



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT



MAR 01 2018

Mark Ferguson
Diamond Pet Food Processors of Ripon
942 South Stockton Ave
Ripon, CA 95366

Re: Notice of Preliminary Decision - Authority to Construct
Facility Number: N-8234
Project Number: N-1173791

Dear Mr. Ferguson:

Enclosed for your review and comment is the District's analysis of Diamond Pet Food Processors of Ripon's application for an Authority to Construct to remove the existing cold plasma injection and odorant injection systems and replace them with three 6.0 MMBtu/hr (each) Durr Systems Inc.'s Ecopure RL-60 regenerative thermal oxidizers (RTO) and associated duct work and control equipment and make changes to the existing permit requirements to match "as-built" plant configuration for the units under permits N-8234-4, '-5 and '-6, and to establish combined annual heat input for the boilers under permits N-8234-10 and '-11, at 942 South Stockton Avenue, Ripon, California.

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

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Jag Kahlon of Permit Services at (209) 557-6452.

Sincerely,


for Arnaud Marjollet
Director of Permit Services

AM:JK

Enclosures

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

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

Installation of Regenerative Thermal Oxidizers for Pet Food Manufacturing Operation

Facility Name: Diamond Pet Food Processors of Ripon Date: February 23, 2018
Mailing Address: 942 S Stockton Ave Engineer: Jag Kahlon
Ripon, CA 95366 Lead Engineer: Nick Peirce
Contact Person: Randy Frazier, Consultant
Telephone: (925) 605-8471
Fax: (925) 560-1042
E-Mail: rfrazier@yorkeengr.com
Application #(s): N-8234-4-10, 5-10, 6-10, '-10-1 and '-11-1
Project #: N-1173791
Deemed Complete: December 27, 2017

I. Proposal

N-8234-4-10: Pet food processing line #1

N-8234-5-10: Pet food processing line #2

N-8234-6-10: Pet food processing line #3

Diamond Pet Food Processors of Ripon (referred hereinafter as "Diamond") is requesting Authority to Construct (ATC) permits to install three 6.0 MMBtu/hr (each) natural gas-fired Durr Systems Inc.'s Ecopure RL-60 regenerative thermal oxidizers (RTOs) and associated duct work and control equipment. These RTO systems will be used to abate pet food odors and reduce Volatile Organic Compounds (VOC) emissions released through wet cyclone, dryer, dryer-cooler, and vertical cooler exhaust stacks under the existing three identical pet food manufacturing lines.

Currently, Diamond uses cold plasma injection and odorant injection systems, which are not as effective as they originally thought to be in reducing pet food odors at this site. Diamond has proposed to permanently remove and replace these systems with the above mentioned RTO systems.

In addition, Diamond has proposed to make some changes to the permit requirements to match "as-built" configuration of this plant (refer to **Appendix F**). These changes do not result in an increase in existing emissions.

Note that ATC permits N-8234-4-7, '-4-8, '-5-7, '-5-8, '-6-7 and '-6-8 were implemented (see a copy of these permits in **Appendix C**); therefore, these permits will be used as basis in evaluating this project.

N-8234-10-1: 14.65 MMBtu/hr natural gas-fired boiler (Boiler #1)

N-8234-11-1: 14.65 MMBtu/hr natural gas-fired boiler (Boiler #2)

The proposed installation of RTO systems (as explained above) results in increase in potential emissions of various criteria pollutants including NO_x, SO_x, PM₁₀, and CO due to use of natural gas fuel in the RTO systems. To minimize impact of the emissions increase, Diamond has proposed to reduce the existing fuel usage rate to both boilers by establishing a combined heat input rate of 128,334 MMBtu/year for both boilers.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (2/18/16)
Rule 2410	Prevention of Significant Deterioration (6/16/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4002	National 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 – Emissions Rate (12/17/92)
Rule 4301	Fuel Burning Equipment (12/17/92)
Rule 4304	Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters (10/19/95)
Rule 4305	Boilers, Steam Generators, and Process Heaters – Phase 2 (8/21/03)
Rule 4306	Boilers, Steam Generators, and Process Heaters – Phase 3 (10/16/08)
Rule 4309	Dryer, Dehydrators, and Ovens (12/15/05)
Rule 4320	Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr (10/16/08)
Rule 4801	Sulfur Compounds (12/17/92)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice
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 920 South Stockton Ave, Ripon, California. 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

This facility has several emission units including material receiving and storage operations (silos/bins), hammermills, screens/scalpers, elevators, conditioners, dryers, coolers, boilers, mechanical and pneumatic material conveying systems and packing machines.

Diamond receives raw materials such as whole corn, beet pulp, chicken meal, cracked barley and peas via rail cars or trucks. The material is screened and stored in appropriate silos/bins located outside of the main production building. On an as needed basis, an appropriate amount of the stored materials is dispensed from the silos/bins into a pre-grinding hammermill system or directly to enclosed drag screw conveyors. The pre-ground material and the materials in the enclosed drag screw conveyors are then transferred to enclosed belt conveyors, which transfers the material to the bins in the mill tower via enclosed bucket elevators.

The material in the mill tower is then dispensed to associated scale bins. From the scale bins, the material is dispensed into surge bins. The material in the surge bins is then dispensed into an enclosed mixer, and then either transferred into an enclosed bucket elevator feeding an enclosed transfer auger or into a truck loadout spout. The enclosed transfer auger feeds three surge bins, each associated with one of the three identical hammermill systems. Each hammermill system consists of a feeding system, hammermill unit, plenum, enclosed screw conveyor, vibratory screener, and a pneumatic transfer system (bin vent filter with static socks) for transferring "overs" from the screener to the extruder surge bin, which feeds the extruder of each pet food processing line.

Frozen meat (beef, chicken and lamb) is delivered to the facility via trucks. The meat is stored in a refrigerated building.

There are currently three separate identical pet food processing lines. Each of these processing lines is capable of manufacturing various pet food kibble based on the production needs and given recipes. The process starts with a specific pet food kibble recipe. Depending on the recipe, an appropriate amount of each material is dispensed from metering bins, mixed, and transferred into steam conditioners. Each recipe may use frozen meat (beef, chicken, lamb, or fish), which is delivered to the facility via trucks, and stored in a refrigerated building. As part of the recipe, ground meat is injected into the steam conditioners, and thoroughly pasteurized/steam conditioned to release starches, which act as binding agents for the material. The material is then extruded to form pet food kibble. The freshly extruded moist kibble is transferred via vacuum takeaway tubing (vacuum created by a cyclone) to the conveyor belt that serves the dryer and dryer-cooler in each processing line. In the dryer and dryer-cooler the kibble is dried using hot air from natural gas combustion and then cooled in the dryer-cooler. The dried kibble is then coated with chicken fat and canola oil to bind other nutrients such as dry digest and probiotics. The coated kibbles are then cooled further in vertical coolers, then packaged and stored in a warehouse or shipped directly to the customers.

Each pet food manufacturing line has four stacks – one for the extruder (wet) cyclone also known as hot kibble conveying cyclone (HT-68), dryer cyclone (MAC HE60), dryer cooler cyclone (MAC) and vertical cooler cyclone (MAC HE-52). Almost all odorous processes are discharged through these stacks. To reduce pet food odors, Diamond uses cold plasma injection system¹ for each stack, and intermittently uses odorant injection system(s) that injects odor masking agents into the extruder, dryer and dryer cooler cyclone exhausts only on an as needed basis when atmospheric conditions warrants the use of such odor masking agents.

¹Cold plasma injection system uses small amount (i.e., about 10% of the stream being treated) clean indoor building air and dissociate that air under high electromagnetic field to form a highly reactive charged particles gas, which is injected into odorous laden stream prior to its discharge into the atmosphere.

Under this project, Diamond has proposed to remove the cold plasma injection systems and odorant injection systems, and duct all 12 stacks (3 lines x 4 stacks/line) into a main duct from where the mixed exhaust will be diverted into three ducts each connected to the proposed RTO system, which will serve to reduce both pet food odor and VOC emissions.

V. Equipment Listing

Pre-Project Equipment Description:

N-8234-4-8: PET FOOD PROCESSING LINE #1

N-8234-5-8: PET FOOD PROCESSING LINE #2

N-8234-6-8: PET FOOD PROCESSING LINE #3

N-8234-10-0: 14.65 MMBTU/HR CLEAVER BROOKS CBLE 700-350, 150# BOILER EQUIPPED WITH CLEAVER BROOKS CB-350 LOW NOX BURNER VENTED TO C&C PANASIA MODEL PANOX CP-12 SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM (BOILER #1)

N-8234-11-0: 14.65 MMBTU/HR CLEAVER BROOKS CBLE 700-350, 150# BOILER EQUIPPED WITH CLEAVER BROOKS CB-350 LOW NOX BURNER VENTED TO C&C PANASIA MODEL PANOX CP-12 SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM (BOILER #2)

Proposed Modification:

Diamond has proposed to remove the existing cold plasma injection and odorant injection systems and replace them with three 6.0 MMBtu/hr (each) RTOs and associated duct work and control equipment, and make changes to the existing permit requirements to match "as-built" plant configuration.

N-8234-4-10: MODIFICATION OF PET FOOD PROCESSING LINE #1: INSTALL THREE 6.0 MMBTU/HR (EACH) DURR SYSTEMS, INC. ECOPURE RL-60 REGENERATIVE THERMAL OXIDIZERS (RTO) AND ASSOCIATED DUCT WORK TO TREAT LADEN AIR DISCHARGE FROM WET CYCLONE, DRYER, DRYER-COOLER AND VERTICAL COOLER STACKS UNDER PERMITS N-8234-4, '-5 AND '-6, REMOVE COLD PLASMA INJECTION SYSTEMS AND ODORANT INJECTION SYSTEMS, AND MAKE CHANGES TO THE EXISTING REQUIREMENTS TO MATCH "AS-BUILT" PLANT CONFIGURATION

N-8234-5-10: MODIFICATION OF PET FOOD PROCESSING LINE #2: INSTALL THREE 6.0 MMBTU/HR (EACH) DURR SYSTEMS, INC. ECOPURE RL-60 REGENERATIVE THERMAL OXIDIZERS (RTO) AND ASSOCIATED DUCT WORK TO TREAT LADEN AIR DISCHARGE FROM WET CYCLONE, DRYER, DRYER-COOLER AND VERTICAL COOLER STACKS UNDER PERMITS N-8234-4, '-5 AND '-6, REMOVE COLD PLASMA INJECTION SYSTEMS AND ODORANT INJECTION SYSTEMS, AND MAKE CHANGES TO THE EXISTING REQUIREMENTS TO MATCH "AS-BUILT" PLANT CONFIGURATION

N-8234-6-10: MODIFICATION OF PET FOOD PROCESSING LINE #3: INSTALL THREE 6.0 MMBTU/HR (EACH) DURR SYSTEMS, INC. ECOPURE RL-60 REGENERATIVE THERMAL OXIDIZERS (RTO) AND ASSOCIATED DUCT WORK TO TREAT LADEN AIR DISCHARGE FROM WET CYCLONE, DRYER, DRYER-COOLER AND VERTICAL COOLER STACKS UNDER PERMITS N-8234-4, '-5 AND '-6, REMOVE COLD PLASMA INJECTION SYSTEMS AND ODORANT INJECTION SYSTEMS, AND MAKE CHANGES TO THE EXISTING REQUIREMENTS TO MATCH "AS-BUILT" PLANT CONFIGURATION

Diamond has proposed to establish combined annual heat input rate for both boilers.

N-8234-10-1: MODIFICATION OF 14.65 MMBTU/HR CLEAVER BROOKS CBLE 700-350, 150# BOILER EQUIPPED WITH CLEAVER BROOKS CB-350 LOW NOX BURNER VENTED TO C&C PANASIA MODEL PANOX CP-12 SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM (BOILER #1): TO ESTABLISH COMBINED ANNUAL HEAT INPUT RATE FOR BOILERS (N-8234-10 AND N-8234-11)

N-8234-11-1: MODIFICATION OF 14.65 MMBTU/HR CLEAVER BROOKS CBLE 700-350, 150# BOILER EQUIPPED WITH CLEAVER BROOKS CB-350 LOW NOX BURNER VENTED TO C&C PANASIA MODEL PANOX CP-12 SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM (BOILER #2): TO ESTABLISH COMBINED ANNUAL HEAT INPUT RATE FOR BOILERS (N-8234-10 AND N-8234-11)

Post Project Equipment Description:

N-8234-4-10: PET FOOD PROCESSING LINE #1

N-8234-5-10: PET FOOD PROCESSING LINE #2

N-8234-6-10: PET FOOD PROCESSING LINE #3

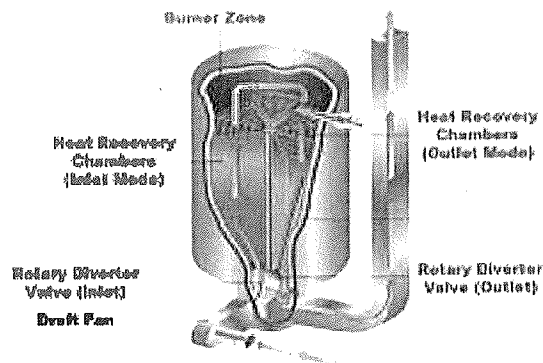
N-8234-10-1: 14.65 MMBTU/HR CLEAVER BROOKS CBLE 700-350, 150# BOILER EQUIPPED WITH CLEAVER BROOKS CB-350 LOW NOX BURNER VENTED TO C&C PANASIA MODEL PANOX CP-12 SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM (BOILER #1)

N-8234-11-1: 14.65 MMBTU/HR CLEAVER BROOKS CBLE 700-350, 150# BOILER EQUIPPED WITH CLEAVER BROOKS CB-350 LOW NOX BURNER VENTED TO C&C PANASIA MODEL PANOX CP-12 SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM (BOILER #2)

VI. Emission Control Technology Evaluation

Each of the proposed RTO systems is a unique single-vessel RTO capable of destroying at least 95% of VOC emissions (by wt.). Pollutants are oxidized at high temperatures (1,620-1,650°F), creating CO₂ and H₂O. Up to 95% of the thermal energy required for the oxidation process is recovered internally to minimize the need for natural gas fuel.

