerated in the afterburner (secondary chamber) at a minimum temperature of 1,600 degrees Fahrenheit and a minimum retention time of 0.5 seconds. [District Rule 4302]
14. 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 Rules 1070 and 2201]

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-10485-6-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: PITMAN FAMILY FARMS HUFFMON RANCH
MAILING ADDRESS: 1075 NORTH AVE
SANGER, CA 93657

LOCATION: 16433 LAUREL AVE
STRATFORD, CA 93266

EQUIPMENT DESCRIPTION:
NATIONAL INCINERATOR, INC. DESTRUCTOR S/C POULTRY INCINERATOR WITH A 0.3 MMBTU/HR MIDCO INTERNATIONAL MODEL J83-DS PROPANE FIRED BURNER AND A 0.1 MMBTU/HR AFTERBURNER

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. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
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. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. {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]

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.

Samir Sheikh, Executive Director / APCO

DRAFT

Brian Clements, Director of Permit Services

C-10485-6-0 : 4/15/2026 10:33:59 AM -- MUTHANAM : Joint Inspection NOT Required

8. The incinerator shall only be fired on LPG/propane fuel. [District Rules 2201and 4801]
9. Emissions from this incinerator shall not exceed any of the following limits: 0.205 lb-NOx /MMBtu, 0.182 lb-SOx/MMBtu, or 0.008 lb-CO/MMBtu. [District Rules 2201 and 4801]
10. Emissions from this incinerator shall not exceed either of the following limits: PM10 - 0.02 pounds per 100 pounds of poultry incinerated, or VOC - 0.02 pounds per 100 pounds of poultry incinerated. [District Rule 2201]
11. The quantity of poultry incinerated shall not exceed 1,500 pounds in any one day. [District Rule 2201]
12. The permittee shall keep a daily record of the quantity of poultry incinerated in pounds. The permittee may assume the loading capacity of the incinerator, 500 lb-birds, for each incineration cycle. [District Rules 1070 and 2201]
13. All emissions and vapors from the primary chamber shall be incinerated in the afterburner (secondary chamber) at a minimum temperature of 1,600 degrees Fahrenheit and a minimum retention time of 0.5 seconds. [District Rule 4302]
14. 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 Rules 1070 and 2201]

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-10485-7-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: PITMAN FAMILY FARMS HUFFMON RANCH
MAILING ADDRESS: 1075 NORTH AVE
SANGER, CA 93657

LOCATION: 16433 LAUREL AVE
STRATFORD, CA 93266

EQUIPMENT DESCRIPTION:
469 BHP (INTERMITTENT) VOLVO PENTA MODEL VD550-04FT4 TIER 4F CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICALGENERATOR

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. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
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. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

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.

Samir Sheikh, Executive Director / APCO

DRAFT

Brian Clements, Director of Permit Services
C-10485-7-0 : 4/14/2026 5:26:55 PM -- MUTHANAM : 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: 0.30 g-NOx/bhp-hr, 2.61 g-CO/bhp-hr, or 0.14 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]
12. Emissions from this IC engine shall not exceed 0.01 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. 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]
16. 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]
17. 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]
18. {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]
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]

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: C-10485-8-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: PITMAN FAMILY FARMS HUFFMON RANCH
MAILING ADDRESS: 1075 NORTH AVE
SANGER, CA 93657

LOCATION: 16433 LAUREL AVE
STRATFORD, CA 93266

EQUIPMENT DESCRIPTION:
850 BHP (INTERMITTENT) VOLVO PENTA MODEL TWD1682GE TIER 4F CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICALGENERATOR

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. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
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. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

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.

Samir Sheikh, Executive Director / APCO

DRAFT

Brian Clements, Director of Permit Services

C-10485-8-0 : 4/14/2026 2:59:12 PM -- MUTHANAM : 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: 0.12 g-NOx/bhp-hr, 0.04 g-CO/bhp-hr, or 0.01 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]

12. Emissions from this IC engine shall not exceed 0.01 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. 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]

16. 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]

17. 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]

18. {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]

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]

San Joaquin Valley AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

AUTHORITY TO CONSTRUCT

PERMIT NO: C-10485-9-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: PITMAN FAMILY FARMS HUFFMON RANCH
MAILING ADDRESS: 1075 NORTH AVE
SANGER, CA 93657

LOCATION: 16433 LAUREL AVE
STRATFORD, CA 93266

EQUIPMENT DESCRIPTION:
850 BHP (INTERMITTENT) VOLVO PENTA MODEL TWD1682GE TIER 4F CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICALGENERATOR

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. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
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. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

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.

Samir Sheikh, Executive Director / APCO

Brian Clements, Director of Permit Services

C-10485-9-0 : 4/14/2026 2:59:13 PM -- MUTHANAM : 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: 0.12 g-NOx/bhp-hr, 0.04 g-CO/bhp-hr, or 0.01 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]
12. Emissions from this IC engine shall not exceed 0.01 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. 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]
16. 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]
17. 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]
18. {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]
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]

APPENDIX B
Draft PTOs C-10485-3-0 and C-10485-4-0

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-10485-3-0 **EXPIRATION DATE:**

EQUIPMENT DESCRIPTION:
NATIONAL INCINERATOR, INC. DESTRUCTOR S/C POULTRY INCINERATOR WITH A 0.3 MMBTU/HR MIDCO INTERNATIONAL MODEL J83-DS PROPANE FIRED BURNER AND A 0.1 MMBTU/HR AFTERBURNER

PERMIT UNIT REQUIREMENTS

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. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
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. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. The incinerator shall only be fired on LPG/propane fuel. [District Rule 4801]
8. {285} Sulfur compound emissions shall not exceed 2000 ppmv as SO2. [District Rule 4801]
9. All emissions and vapors from the primary chamber shall be incinerated in the afterburner (secondary chamber) at a minimum temperature of 1,600 degrees Fahrenheit and a minimum retention time of 0.5 seconds. [District Rule 4302]

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: C-10485-4-0 **EXPIRATION DATE:**

EQUIPMENT DESCRIPTION:
NATIONAL INCINERATOR, INC. DESTRUCTOR S/C POULTRY INCINERATOR WITH A 0.3 MMBTU/HR MIDCO INTERNATIONAL MODEL J83-DS PROPANE FIRED BURNER AND A 0.1 MMBTU/HR AFTERBURNER

PERMIT UNIT REQUIREMENTS

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. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
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. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. The incinerator shall only be fired on LPG/propane fuel. [District Rule 4801]
8. {285} Sulfur compound emissions shall not exceed 2000 ppmv as SO2. [District Rule 4801]
9. All emissions and vapors from the primary chamber shall be incinerated in the afterburner (secondary chamber) at a minimum temperature of 1,600 degrees Fahrenheit and a minimum retention time of 0.5 seconds. [District Rule 4302]

APPENDIX C
Quarterly Net Emissions Change (QNEC)

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:

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

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

C-10485-1-0 Quarterly NEC [QNEC]			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
NOx	0	0	0
SOx	0	0	0
PM10	4,329	1250.5	3,078.5
CO	0	0	
VOC	3,030	1,562	1,468

C-10485-2-0 Quarterly NEC [QNEC]			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
NOx	0	0	0
SOx	0	0	0
PM10	0	0	0
CO	0	0	0
VOC	0	0	0

C-10485-5-0 Quarterly NEC [QNEC]			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
NOx	179.5	0	179.5
SOx	159.5	0	159.5
PM10	27.5	0	27.5
CO	7	0	7
VOC	27.5	0	27.5

C-10485-6-0 Quarterly NEC [QNEC]			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
NOx	179.5	0	179.5
SOx	159.5	0	159.5
PM10	27.5	0	27.5
CO	7	0	7
VOC	27.5	0	27.5

C-10485-7-0 Quarterly NEC [QNEC]			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
NOx	7.8	0	7.8
SOx	0.3	0	0.3
PM10	0.3	0	0.3
CO	67.5	0	67.5
VOC	3.5	0	3.5

C-10485-8-0 Quarterly NEC [QNEC]			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
NOx	5.5	0	5.5
SOx	0.25	0	0.25
PM10	0.5	0	0.5
CO	1.75	0	1.75
VOC	0.5	0	0.5

C-10485-9-0 Quarterly NEC [QNEC]			
Pollutant	**PE2 (lb/qtr)**	**PE1 (lb/qtr)**	**QNEC (lb/qtr)**
NOx	5.5	0	5.5
SOx	0.25	0	0.25
PM10	0.5	0	0.5
CO	1.75	0	1.75
VOC	0.5	0	0.5

APPENDIX D
BACT Guidelines 3.1.1 and 5.7.1

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 3.1.1*

Last Update: 4/29/2022

Emergency Diesel-Fired IC Engine > 50 bhp Powering an Electrical Generator

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	EPA Tier 4 Final certification level or equivalent for applicable horsepower range**		
SOx	Very low sulfur diesel fuel (15 ppmw sulfur or less)		
PM10	EPA Tier 4 Final certification level or equivalent for applicable horsepower range**		
NOx	EPA Tier 4 Final certification level or equivalent for applicable horsepower range**		
CO	EPA Tier 4 Final certification level or equivalent for applicable horsepower range**		

**The following emission levels are equivalent to the EPA Tier 4 Final certification levels:
50 - < 75 bhp: 3.5 g-(NOx + VOC)/bhp-hr, 0.02 g-PM/bhp-hr, 3.7 g-CO/bhp-hr
75 - < 175 bhp: 0.30 g-NOx/bhp-hr, 0.015 g-PM/bhp-hr, 3.7 g-CO/bhp-hr, 0.14 g-VOC/bhp-hr
175 - ≤ 750 bhp: 0.30 g-NOx/bhp-hr, 0.015 g-PM/bhp-hr, 2.6 g-CO/bhp-hr, 0.14 g-VOC/bhp-hr
> 750 bhp: 0.50 g-NOx/bhp-hr, 0.02 g-PM/bhp-hr, 2.6 g-CO/bhp-hr, 0.14 g-VOC/bhp-hr

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.

***This is a Summary Page for this Class of Source**

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 5.7.1*

Last Update: 6/22/2022

Poultry Broiler House

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
VOC	1.a) Enclosed housing with mechanical ventilation and computerized control of environmental conditions using sensors, or b) Use of acidifying litter amendments; AND 2.Comply with applicable District Rule 4570 Feed and Housing Mitigation Measures; AND 3.Houses completely cleaned out at least twice per year; AND 4.All mortality removed from houses at least once per day	1.98% Overall Capture and Control (Thermal/Catalytic Incineration with a Concentrator) 2.95% Overall Capture and Control (Carbon Adsorption) 3.80% Overall Capture and Control (Biofiltration) 4.70% Overall Capture and Control (Wet Scrubber)	
PM10	Use of the following broiler house design and management practices: 1.Weatherproof housing structure, AND 2.Minimum disturbance of manure/litter, AND 3.Covered manure/litter piles	1.99% Overall Capture and Control (Cyclones followed by Electrostatic Precipitator or Baghouse) 2.95% Overall Capture and Control: (Cyclones Followed by Wet Scrubber) 3.60% Overall Capture and Control (High Efficiency Cyclones)	
Ammonia (NH3)	1.a) Enclosed housing with mechanical ventilation and computerized control of environmental conditions using sensors, or b) Use of acidifying litter amendments; AND 2.Comply with applicable District Rule 4570 Feed and Housing Mitigation Measures; AND 3.Houses completely cleaned out at least twice per year; AND 4.All mortality removed from houses at least once per day	1.80% Overall Capture and Control (Biofiltration or Wet Scrubber)	

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.

***This is a Summary Page for this Class of Source**

APPENDIX E
Top-down BACT Analysis

Top-Down BACT Analysis for NH_3 Emissions from New Broiler Housing

This application was deemed complete on February 2, 2026. Therefore, BACT Guideline 5.7.1 (June 22, 2022) was in effect at the time the project was deemed complete and will be used for proposed broiler houses. In accordance with the District BACT policy, information from that guideline will be utilized without further analysis.

1. BACT Analysis for NH_3 emissions:

a. Step 1 - Identify all control technologies

BACT Guideline 5.7.1 identifies only the following options:

Achieved In Practice:

1. *a) Enclosed housing with mechanical ventilation and computerized control of environmental conditions using sensors, or*
   b) Use of acidifying litter amendments; AND
2. *Comply with applicable District Rule 4570 Feed and Housing Mitigation Measures; AND*
3. *Houses completely cleaned out at least twice per year; AND*
4. *All mortality removed from houses at least once per day*

Technologically feasible:

- *80% Overall Capture and Control (Biofiltration or Wet Scrubber)*

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from step 1.

c. Step 3 - Rank remaining options by control effectiveness

NH_3 Control Options for Broiler Housing		
1	80% Overall Capture and Control (Biofiltration)	Technologically Feasible
2	80% Overall Capture and Control (Wet Scrubber)	Technologically Feasible
3	1. a) Enclosed housing with mechanical ventilation and computerized control of environmental conditions using sensors; or b) use of acidifying litter amendments; AND 2. Comply with applicable District Rule 4570 Feed and Housing Mitigation Measures; AND 3. Houses completely cleaned out at least twice per year, AND 4. All mortality removed from houses at least once per day.	Achieved in Practice

d. Step 4 - Cost Effectiveness Analysis

The applicant has proposed control option 3 from Step 3 above and a cost effectiveness analysis of control options 1 and 2 will be performed.