Each RTO has twelve ceramic heat-exchange beds that are arranged radially over a proprietary diverter valve. Incoming contaminated air enters the media bed through the bottom of the unit, and is drawn upwards through five hot ceramic beds which have been previously pre-heated. The air is heated as it rises, and enters 6" ceramic lined combustion chamber at the top where additional energy is added by a burner to complete the oxidation process. Hot clean exhaust is then drawn downwards through the five adjacent cooler ceramic beds to transfer the thermal energy to the ceramic beds before being exhausted into the atmosphere. The two "spare" beds serve to prevent cross contamination between the inlet and outlet sections and to ensure high destruction efficiency of the unit.



More information on the proposed model and a video on how it works can be found at the following link: <http://www.durr.com/product-overview/environmental-and-energy-systems-products/exhaust-air-purification/thermal-oxidation/ecopurer-rl/>

VII. General Calculations

A. Assumptions

- Assumptions will be stated as they are made during the evaluation.
- To streamline emission calculations, PM_{2.5} emissions are assumed to be equal to PM₁₀ emissions. Only if needed, to determine if a project is a Federal major modification for PM_{2.5}, PM_{2.5} emission calculations be performed.

B. Emission Factors

1. Pre-Project Emission Factors (EF1)

N-8234-4-8, '5-8 and '6-8:

Natural gas combustion in dryer:

Pollutant	EF1	Source
NO _x	2.1 ppmvd @ 19% O ₂ (0.024 lb/MMBtu)	N-8234-4, '5 and '6
SO _x	0.00285 lb/MMBtu	
*PM ₁₀	--	See table footnote
CO	16.5 ppmvd @ 19% O ₂ (0.112 lb/MMBtu)	N-8234-4, '5 and '6
*VOC	--	See table footnote

*PM₁₀ and VOC emissions are counted in the process emissions (see below).

Process emissions:

There are several processes under each permit. Potential emissions from each activity are detailed in a worksheet prepared under project N-1130470. Per permit N-8234-4-8, 5-8, 6-8, process emissions from each permit unit are:

EF1 = 0.0612 lb-PM₁₀/ton of finished material
= 0.047 lb-VOC/ton of finished material

Note that both VOC and PM₁₀ emission factors include emissions from various processes under each permit and emissions from direct-fired dryer fueled on natural gas.

Cold plasma injection system:

Each permit N-8234-4-8, 5-8 & 6-8 limits total NO_x emissions to 0.529 lb/hour. These emissions include NO_x emissions from separate cold plasma injection systems on wet cyclone, dryer cyclone, cooler cyclone and the vertical cooler cyclone. These emissions also include NO_x emissions from natural gas combustion in the dryer.

Odorant injection system:

Per application review prepared under project N-1171487,

EF1 = 1.0 lb-VOC/lb-odorant

N-8234-10-0 and '-11-0:

Pollutant	EF1	Source
NO _x	9 ppmvd @ 3% O ₂ (0.011 lb/MMBtu)	N-8234-10-0, '-11-0
SO _x	0.00285 lb/MMBtu	
PM ₁₀	0.003 lb/MMBtu	EF updated per guidance in FYI-328 (6/12/14) and consistent with District's Policy APR-1110 (4/29/04)
CO	50 ppmvd @ 3% O ₂ (0.037 lb/MMBtu)	N-8234-10-0, '-11-0
VOC	0.004 lb/MMBtu	
NH ₃	10.0 ppmvd @ 3% O ₂ (0.0045 lb/MMBtu)	

2. Post-Project Emission factors (EF2)

N-8234-4-10, '-5-10, '-6-10:

Natural gas combustion in dryer:

Pollutant	EF2	Source
NO _x	2.1 ppmvd @ 19% O ₂ (0.024 lb/MMBtu)	N-8234-4, '-5 and '-6
SO _x	0.00285 lb/MMBtu	District Policy APR-1720
*PM ₁₀	--	See table footnote
CO	16.5 ppmvd @ 19% O ₂ (0.112 lb/MMBtu)	N-8234-4, '-5 and '-6
*VOC	--	See table footnote

*PM₁₀ and VOC emissions are counted in the process emissions (see below).

Process emissions:

EF2 = 0.0612 lb-PM₁₀/ton of finished material

Per applicant, each RTO system is expected to reduce at least 95% (by wt.) of VOC emissions. Thus, the EF would be 0.0024 lb-VOC/ton of finished material [(0.047 lb-VOC/ton of finished material) x (1-0.95)] using the pre-project EF and the proposed control efficiency. However, Diamond states that they processes several pet food recipes, and the VOC emissions may vary from one recipe to another, and to have a conservative margin of compliance, the EF should be established at 0.005 lb-VOC/ton of finished material. In addition, Diamond will demonstrate at least 95% reduction in VOC emissions. Therefore,

EF2 = 0.005 lb-VOC/ton of finished material

Note that both VOC and PM₁₀ emission factor include emissions from various processes under each permit and emissions from direct-fired dryer fueled on natural gas. These emission factors do not include emissions from natural gas combustion in the RTO systems.

RTO emissions:

Pollutant	EF2		Source
NO _x	Startup	0.883 lb/MMBtu	Durr Systems Inc., manufacturer guarantee
	Steady state	0.072 lb/MMBtu	
SO _x	0.00285 lb/MMBtu		District Policy APR-1720 (12/20/01)
PM ₁₀	0.0076 lb/MMBtu		EPA's AP-42 Table 1.4-2 (7/98)
CO	Startup	1.41 lb/MMBtu	Durr Systems Inc., manufacturer guarantee
	Steady state	1.2 lb/MMBtu	
VOC	0.0055 lb/MMBtu		EPA's AP-42 Table 1.4-2 (7/98)

N-8234-10-0 and '-11-0:

EF2 will be same as EF1 for each unit.

C. Calculations

1. Pre-Project Potential to Emit (PE1)

N-8238-4-8, 5-8, 6-8:

Natural gas combustion in dryer:

PE1 (lb/hr) = EF2 (lb/MMBtu) x 10 MMBtu/hr

PE1 (lb/day) = EF2 (lb/MMBtu) x 10 MMBtu/hr x 24 hr/day

PE1 (lb/yr) = EF2 (lb/MMBtu) x 10 MMBtu/hr x 8,760 hr/yr

Pollutant	EF1	PE1 (lb/hr)	PE1 (lb/day)	PE1 (lb/yr)
NO _x	0.024 lb/MMBtu	0.24	5.8	2,102
SO _x	0.00285 lb/MMBtu	0.029	0.7	250
*PM ₁₀	--	--	--	--
CO	0.112 lb/MMBtu	1.12	26.9	9,811
*VOC	--	--	--	--

*PM₁₀ and VOC emissions are counted in the process emissions (see below).

Process emissions:

Pet food processing rate is limited to 780 tons/day/line and 780 tons/day for all three pet food manufacturing lines. Thus,

$$\begin{aligned}
 \text{PE1} &= 0.0612 \text{ lb-PM}_{10}/\text{ton of finished material} \times 780 \text{ tons/day} \\
 &= 47.7 \text{ lb-PM}_{10}/\text{day} (17,411 \text{ lb-PM}_{10}/\text{yr}) \text{ for each line as well as all three lines} \\
 &= 0.047 \text{ lb-VOC/ton of finished material} \times 780 \text{ tons/day} \\
 &= 36.7 \text{ lb-VOC/day} (13,396 \text{ lb-VOC/yr}) \text{ for each line as well as all three lines}
 \end{aligned}$$

Cold plasma injection system:

Each permit N-8234-4-8, 5-8 & 6-8 limits total NO_x emissions to 0.529 lb/hr. These emissions include NO_x emissions from separate cold plasma injection systems on wet cyclone, dryer cyclone, cooler cyclone and the vertical cooler cyclone, as well as, the NO_x emissions from natural gas combustion in the dryer. Therefore, the total NO_x emissions from each permit unit are:

$$\begin{aligned}
 \text{PE1} &= 0.529 \text{ lb-NO}_x/\text{hr} \\
 &= 0.529 \text{ lb-NO}_x/\text{hr} \times 24 \text{ hr/day} = 12.7 \text{ lb-NO}_x/\text{day} \\
 &= 0.529 \text{ lb-NO}_x/\text{hr} \times 8,760 \text{ hr/yr} = 4,634 \text{ lb-NO}_x/\text{yr}
 \end{aligned}$$

Odorant injection system:

Permit N-8234-4-8, 5-8 & 6-8 limits odorant injection rate to 22.5 lb/day and 5,475 lb/year for each, as well as, all three pet food manufacturing lines. Therefore,

$$\begin{aligned}
 \text{PE1} &= 1 \text{ lb-VOC/lb-odorant} \times 22.5 \text{ lb/day} = 22.5 \text{ lb-VOC/day} \\
 &= 1 \text{ lb-VOC/lb-odorant} \times 5,475 \text{ lb/yr} = 5,475 \text{ lb-VOC/yr}
 \end{aligned}$$

N-8234-10-0 and '-11-0:

$$\begin{aligned}
 \text{PE1 (lb/hr)} &= \text{EF1 (lb/MMBtu)} \times 14.65 \text{ MMBtu/hr} \\
 \text{PE1 (lb/day)} &= \text{EF1 (lb/MMBtu)} \times 14.65 \text{ MMBtu/hr} \times 24 \text{ hr/day} \\
 \text{PE1 (lb/yr)} &= \text{EF1 (lb/MMBtu)} \times 14.65 \text{ MMBtu/hr} \times 8,760 \text{ hr/yr}
 \end{aligned}$$

Pollutant	EF1 (lb/MMBtu)	PE1 (lb/hr)	PE1 (lb/day)	PE1 (lb/yr)
NO _x	0.011	0.161	3.9	1,412
SO _x	0.00285	0.042	1.0	366
PM ₁₀	0.003	0.044	1.1	385
CO	0.037	0.542	13.0	4,748
VOC	0.004	0.059	1.4	513
NH ₃	0.0045	0.066	1.6	578

2. Post Project Potential to Emit (PE2)

N-8234-4-10, '5-10, and '6-10:

Natural gas combustion in dryer:

PE2 (lb/hr) = EF2 (lb/MMBtu) x 10 MMBtu/hr

PE2 (lb/day) = EF2 (lb/MMBtu) x 10 MMBtu/hr x 24 hr/day

PE2 (lb/yr) = EF2 (lb/MMBtu) x 10 MMBtu/hr x 8,760 hr/yr

Pollutant	EF2	PE2 (lb/hr)	PE2 (lb/day)	PE2 (lb/yr)
NO _x	0.024 lb/MMBtu	0.24	5.8	2,102
SO _x	0.00285 lb/MMBtu	0.029	0.7	250
*PM ₁₀	--	--	--	--
CO	0.112 lb/MMBtu	1.12	26.9	9,811
*VOC	--	--	--	--

*PM₁₀ and VOC emissions are counted in the process emissions (see below).

Process emissions:

Diamond has proposed to retain the existing process rates at 780 tons/day/line and 780 tons/day for all three lines. Therefore,

PE2 = 0.0612 lb-PM₁₀/ton of finished material x 780 tons/day
= 47.7 lb-PM₁₀/day (17,411 lb-PM₁₀/yr) for each line as well as all three lines

PE2 = 0.005 lb-VOC/ton of finished material x 780 tons/day
= 3.9 lb-VOC/day (1,424 lb-VOC/yr) for each line as well as all three lines

RTO emissions:

The burner in each RTO is rated at 6 MMBtu/hr. This burner will be operated during startup to heat up the equipment; once the chamber temperature reaches its set point temperature (1620-1,650 °F), this burner will shut off, and natural gas injection (NGI) valve will open and will stay open during the steady state operation.

Per Durr Systems, Inc., during NGI, the maximum heat input rate to each RTO would be 4.76 MMBtu/hr². Note that use of NGI system (instead of burner combustion) will help reduce the formation of various pollutants.

² 14.28 MMBtu/hr/3 RTOs = 4.76 MMBtu/hr

Diamond has proposed to establish at least 5 hours/day and 35 hours/year of startup time for each RTO during which burner will be operating. Using this information, the potential emissions from each RTO are estimated using following equations:

NO_x, SO_x, PM₁₀, CO and VOC:

$$\text{PE2 (lb/hr)} = \text{EF2 lb/MMBtu} \times 6 \text{ MMBtu/hr}$$

NO_x:

$$\text{PE2 (lb/day)}_{\text{Startup}} = \text{EF2 lb/MMBtu} \times 6 \text{ MMBtu/hr} \times 5 \text{ hr/day}$$

Diamond has proposed to use heat input rate of 6 MMBtu/hr to conservatively estimate the daily emissions. Therefore,

$$\text{PE2 (lb/day)}_{\text{Steady state}} = \text{EF2 lb/MMBtu} \times 6 \text{ MMBtu/hr} \times (24 \text{ hr/day} - 5 \text{ hr/day})$$

$$\text{PE2 (lb/yr)}_{\text{Startup}} = \text{EF2 lb/MMBtu (startup)} \times 6 \text{ MMBtu/hr} \times 35 \text{ hr/yr}$$

$$\text{PE2 (lb/yr)}_{\text{Steady state}} = \text{EF2 lb/MMBtu (steady state)} \times 4.76 \text{ MMBtu/hr} \times (8,677 \text{ hr/yr})^3$$

SO_x, PM₁₀, CO and VOC:

$$\text{PE2 (lb/day)} = \text{EF2 lb/MMBtu} \times 6 \text{ MMBtu/hr} \times 24 \text{ hr/day}$$

$$\text{PE2 (lb/yr)} = \text{EF2 lb/MMBtu} \times (6 \text{ MMBtu/hr} \times 35 \text{ hr/day} + 4.76 \text{ MMBtu/hr} \times 8,677 \text{ hr/yr})$$

PE2 (lb/yr) for all three RTOs:

$$\text{PE2 (lb/yr)} = \text{PE2 (lb/yr)} \times 3 \text{ RTOs}$$

Pollutant	EF2		PE2 (lb/hr) Max.	PE2 (lb/day)	PE2 (lb/yr)	PE2 (lb/yr) for all three RTOs
NO _x	Startup	0.883 lb/MMBtu	5.298	26.5	185	--
	Steady state	0.072 lb/MMBtu	--	8.2	2,974	--
	Total:		--	34.7	3,159	9,477
SO _x	0.00285 lb/MMBtu		0.017	0.4	118	354
PM ₁₀	0.0076 lb/MMBtu		0.046	1.1	315	945
CO	Startup	1.41 lb/MMBtu	8.460	42.3	296	--
	Steady state	1.2 lb/MMBtu	--	136.8	49,563	--
	Total:		--	179.1	49,859	149,577
VOC	0.0055 lb/MMBtu		0.033	0.8	228	684

N-8234-10-1 and '-11-1:

Diamond has proposed to limit fuel usage in the boiler by establishing a combined heat input rate of 128,334 MMBtu/yr for both boilers. Therefore,

$$\text{PE2 (lb/hr)} = \text{EF1 (lb/MMBtu)} \times 14.65 \text{ MMBtu/hr}$$

³ 8760 hr/yr – 48 hr/yr (2 holidays/yr) – 35 hr/yr (startup) = 8,677 hr/yr

$$\text{PE2 (lb/day)} = \text{EF2 (lb/MMBtu)} \times 14.65 \text{ MMBtu/hr} \times 24 \text{ hr/day}$$

$$\text{PE2 (lb/yr)} = \text{EF2 (lb/MMBtu)} \times 128,334 \text{ MMBtu/yr}$$

Pollutant	EF2 (lb/MMBtu)	PE2 (lb/hr)	PE2 (lb/day)	PE2 (lb/yr) for both boilers
NO _x	0.011	0.161	3.9	1,412
SO _x	0.00285	0.042	1.0	366
PM ₁₀	0.003	0.044	1.1	385
CO	0.037	0.542	13.0	4,748
VOC	0.004	0.059	1.4	513
NH ₃	0.0045	0.066	1.6	578

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. Except for the permit units under this project, the potential emissions for each permit unit are taken from the application review under project N-1171487.

SSPE1 (lb/yr)					
Permit #	NO _x	SO _x	PM ₁₀	CO	VOC
N-8234-1-2	--	--	570	--	--
N-8234-2-3	--	--	1,010	--	--
N-8234-3-2	--	--	6,388	--	--
N-8234-4-8	4,634	250	17,411	9,811	18,871
N-8234-5-8	4,634	250		9,811	
N-8234-6-8	4,634	250		9,811	
N-8234-7-1, '8-1, '9-1 and '14-0	--	--	657	--	--
N-8234-10-0	1,412	366	385	4,748	513
N-8234-11-0	1,412	366	385	4,748	513
N-8234-12-0	359	0	15	107	45
ERC	0	0	0	0	0
SSPE1	17,085	1,482	26,821	39,036	19,942

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

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

SSPE2 (lb/yr)					
Permit #	NO _x	SO _x	PM ₁₀	CO	VOC
N-8234-1-2	--	--	570	--	--
N-8234-2-3	--	--	1,010	--	--
N-8234-3-2	--	--	6,388	--	--
N-8234-4-10	2,102	250	17,411	9,811	1,424
N-8234-5-10	2,102	250		9,811	
N-8234-6-10	2,102	250		9,811	
Three RTOs serving N-8234-4, '-5, and '-6	9,477	354	945	149,577	684
N-8234-7-1, '-8-1, '-9-1 and '-14-0	--	--	657	--	--
N-8234-10-1	1,412	366	385	4,748	513
N-8234-11-1					
N-8234-12-0	359	0	15	107	45
ERC	0	0	0	0	0
SSPE2	17,554	1,470	27,381	183,865	2,666

5. Major Source Determination

Rule 2201 Major Source Determination:

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

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

Rule 2201 Major Source Determination (lb/year)						
Category	NO _x	SO _x	PM ₁₀	*PM _{2.5}	CO	VOC
SSPE1	17,085	1,482	26,821	26,821	39,036	19,942
SSPE2	17,554	1,470	27,381	27,381	183,865	2,666
Major Source Threshold	20,000	140,000	140,000	140,000	200,000	20,000
Major Source?	No	No	No	No	No	No

*PM_{2.5} 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 Major Source Determination:

The facility or the equipment evaluated under this project is listed as one of the categories specified in 40 CFR 52.21 (b)(1)(iii). Therefore the PSD Major Source threshold is 100 tpy for any regulated NSR pollutant.

PSD Major Source Determination (tons/year)						
Category	NO ₂	VOC	SO ₂	CO	PM	PM ₁₀
Estimated Facility PE before Project Increase	8.5	<10.0	0.7	19.5	13.4	13.4
PSD Major Source Thresholds	100	100	100	100	100	100
PSD Major Source? (Y/N)	N	N	N	N	N	N

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

6. Baseline Emissions (BE)

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

Pursuant to District Rule 2201, BE = PE1 for:

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

Otherwise,

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

N-8234-4 through '-6, '-10 and '-11:

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

Therefore BE = PE1 for each pollutant.

7. SB 288 Major Modification

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

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

8. Federal Major Modification

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

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

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

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

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

I. Project Emissions Increase - New Major Source Determination

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

The 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)						
Category	NO ₂	VOC	SO ₂	CO	PM	PM ₁₀
Total PE from New and Modified Units	8.8	1.3	0.7	91.9	13.7	13.7
PSD Major Source threshold	250	250	250	250	250	250
New PSD Major Source?	N	N	N	N	N	N

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 E.

VIII. Compliance Determination

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

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

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

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

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

The proposed RTOs will reduce VOC emissions, as well as, other odorous compounds from the pet food manufacturing operations. Consequently, each RTO is an emission control device. The District practice is not to evaluate BACT on the emissions control devices used for pet food manufacturing operations. Therefore, no further discussion is necessary.

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

None of the emissions units are being relocated from one stationary source to another; therefore BACT is not triggered.

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

$$\text{AIPE} = \text{PE2} - \text{HAPE}$$

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)

$$\text{HAPE} = \text{PE1} \times (\text{EF2}/\text{EF1})$$

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

$$\text{AIPE} = \text{PE2} - (\text{PE1} * (\text{EF2} / \text{EF1}))$$

N-8234-4, '-5 and '-6:

Natural gas combustion in dryer:

The applicant is not proposing any changes to the dryer under each permit.

PE2 ≤ PE1 and EF2 = EF1. Therefore, AIPE will not be more than 2.0 lb/day for any pollutant. Therefore, BACT is not triggered.

Process emissions:

There are several source operations/emission units under each permit.

PM₁₀: PE2 = PE1 and EF2 = EF1. Therefore, AIPE would be zero for PM₁₀ emissions, and BACT is not triggered.

VOC: PE2 = 3.9 lb-VOC/day, PE1 = 36.7 lb-VOC/day, EF1 = 0.047 lb-VOC/ton of finished product, EF2 = 0.005 lb-VOC/ton of finished product

$$\text{AIPE} = 3.9 - (36.7 \times (0.005/0.047)) = 3.9 - 3.9 = 0 \text{ lb-VOC/day}$$

Since AIPE is not greater 2.0 lb/day, BACT is not triggered for VOC emissions.

N-8234-10 and '-11:

PE2 = PE1, EF2 = EF1; therefore, AIPE will be zero for each pollutant, and BACT is not triggered for any pollutant.

d. SB 288/Federal Major Modification

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

B. Offsets

1. Offset Applicability

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 Rule 2201.

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

Offset Determination (lb/year)					
Category	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE2	17,554	1,470	27,381	183,865	2,666
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	No	No	No	No	No

2. Quantity of Offsets Required

As seen above, the SSPE2 is not greater than the offset thresholds for any pollutant; therefore offset calculations are not necessary and offsets will not be required for this project.

C. Public Notification

1. Applicability

Public noticing is required for:

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

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

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

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

b. PE > 100 lb/day

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. There are no new emissions units associated with this project. Therefore public noticing is not required for this project for PE > 100 lb/day.

c. Offset Threshold

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

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	17,085	17,554	20,000 lb/year	No
SO _x	1,482	1,470	54,750 lb/year	No
PM ₁₀	26,821	27,381	29,200 lb/year	No
CO	39,036	183,865	200,000 lb/year	No
VOC	19,942	2,666	20,000 lb/year	No

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

d. SSIPE > 20,000 lb/year

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

SSIPE Public Notice Thresholds					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO _x	17,554	17,085	469	20,000 lb/year	No
SO _x	1,470	1,482	0	20,000 lb/year	No
PM ₁₀	27,381	26,821	560	20,000 lb/year	No
CO	183,865	39,036	144,829	20,000 lb/year	Yes
VOC	2,666	19,942	0	20,000 lb/year	No

As demonstrated above, the SSIPE for CO is greater than 20,000 lb/year; therefore, public noticing for SSIPE purposes is required.

e. Title V Significant Permit Modification

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

2. Public Notice Action

Per sections VIII.C.1.d (see above), public noticing is required for this project. The public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC permits for the proposed 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.

Proposed Rule 2201 (DEL) Conditions:

N-8234-4-10, '-5-10 and '-6-10:

Natural gas combustion in dryer:

- Emissions from the dryer shall not exceed any of the following limits: 2.1 ppmvd NOx @ 19% O2 (0.024 lb-NOx/MMBtu), 16.5 ppmvd CO @ 19% O2 (0.112 lb-CO/MMBtu) and 0.00285 lb-SOx/MMBtu. [District Rules 2201 and 4309]

Process emissions:

- PM₁₀ emissions from the operations (not including natural gas combustion in the RTO) covered under this permit shall not exceed 0.0612 pounds per ton of finished material produced. [District Rule 2201]
- The post control VOC emissions from the operations (not including natural gas combustion in the RTO) covered under this permit shall not exceed 0.005 pounds per ton of finished material produced. These emissions include emissions from the natural gas combustion in the dryer. [District Rule 2201]
- The amount of finished product produced under this line shall not exceed 780 tons in any one day. [District Rule 2201]
- The combined amount of finished product produced through all pet food manufacturing lines (N-8234-4, '-5 and '-6) shall not exceed 780 tons in any one day. [District Rule 2201]
- Each RTO shall reduce at least 95% of the VOC emissions from each pet food manufacturing line. [District Rule 2201]

RTO emissions:

- During startup period, emissions due to natural gas combustion in each RTO shall not exceed any of the following limits: 0.883 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 1.41 lb-CO/MMBtu and 0.0055 lb-VOC/MMBtu. [District Rule 2201]
- During startup period, heat input rate to each RTO shall not exceed any of the following limits: 30 MMBtu/day⁴ and 210 MMBtu/year⁴ (12-month rolling total). [District Rule 2201]
- Except during startup period, emissions due to natural gas combustion in each RTO shall not exceed any of the following limits: 0.072 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu,

⁴ 6 MMBtu/hr x 5 hr/day = 30 MMBtu/day; 6 MMBtu/hr x 35 hr/yr = 210 MMBtu/yr

0.0076 lb-PM₁₀/MMBtu, 1.2 lb-CO/MMBtu and 0.0055 lb-VOC/MMBtu. [District Rule 2201]

- The combined total heat input rate to each RTO (i.e., heat input rate during startup period combined with heat input rate during steady state operation) shall not exceed any of the following limits: 144 MMBtu/day⁵, and 41,513 MMBtu/year⁵ (12-month rolling total). [District Rule 2201]

N-8234-10-1, '-11-1:

The heat input rate listed in the equipment description along with the following requirements constitute the daily emissions limits for each boiler.

- NO_x emissions shall not exceed 9.0 ppmvd @ 3% O₂ (0.011 lb/MMBtu) referenced as NO₂. [District Rules 2201, 4305, 4306 and 4320]
- CO emissions shall not exceed 50 ppmvd @ 3% O₂ (0.037 lb/MMBtu). [District Rules 2201, 4305, 4306 and 4320]
- SO_x emissions shall not exceed 0.00285 lb/MMBtu. [District Rule 2201]
- PM₁₀ emissions shall not exceed 0.003 lb/MMBtu. [District Rule 2201]
- VOC emissions shall not exceed 0.004 lb/MMBtu. [District Rule 2201]
- NH₃ emissions from the SCR shall not exceed 10.0 ppmvd @ 3% O₂. [District Rule 2201]

Note that the heat input rate to both boilers will be limited to 128,334 MMBtu/year (12-month rolling total basis).

E. Compliance Assurance

1. Source Testing

N-8234-4 through '-6

Natural gas combustion in dryer:

Diamond is not proposing any changes to the natural gas combustion emission factors, or the processing rates. Therefore, source testing is not required. Any existing periodic source testing requirements in the existing permits will be replicated into the ATC permits under this project.