Air Flow Rate of Each Broiler House

Based on the specifications of the fans the will be installed, the maximum potential flow rate of each broiler house is grater the 300,000 cfm. However, In practice broiler houses do not run all fans at full speed simultaneously. For a conservative cost effectiveness determination, we will only assume the minimum airflow needed for moisture removal.

Minimum Air Flow for New Poultry Houses		
Max # of Birds per House	Minimum Airflow Rate (cfm/bird) [5]	Minimum Airflow Required (cfm)
25,253	0.8	20,202

Cost Effectiveness for Option 1: Cost 80% Overall Capture and Control (Biofiltration)

Cost of Biofiltration:

The following analysis is based on the cost of emission reductions for confining broiler chickens in each broiler house and venting the poultry house to a biofilter. Costs for each housing unit group is the same because the number of fans used is equivalent.

Biofiltration can control ammonia emissions but cost effectiveness threshold has not been established for ammonia. Pursuant to District BACT Policy APR 1305 if there is not a cost threshold for a pollutant for which BACT is required, the threshold for the most similar pollutant shall be utilized. For example, since ammonia is a PM_{10} precursor, the PM_{10} cost threshold would be utilized to determine the cost effectiveness of an ammonia control option.

The table below summarizes the cost information for biofilters found in literature. The references follow the table.

5 Minimum airflow rate is based on the recommended minimum ventilation rates for moisture removal for grown broilers (> 45 days old).

Wells, Jessica. "Minimum Ventilation Can Challenge Broiler Growers." Extension Service of Mississippi State University, September 2024, https://extension.msstate.edu/publications/minimum-ventilation-can-challenge-broilers

Biofilter Costs from Literature					
Article Number	Year published	Capital Cost Range ($/cfm)	Adj 2010 Capital Cost ($/cfm)	Operating Cost Range ($/cfm/yr)	Adj 2010 Operating Cost ($/yr)
1	2003	$2.35 - $7.74 biofilter (Table 3)	$6.67	$3.31 Biofilter (Table 9)	$4.07
2	2003	$20.20 - 30.30 biotrickling filter	$33.34	$6.35 biotrickling filter	$7.81
3	1991	$12.79 - $20.93 open biofilter	$22.43 - $36.70		
4	1991	$20.93 - $116.28 enclosed biofilter	$36.70 - $203.90		
5	1998	-	-	$2 - $14	$2.85 - $19.96
6	2008	$15	$15.91	$2	$2.12
7	2005	$16.99 - $118.93	$19.70 - $137.87	$5.10 - $16.99	$5.91 - $19.70
8	1996	$2.50 - $5.00	$3.07 - $6.15	$'2 - $14	$2.46 - $17.22
9	1999	$13.30 - $18	$18.401 - $24.92	$3.33 - $6.67	$4.61 - $9.23
10	2002	$2.79	$3.53	10% of capital cost	
11	2004	$0.15 - $0.25	$0.25 - $0.35	$0.005 -$ 0.015	$0.006 - $0.018

The articles referenced in the previous table are cited below:

1 & 2. U.S. Environmental Protection Agency, The Clean Air Technology Center (CATC), "Using Bioreactors to Control Air Pollution" EPA-456/R-03-003, (E143-03), September 2003, https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P1005HH8.PDF. The costs include engineering, construction, and start-up costs, but not the cost of ducting for air flow rates 50,000 to 210,000 cfm.

3. U.S. Environmental Protection Agency, "Emissions from Animal Feeding Operations" (Draft), EPA Contract No. 68-D6-0011, August 15, 2001, Section 9.2.3 - Biofiltration of Confinement Housing Exhaust. https://www3.epa.gov/ttnchie1/ap42/ch09/draft/draftanimalfeed.pdf

4. Leson, G. and A.M. Winer. 1991. "Biofiltration: An Innovative Air Pollution Control Technology for VOC Emissions". Journal of the Air and Waste Management Association. 41(8):1045-54. https://pubmed.ncbi.nlm.nih.gov/1958341/

5. Operating Cost Estimate for a Biofilter (1998): $2-14/cfm (from Boyette, R. A. 1998. "Getting Down to (Biofilter) Basics". Biocycle 39(5):58-62). https://p2infohouse.org/ref/33/32800.pdf

6. Bohn, Hinrich, "Biofilter Technology Offers Emissions Abatement Option", Distillers Grain Quarterly, 3rd Qtr 2008

7. Delhoménie, Marie-Caroline; Heitz, Michèle, "Biofiltration of Air: A Review", Critical Reviews in Biotechnology, 1549-7801, Volume 25, Issue 1, 2005, Pages 53 – 72

8. Boyette, R. Allen – E&A Environmental Consultants Inc., “Biofilter Economics and Performance”, 1996. https://p2infohouse.org/ref/12/11505.pdf

9. Govind, Rakesh – PRD Tech Inc., White Paper - “Biofilteration: An Innovative Technology for the Future”, 1999, https://www.academia.edu/37745359/Biofiltration_An_Innovative_Technology_for_the_Future

10. South Coast Air Quality Management District, “Technology Assessment for: Proposed Rule 1133: Emission Reductions from Composting and Related Operations”, March 22, 2002, https://www.aqmd.gov/docs/default-source/rule-book/support-documents/rule-1133/technology-assessment.pdf

11. Schmidt, David. Janni, Kevin. Nicolai, Richard. “Biofilter Design Information”. Biosystems and Agricultural Engineering Update: BAEU-18, Revised March 2004. University of Minnesota Department of Biosystems and Agricultural Engineering, College of Agricultural, Food and Environmental Sciences. ttp://osuwastemanage.bae.okstate.edu/baeu18.pdf/

Note: The capital cost estimate obtained from reference number 11 was ten times lower than the low-end of the cost estimates given in other sources listed above and cost estimates previously obtained from biofilter suppliers during the 2010 amendments to District Rule 4570. Also, the operating cost estimate from this source was more than 100 times lower than the lowest the cost estimates given in the other sources listed above. Because of this significant difference in costs, the design of this biofilter was evaluated to determine if it would meet District and EPA standards for an add-on emission control device. This preliminary evaluation is discussed below.

Reference #11 describes a biofilter primarily designed to reduce odors not VOC or NH_3. The document recommends that an open-bed biofilter used to control exhaust from animal housing have a depth of 10-18 inches and an empty bed contact time of 3-5 seconds. For an open-bed biofilter used for VOC control, the recommended depth and contact time are generally 3-5 feet and 30-60 seconds, respectively. The lower recommended depth is the result of limitations with typical exhaust fans used for ventilation in animal housing, which are not designed for the larger pressure drops that would be caused by a deeper biofilter bed. It is likely that the much smaller recommended contact time is related to the fact that the biofilter is only designed to reduce odors. Many odorous compounds are branched-chain volatile fatty acids (VFAs) that consist of large molecules with a strong tendency to adhere to any surfaces that they contact; thus shortening the contact time required to treat these compounds. Although VFAs are largely responsible for objectionable odors from agricultural facilities, confined animal facilities are expected to emit larger quantities of other VOCs and NH_3. The biofilter design recommended in the document would not be as effective for reducing other VOCs which are more volatile and do not have a strong tendency to adhere to surfaces or NH_3. The biofilter does not appear to be designed to handle the total flow rates from the animal housing but is probably intended to handle smaller flow rates from high-odor areas such as manure pits. Another limitation with the design is that there is no dedicated outlet to allow measurement and determination of control efficiency; thus there isn’t any way to accurately assess if the biofilter is functioning properly.

Because of the substantial deviation from established criteria for the design of biofilters for control of VOC and NH_3 and the lack of information to support and quantify emission reductions

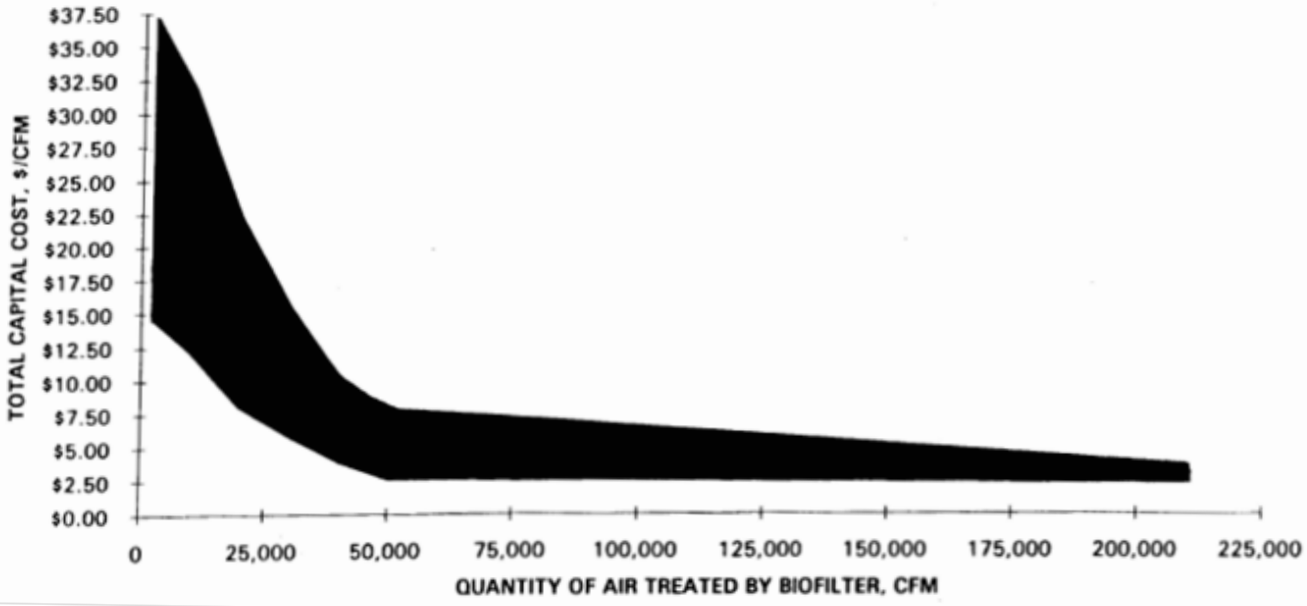
from this particular design, the cost estimates associated with this design will be removed from further consideration.

Reduced Capital Cost from Economy of Scale

The potential for reduced dollar-per-cfm capital costs was considered based on the large airflow rates that would be handled by biofilters for confined animal facilities. Based on the information reviewed, it was determined that there is not any additional cost reduction benefit related to economy of scale for biofilters handling such large flow rates.

The information available indicates significant reductions in biofilter costs per cfm as the flow rate treated increases to a few thousand cfm but diminishing reductions in cost after this until there is no further benefit. This is illustrated in the graph below. The graph shows no additional cost reductions benefits after approximately 50,000 cfm. Also, information previously obtained from Jim Cash of MEGTEC Systems, Inc. during the 2010 amendments to District Rule 4570 indicates that economy of scale cost reductions for biofilter systems were insignificant after approximately 20,000 cfm. This was because multiple individual units are generally required to treat flows greater than this and each unit would still cost about the same. Additionally, single units, and sometimes even multiple units, handling such large flow rates would not be pre-fabricated but would have to be specially constructed on site, which can increase costs. This was also supported by the information provided by other biofilter suppliers. Therefore, any potential cost reduction benefits related to economy of scale have already been captured in the lower biofilter cost estimates given above and no additional cost benefits will be realized at higher flow rates. As a result, the cost estimates for biofilters will be directly proportional to the airflow rate treated and the number of animals housed.

FIGURE 1 BIOFILTER CAPITAL COST PER CFM OF AIR TREATED



Cost Estimate for Biofilters for this Analysis

For purposes of this analysis, the following biofilter cost estimate from the above graph will be used. The cost estimate is conservative and significantly lower than many of the capitol cost estimates given in the references listed above.

Capital Cost (2010): $3.00/cfm

As established above the cost of installing a biofilter on a broiler house is $3.00/cfm in 2010 dollars. The cumulative inflation rate between 2010 and 2026 (when the application was deemed complete) is 50.6%.[6] Therefore,

Capital Cost (2026 dollars) = $4.52/cfm

Capital Cost

The cost estimate for the biofilter includes the costs of the fans, media, plenum, engineering, and labor but does not include installation of the required ductwork. As stated above, a conservative capital cost of $4.52 per cfm will be assumed in this cost analysis.

Based on the required airflow previously determined, the capital cost of the biofilter in each house is calculated as follows:

Capital Cost = $4.52 cfm x cfm/house = $4.52/cfm x 20,202 cfm = $91,313

Annualized Capital Cost:

The annualized cost of installing a biofilter on a broiler in accordance to District Policy APR 1305 is calculated as follows:

$A = [P \times i(i+1)^n]/[(i+1)^n-1]$

Where: A = Annual Capital Cost ($/year)
P = Present Value of Biofilter or Capital Cost ($/house)
i = Interest Rate (6%)
N = Equipment Life (10 years)

$A = [\$P \times i(i+1)^{10}]/[(i+1)^{10}-1]$
$= [\$P \times 0.06(0.06+1)^{10}]/[(0.06+1)^{10}-1]$
= $91,313 x 0.136/year
= $12,419/year

Emission Reductions with Biofilter:

Emission Reductions = District Standard Emissions (DSE) – Emissions w/Tech Feasible BACT (EFT)

[6] https://www.bls.gov/data/inflation_calculator.htm

For new emission units, District Standard Emissions (DSE) are equal to the emissions level allowed the by the applicable San Joaquin Valley Air Pollution Control District (District) rule once the final compliance date for the rule has passed. The emission limits in the applicable District prohibitory rule shall be those that the particular emission unit would be subject to. If the applicable rule has both standard and enhanced compliance options, the standard compliance option date and emission standard shall be used.

This operation is subject to District Rule 4570 and is in full compliance with the rule as proposed. Therefore, DSE = PE2 for each broiler house as calculated in the BACT determination section.

EFT = Annual PE x 1 ton/2,000 lb x (1 - Overall Control Eff.)
= 1,210 lb-NH_3 x 1 ton/2,000 lb x (1 - 0.80)
= 0.12 ton-NH_3

Emissions Reduction = DSE ton/year – EFT ton/year
= 0.61 ton/year – 0.12 ton/year
= 0.48 ton/year

Cost Effectiveness for Biofilter:

Pursuant to District's BACT Policy APR-1305, a cost effectiveness shall be calculated using the cost effectiveness thresholds ($/ton) for each pollutant controlled and if there is not a cost threshold for a pollutant such as NH_3 for which BACT is required, the threshold for the most similar pollutant shall be utilized. Since NH_3 is a PM_{10} precursor, the PM_{10} cost threshold will be utilized to determine the cost effectiveness of an NH_3 control option.

Cost of Reduction ($/ton) = Annual Capital Cost / NH_3 Reductions
= $12,419/year ÷ 0.48 ton/year
= $25,872/ton

The analysis demonstrates that the cost of reduction will exceed the District's BACT Cost Effectiveness Threshold for PM10 of $13,300/ton. This control option is therefore not cost effective and is removed from further consideration.

Cost Effectiveness Analysis for Option 2: Cost 80% Overall Capture and Control (Wet Scrubber)

Emission Reductions with Wet Scrubber:

Emission Reductions = District Standard Emissions (DSE) – Emissions w/Tech Feasible BACT (EFT)

For new emission units, District Standard Emissions (DSE) are equal to the emissions level allowed the by the applicable San Joaquin Valley Air Pollution Control District (District) rule once the final compliance date for the rule has passed. The emission limits in the applicable District prohibitory rule shall be those that the particular emission unit would be subject to. If the applicable rule has both standard and enhanced compliance options, the standard compliance option date and emission standard shall be used.

This operation is subject to District Rule 4570 and is in full compliance with the rule as proposed. Therefore, DSE = PE2 for each broiler house as calculated in the BACT determination section.

EFT = Annual PE x 1 ton/2,000 lb x (1 - Overall Control Eff.)
= 1,210 lb-NH_3 x 1 ton/2,000 lb x (1 - 0.80)
= 0.12 ton-NH_3

Emissions Reduction = DSE ton/year – EFT ton/year
= 0.61 ton/year – 0.12 ton/year
= 0.48 ton/year

Cost of Wet Scrubber:

The following cost analysis demonstrates that the annual operating & maintenance (O&M) costs alone, not including the initial capital costs, causes the wet scrubber to exceed the District NH_3 cost effective threshold.

According to the EPA-CICA Air Pollution Control Technology Fact Sheet on Venturi Scrubbers (EPA-452/F-03-017)[12], the annual O&M cost for a Venturi wet scrubber ranges from $4.4 to $120 per scfm (in 2002 dollars).

For purposes of this analysis, the lowest O&M cost value given of $4.4 per scfm will be used for the most conservative estimate.

Annual O&M Cost = $4.4/scfm (in 2002 dollars)

As established above the annual operating & maintenance (O&M) a wet scrubber is $4.4/cfm in 2002 dollars. The inflation rate between 2002 and 2026 (when the application was deemed complete) is 84.5% and is equivalent to $8.12. [7] Therefore,

Annual O&M Cost (in 2026 dollars) = $8.12/scfm

[12] http://www.epa.gov/ttncatc1/products.html#aptecfacts
[7] https://www.bls.gov/data/inflation_calculator.htm

Based on the required airflow previously determined, the annual O&M cost of a wet scrubber in each house is calculated in the following table:

Annual O&M Cost = $8.12 cfm x cfm/house
= $8.12 cfm x 20,202 cfm
= $164,040

Cost Effectiveness for Wet Scrubber:

Pursuant to District's BACT Policy APR-1305, a cost effectiveness shall be calculated using the cost effectiveness thresholds ($/ton) for each pollutant controlled and if there is not a cost threshold for a pollutant such as NH_3 for which BACT is required, the threshold for the most similar pollutant shall be utilized. Since NH_3 is a PM_{10} precursor, the PM_{10} cost threshold will be utilized to determine the cost effectiveness of an NH_3 control option.

The cost of NH_3 emission reduction per ton is calculated using the equation below and is summarized in the following table:

Cost of Reduction ($/ton) = Annual O&M Cost / NH_3 Reductions
= $ 164,040 ÷ 0.48 ton
= $ 341,750/ton

The analysis demonstrates that the operation and maintenance cost of a wet scrubber, not including the initial capital cost, will exceed the District's BACT Cost Effectiveness Threshold for PM10 of $13,300/ton. Therefore, this option is not cost-effective and will not be required for the proposed project.

e. Step 5 – Select BACT

As demonstrated above, BACT for this operation is use of acidifying litter amendments, comply with applicable District Rule 4570 Feed and Housing Mitigation Measures, broiler houses completely cleaned out at least twice per year, and all mortality removed from houses once per day, which the facility has proposed for this operation. Therefore, BACT has been satisfied for NH_3 emissions from the broiler housing.

Top Down BACT Analysis for the Emergency IC Engines

This application was deemed complete on February 2, 2026. Therefore, BACT Guideline 3.1.1 (April 29, 2022) was in effect at the time the project was deemed complete and will be used for all three emergency diesel IC engines in this project (C-10485-7-0, '-8-0, and '–9-0). In accordance with the District BACT policy, information from that guideline will be utilized without further analysis.

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:

- *EPA Tier 4 Final Certification level or equivalent for the applicable horsepower range*

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 NOx and VOC will be the use of EPA Tier 4 Final certified engines. The applicant is proposing such a units. Therefore, BACT will be satisfied for all three engines.

APPENDIX F
Health Risk Assessment Summary

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	Mohamed M Muthana – Permit Services
From:	Michael Scott – Technical Services
Date:	March 4, 2026
Facility Name:	PITMAN FAMILY FARMS HUFFMON RANCH
Location:	16433 LAUREL AVE, STRATFORD
Application #(s):	C-10485-1-0, -2-0, -5-0, -6-0, -7-0, -8-0, -9-0
Project #:	C-1253757

Summary

Risk Management Review (RMR)

Units	Prioritization Score	Acute Hazard Index	Chronic Hazard Index	Maximum Individual Cancer Risk	T-BACT Required	Special Permit Requirements
1-0	24.80	0.23	0.02	1.46E-06	No[1]	No
2-0	5.07	0.00	0.02	7.17E-07	No	No
5-0	11.70	0.00	0.01	5.35E-07	No	Yes
6-0	11.70	0.00	0.01	5.35E-07	No	Yes
7-0	2.31	0.00	0.00	2.16E-08	No	Yes
8-0	4.62	0.00	0.00	1.62E-08	No	Yes
9-0	4.62	0.00	0.00	8.46E-09	No	Yes
Project Totals	64.82	0.23	0.05	3.29E-06		
Facility Totals	>1	0.23	0.05	3.29E-06		

Notes:
1. T-BACT is determined on an emission unit by emission unit basis. While the cumulative total risk of the poultry housing units exceeds the threshold for T-BACT, none of the individual units exceed this threshold.

Proposed Permit Requirements

To ensure that human health risks will not exceed District allowable levels; the following shall be

Units # 1-0 and 2-0

1. No special requirements.

Units # 5-0 and 6-0

1. 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.

Units # 7-0, 8-0, and 9-0

1. The PM_{10} emissions rate shall not exceed 0.01 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.

Project Description

Technical Services received a request to perform a Risk Management Review (RMR) for the following:

- Unit -1-0: MODIFICATION OF POULTRY RANCH CONSISTING OF 250,000 BROILER CHICKENS; 7 MECHANICALLY VENTILATED POULTRY HOUSES, INCLUDING ELECTRIC FANS/EQUIPMENT TOTALING XXX HP: ADD 34 NEW MECHANINCLY VENTILATED POULTRY HOUSES TO INCREASE THE TOTAL RANCH CAPACITY TO 1,070,000 BOILER CHICKENS
- Unit -2-0: SOLID MANURE SYSTEM CONSISTING OF OPEN PILES; SOLID MANURE HAULED OFFSITE
- Unit -5-0: 0.3 MMBTU/HR MIDCO INTERNATIONAL MODEL J83-DS PROPANE FIRED POULTRY INCINERATOR WITH 0.1 MMBTU/HR AFTERBURNER
- Unit -6-0: 0.3 MMBTU/HR MIDCO INTERNATIONAL MODEL J83-DS PROPANE FIRED POULTRY INCINERATOR WITH 0.1 MMBTU/HR AFTERBURNER
- Unit -7-0: 469 BHP (INTERMITTENT) VOLVO PENTA MODEL VD550-04FT4 TIER 4 FINAL CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICALGENERATOR
- Unit -8-0: 850 BHP (INTERMITTENT) VOLVO PENTA MODEL TWD1682GE TIER 4 FINAL CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICALGENERATOR
- Unit -9-0: 850 BHP (INTERMITTENT) VOLVO PENTA MODEL TWD1682GE TIER 4 FINAL CERTIFIED DIESEL-FIRED EMERGENCY STANDBY IC ENGINE POWERING AN ELECTRICALGENERATOR

RMR Report

Analysis

The District performed an analysis pursuant to the District's Risk Management Policy for Permitting New and Modified Sources (APR 1905, May 28, 2015) to determine the possible cancer and non-cancer health impact to the nearest resident or worksite. This policy requires that an assessment be performed on a unit by unit basis, project basis, and on a facility-wide basis. If a preliminary prioritization analysis demonstrates that:

- A unit's prioritization score is less than the District's significance threshold and;
- The project's prioritization score is less than the District's significance threshold and;
- The facility's total prioritization score is less than the District's significance threshold

Then, generally no further analysis is required.

The District's significant prioritization score threshold is defined as being equal to or greater than 1.0. If a preliminary analysis demonstrates that either the units', the project's or the facility's total prioritization score is greater than the District threshold, a screening or a refined assessment is required.

If a refined assessment is greater than one in a million but less than 20 in a million for carcinogenic impacts (cancer risk) and less than 1.0 for the acute and chronic hazard indices (non-carcinogenic) on a unit by unit basis, project basis and on a facility-wide basis the proposed application is considered less

than significant. For units that exceed a cancer risk of one in a million, Toxic Best Available Control Technology (TBACT) must be implemented.

Air toxics emissions for this project were calculated using the following methods:

- Air toxic emissions for this proposed poultry house (Unit 1-0) were calculated using emission factors generated from a 2004 source test conducted on a Broiler House in the District.
- Particulate matter emissions from this proposed solid manure handling operation (Unit 2-0) were provided by the Permit Engineer. These emissions were speciated into air toxics using emission factors from the table, "Mineral Composition of Manures" (page iv in Appendix III) in the 1990 report, A Review of Poultry Manure Management: Directions for the Future, Agriculture, and Agri-Food Canada Poultry Section.
- Process rates for the proposed operation of Unit 5-0 and 6-0 were provided by the Permit Engineer. These process rates were speciated into air toxics using emission factors derived from the 2006 Canadian Environmental Technology Center report, Characterization of Emissions from an Animal Crematorium Shenandoah A850.
- Particulate matter (PM10) emissions for the proposed diesel internal combustion engines (Unit 7-0, 8-0, and 9-0) were provided by the Permit Engineer. Per OEHHA guidance, all diesel exhaust PM10 is evaluated as diesel particulate matter (CAS# 9901).

These emissions were input into the San Joaquin Valley APCD's Hazard Assessment and Reporting Program (SHARP). In accordance with the District's Risk Management Policy, risks from the proposed unit's toxic emissions were prioritized using the procedure in the 2016 CAPCOA Facility Prioritization Guidelines. The prioritization score for this proposed 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 2018-2022 from Lemoore (rural dispersion coefficient selected) 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:

Source Process Rates					
Unit ID	**Process ID**	**Process Material**	**Process Units**	**Hourly Process Rate**	**Annual Process Rate**
1-0	1	VOC	Lbs	0.04[1]	336[1]
1-0	1	NH_3	Lbs	0.13[1]	1,210[1]
2-0	1	PM_{10}	Lbs	0.05[1]	480[1]
5-0	1	Birds	Lbs	125	547,500
6-0	1	Birds	Lbs	125	547,500
7-0	1	Diesel Engine PM_{10}	Lbs	0.01	1
8-0	1	Diesel Engine PM_{10}	Lbs	0.02	2
9-0	1	Diesel Engine PM_{10}	Lbs	0.02	2

Notes:
1. Emission rates are representative of each individual poultry house.