Process emissions:

District Policy APR 1705 (10/9/97), page 3, states that units equipped with afterburner, thermal incinerator, or catalytic incinerator for controlling VOCs must be tested upon initial start-up and annually thereafter.

⁵ 6 MMBtu/hr x 24 hr/day = 144 MMBtu/day; 6 MMBtu/hr x 35 hr/yr + 4.76 MMBtu/hr x 8,677 hr/yr = 41,512.52 MMBtu/yr (≈41,513 MMBtu/yr)

Diamond has proposed to duct all 12 stacks into a main duct from where the flow will be equally divided into three ducts, one for each RTO system.

Diamond is proposing to reduce at least 95% (by wt.) of the influent VOC emissions. Therefore, the company will be required to conduct source testing within 60-days of initial startup and annually thereafter. In the District's experience, RTO is a very reliable technology in reducing VOC emissions; therefore, the annual source test frequency is modified to align with the annual testing frequency in the other latest permits. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every thirty-six months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve months.

Diamond will be required to conduct source testing by selecting pet food recipe(s) that generates most odorous compounds. The pet food manufacturing line(s) must be operated at or above 90% of the maximum hourly process rate of the recipe(s) selected. The pet food recipe(s) chosen shall include at least 3% (by weight) of ground meat. If multiple pet food lines are operated during the test, the operator must utilize the average production rate (tons of finished product produced) to demonstrate compliance with VOC and PM₁₀ emission limits (pounds per ton of finished product produced).

As stated previously, Diamond is proposing to reduce at least 95% (by wt.) of the influent VOC emissions. Combustion of VOC may generate additional process PM₁₀ emissions. Therefore, Diamond will be required to conduct a source test to measure VOC, both at the inlet and outlet of at least one of the RTO systems, and PM₁₀ emissions, at the outlet of at least one of the RTO systems, while operating all pet food manufacturing line(s) under scenario explained above. The results of this source test will verify compliance with VOC and PM₁₀ emission limits and the proposed VOC control efficiency.

Diamond is required to collect samples from inlet and the outlet of an RTO. The outlet or exhaust of the RTO emissions will include some VOC emissions from natural gas fuel combustion in the RTO, therefore, Diamond may calculate the process VOC emissions in the following manner:

$$\text{VOC}_P = \text{VOC}_{\text{inlet}} - \text{VOC}_{\text{outlet}}$$

Where,

VOC_P = Process VOC emissions, lb/hr

$\text{VOC}_{\text{inlet}}$ = VOC, lb/hr from the samples collected from inlet of the RTO

$\text{VOC}_{\text{outlet}}$ = VOC, lb/hr from the samples collected from outlet of the RTO excluding VOC emissions natural gas combustion in the RTO

The process emissions calculated using above equation will be required to be translated into production basis (lb-VOC/ton of product production) using actual average pet food processing rate(s).

Combustion of VOC may cause additional PM₁₀ emissions. Therefore, Diamond is required to conduct an initial test to verify compliance with the PM₁₀ emission limit. The process PM₁₀ emission may be calculated in the following manner:

$$PM_{10\ P} = PM_{10\ \text{outlet}} - PM_{10\ \text{NG}}$$

Where,

PM_{10 P} = Process PM₁₀ emissions, lb/hr

PM_{10 outlet} = PM₁₀, lb/hr at the outlet or exhaust of the RTO

PM_{10 NG} = PM₁₀ emission due to natural gas combustion in the RTO

The process emissions calculated using above equation will be required to be translated into production basis (lb-PM₁₀/ton of product production) using average actual pet food processing rate(s).

RTO emissions:

Diamond will be required to conduct one-time source test to verify compliance with NO_x and CO emissions from one of the RTO systems during startup period while burner is operating, as well as, during steady state period when natural gas injection system is operating.

For startup period, Diamond is required collect samples from the outlet of an RTO, while the equipment is being warmed up before treating the contaminated stream from the pet food manufacturing lines. If the startup period is shorter than the required three 30-minute runs, then a shorter period may be allowed, upon District's Compliance Division's discretion.

For steady state period, Diamond is required collect samples from the inlet and outlet of an RTO. The outlet or exhaust of the RTO emissions will include some emissions from natural gas fuel combustion in the dryer, therefore, Diamond may calculate the RTO emissions in the following manner:

$$\text{Pollutant}_{\text{RTO}} = \text{Pollutant}_{\text{RTO outlet}} - \text{Pollutant}_{\text{RTO inlet}}$$

Where,

Pollutant = NO_x or CO

Pollutant_{RTO} = RTO emissions, lb/hr

Pollutant_{RTO outlet} = RTO, lb/hr, at the outlet

Pollutant_{RTO inlet} = RTO emissions, lb/hr, at the inlet (i.e., after removing any contribution from dryer)

The emissions calculated using above equation will be required to be translated into heat input basis (lb-NO_x/MMBtu) using actual heat input rate to the RTO(s).

Note that the pet food manufacturing lines and RTOs are identical, therefore, demonstration of compliance by conducting test on single RTO unit may be used to demonstrate compliance for all units. Failure to comply with the emission limits or control efficiency will be violation of all three pet food line permits.

N-8234-10 and '-11

The applicant is not proposing any changes to the existing emission factors. Therefore, source testing is not required.

2. Monitoring

N-8234-4 through '-6

During initial source testing, Diamond is required to monitor, record and establish a minimum temperature of the RTO combustion chamber while demonstrating successful compliance with the permitted VOC and PM₁₀ emission limits. The minimum temperature will be administratively included in the PTO. Diamond will be required to operate each RTO in a way to maintain the combustion chamber temperature at or above the established minimum temperature.

N-8234-10 and '-11

The monitoring requirements in the existing PTOs will be replicated in the ATCs under this project.

3. Recordkeeping

N-8234-4 through '-6

In addition to the existing recordkeeping requirements, Diamond will be required to keep daily records of each RTO's combustion chamber temperature, heat input rate during startup mode, natural gas injection mode (steady state mod), and the combined total heat input rate. The records are required to be kept for a period of at least five year from the date each record is entered in a log book.

N-8234-10 and '-11

The recordkeeping requirements in the existing PTOs will be replicated in the ATCs under this project.

4. Reporting

N-8234-4 through '-6

Source testing reports are required to be submitted to the District within 60 days after completing each source test.

N-8234-10 and '-11

The reporting requirements in the existing PTOs will be replicated in the ATCs under this project.

F. Ambient Air Quality Analysis (AAQA)

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

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

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

Rule 2410 Prevention of Significant Deterioration

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

Rule 2520 Federally Mandated Operating Permits

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

Rule 4001 New Source Performance Standards (NSPS)

40 CFR Part 60 Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units

This subpart applies to steam generating units that are constructed, reconstructed, or modified after 6/9/89 and have a maximum design heat input capacity of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr. Subpart Dc has standards for SO_x and PM₁₀ emissions.

There would not be any increase in boiler emissions (N-8234-10 and '-11); therefore, continued compliance is expected.

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

40 CFR Part 63 Subpart DDDDD National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters

This subpart is applicable to boilers and process heaters located at Major Sources of HAP emissions.

This facility is not a Major source of HAP emissions; therefore, the boilers are not subject to this subpart.

40 CFR Part 63 Subpart JJJJJJ National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources

Pursuant to Section 63.1195(e) a gas-fired boiler, as defined in Subpart JJJJJ, is not subject to any requirement of this Subpart. Pursuant to the definition in the subpart, a gas-fired boiler includes any boiler that burns gaseous fuels not combined with any solid fuels and burns liquid fuel only during periods of gas curtailment, gas supply interruption, startups, or periodic testing on liquid fuel.

The boilers (N-8234-10 and '-11) under this project meets the definition of a "gas-fired boiler" as this unit is required to use natural gas fuel. Therefore, Subpart JJJJJ requirements are not applicable.

Rule 4101 Visible Emissions

Section 5.0, indicates that 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 dark or darker than Ringelmann 1 or equivalent to 20% opacity. The following condition will be included in each permit:

- 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]

Compliance is expected with this Rule.

Rule 4102 Nuisance

Section 4.0 prohibits discharge of air contaminants, which could cause injury, detriment, nuisance or annoyance to the public. The following condition will be included in each permit:

- No air contaminant shall be released into the atmosphere, 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.

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (**Appendix D**), 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 cancer risk for this project is shown below:

HRA Summary		
Unit	Cancer Risk	T-BACT Required
N-8234-4-10	2.35×10^{-3} per million	No
N-8234-5-10	2.37×10^{-3} per million	No
N-8234-6-10	2.41×10^{-3} per million	No

Discussion of T-BACT

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As demonstrated above, T-BACT is not required for this project because the HRA indicates that the risk is not above the District's thresholds for triggering T-BACT requirements; therefore, compliance with the District's Risk Management Policy is expected. District policy APR 1905 also specifies that the increase in emissions associated with a proposed new source or modification not have acute or chronic indices, or a cancer risk greater than the District's significance levels (i.e. acute and/or chronic indices greater than 1 and a cancer risk greater than 20 in a million). As outlined by the HRA Summary in **Appendix D** of this report, the emissions increases for this project was determined to be less than significant.

Compliance is expected with this Rule.

Rule 4201 Particulate Matter Concentration

Section 3.0 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.

N-8234-4-10, '-5-10 and '-6-10:

Natural gas combustion in dryer:

Process emissions:

RTO emissions:

PM ₁₀ emissions	= 2.025 lb-PM ₁₀ /hr (48.6 lb/day ÷ 24 hr/day)
Fraction (lb-PM ₁₀ /lb-PM)	= 100%
Exhaust flow rate	= 61,797 acfm
Exhaust gas temperature	= 218°F
Moisture in exhaust gas	= 7% (assumed)

$$\text{PM} \left(\frac{\text{gr}}{\text{dscf}} \right) = \frac{\left(2.025 \frac{\text{lb-PM}}{\text{hr}} \right) \left(7,000 \frac{\text{gr-PM}}{\text{lb-PM}} \right) \left(\frac{\text{hr}}{60 \text{ min}} \right)}{\left(61,797 \frac{\text{ft}^3}{\text{min}} \right) \left(\frac{459.67 + 60}{459.67 + 218} \right) (1 - 0.07)} = 0.0054 \frac{\text{gr-PM}}{\text{dscf}}$$

Since PM emissions are not in excess of 0.1 gr/dscf, compliance is expected with this rule.

N-8234-10-1 and '-11-1:

The applicant is not proposing any increase to particulate matter emissions; therefore, continued compliance is expected with this rule.

Rule 4202 Particulate Matter – Emission Rate

Section 4.0 of this rule, a person shall not discharge into the atmosphere from any one source operation PM emissions in excess of the maximum allowable limit (E_{max}), in lb/hr, determined by the following equation:

$E_{Max} = 3.59 P^{0.62}$, for Process weight (P) less than or equal to 30 tons/hr
 $E_{Max} = 17.31 P^{0.16}$ for Process weight (P) greater than 30 tons/hr

N-8234-4-10, '-5-10 and '-6-10:

Natural gas combustion in dryer:

RTO emissions:

The units use gaseous fuel, which can't be a part of the process weight per definition of process weight. Therefore, maximum allowable limits cannot be determined.

Process emissions:

The applicant is not proposing any changes to the processing rate; therefore, continued compliance is expected with this rule.

N-8234-10-1 and '-11-1:

The units use gaseous fuel, which can't be a part of the process weight per definition of process weight. Therefore, maximum allowable limits cannot be determined.

Rule 4301 Fuel Burning Equipment

The requirements of section 5.0 are as follows:

- Combustion contaminants (TSP) - Not to exceed 0.1 gr/dscf @ 12% CO₂ and 10 lb/hr.
- SO_x emissions - Not to exceed 200 lb/hr
- NO_x emissions - Not to exceed 140 lb/hr

N-8234-4-10, '-5-10 and '-6-10:

Natural gas combustion in dryer:

The applicant is not proposing any changes to the emission factors or processing rate. Consequently, there would not be any changes to the emissions. Therefore, continued compliance is expected.

RTO emissions:

NO_x (lb/hr) - Startup = 5.298 lb/hr

SO_x (lb/hr) = (0.00285 lb/MMBtu)(6 MMBtu/hr) = 0.017 lb/hr

$$\begin{aligned}
 \text{PM} \left(\frac{\text{gr}}{\text{dscf}} \right) &= \frac{\text{PM Emissions} \left(\frac{\text{lb} - \text{PM}}{\text{MMBtu}} \right) \times 7,000 \frac{\text{gr} - \text{PM}}{\text{lb} - \text{PM}}}{F_{\text{factor CO}_2} \left(\frac{\text{dscf}}{\text{MMBtu}} \right) \times \left(\frac{100\%}{12\%} \right)} \\
 &= \frac{\left(0.0076 \frac{\text{lb} - \text{PM}}{\text{MMBtu}} \right) \left(7,000 \frac{\text{gr} - \text{PM}}{\text{lb} - \text{PM}} \right)}{\left(1,024.2 \frac{\text{dscf}}{\text{MMBtu}} \right) \left(\frac{100\%}{12\%} \right)} \\
 &= 0.0 \frac{\text{gr} - \text{PM}}{\text{dscf}}
 \end{aligned}$$

The proposed emissions are below the limits of this Rule; therefore, compliance is expected.

- Rule 4304** **Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters**
Rule 4305 **Boilers, Steam Generators, and Process Heaters – Phase 2**
Rule 4306 **Boilers, Steam Generators, and Process Heaters – Phase 3**
Rule 4320 **Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr**
Rule 4309 **Dryer, Dehydrators, and Ovens**

Diamond is not proposing any changes to the emission factors, equipment rating, or any other parameter that would result in an increase in emissions. Furthermore, the existing requirements are all up to date with the latest version of each rule. Therefore, continued compliance is expected with these rules.