Line Volume Source Parameters Poultry Houses 1 thru 30 (Units 1-0 and 2-0)	
Approximate Length of each Line Volume (m)	96.4
Building Height (m)	3.66
Plume Width (m)	1.00

Point Source Parameters						
Unit ID	**Unit Description**	**Release Height (m)**	**Temp. (°K)**	**Exit Velocity (m/sec)**	**Stack Diameter (m)**	**Vertical/ Horizontal/ Capped**
5-0	LPG Poultry Incinerator	3.00	1253	25.22	0.10	Vertical
6-0	LPG Poultry Incinerator	3.00	1253	25.22	0.10	Vertical
7-0	469 BHP Emergency IC Engine-Diesel	3.29	751	67.92	0.13	Vertical
8-0	850 BHP Emergency IC Engine-Diesel	3.75	714	63.26	0.20	Vertical
9-0	850 BHP Emergency IC Engine-Diesel	3.75	714	63.26	0.20	Vertical

Conclusion

RMR

The cumulative prioritization score for the facility, including this project, is less than 1.0. **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 this 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.

Attachments

A. Modeling request from the project engineer

B. Additional information from the applicant/project engineer

C. Prioritization score w/ toxic emissions summary

D. Facility Summary

APPENDIX G
National Incinerator, Inc. Destructor Emissions Test

S/C

SANDERS ENGINEERING & ANALYTICAL SERVICES, INC.

PARTICULATE, CARBON MONOXIDE, CARBON DIOXIDE, AND VISIBLE EMISSIONS TEST REPORT

FOR

NATIONAL INCINERATOR
Destructor Incinerator
Boaz, Alabama

December 8, 2004

1568 LEROY STEVENS ROAD
MOBILE, ALABAMA 36695
(251) 633-4120
FAX: (251) 633-2285
E-MAIL: sanders@sandersengineering.com

TABLE OF CONTENTS

LIST OF TABLES

ILLUSTRATIONS

1. INTRODUCTION

Sanders Engineering & Analytical Services, Inc. (SEAS) performed particulate, carbon monoxide, carbon dioxide, and visible emissions testing for National Incinerator, Incorporated on the Destructor Incinerator located at the Boaz, Alabama facility. The testing was conducted December 8, 2004. The testing was performed in accordance with the applicable U.S. EPA procedures specified at **40 CFR, Part 60, Appendix A, Methods 1, 2, 3a, 4, 5, 9, and 10**. Further discussions of the test methods are included later in the report.

The purpose of the testing was to demonstrate compliance with the rules and regulations of the U. S. Environmental Protection Agency, and to meet the necessary requirements contained in the permit to operate issued by the Alabama Department of Environmental Management. The tests were conducted by Mr. Joseph Sanders, Mr. Richard Reynolds, and Mr. John Phillippi of Sanders Engineering & Analytical Services, Inc., and were coordinated with Mr. Darrin Baker of National Incinerator. The Alabama Department of Environmental Management was notified so a representative could be present to observe the testing.

2. DESCRIPTION OF SAMPLING PROGRAM

The sampling program consisted of particulate, carbon monoxide and carbon dioxide emissions testing in compliance with US EPA methods. The following is a brief description of these types of tests.

2.1. *Particulate Testing*

The sampling program consisted of particulate emissions testing in compliance with US EPA methods. The following is a brief description of this type of test. The particulate sample was extracted from the stack isokinetically through a stainless steel nozzle and probe onto a pre-weighed glass fiber filter. The sample was taken at a series of points across the stack. Each point represented an equal area of stack. The isokinetic sampling rate and volumetric flow rate was monitored by an S-type pitot tube attached to the probe. Calibrations of the particulate testing equipment including pitots, thermocouples, magnehelics, and other measurement devices are included in Appendix A. A detailed description of the testing procedures and schematic of the sampling train is presented in Section 6. The field data sheets for the testing are presented in Appendix B. Sample calculations of Run 1 are presented in Appendix C.

2.2. *Carbon Monoxide and Carbon Dioxide Testing*

Carbon monoxide and carbon dioxide testing was accomplished by withdrawing a sample of the stack gas through a stainless steel probe, a moisture removal system, and into instruments specifically designed for the measurement of the particular pollutants of interest. These instruments responded linearly to concentrations of the pollutants. The output of these instruments is a continuous

analog voltage which is digitized and input into a PC based data acquisition system. The PC data acquisition system polls the instruments 1000 times per second. The computer averages these readings into one-second averages during calibrations and one minute averages at other times. These one second and one minute averages are written to the hard disk each minute to ensure no data loss due to power failure or other inadvertent occurrence. The computer stores in memory all calibration and stack gas analyses during each run. The averages for each calibration and for each independent run were averaged for the time of the runs. A description of the testing procedure is included in Section 7. The gas certifications are included in Appendix D. Operational data as supplied by National Incinerator, Incorporated is included in Appendix E.

3. SUMMARY AND DISCUSSION OF RESULTS

There were no unusual problems experienced during the performance of the testing. Before testing commenced, the unit was charged with 500 pounds of chickens. The testing lasted for approximately four hours, which yielded an average charge rate of 125 pounds of chickens per hour. There were no additional charges made to the unit during the performance of the testing. The results of the particulate emissions testing are presented in Table I. The results of the carbon monoxide and carbon dioxide emissions testing are presented in Table II. Graphical representation of the carbon monoxide and carbon dioxide concentrations is presented in Figure 1. The quality assurance for the carbon monoxide and carbon dioxide testing are presented in Tables III and IV. The visible emissions test results are presented in Tables V through VII. The visible emissions field data, along with the observer certification, is included in Appendix B.

TABLE I. SUMMARY OF PARTICULATE EMISSIONS TEST RESULTS
NATIONAL INCINERATOR
DESTRUCTOR
BOAZ, ALABAMA

Title of Run		RUN 1	RUN 2	RUN 3
Date	Month/Day/Year	12/8/2004	12/8/2004	12/8/2004
Sampling Time -Start	Military	1220	1330	1440
Sampling Time -Stop	Military	1320	1430	1540
Production Rate	Pounds of Chicken Per Hour	125.0	125.0	125.0
Stack Static Pressure	Inches Water	-0.10	-0.10	-0.10
Barometric Pressure	Inches Mercury	29.90	29.90	29.90
Meter Correction Factor	dimensionless	1.0110	1.0110	1.0110
Oxygen Concentration	Mole Percent O2	6.0	7.0	7.0
Carbon Dioxide Concentration	Mole Percent CO2	11.1	11.2	11.1
Volume of Gas Metered	Actual Cubic Feet	32.815	33.045	33.480
Volume of Water Collected	Milliliters	118	122	125
Sampling Time	Minutes	60.00	60.00	60.00
Nozzle Diameter	Inches	0.600	0.600	0.600
Weight of Solids Collected	Milligrams	50.7	15.8	18.2
Area of Stack	Square Feet	0.7854	0.7854	0.7854
Avg. Sqr. Root Velocity Pressure	Inches Water	0.1957	0.1973	0.1973
Average Orifice Pressure (ΔH)	Inches Water	1.1	1.1	1.1
Average Stack Temperature	Degrees F	1522	1522	1624
Average Meter Temperature	Degrees F	76	81	81
Average Temp. Secondary Burn Unit	Degrees F	1798	1802	1796

Calculations

		RUN 1	RUN 2	RUN 3	*3 Runs* Average
Volume of Gas Sampled	Standard Dry Cubic Feet	32.768	32.679	33.110	32.852
Molecular Wt. of Stack Gas	LB/LB-MOLE	28.27	28.27	28.24	28.26
Water vapor in Stack Gas	Percent	14.5	14.9	15.1	14.8
Average Stack Gas Velocity	Feet per second	21.5	21.7	22.3	21.8
Stack Gas Flow Rate	Actual Cubic Feet Per Minute	1,014	1,023	1,049	1,029
Stack Gas Flow Rate	Standard Wet Cubic Feet Per Minute	270	272	265	269
Stack Gas Flow Rate	Standard Dry Cubic Feet Per Minute	231	231	225	229
Particulate Concentration	Grains per Standard Dry Cubic Foot	0.02383	0.00745	0.00847	0.01325
Particulate Concentration	Grains per Actual Cubic Foot	0.00542	0.00168	0.00182	0.00297
Particulate Emission Rate	Pounds per Hour	0.0471	0.0148	0.0163	0.0261
Particulate Emission Rate	Pounds per Hundred Pounds Charged	0.0377	0.0118	0.0131	0.0209
Part Conc. 50% Excess Air	Grains per Standard Dry Cubic Foot	0.02172	0.00731	0.00831	0.01245
Particulate Concentration	Grains per Standard Dry Cubic Foot @ 7% O_2	0.02223	0.00745	0.00847	0.01271
Particulate Concentration	Grains per Standard Dry Cubic Foot @ 10% O_2	0.01743	0.00584	0.00664	0.00997
Particulate Concentration	Grains per Standard Dry Cubic Foot @ 12% CO_2	0.02576	0.00798	0.00915	0.0143
Isokinetic Rate	Percent	94.7	94.2	97.9	95.6

TABLE II. SUMMARY OF CARBON MONOXIDE AND CARBON DIOXIDE EMISSIONS TEST RESULTS
NATIONAL INCINERATOR
DESTRUCTOR
BOAZ, ALABAMA
12/8/2004

TEST	Start Time Military	Stop Time Military	Stack Gas Flow Rate (Standard Dry Cubic Feet per Minute)	Water Vapor in Stack Gas (Percent)	Production Rate (Pounds Per Hour of Chickens Incinerated	Carbon Dioxide (Dry) (measured) (Percent)	Carbon Monoxide Emissions (ppm-dry)	Carbon Monoxide Emissions (Lbs/hour)	Combustion Efficency Percent
RUN 1	12:19	13:19	231	14.5	125.0	7.9	5.5	0.0	99.99
RUN 2	13:28	14:28	231	14.9	125.0	8.4	8.2	0.0	99.99
RUN 3	14:36	15:36	225	15.1	125.0	8.7	6.7	0.0	99.99
Average			229	14.8	125.0	8.3	6.8	0.0	99.99

Figure 1. Graphical Representation of Stack Gas Concentrations
Destructor

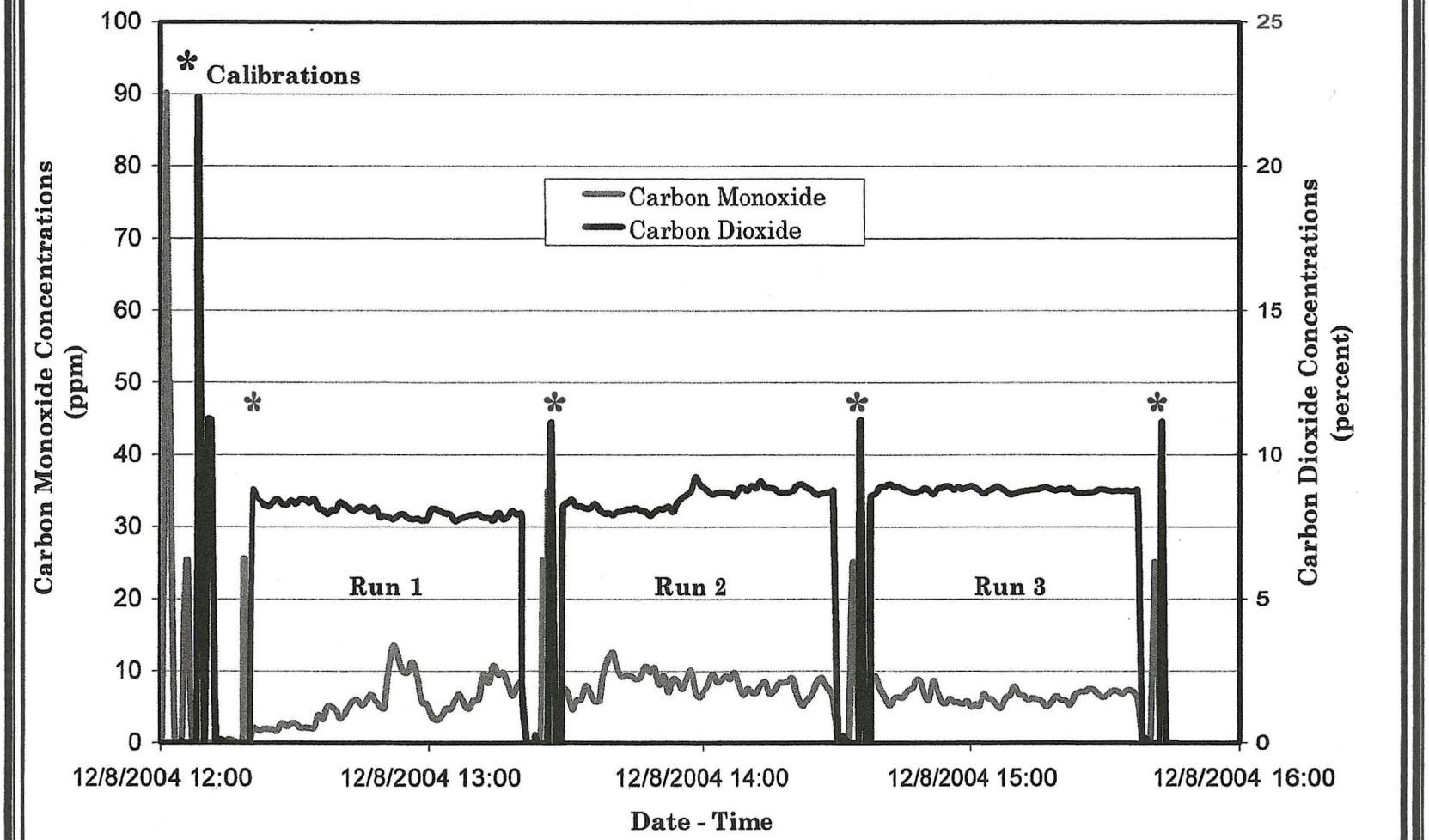


TABLE III. CARBON MONOXIDE TESTING QUALITY ASSURANCE
NATIONAL INCINERATOR
DESTRUCTOR
BOAZ, ALABAMA
12/8/2004

Analyzer Calibration Data

INITIAL ANALYZER SPAN (PPM) =		100	ANALYZER ID.	CO
	CYLINDER VALUE PPM	ANALYZER RESPONSE (PPM)	DIFFERENCE (PPM)	DIFFERENCE % SPAN (ALLOWED 2%)
Zero Gas	0.00	0.00	0.0	0.0
High Range Gas	90.10	90.10	0.0	0.0
Mid Range Gas	49.70	49.60	0.1	0.1
Low Range Gas	25.50	25.30	0.2	0.2

Test Results & Analyzer Calibration Bias and Drift Data

calculation data entry								system zero bias & drift			system upscale bias & drift			test results
start time of Run	*stop time of Run*	RUN #	*ANALYZER stack gas concentration uncorrected (PPM)*	*system Zero (PPM)*	*system upscale (PPM)*	*CYLINDER CONCENTRATION UPSCALE CALIBRATION GAS (PPM)*	*ANALYZER SPAN (PPM)*	INITIAL SYSTEM ZERO CAL. BIAS RESPONSE % SPAN (ALLOWED 5%)	FINAL SYSTEM ZERO CAL. BIAS RESPONSE % SPAN (ALLOWED 5%)	ZERO DRIFT % SPAN (ALLOWED 3%)	INITIAL SYSTEM UPSCALE CAL. BIAS RESPONSE % SPAN (ALLOWED 5%)	FINAL SYSTEM UPSCALE CAL. BIAS RESPONSE % SPAN (ALLOWED 5%)	UPSCALE DRIFT % SPAN (ALLOWED 3%)	**CARBON MONOXIDE CONCENTRATION (PPM-DRY)**
		INITIAL SYSTEM		*0.30*	*25.50*									
12:19	*13:19*	**Run 1**	*5.60*	*0.00*	*25.30*	*25.50*	*100.0*	0.3	0.0	-0.3	0.2	0.0	-0.2	**5.5**
13:28	*14:28*	**Run 2**	*8.10*	*0.00*	*25.10*	*25.50*	*100.0*	0.0	0.0	0.0	0.0	-0.2	-0.2	**8.2**
14:36	*15:36*	**Run 3**	*6.50*	*-0.10*	*25.00*	*25.50*	*100.0*	0.0	-0.1	-0.1	-0.2	-0.3	-0.1	**6.7**

TABLE IV. CARBON DIOXIDE TESTING QUALITY ASSURANCE
NATIONAL INCINERATOR
DESTRUCTOR
BOAZ, ALABAMA
12/8/2004

Analyzer Calibration Data

INITIAL ANALYZER SPAN (PPM) =		25	ANALYZER ID.	CO2
	CYLINDER VALUE PPM	ANALYZER RESPONSE (PPM)	DIFFERENCE (PPM)	DIFFERENCE % SPAN (ALLOWED 2%)
Zero Gas	0.00	0.00	0.0	0.0
High Range Gas	22.42	22.40	0.0	0.1
Mid Range Gas	11.08	11.20	-0.1	-0.5

Test Results & Analyzer Calibration Bias and Drift Data

calculation data entry								system zero bias & drift			system upscale bias & drift			test results
start time of Run	*stop time of Run*	RUN #	*ANALYZER stack gas concentration uncorrected (PPM)*	*system Zero (PPM)*	*system upscale (PPM)*	*CYLINDER CONCENTRATION UPSCALE CALIBRATION GAS (PPM)*	*ANALYZER SPAN (PPM)*	INITIAL SYSTEM ZERO CAL. BIAS RESPONSE % SPAN (ALLOWED 5%)	FINAL SYSTEM ZERO CAL. BIAS RESPONSE % SPAN (ALLOWED 5%)	ZERO DRIFT % SPAN (ALLOWED 3%)	INITIAL SYSTEM UPSCALE CAL. BIAS RESPONSE % SPAN (ALLOWED 5%)	FINAL SYSTEM UPSCALE CAL. BIAS RESPONSE % SPAN (ALLOWED 5%)	UPSCALE DRIFT % SPAN (ALLOWED 3%)	SULFUR DIOXIDE CONCENTRATION (PPM-DRY)
		INITIAL SYSTEM		*0.10*	*11.20*									
12:19	*13:19*	Run 1	*8.00*	*0.20*	*11.10*	*11.08*	*25.0*	0.4	0.8	0.4	0.0	-0.4	-0.4	7.9
13:28	*14:28*	Run 2	*8.50*	*0.20*	*11.20*	*11.08*	*25.0*	0.8	0.8	0.0	-0.4	0.0	0.4	8.4
14:36	*15:36*	Run 3	*8.80*	*0.20*	*11.10*	*11.08*	*25.0*	0.8	0.8	0.0	0.0	-0.4	-0.4	8.7

TABLE V. VISIBLE EMISSIONS TEST RESULTS
NATIONAL INCINERATOR
DESTRUCTOR -RUN 1
BOAZ, ALABAMA
December 8, 2004

TIME	OPACITY PERCENT	6 MIN. AVG.	TIME	OPACITY PERCENT	6 MIN. AVG.	TIME	OPACITY PERCENT	6 MIN. AVG.	TIME	OPACITY PERCENT	6 MIN. AVG.
12:20:00	0		12:35:00	0	0.0	12:50:00	0	0.0	13:05:00	0	0.0
12:20:15	0		12:35:15	0	0.0	12:50:15	0	0.0	13:05:15	0	0.0
12:20:30	0		12:35:30	0	0.0	12:50:30	0	0.0	13:05:30	0	0.0
12:20:45	0		12:35:45	0	0.0	12:50:45	0	0.0	13:05:45	0	0.0
12:21:00	0		12:36:00	0	0.0	12:51:00	0	0.0	13:06:00	0	0.0
12:21:15	0		12:36:15	0	0.0	12:51:15	0	0.0	13:06:15	0	0.0
12:21:30	0		12:36:30	0	0.0	12:51:30	0	0.0	13:06:30	0	0.0
12:21:45	0		12:36:45	0	0.0	12:51:45	0	0.0	13:06:45	0	0.0
12:22:00	0		12:37:00	0	0.0	12:52:00	0	0.0	13:07:00	0	0.0
12:22:15	0		12:37:15	0	0.0	12:52:15	0	0.0	13:07:15	0	0.0
12:22:30	0		12:37:30	0	0.0	12:52:30	0	0.0	13:07:30	0	0.0
12:22:45	0		12:37:45	0	0.0	12:52:45	0	0.0	13:07:45	0	0.0
12:23:00	0		12:38:00	0	0.0	12:53:00	0	0.0	13:08:00	0	0.0
12:23:15	0		12:38:15	0	0.0	12:53:15	0	0.0	13:08:15	0	0.0
12:23:30	0		12:38:30	0	0.0	12:53:30	0	0.0	13:08:30	0	0.0
12:23:45	0		12:38:45	0	0.0	12:53:45	0	0.0	13:08:45	0	0.0
12:24:00	0		12:39:00	0	0.0	12:54:00	0	0.0	13:09:00	0	0.0
12:24:15	0		12:39:15	0	0.0	12:54:15	0	0.0	13:09:15	0	0.0
12:24:30	0		12:39:30	0	0.0	12:54:30	0	0.0	13:09:30	0	0.0
12:24:45	0		12:39:45	0	0.0	12:54:45	0	0.0	13:09:45	0	0.0
12:25:00	0		12:40:00	0	0.0	12:55:00	0	0.0	13:10:00	0	0.0
12:25:15	0		12:40:15	0	0.0	12:55:15	0	0.0	13:10:15	0	0.0
12:25:30	0		12:40:30	0	0.0	12:55:30	0	0.0	13:10:30	0	0.0
12:25:45	0	0.0	12:40:45	0	0.0	12:55:45	0	0.0	13:10:45	0	0.0
12:26:00	0	0.0	12:41:00	0	0.0	12:56:00	0	0.0	13:11:00	0	0.0
12:26:15	0	0.0	12:41:15	0	0.0	12:56:15	0	0.0	13:11:15	0	0.0
12:26:30	0	0.0	12:41:30	0	0.0	12:56:30	0	0.0	13:11:30	0	0.0
12:26:45	0	0.0	12:41:45	0	0.0	12:56:45	0	0.0	13:11:45	0	0.0
12:27:00	0	0.0	12:42:00	0	0.0	12:57:00	0	0.0	13:12:00	0	0.0
12:27:15	0	0.0	12:42:15	0	0.0	12:57:15	0	0.0	13:12:15	0	0.0
12:27:30	0	0.0	12:42:30	0	0.0	12:57:30	0	0.0	13:12:30	0	0.0
12:27:45	0	0.0	12:42:45	0	0.0	12:57:45	0	0.0	13:12:45	0	0.0
12:28:00	0	0.0	12:43:00	0	0.0	12:58:00	0	0.0	13:13:00	0	0.0
12:28:15	0	0.0	12:43:15	0	0.0	12:58:15	0	0.0	13:13:15	0	0.0
12:28:30	0	0.0	12:43:30	0	0.0	12:58:30	0	0.0	13:13:30	0	0.0
12:28:45	0	0.0	12:43:45	0	0.0	12:58:45	0	0.0	13:13:45	0	0.0
12:29:00	0	0.0	12:44:00	0	0.0	12:59:00	0	0.0	13:14:00	0	0.0
12:29:15	0	0.0	12:44:15	0	0.0	12:59:15	0	0.0	13:14:15	0	0.0
12:29:30	0	0.0	12:44:30	0	0.0	12:59:30	0	0.0	13:14:30	0	0.0
12:29:45	0	0.0	12:44:45	0	0.0	12:59:45	0	0.0	13:14:45	0	0.0
12:30:00	0	0.0	12:45:00	0	0.0	13:00:00	0	0.0	13:15:00	0	0.0
12:30:15	0	0.0	12:45:15	0	0.0	13:00:15	0	0.0	13:15:15	0	0.0
12:30:30	0	0.0	12:45:30	0	0.0	13:00:30	0	0.0	13:15:30	0	0.0
12:30:45	0	0.0	12:45:45	0	0.0	13:00:45	0	0.0	13:15:45	0	0.0
12:31:00	0	0.0	12:46:00	0	0.0	13:01:00	0	0.0	13:16:00	0	0.0
12:31:15	0	0.0	12:46:15	0	0.0	13:01:15	0	0.0	13:16:15	0	0.0
12:31:30	0	0.0	12:46:30	0	0.0	13:01:30	0	0.0	13:16:30	0	0.0
12:31:45	0	0.0	12:46:45	0	0.0	13:01:45	0	0.0	13:16:45	0	0.0
12:32:00	0	0.0	12:47:00	0	0.0	13:02:00	0	0.0	13:17:00	0	0.0
12:32:15	0	0.0	12:47:15	0	0.0	13:02:15	0	0.0	13:17:15	0	0.0
12:32:30	0	0.0	12:47:30	0	0.0	13:02:30	0	0.0	13:17:30	0	0.0
12:32:45	0	0.0	12:47:45	0	0.0	13:02:45	0	0.0	13:17:45	0	0.0
12:33:00	0	0.0	12:48:00	0	0.0	13:03:00	0	0.0	13:18:00	0	0.0
12:33:15	0	0.0	12:48:15	0	0.0	13:03:15	0	0.0	13:18:15	0	0.0
12:33:30	0	0.0	12:48:30	0	0.0	13:03:30	0	0.0	13:18:30	0	0.0
12:33:45	0	0.0	12:48:45	0	0.0	13:03:45	0	0.0	13:18:45	0	0.0
12:34:00	0	0.0	12:49:00	0	0.0	13:04:00	0	0.0	13:19:00	0	0.0
12:34:15	0	0.0	12:49:15	0	0.0	13:04:15	0	0.0	13:19:15	0	0.0
12:34:30	0	0.0	12:49:30	0	0.0	13:04:30	0	0.0	13:19:30	0	0.0
12:34:45	0	0.0	12:49:45	0	0.0	13:04:45	0	0.0	13:19:45	0	0.0

The Average Opacity was Zero for All Times.