Rule 4801 Sulfur Compounds

Section 3.1 states that a person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding a concentration of two-tenths (0.2) percent by volume calculated as sulfur dioxide (SO₂) at the point of discharge on a dry basis averaged over 15 consecutive minutes.

For the proposed gaseous fuel combustion at a reference state of 60 °F, the Rule 4801 limit of 2,000 ppmvd is equivalent to:

$$\frac{(2000 \text{ ppmvd}) \left(8,578 \frac{\text{dscf}}{\text{MMBtu}} \right) \left(64 \frac{\text{lb} - \text{SO}_x}{\text{lb} - \text{mol}} \right)}{\left(379.5 \frac{\text{dscf}}{\text{lb} - \text{mol}} \right) (10^6)} \cong 2.9 \frac{\text{lb} - \text{SO}_x}{\text{MMBtu}}$$

N-8234-4 through '-6, '-10 and '-11:

SO_x emissions from the dryers, boilers, and RTO systems are based on 1.0 gr-S/100 scf, equivalent to 0.00285 lb/MMBtu. Since these emissions are less than 2.9 lb/MMBtu, each units is expected to operate in compliance with this Rule.

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.

California Environmental Quality Act (CEQA)

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

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

Greenhouse Gas (GHG) Significance Determination

It is determined that another agency has prepared an environmental review document for the project. The District is a Responsible Agency for the project because of its discretionary approval power over the project via its Permits Rule (Rule 2010) and New Source Review Rule (Rule 2201), (CEQA Guidelines §15381). As a Responsible Agency, the District is limited to mitigating or avoiding impacts for which it has statutory authority. The District does not have statutory authority for regulating greenhouse gas emissions. The District has determined that the applicant is responsible for implementing greenhouse gas mitigation measures, if any, imposed by the Lead Agency.

District CEQA Findings

The City of Ripon (City) is the public agency having principal responsibility for approving the Diamond Pet Food Processors of Ripon facility. As such, the City served as the Lead Agency.

The District is a Responsible Agency for the installation of the regenerative thermal oxidizers project for the facility because of its discretionary approval power over the project via its Permits Rule (Rule 2010) and New Source Review Rule (Rule 2201), (CEQA Guidelines §15381).

The District's engineering evaluation of the project (this document) demonstrates that compliance with District rules and permit conditions would reduce Stationary Source emissions from the project to levels below the District's thresholds of significance for criteria pollutants. Additionally, the regenerative thermal oxidizers will be installed to abate pet food odors and therefore will reduce odors associated with the facility. Thus, the District concludes that through a combination of project design elements and permit conditions, project specific stationary source emissions will have a less than significant impact. 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)).

Indemnification Agreement/Letter of Credit Determination

According to District Policy APR 2010 (CEQA Implementation Policy), when the District is the Lead or Responsible Agency for CEQA purposes, an indemnification agreement and/or a letter of credit may be required. The decision to require an indemnity agreement and/or a letter of credit is based on a case-by-case analysis of a particular project's

potential for litigation risk, which in turn may be based on a project's potential to generate public concern, its potential for significant impacts, and the project proponent's ability to pay for the costs of litigation without a letter of credit, among other factors.

The criteria pollutant emissions and toxic air contaminant emissions associated with the proposed project are not significant. The regenerative thermal oxidizers will be installed to abate pet food odors and to reduce odors associated with the facility. Additionally, there is minimal potential for public concern for this particular project. Therefore, an Indemnification Agreement and/or a Letter of Credit will not be required for this project in the absence of expressed public concern.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue ATC permits N-8234-4-10 through '-6-10 and '-10-1 and '-11-1 subject to the permit conditions on the attached draft ATC in **Appendix A**.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
N-8234-4-10 through '-6-10	3020-02 H	16 MMBtu/hr	\$1,128
N-8234-10-1 or '-11-1	3020-02 G	14.65 MMBtu/hr	\$893

Appendixes

- A: Draft ATCs
- B: Current PTOs
- C: ATC N-8234-4-8, '-5-8 and '-6-8
- D: HRA Summary
- E: Quarterly Net Emissions Change
- F: Changes to permits N-8234-4, '-5 and '-6 to match "as-built" configuration

Appendix A

Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: N-8234-4-10

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: DIAMOND PET FOOD PROCESSORS OF RIPON
MAILING ADDRESS: 942 S STOCKTON AVE
RIPON, CA 95366

LOCATION: 942 S STOCKTON AVE
RIPON, CA 95366

EQUIPMENT DESCRIPTION:

MODIFICATION OF PET FOOD PROCESSING LINE #1: INSTALL THREE 6.0 MMBTU/HR (EACH) DURR SYSTEMS, INC. ECOPURE RL-60 REGENERATIVE THERMAL OXIDIZERS (RTO) AND ASSOCIATED DUCT WORK TO TREAT LADEN AIR DISCHARGE FROM WET CYCLONE, DRYER, DRYER-COOLER AND VERTICAL COOLER STACKS UNDER PERMITS N-8234-4, '-5 AND '-6, REMOVE COLD PLASMA INJECTION SYSTEMS AND ODORANT INJECTION SYSTEMS, AND MAKE CHANGES TO THE EXISTING REQUIREMENTS TO MATCH "AS-BUILT" PLANT CONFIGURATION

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Particulate matter, at the exhaust of each dust collector system (baghouse, cartridge dust collector, cyclone etc.), shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
3. All exhaust stacks under this permit 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]
4. {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]
5. Material Dispensing, Kibble Manufacturing, and Conveying Systems: The material from the extruder surge bin is dispensed into an extruder bin from where the material is transferred into an EXTRU-TECH 24X144 steam-conditioner system. The material is extruded to form kibbles. The kibbles are pneumatically conveyed using HEPA filtered air into a dryer receiving chamber using HORIZON SYSTEMS HT-68 high volume cyclone. The owner or operator shall install and maintain a duct work to discharge exhaust from the wet cyclone (Horizon HT-68) into the duct connected to the RTO. [District Rules 2201 and 4201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

Arnaud Marjolle, Director of Permit Services
N-8234-4-10 Feb 23 2016 2:27PM --KAHLONJ Joint Inspection NOT Required

6. **Dryer System:** The system consists of an EXTRU-TECH 1053-2P-AF11, 10 MMBtu/hr (total) direct-fired natural gas fired dryer with five drying sections, each section is equipped with an ECLIPSE WINNOX WX0200 burner with a maximum heat input rate of 2.0 MMBtu/hr. The dryer exhaust is vented to a MAC HE60 high efficiency cyclone. The owner or operator shall install and maintain a duct work to discharge exhaust from the dryer cyclone (MAC HE60) into the duct connected to the RTO. [District Rules 2201 and 4102]
7. **Cooler and Conveying System:** The system consists of three cooler sections, all vented to a MAC high efficiency cyclone, a discharge conveyor for the transfer of dried kibbles into a hopper. The material from the hopper is pneumatically conveyed to an enclosed shaker screener. The owner or operator shall install and maintain a duct work to discharge exhaust from the dryer cooler cyclone (MAC) into the duct connected to the RTO. [District Rules 2201 and 4102]
8. **Fines Collection and Conveying System:** This system collects fines from two locations in the dryer, the dryer cyclone discharge, and the cooler cyclone discharge, and vents these fines to a HORIZON SYSTEMS 28S WRDL8 baghouse. This baghouse is vented indoors. [District Rule 2201]
9. **Screening and Conveying System.** The system consists of an enclosed shaker screener, an enclosed surge bin, and an enclosed weigh belt. The fines (rejects) are dropped to the dumpsters. Each dumpster receiving fines (rejects) shall be equipped with a tight-fitting lid with a static sock filter. [District Rule 2201]
10. **Coating and Conveying System:** The system consists of a hopper where material from a weight belt is sprayed with chicken fat and canola oil (or other similar ingredients) and a coating reel where dry dog/cat digest and probiotics (or other similar ingredients) are sprinkled to be absorbed into the kibbles. The kibbles are then conveyed pneumatically to a vertical cooler system using a filter receiver system with a static sock filter. [District Rule 2201]
11. **Vertical Cooler and Conveying System:** A vertical cooler vented to a MAC HE52 high efficiency cyclone. The dried material falls on a vibratory pan on sliding rails. The material (accepts) from the vibratory pan drops into a hopper from where the dried kibbles are pneumatically conveyed to 14 finished product bins. Each bin shall be vented to a static sock filter. The fines (rejects) from MAC HE52 cyclone discharge and vibratory pan are conveyed to a barrel. Each barrel shall have a tight-fitting lid with an optional static sock filter. The owner or operator shall install and maintain a duct work to discharge exhaust from the vertical cooler cyclone (MAC HE 52) into the duct connected to the RTO. [District Rules 2201 and 4102]
12. The owner or operator shall install, operate and maintain three identical Durr Systems, Inc.'s Ecopure RL-60 regenerative thermal oxidizers (RTO), associated duct work and control equipment, to abate pet food odors and reduce VOC emissions from all pet food manufacturing lines discharge stacks (wet cyclone (Horizon HT-68), dryer cyclone (MAC HE60), dryer cooler cyclone (MAC) and vertical cooler cyclone (MAC HE52). [District Rules 2201 and 4102]
13. Each RTO's chamber shall be permanently equipped with temperature measurement devices to determine the average combustion chamber temperature. The combustion temperature shall be continuously monitored and recorded at least every 15-minutes, as long as the pet food manufacturing process operates. The recorded temperature data shall be averaged over a 30-consecutive-minute block to demonstrate compliance with the established RTO combustion chamber temperature. Upon detecting any excursion, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [District Rule 2201]
14. Each RTO shall be equipped with non-resettable fuel flow meter(s) to measure natural gas fuel flow into each RTO during various modes of operation (e.g., startup, steady state, etc.). [District Rule 2201]
15. The RTO(s) shall operate at or above the minimum steady-state average operating combustion chamber temperature established during the initial source test, when pet food manufacturing is occurring. [District Rule 2201]
16. The minimum steady state average RTO combustion chamber temperature (degree Fahrenheit) shall be determined during the initial source test while achieving compliance with the 95% VOC emissions control efficiency. This temperature limit shall be included in the Permit to Operate. [District Rule 2201]
17. Visible emissions, at the exhaust of each dust collector system (baghouse, cartridge dust collector, cyclone etc.) shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201]
18. The dryer and RTO(s) shall only be fired on PUC-quality natural gas. [District Rule 2201]

DRAFT
CONDITIONS CONTINUE ON NEXT PAGE

19. PM10 emissions from the operations (not including PM10 emissions from natural gas combustion in the RTO) covered under this permit shall not exceed 0.0612 pounds per ton of finished material produced. [District Rule 2201]
20. The post control VOC emissions from the operations (not including VOC emissions from natural gas combustion in the RTO) covered under this permit shall not exceed 0.005 pounds per ton of finished material produced. [District Rule 2201]
21. No more than 36 tons of ground meat, excluding moisture, shall be injected into the steam-conditioner in any one day. [District Rule 2201]
22. The amount of finished product produced under this line shall not exceed 780 tons in any one day. [District Rule 2201]
23. The combined amount of finished product produced through all pet food manufacturing lines (N-8234-4, '-5 and '-6) shall not exceed 780 tons in any one day. [District Rule 2201]
24. Emissions from the dryer shall not exceed any of the following limits: 2.1 ppmvd NOx @ 19% O2 (0.024 lb-NOx/MMBtu), 16.5 ppmvd CO @ 19% O2 (0.112 lb-CO/MMBtu) and 0.00285 lb-SOx/MMBtu. [District Rules 2201 and 4309]
25. The RTO(s) shall reduce the VOC emissions (not including VOC emissions from natural gas combustion in the RTO) from pet food manufacturing by at least 95% (by weight). [District Rule 2201]
26. During startup period, emissions due to natural gas combustion in each RTO shall not exceed any of the following limits: 0.883 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 1.41 lb-CO/MMBtu and 0.0055 lb-VOC/MMBtu. [District Rule 2201]
27. During startup period, heat input rate to each RTO shall not exceed any of the following limits: 30 MMBtu/day and 210 MMBtu/year (12-month rolling total). [District Rule 2201]
28. Except during startup period, emissions due to natural gas combustion in each RTO shall not exceed any of the following limits: 0.072 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 1.2 lb-CO/MMBtu and 0.0055 lb-VOC/MMBtu. [District Rule 2201]
29. The combined total heat input rate to each RTO (i.e., heat input rate during startup period, as well as, heat input rate during steady state period) shall not exceed any of the following limits: 144 MMBtu/day, and 41,513 MMBtu/year (12-month rolling total). [District Rule 2201]
30. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 of the dryer (at the exhaust stack of the MAC HE60 cyclone, upstream of the duct collecting discharge from other process streams), at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4309]
31. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201 and 4309]
32. If either the dryer NOx or CO concentrations corrected to 19% O2 (or no correction if measured above 19% O2), as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4309]

CONDITIONS CONTINUE ON NEXT PAGE

33. {3744} The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 19% O₂ (or no correction if measured above 19% O₂), (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4309]
34. {33} Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081]
35. {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
36. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4309. [District Rules 2201 and 4309]
37. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2201 and 4309]
38. Source testing to determine NO_x and CO emissions from the dryer at the exhaust stack of the MAC HE60 cyclone by obtaining samples upstream of the duct collecting discharge from other process streams shall be conducted at least once every 24 months. [District Rule 4309]
39. All dryer test results for NO_x and CO shall be reported in ppmv @ 19% O₂ (or no correction if measured above 19% O₂), corrected to dry stack conditions. [District Rule 4309]
40. Source testing to measure startup NO_x and CO emissions from the RTO system, when the RTO chamber burner is operating, shall be conducted within 60 days of initial startup. The owner or operator shall collect samples from the outlet of an RTO, while the equipment is being warmed up before treating the contaminated stream from the pet food manufacturing line(s). If the startup period is shorter than the required three 30 minutes runs, then a shorter period may be allowed, upon District's Compliance Division's discretion. Should the permittee decide to use a different test methodology, the methodology must be approved by the District. [District Rule 2201]
41. Source testing to measure steady state NO_x and CO emissions from the RTO system, when the natural gas injection system is operating (no burner operation), shall be conducted within 60 days of initial startup. The NO_x and CO emissions shall be calculated as follows: Pollutant (lb/hr) = Pollutant outlet (lb/hr) - Pollutant inlet (lb/hr), where Pollutant outlet = NO_x or CO emissions at the exhaust of the RTO, Pollutant inlet = NO_x or CO emissions from the latest source test for dryer(s) x actual natural gas fuel heat input rate (MMBtu/hr) in the dryer(s). The resulting emissions shall be translated to heat input basis (MMBtu/hr) using the actual heat input rate to the RTO to demonstrate compliance with NO_x and CO emission factors. Should the permittee decide to use a different test methodology, the methodology must be approved by the District. [District Rule 2201]
42. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 2201 and 4309]
43. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2201 and 4309]
44. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2201 and 4309]
45. Stack gas velocity or volumetric flow rate shall be determined using EPA Methods 2, 2A, or 2D. [District Rule 2201]
46. For initial and annual testing purposes, one RTO system inlet and outlet may be sampled to determine compliance with various emission limits (i.e., NO_x and CO limits - Startup and steady state, VOC control efficiency, VOC and PM₁₀ emission limits) in this permit. The testing results may be substituted for the other RTO systems instead of sampling each RTO system. Failure to comply with any emission limit in this permit shall constitute violation of permits N-8234-4, -5 and -6. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

47. Source testing shall be conducted by selecting pet food recipe(s) that generates most odorous compounds. The pet food manufacturing line(s) must be operated at or above 90% of the maximum hourly process rate of the recipe(s) selected. The pet food recipe(s) chosen shall include at least 3% (by weight) of ground meat. If multiple pet food lines are operated during the test, the operator must utilize the average production rate (tons of finished product produced) to demonstrate compliance with VOC and PM10 emission limits (pounds per ton of finished product produced). [District Rule 2201 and 4102]
48. Source testing to determine compliance with process VOC emission limit (0.005 lb/ton of finished product produced) and VOC control efficiency (95% by weight) of the RTO shall be conducted within 60 days of the initial startup under this permit and at least once every twelve months thereafter. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every thirty-six months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve months. [District Rule 2201]
49. Source testing to determine compliance with PM10 emission limit (0.0612 lb/ton of finished product produced) shall be conducted within 60 days of the initial startup under this permit. [District Rule 2201]
50. The process emissions shall be calculated as follows: $\text{VOC (lb/hr)} = \text{VOC}_{\text{inlet of the RTO (lb/hr)}} - \text{VOC}_{\text{outlet of the RTO (lb/hr)}}$. $\text{VOC}_{\text{outlet of the RTO (lb/hr)}} = \text{VOC}_{\text{measured at the outlet of RTO (lb/hr)}} - \text{VOC}_{\text{natural gas combustion in the RTO (lb/hr)}}$. $\text{PM10 (lb/hr)} = \text{PM10}_{\text{outlet of the RTO (lb/hr)}} - \text{PM10}_{\text{natural gas combustion in the RTO (lb/hr)}}$. The resulting emissions shall be translated into lb/ton basis using the actual average hourly pet food production rate(s). Should the permittee decide to use a different test methodology, the methodology must be approved by the District. [District Rule 2201]
51. Source testing to measure PM10 shall be conducted using either: EPA Method 201 or 201A, and 202; or CARB Method 5 in combination with 501. In lieu of performing a source test for PM10, the results of the total particulate test (CARB Method 5) may be used for compliance with the PM10 emissions limit provided the results include both the filterable and condensable (back half) particulate, and that all particulate matter is assumed to be PM10. Should the applicant decided to use different methodology, the methodology must be approved by the District prior to its use. [District Rule 2201]
52. A presurvey must be done prior to source testing to determine VOC compound analytes present in the effluent streams from wet cyclone, dryer cyclone, dryer cooler cyclone and vertical cooler cyclone using the methodology described in EPA Method 18, Section 16. The presurvey shall be used to develop the appropriate sampling approach to ensure efficient collection of all VOCs present in the effluent and to develop a specific list of target compounds to be quantified during the subsequent total VOC source testing. VOC source testing shall be conducted using EPA Methods 18, 25, 25A, or 308. EPA Methods 25 or 25A can be used to determine the total VOCs only if the analyzer is calibrated with appropriate compound as determined during the presurvey, and the total carbon mass is scaled to the mole fraction of an appropriate compound, with the balance being scaled to the relative mole fraction of other the identified compounds. The Method 25 or 25A scaling factor shall be reported in the source test report and may be listed in the Permit to Operate for future testing (if any) required by the District. Should the permittee decide to use a different test methodology, the methodology must be approved by the District. [District Rule 2201]
53. The District may, at its discretion, require VOC source testing and odor panel testing at any time should conditions at the facility or the surrounding area warrant such testing. [District Rules 2201 and 4201]
54. During each source test, the owner or operator shall keep track of all parameters that are used in demonstrating compliance with the limits in this permit, including, but not limited to: (1) date, (2) identification of pet food line that are operated, (3) name of the recipe being produced, (4) amount of ground meat injected rate, excluding moisture, into the steam-conditioner, (5) processing rate of finished product produced, tons/hour, (6) maximum processing rate of finished product produced, tons/hour, (7) RTO chamber temperature data (degrees Fahrenheit), (8) actual amount of fuel combusted in the dryer(s) and (9) actual amount of fuel combusted in the RTO. [District Rules 2201 and 4102]
55. {3721} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

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CONDITIONS CONTINUE ON NEXT PAGE

56. The owner or operator shall maintain daily records of the following items: (1) date, (2) name of the pet food recipe being produced, (3) RTO temperature monitoring data, (4) ground meat injection rate, excluding moisture, into the steam conditioner (tons/day), (5) the combined amount of finished product produced by all pet food manufacturing lines (N-8234-4, '-5 and '-6, tons/day), (6) amount of finished product produced by this line (tons/day); the combined amount of finished product produced by all pet food manufacturing lines (N-8234-4, '-5 and '-6, tons/day) may be used to demonstrate compliance with the amount of finished product produced by this line (tons/day), (7) heat input rate to each RTO during startup period, in MMBtu/day and in MMBtu/year on a rolling 12 consecutive month period, (8) heat input rate to each RTO during steady state period, in MMBtu/day and in MMBtu/year on a rolling 12 consecutive month period, and (9) the combined total heat input rate to each RTO in MMBtu/day and in MMBtu/year on a rolling 12 consecutive month period. [District Rule 2201]
57. Each RTO system (i.e., RTO, duct work, sensors, and other equipment) shall be installed, operated, and maintained per the manufacturer's (vendor) recommendations. A copy of manufacturer's recommendations shall be kept on site at all times. [District Rule 2201]
58. The owner or operator shall maintain all records of maintenance for each RTO system including date, RTO identification, reason for the maintenance, description of the maintenance activity, name of the individual performing the inspection and company affiliation. [District Rules 2201 and 4102]
59. All records shall be maintained and retained on-site for minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 2201 and 4309]
60. Authority to Construct (ATC) permits N-8234-10-1 and N-8234-11-1 shall be implemented prior to, or concurrently with the implementation of this permit. [District Rule 2201]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: N-8234-5-10

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: DIAMOND PET FOOD PROCESSORS OF RIPON
MAILING ADDRESS: 942 S STOCKTON AVE
RIPON, CA 95366

LOCATION: 942 S STOCKTON AVE
RIPON, CA 95366

EQUIPMENT DESCRIPTION:

MODIFICATION OF PET FOOD PROCESSING LINE #2: INSTALL THREE 6.0 MMBTU/HR (EACH) DURR SYSTEMS, INC. ECOPURE RL-60 REGENERATIVE THERMAL OXIDIZERS (RTO) AND ASSOCIATED DUCT WORK TO TREAT LADEN AIR DISCHARGE FROM WET CYCLONE, DRYER, DRYER-COOLER AND VERTICAL COOLER STACKS UNDER PERMITS N-8234-4, '-5 AND '-6, REMOVE COLD PLASMA INJECTION SYSTEMS AND ODORANT INJECTION SYSTEMS, AND MAKE CHANGES TO THE EXISTING REQUIREMENTS TO MATCH "AS-BUILT" PLANT CONFIGURATION

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Particulate matter, at the exhaust of each dust collector system (baghouse, cartridge dust collector, cyclone etc.), shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
3. All exhaust stacks under this permit 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]
4. {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]
5. Material Dispensing, Kibble Manufacturing, and Conveying Systems: The material from the extruder surge bin is dispensed into an extruder bin from where the material is transferred into an EXTRU-TECH 24X144 steam-conditioner system. The material is extruded to form kibbles. The kibbles are pneumatically conveyed using HEPA filtered air into a dryer receiving chamber using HORIZON SYSTEMS HT-68 high volume cyclone. The owner or operator shall install and maintain a duct work to discharge exhaust from the wet cyclone (Horizon HT-68) into the duct connected to the RTO. [District Rules 2201 and 4201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

Arnaud Marjolle, Director of Permit Services
N-8234-5-10 Feb 23 2016 2:27PM - KAHLOHJ Joht Inspection NOT Required

6. **Dryer System:** The system consists of an EXTRU-TECH 1053-2P-AF11, 10 MMBtu/hr (total) direct-fired natural gas fired dryer with five drying sections, each section is equipped with an ECLIPSE WINNOX WX0200 burner with a maximum heat input rate of 2.0 MMBtu/hr. The dryer exhaust is vented to a MAC HE60 high efficiency cyclone. The owner or operator shall install and maintain a duct work to discharge exhaust from the dryer cyclone (MAC HE60) into the duct connected to the RTO. [District Rules 2201 and 4102]
7. **Cooler and Conveying System:** The system consists of three cooler sections, all vented to a MAC high efficiency cyclone, a discharge conveyor for the transfer of dried kibbles into a hopper. The material from the hopper is pneumatically conveyed to an enclosed shaker screener. The owner or operator shall install and maintain a duct work to discharge exhaust from the dryer cooler cyclone (MAC) into the duct connected to the RTO. [District Rules 2201 and 4102]
8. **Fines Collection and Conveying System:** This system collects fines from two locations in the dryer, the dryer cyclone discharge, and the cooler cyclone discharge, and vents these fines to a HORIZON SYSTEMS 28S WRDL8 baghouse. This baghouse is vented indoors. [District Rule 2201]
9. **Screening and Conveying System.** The system consists of an enclosed shaker screener, an enclosed surge bin, and an enclosed weigh belt. The fines (rejects) are dropped to the dumpsters. Each dumpster receiving fines (rejects) shall be equipped with a tight-fitting lid with a static sock filter. [District Rule 2201]
10. **Coating and Conveying System:** The system consists of a hopper where material from a weight belt is sprayed with chicken fat and canola oil (or other similar ingredients) and a coating reel where dry dog/cat digest and probiotics (or other similar ingredients) are sprinkled to be absorbed into the kibbles. The kibbles are then conveyed pneumatically to a vertical cooler system using a filter receiver system with a static sock filter. [District Rule 2201]
11. **Vertical Cooler and Conveying System:** A vertical cooler vented to a MAC HE52 high efficiency cyclone. The dried material falls on a vibratory pan on sliding rails. The material (accepts) from the vibratory pan drops into a hopper from where the dried kibbles are pneumatically conveyed to 14 finished product bins. Each bin shall be vented to a static sock filter. The fines (rejects) from MAC HE52 cyclone discharge and vibratory pan are conveyed to a barrel. Each barrel shall have a tight-fitting lid with an optional static sock filter. The owner or operator shall install and maintain a duct work to discharge exhaust from the vertical cooler cyclone (MAC HE 52) into the duct connected to the RTO. [District Rules 2201 and 4102]
12. The owner or operator shall install, operate and maintain three identical Durr Systems, Inc.'s Ecopure RL-60 regenerative thermal oxidizers (RTO), associated duct work and control equipment, to abate pet food odors and reduce VOC emissions from all pet food manufacturing lines discharge stacks (wet cyclone (Horizon HT-68), dryer cyclone (MAC HE60), dryer cooler cyclone (MAC) and vertical cooler cyclone (MAC HE52). [District Rules 2201 and 4102]
13. Each RTO's chamber shall be permanently equipped with temperature measurement devices to determine the average combustion chamber temperature. The combustion temperature shall be continuously monitored and recorded at least every 15-minutes, as long as the pet food manufacturing process operates. The recorded temperature data shall be averaged over a 30-consecutive-minute block to demonstrate compliance with the established RTO combustion chamber temperature. Upon detecting any excursion, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [District Rule 2201]
14. Each RTO shall be equipped with non-resettable fuel flow meter(s) to measure natural gas fuel flow into each RTO during various modes of operation (e.g., startup, steady state, etc.). [District Rule 2201]
15. The RTO(s) shall operate at or above the minimum steady-state average operating combustion chamber temperature established during the initial source test, when pet food manufacturing is occurring. [District Rule 2201]
16. The minimum steady state average RTO combustion chamber temperature (degree Fahrenheit) shall be determined during the initial source test while achieving compliance with the 95% VOC emissions control efficiency. This temperature limit shall be included in the Permit to Operate. [District Rule 2201]
17. Visible emissions, at the exhaust of each dust collector system (baghouse, cartridge dust collector, cyclone etc.) shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201]
18. The dryer and RTO(s) shall only be fired on PUC-quality natural gas. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