TABLE VI. VISIBLE EMISSIONS TEST RESULTS
NATIONAL INCINERATOR
DESTRUCTOR - RUN 2
BOAZ, ALABAMA
December 8, 2004

TIME	OPACITY PERCENT	6 MIN. AVG.	TIME	OPACITY PERCENT	6 MIN. AVG.	TIME	OPACITY PERCENT	6 MIN. AVG.	TIME	OPACITY PERCENT	6 MIN. AVG.
13:30:00	0		13:45:00	0	0.0	14:00:00	0	0.0	14:15:00	0	0.0
13:30:15	0		13:45:15	0	0.0	14:00:15	0	0.0	14:15:15	0	0.0
13:30:30	0		13:45:30	0	0.0	14:00:30	0	0.0	14:15:30	0	0.0
13:30:45	0		13:45:45	0	0.0	14:00:45	0	0.0	14:15:45	0	0.0
13:31:00	0		13:46:00	0	0.0	14:01:00	0	0.0	14:16:00	0	0.0
13:31:15	0		13:46:15	0	0.0	14:01:15	0	0.0	14:16:15	0	0.0
13:31:30	0		13:46:30	0	0.0	14:01:30	0	0.0	14:16:30	0	0.0
13:31:45	0		13:46:45	0	0.0	14:01:45	0	0.0	14:16:45	0	0.0
13:32:00	0		13:47:00	0	0.0	14:02:00	0	0.0	14:17:00	0	0.0
13:32:15	0		13:47:15	0	0.0	14:02:15	0	0.0	14:17:15	0	0.0
13:32:30	0		13:47:30	0	0.0	14:02:30	0	0.0	14:17:30	0	0.0
13:32:45	0		13:47:45	0	0.0	14:02:45	0	0.0	14:17:45	0	0.0
13:33:00	0		13:48:00	0	0.0	14:03:00	0	0.0	14:18:00	0	0.0
13:33:15	0		13:48:15	0	0.0	14:03:15	0	0.0	14:18:15	0	0.0
13:33:30	0		13:48:30	0	0.0	14:03:30	0	0.0	14:18:30	0	0.0
13:33:45	0		13:48:45	0	0.0	14:03:45	0	0.0	14:18:45	0	0.0
13:34:00	0		13:49:00	0	0.0	14:04:00	0	0.0	14:19:00	0	0.0
13:34:15	0		13:49:15	0	0.0	14:04:15	0	0.0	14:19:15	0	0.0
13:34:30	0		13:49:30	0	0.0	14:04:30	0	0.0	14:19:30	0	0.0
13:34:45	0		13:49:45	0	0.0	14:04:45	0	0.0	14:19:45	0	0.0
13:35:00	0		13:50:00	0	0.0	14:05:00	0	0.0	14:20:00	0	0.0
13:35:15	0		13:50:15	0	0.0	14:05:15	0	0.0	14:20:15	0	0.0
13:35:30	0		13:50:30	0	0.0	14:05:30	0	0.0	14:20:30	0	0.0
13:35:45	0	0.0	13:50:45	0	0.0	14:05:45	0	0.0	14:20:45	0	0.0
13:36:00	0	0.0	13:51:00	0	0.0	14:06:00	0	0.0	14:21:00	0	0.0
13:36:15	0	0.0	13:51:15	0	0.0	14:06:15	0	0.0	14:21:15	0	0.0
13:36:30	0	0.0	13:51:30	0	0.0	14:06:30	0	0.0	14:21:30	0	0.0
13:36:45	0	0.0	13:51:45	0	0.0	14:06:45	0	0.0	14:21:45	0	0.0
13:37:00	0	0.0	13:52:00	0	0.0	14:07:00	0	0.0	14:22:00	0	0.0
13:37:15	0	0.0	13:52:15	0	0.0	14:07:15	0	0.0	14:22:15	0	0.0
13:37:30	0	0.0	13:52:30	0	0.0	14:07:30	0	0.0	14:22:30	0	0.0
13:37:45	0	0.0	13:52:45	0	0.0	14:07:45	0	0.0	14:22:45	0	0.0
13:38:00	0	0.0	13:53:00	0	0.0	14:08:00	0	0.0	14:23:00	0	0.0
13:38:15	0	0.0	13:53:15	0	0.0	14:08:15	0	0.0	14:23:15	0	0.0
13:38:30	0	0.0	13:53:30	0	0.0	14:08:30	0	0.0	14:23:30	0	0.0
13:38:45	0	0.0	13:53:45	0	0.0	14:08:45	0	0.0	14:23:45	0	0.0
13:39:00	0	0.0	13:54:00	0	0.0	14:09:00	0	0.0	14:24:00	0	0.0
13:39:15	0	0.0	13:54:15	0	0.0	14:09:15	0	0.0	14:24:15	0	0.0
13:39:30	0	0.0	13:54:30	0	0.0	14:09:30	0	0.0	14:24:30	0	0.0
13:39:45	0	0.0	13:54:45	0	0.0	14:09:45	0	0.0	14:24:45	0	0.0
13:40:00	0	0.0	13:55:00	0	0.0	14:10:00	0	0.0	14:25:00	0	0.0
13:40:15	0	0.0	13:55:15	0	0.0	14:10:15	0	0.0	14:25:15	0	0.0
13:40:30	0	0.0	13:55:30	0	0.0	14:10:30	0	0.0	14:25:30	0	0.0
13:40:45	0	0.0	13:55:45	0	0.0	14:10:45	0	0.0	14:25:45	0	0.0
13:41:00	0	0.0	13:56:00	0	0.0	14:11:00	0	0.0	14:26:00	0	0.0
13:41:15	0	0.0	13:56:15	0	0.0	14:11:15	0	0.0	14:26:15	0	0.0
13:41:30	0	0.0	13:56:30	0	0.0	14:11:30	0	0.0	14:26:30	0	0.0
13:41:45	0	0.0	13:56:45	0	0.0	14:11:45	0	0.0	14:26:45	0	0.0
13:42:00	0	0.0	13:57:00	0	0.0	14:12:00	0	0.0	14:27:00	0	0.0
13:42:15	0	0.0	13:57:15	0	0.0	14:12:15	0	0.0	14:27:15	0	0.0
13:42:30	0	0.0	13:57:30	0	0.0	14:12:30	0	0.0	14:27:30	0	0.0
13:42:45	0	0.0	13:57:45	0	0.0	14:12:45	0	0.0	14:27:45	0	0.0
13:43:00	0	0.0	13:58:00	0	0.0	14:13:00	0	0.0	14:28:00	0	0.0
13:43:15	0	0.0	13:58:15	0	0.0	14:13:15	0	0.0	14:28:15	0	0.0
13:43:30	0	0.0	13:58:30	0	0.0	14:13:30	0	0.0	14:28:30	0	0.0
13:43:45	0	0.0	13:58:45	0	0.0	14:13:45	0	0.0	14:28:45	0	0.0
13:44:00	0	0.0	13:59:00	0	0.0	14:14:00	0	0.0	14:29:00	0	0.0
13:44:15	0	0.0	13:59:15	0	0.0	14:14:15	0	0.0	14:29:15	0	0.0
13:44:30	0	0.0	13:59:30	0	0.0	14:14:30	0	0.0	14:29:30	0	0.0
13:44:45	0	0.0	13:59:45	0	0.0	14:14:45	0	0.0	14:29:45	0	0.0

The Average Opacity was Zero for All Times.

TABLE VII. VISIBLE EMISSIONS TEST RESULTS
NATIONAL INCINERATOR
DESTRUCTOR - RUN 3
BOAZ, ALABAMA
December 8, 2004

TIME	OPACITY PERCENT	6 MIN. AVG.	TIME	OPACITY PERCENT	6 MIN. AVG.	TIME	OPACITY PERCENT	6 MIN. AVG.	TIME	OPACITY PERCENT	6 MIN. AVG.
14:40:00	0		14:55:00	0	0.0	15:10:00	0	0.0	15:25:00	0	0.0
14:40:15	0		14:55:15	0	0.0	15:10:15	0	0.0	15:25:15	0	0.0
14:40:30	0		14:55:30	0	0.0	15:10:30	0	0.0	15:25:30	0	0.0
14:40:45	0		14:55:45	0	0.0	15:10:45	0	0.0	15:25:45	0	0.0
14:41:00	0		14:56:00	0	0.0	15:11:00	0	0.0	15:26:00	0	0.0
14:41:15	0		14:56:15	0	0.0	15:11:15	0	0.0	15:26:15	0	0.0
14:41:30	0		14:56:30	0	0.0	15:11:30	0	0.0	15:26:30	0	0.0
14:41:45	0		14:56:45	0	0.0	15:11:45	0	0.0	15:26:45	0	0.0
14:42:00	0		14:57:00	0	0.0	15:12:00	0	0.0	15:27:00	0	0.0
14:42:15	0		14:57:15	0	0.0	15:12:15	0	0.0	15:27:15	0	0.0
14:42:30	0		14:57:30	0	0.0	15:12:30	0	0.0	15:27:30	0	0.0
14:42:45	0		14:57:45	0	0.0	15:12:45	0	0.0	15:27:45	0	0.0
14:43:00	0		14:58:00	0	0.0	15:13:00	0	0.0	15:28:00	0	0.0
14:43:15	0		14:58:15	0	0.0	15:13:15	0	0.0	15:28:15	0	0.0
14:43:30	0		14:58:30	0	0.0	15:13:30	0	0.0	15:28:30	0	0.0
14:43:45	0		14:58:45	0	0.0	15:13:45	0	0.0	15:28:45	0	0.0
14:44:00	0		14:59:00	0	0.0	15:14:00	0	0.0	15:29:00	0	0.0
14:44:15	0		14:59:15	0	0.0	15:14:15	0	0.0	15:29:15	0	0.0
14:44:30	0		14:59:30	0	0.0	15:14:30	0	0.0	15:29:30	0	0.0
14:44:45	0		14:59:45	0	0.0	15:14:45	0	0.0	15:29:45	0	0.0
14:45:00	0		15:00:00	0	0.0	15:15:00	0	0.0	15:30:00	0	0.0
14:45:15	0		15:00:15	0	0.0	15:15:15	0	0.0	15:30:15	0	0.0
14:45:30	0		15:00:30	0	0.0	15:15:30	0	0.0	15:30:30	0	0.0
14:45:45	0	0.0	15:00:45	0	0.0	15:15:45	0	0.0	15:30:45	0	0.0
14:46:00	0	0.0	15:01:00	0	0.0	15:16:00	0	0.0	15:31:00	0	0.0
14:46:15	0	0.0	15:01:15	0	0.0	15:16:15	0	0.0	15:31:15	0	0.0
14:46:30	0	0.0	15:01:30	0	0.0	15:16:30	0	0.0	15:31:30	0	0.0
14:46:45	0	0.0	15:01:45	0	0.0	15:16:45	0	0.0	15:31:45	0	0.0
14:47:00	0	0.0	15:02:00	0	0.0	15:17:00	0	0.0	15:32:00	0	0.0
14:47:15	0	0.0	15:02:15	0	0.0	15:17:15	0	0.0	15:32:15	0	0.0
14:47:30	0	0.0	15:02:30	0	0.0	15:17:30	0	0.0	15:32:30	0	0.0
14:47:45	0	0.0	15:02:45	0	0.0	15:17:45	0	0.0	15:32:45	0	0.0
14:48:00	0	0.0	15:03:00	0	0.0	15:18:00	0	0.0	15:33:00	0	0.0
14:48:15	0	0.0	15:03:15	0	0.0	15:18:15	0	0.0	15:33:15	0	0.0
14:48:30	0	0.0	15:03:30	0	0.0	15:18:30	0	0.0	15:33:30	0	0.0
14:48:45	0	0.0	15:03:45	0	0.0	15:18:45	0	0.0	15:33:45	0	0.0
14:49:00	0	0.0	15:04:00	0	0.0	15:19:00	0	0.0	15:34:00	0	0.0
14:49:15	0	0.0	15:04:15	0	0.0	15:19:15	0	0.0	15:34:15	0	0.0
14:49:30	0	0.0	15:04:30	0	0.0	15:19:30	0	0.0	15:34:30	0	0.0
14:49:45	0	0.0	15:04:45	0	0.0	15:19:45	0	0.0	15:34:45	0	0.0
14:50:00	0	0.0	15:05:00	0	0.0	15:20:00	0	0.0	15:35:00	0	0.0
14:50:15	0	0.0	15:05:15	0	0.0	15:20:15	0	0.0	15:35:15	0	0.0
14:50:30	0	0.0	15:05:30	0	0.0	15:20:30	0	0.0	15:35:30	0	0.0
14:50:45	0	0.0	15:05:45	0	0.0	15:20:45	0	0.0	15:35:45	0	0.0
14:51:00	0	0.0	15:06:00	0	0.0	15:21:00	0	0.0	15:36:00	0	0.0
14:51:15	0	0.0	15:06:15	0	0.0	15:21:15	0	0.0	15:36:15	0	0.0
14:51:30	0	0.0	15:06:30	0	0.0	15:21:30	0	0.0	15:36:30	0	0.0
14:51:45	0	0.0	15:06:45	0	0.0	15:21:45	0	0.0	15:36:45	0	0.0
14:52:00	0	0.0	15:07:00	0	0.0	15:22:00	0	0.0	15:37:00	0	0.0
14:52:15	0	0.0	15:07:15	0	0.0	15:22:15	0	0.0	15:37:15	0	0.0
14:52:30	0	0.0	15:07:30	0	0.0	15:22:30	0	0.0	15:37:30	0	0.0
14:52:45	0	0.0	15:07:45	0	0.0	15:22:45	0	0.0	15:37:45	0	0.0
14:53:00	0	0.0	15:08:00	0	0.0	15:23:00	0	0.0	15:38:00	0	0.0
14:53:15	0	0.0	15:08:15	0	0.0	15:23:15	0	0.0	15:38:15	0	0.0
14:53:30	0	0.0	15:08:30	0	0.0	15:23:30	0	0.0	15:38:30	0	0.0
14:53:45	0	0.0	15:08:45	0	0.0	15:23:45	0	0.0	15:38:45	0	0.0
14:54:00	0	0.0	15:09:00	0	0.0	15:24:00	0	0.0	15:39:00	0	0.0
14:54:15	0	0.0	15:09:15	0	0.0	15:24:15	0	0.0	15:39:15	0	0.0
14:54:30	0	0.0	15:09:30	0	0.0	15:24:30	0	0.0	15:39:30	0	0.0
14:54:45	0	0.0	15:09:45	0	0.0	15:24:45	0	0.0	15:39:45	0	0.0

The Average Opacity was Zero for All Times.