19. PM10 emissions from the operations (not including PM10 emissions from natural gas combustion in the RTO) covered under this permit shall not exceed 0.0612 pounds per ton of finished material produced. [District Rule 2201]
20. The post control VOC emissions from the operations (not including VOC emissions from natural gas combustion in the RTO) covered under this permit shall not exceed 0.005 pounds per ton of finished material produced. [District Rule 2201]
21. No more than 36 tons of ground meat, excluding moisture, shall be injected into the steam-conditioner in any one day. [District Rule 2201]
22. The amount of finished product produced under this line shall not exceed 780 tons in any one day. [District Rule 2201]
23. The combined amount of finished product produced through all pet food manufacturing lines (N-8234-4, '-5 and '-6) shall not exceed 780 tons in any one day. [District Rule 2201]
24. Emissions from the dryer shall not exceed any of the following limits: 2.1 ppmvd NOx @ 19% O2 (0.024 lb-NOx/MMBtu), 16.5 ppmvd CO @ 19% O2 (0.112 lb-CO/MMBtu) and 0.00285 lb-SOx/MMBtu. [District Rules 2201 and 4309]
25. The RTO(s) shall reduce the VOC emissions (not including VOC emissions from natural gas combustion in the RTO) from pet food manufacturing by at least 95% (by weight). [District Rule 2201]
26. During startup period, emissions due to natural gas combustion in each RTO shall not exceed any of the following limits: 0.883 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 1.41 lb-CO/MMBtu and 0.0055 lb-VOC/MMBtu. [District Rule 2201]
27. During startup period, heat input rate to each RTO shall not exceed any of the following limits: 30 MMBtu/day and 210 MMBtu/year (12-month rolling total). [District Rule 2201]
28. Except during startup period, emissions due to natural gas combustion in each RTO shall not exceed any of the following limits: 0.072 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 1.2 lb-CO/MMBtu and 0.0055 lb-VOC/MMBtu. [District Rule 2201]
29. The combined total heat input rate to each RTO (i.e., heat input rate during startup period, as well as, heat input rate during steady state period) shall not exceed any of the following limits: 144 MMBtu/day, and 41,513 MMBtu/year (12-month rolling total). [District Rule 2201]
30. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 of the dryer (at the exhaust stack of the MAC HE60 cyclone, upstream of the duct collecting discharge from other process streams), at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4309]
31. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201 and 4309]
32. If either the dryer NOx or CO concentrations corrected to 19% O2 (or no correction if measured above 19% O2), as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4309]

CONDITIONS CONTINUE ON NEXT PAGE

33. {3744} The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 19% O₂ (or no correction if measured above 19% O₂), (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4309]
34. {33} Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081]
35. {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
36. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4309. [District Rules 2201 and 4309]
37. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2201 and 4309]
38. Source testing to determine NO_x and CO emissions from the dryer at the exhaust stack of the MAC HE60 cyclone by obtaining samples upstream of the duct collecting discharge from other process streams shall be conducted at least once every 24 months. [District Rule 4309]
39. All dryer test results for NO_x and CO shall be reported in ppmv @ 19% O₂ (or no correction if measured above 19% O₂), corrected to dry stack conditions. [District Rule 4309]
40. Source testing to measure startup NO_x and CO emissions from the RTO system, when the RTO chamber burner is operating, shall be conducted within 60 days of initial startup. The owner or operator shall collect samples from the outlet of an RTO, while the equipment is being warmed up before treating the contaminated stream from the pet food manufacturing line(s). If the startup period is shorter than the required three 30 minutes runs, then a shorter period may be allowed, upon District's Compliance Division's discretion. Should the permittee decide to use a different test methodology, the methodology must be approved by the District. [District Rule 2201]
41. Source testing to measure steady state NO_x and CO emissions from the RTO system, when the natural gas injection system is operating (no burner operation), shall be conducted within 60 days of initial startup. The NO_x and CO emissions shall be calculated as follows: Pollutant (lb/hr) = Pollutant outlet (lb/hr) - Pollutant inlet (lb/hr), where Pollutant outlet = NO_x or CO emissions at the exhaust of the RTO, Pollutant inlet = NO_x or CO emissions from the latest source test for dryer(s) x actual natural gas fuel heat input rate (MMBtu/hr) in the dryer(s). The resulting emissions shall be translated to heat input basis (MMBtu/hr) using the actual heat input rate to the RTO to demonstrate compliance with NO_x and CO emission factors. Should the permittee decide to use a different test methodology, the methodology must be approved by the District. [District Rule 2201]
42. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 2201 and 4309]
43. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2201 and 4309]
44. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2201 and 4309]
45. Stack gas velocity or volumetric flow rate shall be determined using EPA Methods 2, 2A, or 2D. [District Rule 2201]
46. For initial and annual testing purposes, one RTO system inlet and outlet may be sampled to determine compliance with various emission limits (i.e., NO_x and CO limits - Startup and steady state, VOC control efficiency, VOC and PM₁₀ emission limits) in this permit. The testing results may be substituted for the other RTO systems instead of sampling each RTO system. Failure to comply with any emission limit in this permit shall constitute violation of permits N-8234-4, -5 and -6. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

47. Source testing shall be conducted by selecting pet food recipe(s) that generates most odorous compounds. The pet food manufacturing line(s) must be operated at or above 90% of the maximum hourly process rate of the recipe(s) selected. The pet food recipe(s) chosen shall include at least 3% (by weight) of ground meat. If multiple pet food lines are operated during the test, the operator must utilize the average production rate (tons of finished product produced) to demonstrate compliance with VOC and PM10 emission limits (pounds per ton of finished product produced). [District Rule 2201 and 4102]
48. Source testing to determine compliance with process VOC emission limit (0.005 lb/ton of finished product produced) and VOC control efficiency (95% by weight) of the RTO shall be conducted within 60 days of the initial startup under this permit and at least once every twelve months thereafter. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every thirty-six months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve months. [District Rule 2201]
49. Source testing to determine compliance with PM10 emission limit (0.0612 lb/ton of finished product produced) shall be conducted within 60 days of the initial startup under this permit. [District Rule 2201]
50. The process emissions shall be calculated as follows: $\text{VOC (lb/hr)} = \text{VOC}_{\text{inlet of the RTO (lb/hr)}} - \text{VOC}_{\text{outlet of the RTO (lb/hr)}}$. $\text{VOC}_{\text{outlet of the RTO (lb/hr)}} = \text{VOC}_{\text{measured at the outlet of RTO (lb/hr)}} - \text{VOC}_{\text{natural gas combustion in the RTO (lb/hr)}}$. $\text{PM}_{10} \text{ (lb/hr)} = \text{PM}_{10\text{outlet of the RTO (lb/hr)}} - \text{PM}_{10\text{natural gas combustion in the RTO (lb/hr)}}$. The resulting emissions shall be translated into lb/ton basis using the actual average hourly pet food production rate(s). Should the permittee decide to use a different test methodology, the methodology must be approved by the District. [District Rule 2201]
51. Source testing to measure PM10 shall be conducted using either: EPA Method 201 or 201A, and 202; or CARB Method 5 in combination with 501. In lieu of performing a source test for PM10, the results of the total particulate test (CARB Method 5) may be used for compliance with the PM10 emissions limit provided the results include both the filterable and condensable (back half) particulate, and that all particulate matter is assumed to be PM10. Should the applicant decided to use different methodology, the methodology must be approved by the District prior to its use. [District Rule 2201]
52. A presurvey must be done prior to source testing to determine VOC compound analytes present in the effluent streams from wet cyclone, dryer cyclone, dryer cooler cyclone and vertical cooler cyclone using the methodology described in EPA Method 18, Section 16. The presurvey shall be used to develop the appropriate sampling approach to ensure efficient collection of all VOCs present in the effluent and to develop a specific list of target compounds to be quantified during the subsequent total VOC source testing. VOC source testing shall be conducted using EPA Methods 18, 25, 25A, or 308. EPA Methods 25 or 25A can be used to determine the total VOCs only if the analyzer is calibrated with appropriate compound as determined during the presurvey, and the total carbon mass is scaled to the mole fraction of an appropriate compound, with the balance being scaled to the relative mole fraction of other the identified compounds. The Method 25 or 25A scaling factor shall be reported in the source test report and may be listed in the Permit to Operate for future testing (if any) required by the District. Should the permittee decide to use a different test methodology, the methodology must be approved by the District. [District Rule 2201]
53. The District may, at its discretion, require VOC source testing and odor panel testing at any time should conditions at the facility or the surrounding area warrant such testing. [District Rules 2201 and 4201]
54. During each source test, the owner or operator shall keep track of all parameters that are used in demonstrating compliance with the limits in this permit, including, but not limited to: (1) date, (2) identification of pet food line that are operated, (3) name of the recipe being produced, (4) amount of ground meat injected rate, excluding moisture, into the steam-conditioner, (5) processing rate of finished product produced, tons/hour, (6) maximum processing rate of finished product produced, tons/hour, (7) RTO chamber temperature data (degrees Fahrenheit), (8) actual amount of fuel combusted in the dryer(s) and (9) actual amount of fuel combusted in the RTO. [District Rules 2201 and 4102]
55. {3721} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

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CONDITIONS CONTINUE ON NEXT PAGE

56. The owner or operator shall maintain daily records of the following items: (1) date, (2) name of the pet food recipe being produced, (3) RTO temperature monitoring data, (4) ground meat injection rate, excluding moisture, into the steam conditioner (tons/day), (5) the combined amount of finished product produced by all pet food manufacturing lines (N-8234-4, '-5 and '-6, tons/day), (6) amount of finished product produced by this line (tons/day); the combined amount of finished product produced by all pet food manufacturing lines (N-8234-4, '-5 and '-6, tons/day) may be used to demonstrate compliance with the amount of finished product produced by this line (tons/day), (7) heat input rate to each RTO during startup period, in MMBtu/day and in MMBtu/year on a rolling 12 consecutive month period, (8) heat input rate to each RTO during steady state period, in MMBtu/day and in MMBtu/year on a rolling 12 consecutive month period, and (9) the combined total heat input rate to each RTO in MMBtu/day and in MMBtu/year on a rolling 12 consecutive month period. [District Rule 2201]
57. Each RTO system (i.e., RTO, duct work, sensors, and other equipment) shall be installed, operated, and maintained per the manufacturer's (vendor) recommendations. A copy of manufacturer's recommendations shall be kept on site at all times. [District Rule 2201]
58. The owner or operator shall maintain all records of maintenance for each RTO system including date, RTO identification, reason for the maintenance, description of the maintenance activity, name of the individual performing the inspection and company affiliation. [District Rules 2201 and 4102]
59. All records shall be maintained and retained on-site for minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 2201 and 4309]
60. Authority to Construct (ATC) permits N-8234-10-1 and N-8234-11-1 shall be implemented prior to, or concurrently with the implementation of this permit. [District Rule 2201]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: N-8234-6-10

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: DIAMOND PET FOOD PROCESSORS OF RIPON
MAILING ADDRESS: 942 S STOCKTON AVE
RIPON, CA 95366

LOCATION: 942 S STOCKTON AVE
RIPON, CA 95366

EQUIPMENT DESCRIPTION:

MODIFICATION OF PET FOOD PROCESSING LINE #3: INSTALL THREE 6.0 MMBTU/HR (EACH) DURR SYSTEMS, INC. ECOPURE RL-60 REGENERATIVE THERMAL OXIDIZERS (RTO) AND ASSOCIATED DUCT WORK TO TREAT LADEN AIR DISCHARGE FROM WET CYCLONE, DRYER, DRYER-COOLER AND VERTICAL COOLER STACKS UNDER PERMITS N-8234-4, '-5 AND '-6, REMOVE COLD PLASMA INJECTION SYSTEMS AND ODORANT INJECTION SYSTEMS, AND MAKE CHANGES TO THE EXISTING REQUIREMENTS TO MATCH "AS-BUILT" PLANT CONFIGURATION

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Particulate matter, at the exhaust of each dust collector system (baghouse, cartridge dust collector, cyclone etc.), shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
3. All exhaust stacks under this permit 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]
4. {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]
5. Material Dispensing, Kibble Manufacturing, and Conveying Systems: The material from the extruder surge bin is dispensed into an extruder bin from where the material is transferred into an EXTRU-TECH 24X144 steam-conditioner system. The material is extruded to form kibbles. The kibbles are pneumatically conveyed using HEPA filtered air into a dryer receiving chamber using HORIZON SYSTEMS HT-68 high volume cyclone. The owner or operator shall install and maintain a duct work to discharge exhaust from the wet cyclone (Horizon HT-68) into the duct connected to the RTO. [District Rules 2201 and 4201]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