4. PROCESS DESCRIPTION

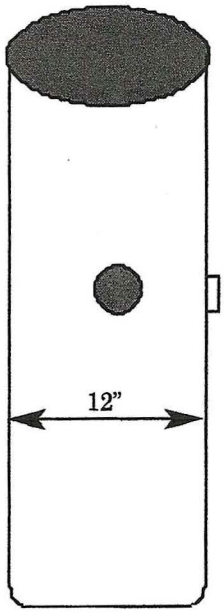
The process consisted of a pathological incinerator for the destruction of carcasses from agricultural poultry and livestock. The incinerator has both primary and secondary chambers with gas fired burners in each chamber.

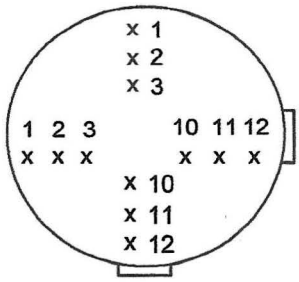
5. SAMPLE POINT LOCATION

The sample point locations and outlet duct schematic for National Incinerator, Incorporated, Destructor Incinerator, are presented in Figure 2.

Figure 2. Sample Point Locations

Stack Area = 0.7854 $ft.^2$





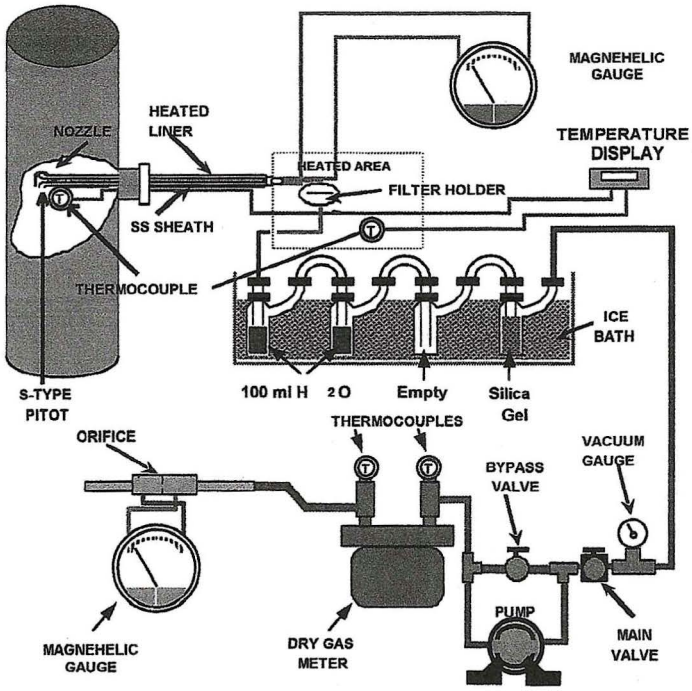
Point Number	Distance From Stack Wall (Inches)
1	11.50
2	11.20
3	10.58
4	9.88
5	9.00
6	7.73
7	4.27
8	3.00
9	2.12
10	1.42
11	0.80
12	0.50

6. PARTICULATE SAMPLING PROCEDURE (EPA Method 5)

The sampling procedure utilized is that specified in **40 CFR, Part 60, Appendix A, Method 5**. A brief description of this procedure is as follows:

The first impingers were partially filled with 100 milliliters of deionized water. The next impinger was left empty to act as a moisture trap. Preweighed 6 to 16 mesh indication silica gel was added to the last impinger. The sampling equipment manufactured by Lear Siegler (Model 100) or Sanders Engineering (Model 200) was assembled as shown in the attached drawing. The system was leak checked by plugging the inlet to the nozzle and pulling a 15 inch mercury vacuum. A leakage rate not in excess of 0.02 cubic feet per minute was considered acceptable.

Figure 3. Particulate Sampling Train



The inside dimensions of the stack liner were measured and recorded. The required number of sampling points was marked on the probe for easy visibility. The range of velocity pressure, the percent moisture, and the temperature of the effluent gases were determined. From this data, the correct nozzle size and the nomograph multiplication factor were determined.

The probe and hotbox heaters were adjusted to provide a temperature of 248 degrees Fahrenheit (± 25). Crushed ice was placed around the impingers. The nozzle was placed on the first traverse point with the tip pointing directly into the gas stream. The pump was started immediately and the flow was adjusted to isokinetic sampling conditions. After the required time interval had elapsed, the probe was repositioned to the next traverse point and isokinetic sampling was re-established. This was performed for each point until the run was completed. Readings were taken at each point and recorded on the field data sheet. At the conclusion of each run, the pump was turned off, final readings were recorded, and final system leak checks were performed.

6.1. Particulate Sample Recovery

Care was exercised in moving the collection train to the sample recovery area to minimize the loss of collected sample, or the gain of extraneous particulate matter. The volume of water in the impingers was measured, the silica gel impinger was weighed, and these data recorded on the field data sheet. The probe, nozzle, and all sample-exposed surfaces were washed with acetone into a clean sample container. A brush was used to loosen any adhering particulate matter and subsequent washings were placed into the container. The filter was carefully removed from the fritted glass support and placed in a clean separate sample container. A sample of the acetone used in the washing was saved for a blank laboratory analysis.

6.2. Particulate Analytical Procedures

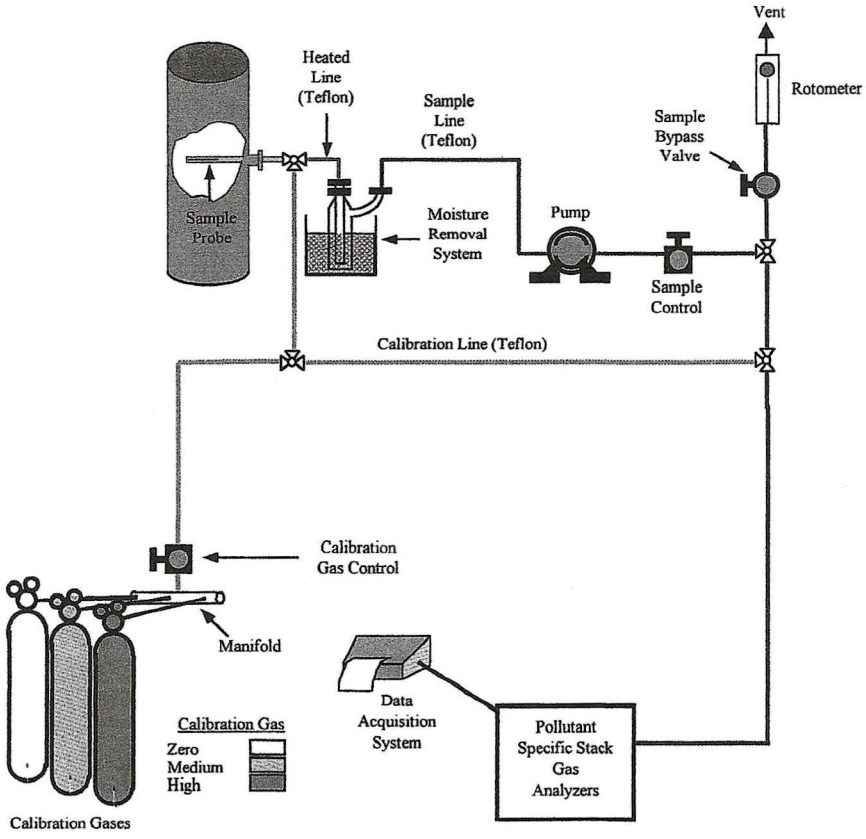
The filter and any loose particulate matter were transferred from the sample container to a clean, tared weighing dish. The filter was placed in a desiccator for at least 24 hours and then weighed to the nearest 0.1 milligram until a constant weight was obtained. The original weight of the filter was deducted, and the weight gain was recorded to the nearest 0.1 milligram.

The wash solution was transferred to a clean, tared beaker. The solution was evaporated to dryness, desiccated to a constant weight, and the weight gain was recorded to the nearest 0.1 milligram.

7. CARBON DIOXIDE AND CARBON MONOXIDE SAMPLING PROCEDURE (EPA Methods 3a and 10)

The sampling procedures utilized were those specified in **40 CFR, Part 60, Appendix A, Method 10** as modified by the governing regulatory agency. A brief description of these procedures is as follows:

Figure 4. Carbon Dioxide and Carbon Monoxide Sampling Train



The sample was removed from the stack through a stainless steel probe and passed through a three-way valve and condenser moisture removal system. Teflon line was used to transport the sample through a transport pump and a flow control valve. From this point the sample was routed into a manifold with a bypass valve, an analyzer sample flow control valve, and to an analyzer specific for the pollutant of interest. Each analyzer produces a voltage analogue output proportional to the concentration of pollutant present in the gas. A schematic of the sampling train is presented in the attached drawing.

Each instrument was allowed to warm up for at least 30 minutes before it was initially calibrated. Zero air was introduced directly to each instrument to establish a baseline and check the zero reading of the instrument. A high range calibration gas was introduced directly to each instrument. The instrument was

allowed to fully respond to the calibration gas. Each analyzer was adjusted, if needed, to the correct value. A linear calibration curve was calculated from this data and stored on computer. Next, a mid-range calibration gas was introduced directly to each instrument. The percent error between each measured value and the corresponding calibration value was calculated. If any of the readings indicated a difference of more than ±2 percent of the span the analyzer was recalibrated.

The high or mid gas and zero gas were then introduced to the system at the three-way valve before the condenser. The response value for each of these gases was recorded. If these measured values differed significantly from the calibration values the sampling system was checked and repaired until the system check met EPA specifications.

To begin sampling, the three-way valve was switched to allow the instrument to sample the stack gas. Twice the system response time was allowed to elapse before the data recorder was marked for the beginning of the run. After the required sampling time, the data recorder was marked for the end of the run. At the end of each run the three-way valve was switched to allow introduction of the zero and calibration gas to the system. From this data the calibration bias and drift was calculated. If the bias values were greater than ±5 percent of the span, or the drift was greater than three percent of the span, the run was invalidated. To begin the next run the three-way valve was switched to allow sampling of the stack gas and the next run was started. This procedure was repeated until all runs were complete.

7.1. Sample Recovery & Analysis

After the tests were completed the data was reduced to give an average concentration in parts per million for each run. This average concentration was then corrected for the analyzer zero and span bias and drift using the equation:

$$C\ gas = \frac{(C - Co)\ \ Cma}{(Cm - Co)}$$

Where:

C gas = Effluent gas Concentration, dry basis, ppm.

C = Average gas concentration indicated by the gas analyzer, dry basis, ppm.

Co = Average of Initial and final system calibration responses for the zero gas, ppm.

Cm = Average of initial and final calibration responses for the upscale calibration gas, ppm.

Cma = Actual concentration of the scale calibration gas, ppm.

8. QUALITY ASSURANCE

In order to ensure the accuracy of all the data collected in the field and at the laboratory, SEAS has instituted a comprehensive quality assurance and quality control program. New or repaired items requiring calibration are calibrated before their initial use in the field. Equipment with calibration that may change with use is calibrated before and after each use. When an item is found to be out of calibration the unit is either discarded or repaired and recalibrated before being returned to service. All equipment is periodically recalibrated in full regardless of the results of the regular inspections or its present calibration status. Calibrations are performed in a manner consistent with the EPA reference methods recommended in the "Quality Assurance Handbook for Air Pollution Measurement Systems" published by the US Environmental Protection Agency. To the maximum degree possible all calibrations are traceable to the National Institute of Standards & Technology (NIST).

In order to ensure that the testing will be performed in a timely manner without undue delays, SEAS sampling vans are equipped with duplicate sampling devices for almost every device needed to perform the test. If a particular device is broken or does not pass inspection a second device is available immediately at the site for use. Any device which appears to be outside calibration, or is in need of repair, is tagged in the field and repaired, calibrated, or discarded immediately upon return to the laboratory.

8.1. Calibrations

Certain pieces of equipment need to be calibrated before and after each test. Those items include pitot tubes, differential pressure gauges, dry gas meter, and nozzles used for the particulate testing. The following is a brief description of the calibration procedures for each of these important devices.

8.1.1. Pitot Tubes

All pitot tubes are the S-type as required by EPA Reference Method 2 (**40 CFR, Part 60, Appendix A, Method 2**). This method contains certain geometric standards for the construction of S-type pitot tubes. All of SEAS pitot tubes are constructed according to these standards. According to the EPA, any pitot tube constructed to these standards will have a coefficient of 0.84 $\pm$ 0.02. To ensure the exact value of SEAS pitot tubes all pitot tubes are initially calibrated in SEAS wind tunnel to determine the exact pitot coefficient. This coefficient should not change unless the pitot is physically damaged. Each pitot tube is checked before going to the field to make sure it meets the geometry as specified. Any pitot tube that fails to meet the specifications is not used in the test.

8.1.2. Differential Pressure Gauges

SEAS uses several different types of pressure gauges, including oil tube manometers, water tube manometers, magnehelics, and current output electronic load cells. Each of these devices are inspected before taken to the field and are inspected for leaks during each test. The magnehelics and load cells are tested against an incline manometer water gauge to ensure accuracy.

8.1.3. Orifice

The flow meter orifice is used to establish isokinetic sampling rates during the test. The orifice is calibrated with the dry gas meter at the same time under the same conditions. The orifice is calibrated over a wide range of flow rates and the arithmetic mean of the orifice calibration is used for sampling purposes. The orifice is recalibrated every time the gas meter is re-certified.

8.1.4. Dry Gas Meter

The dry gas meter is initially calibrated against a spirometer transfer standard. During the initial calibration, a five point calibration curve is made at a minimum of one-half inch water column orifice pressure up to four inches water column orifice pressure. After each test, the dry gas meter calibration factor is checked by performing three repetitions at a representative flow rate experienced during the test. If the final calibration does not agree with the initial calibration within five percent the calibration which yields the lowest volume of sample pulled is used in the calculations. The dry gas meter is repaired and a new five initial five point calibration is performed.

8.1.5. Temperature Sensors

All temperature sensors used in SEAS sampling program are either mercury in-glass thermometers or type K thermocouples. These thermocouples are physical devices which produce a voltage proportional to the temperature. The thermocouple reading device is calibrated before and after each series of tests to ensure accuracy of $\pm$ 2 percent. The calibration of the thermocouple is accomplished by a NIST traceable calibrated reference thermocouple potentiometer system.

8.1.6. Nozzles

The inside diameter of each nozzle is measured to the nearest 0.001 inches prior to its initial use. Upon arriving in the field each nozzle is again measured with a micrometer on three different points on the diameter to ensure its original measurement and that the nozzle is perfectly round. If the difference between the maximum and minimum diameters measured does not exceed 0.003 inches the nozzle is acceptable; otherwise, this nozzle is discarded and another is selected. At the end of each test the nozzles are again remeasured on three different points on the diameter to ensure that during the test the nozzle has not become dented or deformed.

APPENDIX H
IC Engine Emissions Data and Certifications

Pursuant to the authority vested in the California Air Resources Board by Health and Safety Code Division 26, Part 5, Chapters 1 and 2; and pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-19-095;

IT IS ORDERED AND RESOLVED: The engines and emission control systems produced by the manufacturer as described below are certified for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

Model Year	Engine Family	Combustion Cycle	Fuel Operation	Fuel Type(s)	Engine Operation
2024	RVPXL12.8CJB	Diesel	Dedicated	Diesel	Variable and Constant Speed

Emission Control Systems	Special Features
[1]: Electronic Direct Injection (DDI), Electronic Control Module (ECM), Oxidation Catalyst (OC), Turbocharger (TC), Charge Air Cooler (CAC), Selective Catalytic Reduction - Urea (SCR-U), Smoke Puff Limiter (SPL), Ammonia Oxidation Catalyst (AMOX), Exhaust Pressure Regulator (EPR), Exhaust Gas Recirculation (EGR), Periodic Trap Oxidizer (PTOX)	None

The certified engine models are attached.

The listed engine models comply with the following: 1) emission standard limits (STD) and Not-To-Exceed (NTE) limits, as applicable, for criteria pollutants non-methane hydrocarbons (NMHC), nitrogen oxides (NOx), carbon monoxide (CO), and particulate matter (PM), and for smoke opacity as demonstrated during the Acceleration (ACL) and Lugging (LUG) modes, and the peak value (PEAK) in either mode of the Smoke Opacity cycle, as set forth in 13 CCR 2423 and the applicable California test procedures for off-road compression-ignition engines, and 2) family emission limits (FEL) declared by the manufacturer as allowed by the applicable California test procedures, stated in units of gram per kilowatt-hour (g/kW-hr) and percent opacity (%opacity), respectively, except as noted, or designated as not applicable (*).

Applicable Standard		Criteria				Smoke Opacity		
		NMHC	NOx	CO	PM	ACL	LUG	PEAK
Tier 4 Final 130 ≤ kW ≤ 560	STD	0.19	0.40	3.5	0.02	*	*	*
	FEL	*	*	*	*	*	*	*
	NTE	0.28	0.60	4.4	0.03	*	*	*

BE IT FURTHER RESOLVED: Any declared FEL is the emission limit to which all engines must comply in lieu of the standard limit for certification purposes, subject to the restrictions of averaging, banking, or trading (ABT) programs allowed by the applicable California test procedures.

BE IT FURTHER RESOLVED: For the listed engine models, the manufacturer has submitted materials to demonstrate certification compliance with 13 CCR 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control warranty).

BE IT FURTHER RESOLVED: The listed engine models may only be installed in or on equipment such that engine operation is consistent with off-road compression-ignition engines as defined in 13 CCR 2421(a)(39).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

Executed on this 15th day of December 2023.

Robin U. Lang

Robin U. Lang, Chief
Emissions Certification and Compliance Division

ATTACHMENT: ENGINE MODELS

Family: RVPXL12.8CJB EO Number: U-R-014-0212 Date Applicable: 09/06/2024

					Peak Power			Peak Torque					
Model	Code	Trim	Config	Displacement	Power	Speed	Fueling	Torque	Speed	Fueling	ECS Num	GHG	Notes
-	-	-	-	L	hp	rpm	lb/hr	N-m	rpm	lb/hr	-	-	-
TAD1381VE	I	TC1	I6	12.8	382	1900	131	1965	1200	104	1	N/A	
TAD1382VE	II	TC1	I6	12.8	422	1900	145	2175	1200	115	1	N/A	
TAD1383VE	III	TC1	I6	12.8	463	1900	158	2380	1200	126	1	N/A	
TAD1384VE	IV	TC1	I6	12.8	503	1900	172	2595	1200	138	1	N/A	
TAD1385VE	V	TC1	I6	12.8	543	1700	244	2650	1200	141	1	N/A	
TAD1381VE	I	TC2	I6	12.8	382	1900	131	1965	1200	104	2	N/A	New model
TAD1382VE	II	TC2	I6	12.8	422	1900	145	2175	1200	115	2	N/A	New model
TAD1383VE	III	TC2	I6	12.8	463	1900	158	2380	1200	126	2	N/A	New model
TAD1384VE	IV	TC2	I6	12.8	503	1900	172	2595	1200	138	2	N/A	New model
TAD1385VE	V	TC2	I6	12.8	543	1700	244	2650	1200	141	2	N/A	New model

Pursuant to the authority vested in the California Air Resources Board by Health and Safety Code Division 26, Part 5, Chapters 1 and 2; and pursuant to the authority vested in the undersigned by Health and Safety Code Sections 39515 and 39516 and Executive Order G-19-095;

IT IS ORDERED AND RESOLVED: The engines and emission control systems produced by the manufacturer as described below are certified for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

Model Year	Engine Family	Combustion Cycle	Fuel Operation	Fuel Type(s)	Engine Operation
2025	SVPXL16.1CDD	Diesel	Dedicated	Diesel	Constant Speed Only

Emission Control Systems	Special Features
[1]: Electronic Direct Injection (DDI), Electronic Control Module (ECM), Turbocharger (TC), Charge Air Cooler (CAC), Selective Catalytic Reduction - Urea (SCR-U), Ammonia Oxidation Catalyst (AMOX)	None

The certified engine models are attached.

The listed engine models comply with the following: 1) emission standard limits (STD) and Not-To-Exceed (NTE) limits, as applicable, for criteria pollutants non-methane hydrocarbons (NMHC), nitrogen oxides (NOx), carbon monoxide (CO), and particulate matter (PM), and for smoke opacity as demonstrated during the Acceleration (ACL) and Lugging (LUG) modes, and the peak value (PEAK) in either mode of the Smoke Opacity cycle, as set forth in 13 CCR 2423 and the applicable California test procedures for off-road compression-ignition engines, and 2) family emission limits (FEL) declared by the manufacturer as allowed by the applicable California test procedures, stated in units of gram per kilowatt-hour (g/kW-hr) and percent opacity (%opacity), respectively, except as noted, or designated as not applicable (*).

Applicable Standard		Criteria				Smoke Opacity		
		NMHC	NOx	CO	PM	ACL	LUG	PEAK
Tier 4 Final 560 kW < GEN ≤ 900 kW	STD	0.19	0.67	3.5	0.03	*	*	*
	FEL	*	*	*	*	*	*	*
	NTE	0.28	1.00	4.4	0.04	*	*	*

BE IT FURTHER RESOLVED: Any declared FEL is the emission limit to which all engines must comply in lieu of the standard limit for certification purposes, subject to the restrictions of averaging, banking, or trading (ABT) programs allowed by the applicable California test procedures.

BE IT FURTHER RESOLVED: For the listed engine models, the manufacturer has submitted materials to demonstrate certification compliance with 13 CCR 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control warranty).

BE IT FURTHER RESOLVED: The listed engine models may only be installed in or on equipment such that engine operation is consistent with off-road compression-ignition engines as defined in 13 CCR 2421(a)(39).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

Executed on this 21st day of June 2024.

Robin U. Lang

Robin U. Lang, Chief
Emissions Certification and Compliance Division

ATTACHMENT: ENGINE MODELS

Family: SVPXL16.1CDD EO Number: U-R-014-0225 Date Applicable: 11/25/2024

					Peak Power			Peak Torque					
Model	Code	Trim	Config	Displacement	Power	Speed	Fueling	Torque	Speed	Fueling	ECS Num	GHG	Notes
-	-	-	-	L	hp	rpm	lb/hr	N-m	rpm	lb/hr	-	-	-
TWD1683GE	I	N/A	I6	16.1	867	1500	275	4118	1500	275	1	N/A	
TWD1683GE	II	N/A	I6	16.1	919	1800	297	3634	1800	297	1	N/A	
TWD1682GE	III	N/A	I6	16.1	838.14	1800	266	3319	1800	266	1	N/A	NEW

VOLVO PENTA

NO: 164101

EXHAUST EMISSION DECLARATION

The emission data in this declaration are measured according to the test procedures specified below and on one member engine of the engine type. Emission data may vary among production engines.

TECHNICAL SPECIFICATION

Engine type:	TWD1682GE
Module No:	138090514
Rated crankshaft power *):	625 kW
Rated speed:	1800 rpm

*) Stand-by power without fan acc. to ISO 3046.

TEST INFORMATION

Test conditions	40 CFR part 89
Test identification	30006820
Test date	Oct 22, 2024
Test cycle	D2: 5-mode US constant speed
Test fuel	Diesel US1065 ULS

EXHAUST EMISSIONS (weighted cycle)

CO (g/kWh)	0.056
HC (g/kWh)	0.011
NOx (g/kWh)	0.166
PM (g/kWh)	0.0209

EXHAUST EMISSIONS (per cycle mode)

Mode	#	1	2	3	4	5
Power	(kW)	624.7	468.5	312.3	156.2	62.5
NOx	(g/h)	126	79	41	18	53
HC	(g/h)	4	4	3	3	3
CO	(g/h)	33	23	14	11	16
CO_2	(kg/h)	391.177	293.01	206.188	114.898	61.182
NOx	(ppm)	24	16	12	7	28
HC	(ppm)	3	3	3	3	5
CO	(ppm)	11	9	7	7	14
CO_2	(%)	8.01	7	6.28	4.74	3.35
O_2	(%)	9.98	11.34	12.33	14.44	16.32

Gothenburg 2025-01-19

Kuthan Toydemir
Director-Emission Compliance
Quality, Environment, Product Compliance
AB Volvo Penta