Arnaud Marjollet, Director of Permit Services

11-12-24 6:10 PM - 11/23/2016 2:27PM - KAH,ONJ - Joint Inspection NOT Required

6. Dryer System: The system consists of an EXTRU-TECH 1053-2P-AF11, 10 MMBtu/hr (total) direct-fired natural gas fired dryer with five drying sections, each section is equipped with an ECLIPSE WINNOX WX0200 burner with a maximum heat input rate of 2.0 MMBtu/hr. The dryer exhaust is vented to a MAC HE60 high efficiency cyclone. The owner or operator shall install and maintain a duct work to discharge exhaust from the dryer cyclone (MAC HE60) into the duct connected to the RTO. [District Rules 2201 and 4102]
7. Cooler and Conveying System: The system consists of three cooler sections, all vented to a MAC high efficiency cyclone, a discharge conveyor for the transfer of dried kibbles into a hopper. The material from the hopper is pneumatically conveyed to an enclosed shaker screener. The owner or operator shall install and maintain a duct work to discharge exhaust from the dryer cooler cyclone (MAC) into the duct connected to the RTO. [District Rules 2201 and 4102]
8. Fines Collection and Conveying System: This system collects fines from two locations in the dryer, the dryer cyclone discharge, and the cooler cyclone discharge, and vents these fines to a HORIZON SYSTEMS 28S WRDL8 baghouse. This baghouse is vented indoors. [District Rule 2201]
9. Screening and Conveying System. The system consists of an enclosed shaker screener, an enclosed surge bin, and an enclosed weigh belt. The fines (rejects) are dropped to the dumpsters. Each dumpster receiving fines (rejects) shall be equipped with a tight-fitting lid with a static sock filter. [District Rule 2201]
10. Coating and Conveying System: The system consists of a hopper where material from a weight belt is sprayed with chicken fat and canola oil (or other similar ingredients) and a coating reel where dry dog/cat digest and probiotics (or other similar ingredients) are sprinkled to be absorbed into the kibbles. The kibbles are then conveyed pneumatically to a vertical cooler system using a filter receiver system with a static sock filter. [District Rule 2201]
11. Vertical Cooler and Conveying System: A vertical cooler vented to a MAC HE52 high efficiency cyclone. The dried material falls on a vibratory pan on sliding rails. The material (accepts) from the vibratory pan drops into a hopper from where the dried kibbles are pneumatically conveyed to 14 finished product bins. Each bin shall be vented to a static sock filter. The fines (rejects) from MAC HE52 cyclone discharge and vibratory pan are conveyed to a barrel. Each barrel shall have a tight-fitting lid with an optional static sock filter. The owner or operator shall install and maintain a duct work to discharge exhaust from the vertical cooler cyclone (MAC HE 52) into the duct connected to the RTO. [District Rules 2201 and 4102]
12. The owner or operator shall install, operate and maintain three identical Durr Systems, Inc.'s Ecopure RL-60 regenerative thermal oxidizers (RTO), associated duct work and control equipment, to abate pet food odors and reduce VOC emissions from all pet food manufacturing lines discharge stacks (wet cyclone (Horizon HT-68), dryer cyclone (MAC HE60), dryer cooler cyclone (MAC) and vertical cooler cyclone (MAC HE52). [District Rules 2201 and 4102]
13. Each RTO's chamber shall be permanently equipped with temperature measurement devices to determine the average combustion chamber temperature. The combustion temperature shall be continuously monitored and recorded at least every 15-minutes, as long as the pet food manufacturing process operates. The recorded temperature data shall be averaged over a 30-consecutive-minute block to demonstrate compliance with the established RTO combustion chamber temperature. Upon detecting any excursion, the permittee shall investigate the excursion and take corrective action to minimize excessive emissions and prevent recurrence of the excursion as expeditiously as practicable. [District Rule 2201]
14. Each RTO shall be equipped with non-resettable fuel flow meter(s) to measure natural gas fuel flow into each RTO during various modes of operation (e.g., startup, steady state, etc.). [District Rule 2201]
15. The RTO(s) shall operate at or above the minimum steady-state average operating combustion chamber temperature established during the initial source test, when pet food manufacturing is occurring. [District Rule 2201]
16. The minimum steady state average RTO combustion chamber temperature (degree Fahrenheit) shall be determined during the initial source test while achieving compliance with the 95% VOC emissions control efficiency. This temperature limit shall be included in the Permit to Operate. [District Rule 2201]
17. Visible emissions, at the exhaust of each dust collector system (baghouse, cartridge dust collector, cyclone etc.) shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201]
18. The dryer and RTO(s) shall only be fired on PUC-quality natural gas. [District Rule 2201]

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19. PM10 emissions from the operations (not including PM10 emissions from natural gas combustion in the RTO) covered under this permit shall not exceed 0.0612 pounds per ton of finished material produced. [District Rule 2201]
20. The post control VOC emissions from the operations (not including VOC emissions from natural gas combustion in the RTO) covered under this permit shall not exceed 0.005 pounds per ton of finished material produced. [District Rule 2201]
21. No more than 36 tons of ground meat, excluding moisture, shall be injected into the steam-conditioner in any one day. [District Rule 2201]
22. The amount of finished product produced under this line shall not exceed 780 tons in any one day. [District Rule 2201]
23. The combined amount of finished product produced through all pet food manufacturing lines (N-8234-4, '-5 and '-6) shall not exceed 780 tons in any one day. [District Rule 2201]
24. Emissions from the dryer shall not exceed any of the following limits: 2.1 ppmvd NOx @ 19% O2 (0.024 lb-NOx/MMBtu), 16.5 ppmvd CO @ 19% O2 (0.112 lb-CO/MMBtu) and 0.00285 lb-SOx/MMBtu. [District Rules 2201 and 4309]
25. The RTO(s) shall reduce the VOC emissions (not including VOC emissions from natural gas combustion in the RTO) from pet food manufacturing by at least 95% (by weight). [District Rule 2201]
26. During startup period, emissions due to natural gas combustion in each RTO shall not exceed any of the following limits: 0.883 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 1.41 lb-CO/MMBtu and 0.0055 lb-VOC/MMBtu. [District Rule 2201]
27. During startup period, heat input rate to each RTO shall not exceed any of the following limits: 30 MMBtu/day and 210 MMBtu/year (12-month rolling total). [District Rule 2201]
28. Except during startup period, emissions due to natural gas combustion in each RTO shall not exceed any of the following limits: 0.072 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 1.2 lb-CO/MMBtu and 0.0055 lb-VOC/MMBtu. [District Rule 2201]
29. The combined total heat input rate to each RTO (i.e., heat input rate during startup period, as well as, heat input rate during steady state period) shall not exceed any of the following limits: 144 MMBtu/day, and 41,513 MMBtu/year (12-month rolling total). [District Rule 2201]
30. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 of the dryer (at the exhaust stack of the MAC HE60 cyclone, upstream of the duct collecting discharge from other process streams), at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4309]
31. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201 and 4309]
32. If either the dryer NOx or CO concentrations corrected to 19% O2 (or no correction if measured above 19% O2), as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4309]

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33. {3744} The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 19% O₂ (or no correction if measured above 19% O₂), (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4309]
34. {33} Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081]
35. {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
36. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4309. [District Rules 2201 and 4309]
37. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2201 and 4309]
38. Source testing to determine NO_x and CO emissions from the dryer at the exhaust stack of the MAC HE60 cyclone by obtaining samples upstream of the duct collecting discharge from other process streams shall be conducted at least once every 24 months. [District Rule 4309]
39. All dryer test results for NO_x and CO shall be reported in ppmv @ 19% O₂ (or no correction if measured above 19% O₂), corrected to dry stack conditions. [District Rule 4309]
40. Source testing to measure startup NO_x and CO emissions from the RTO system, when the RTO chamber burner is operating, shall be conducted within 60 days of initial startup. The owner or operator shall collect samples from the outlet of an RTO, while the equipment is being warmed up before treating the contaminated stream from the pet food manufacturing line(s). If the startup period is shorter than the required three 30 minutes runs, then a shorter period may be allowed, upon District's Compliance Division's discretion. Should the permittee decide to use a different test methodology, the methodology must be approved by the District. [District Rule 2201]
41. Source testing to measure steady state NO_x and CO emissions from the RTO system, when the natural gas injection system is operating (no burner operation), shall be conducted within 60 days of initial startup. The NO_x and CO emissions shall be calculated as follows: Pollutant (lb/hr) = Pollutant outlet (lb/hr) - Pollutant inlet (lb/hr), where Pollutant outlet = NO_x or CO emissions at the exhaust of the RTO, Pollutant inlet = NO_x or CO emissions from the latest source test for dryer(s) x actual natural gas fuel heat input rate (MMBtu/hr) in the dryer(s). The resulting emissions shall be translated to heat input basis (MMBtu/hr) using the actual heat input rate to the RTO to demonstrate compliance with NO_x and CO emission factors. Should the permittee decide to use a different test methodology, the methodology must be approved by the District. [District Rule 2201]
42. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 2201 and 4309]
43. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 2201 and 4309]
44. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 2201 and 4309]
45. Stack gas velocity or volumetric flow rate shall be determined using EPA Methods 2, 2A, or 2D. [District Rule 2201]
46. For initial and annual testing purposes, one RTO system inlet and outlet may be sampled to determine compliance with various emission limits (i.e., NO_x and CO limits - Startup and steady state, VOC control efficiency, VOC and PM₁₀ emission limits) in this permit. The testing results may be substituted for the other RTO systems instead of sampling each RTO system. Failure to comply with any emission limit in this permit shall constitute violation of permits N-8234-4, -5 and -6. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

47. Source testing shall be conducted by selecting pet food recipe(s) that generates most odorous compounds. The pet food manufacturing line(s) must be operated at or above 90% of the maximum hourly process rate of the recipe(s) selected. The pet food recipe(s) chosen shall include at least 3% (by weight) of ground meat. If multiple pet food lines are operated during the test, the operator must utilize the average production rate (tons of finished product produced) to demonstrate compliance with VOC and PM10 emission limits (pounds per ton of finished product produced). [District Rule 2201 and 4102]
48. Source testing to determine compliance with process VOC emission limit (0.005 lb/ton of finished product produced) and VOC control efficiency (95% by weight) of the RTO shall be conducted within 60 days of the initial startup under this permit and at least once every twelve months thereafter. After demonstrating compliance on two consecutive annual source tests, the unit shall be tested not less than once every thirty-six months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve months. [District Rule 2201]
49. Source testing to determine compliance with PM10 emission limit (0.0612 lb/ton of finished product produced) shall be conducted within 60 days of the initial startup under this permit. [District Rule 2201]
50. The process emissions shall be calculated as follows: $\text{VOC (lb/hr)} = \text{VOC}_{\text{inlet of the RTO (lb/hr)}} - \text{VOC}_{\text{outlet of the RTO (lb/hr)}}$. $\text{VOC}_{\text{outlet of the RTO (lb/hr)}} = \text{VOC}_{\text{measured at the outlet of RTO (lb/hr)}} - \text{VOC}_{\text{natural gas combustion in the RTO (lb/hr)}}$. $\text{PM}_{10} \text{ (lb/hr)} = \text{PM}_{10 \text{outlet of the RTO (lb/hr)}} - \text{PM}_{10 \text{natural gas combustion in the RTO (lb/hr)}}$. The resulting emissions shall be translated into lb/ton basis using the actual average hourly pet food production rate(s). Should the permittee decide to use a different test methodology, the methodology must be approved by the District. [District Rule 2201]
51. Source testing to measure PM10 shall be conducted using either: EPA Method 201 or 201A, and 202; or CARB Method 5 in combination with 501. In lieu of performing a source test for PM10, the results of the total particulate test (CARB Method 5) may be used for compliance with the PM10 emissions limit provided the results include both the filterable and condensable (back half) particulate, and that all particulate matter is assumed to be PM10. Should the applicant decided to use different methodology, the methodology must be approved by the District prior to its use. [District Rule 2201]
52. A presurvey must be done prior to source testing to determine VOC compound analytes present in the effluent streams from wet cyclone, dryer cyclone, dryer cooler cyclone and vertical cooler cyclone using the methodology described in EPA Method 18, Section 16. The presurvey shall be used to develop the appropriate sampling approach to ensure efficient collection of all VOCs present in the effluent and to develop a specific list of target compounds to be quantified during the subsequent total VOC source testing. VOC source testing shall be conducted using EPA Methods 18, 25, 25A, or 308. EPA Methods 25 or 25A can be used to determine the total VOCs only if the analyzer is calibrated with appropriate compound as determined during the presurvey, and the total carbon mass is scaled to the mole fraction of an appropriate compound, with the balance being scaled to the relative mole fraction of other the identified compounds. The Method 25 or 25A scaling factor shall be reported in the source test report and may be listed in the Permit to Operate for future testing (if any) required by the District. Should the permittee decide to use a different test methodology, the methodology must be approved by the District. [District Rule 2201]
53. The District may, at its discretion, require VOC source testing and odor panel testing at any time should conditions at the facility or the surrounding area warrant such testing. [District Rules 2201 and 4201]
54. During each source test, the owner or operator shall keep track of all parameters that are used in demonstrating compliance with the limits in this permit, including, but not limited to: (1) date, (2) identification of pet food line that are operated, (3) name of the recipe being produced, (4) amount of ground meat injected rate, excluding moisture, into the steam-conditioner, (5) processing rate of finished product produced, tons/hour, (6) maximum processing rate of finished product produced, tons/hour, (7) RTO chamber temperature data (degrees Fahrenheit), (8) actual amount of fuel combusted in the dryer(s) and (9) actual amount of fuel combusted in the RTO. [District Rules 2201 and 4102]
55. {3721} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

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CONDITIONS CONTINUE ON NEXT PAGE

56. The owner or operator shall maintain daily records of the following items: (1) date, (2) name of the pet food recipe being produced, (3) RTO temperature monitoring data, (4) ground meat injection rate, excluding moisture, into the steam conditioner (tons/day), (5) the combined amount of finished product produced by all pet food manufacturing lines (N-8234-4, '-5 and '-6, tons/day), (6) amount of finished product produced by this line (tons/day); the combined amount of finished product produced by all pet food manufacturing lines (N-8234-4, '-5 and '-6, tons/day) may be used to demonstrate compliance with the amount of finished product produced by this line (tons/day), (7) heat input rate to each RTO during startup period, in MMBtu/day and in MMBtu/year on a rolling 12 consecutive month period, (8) heat input rate to each RTO during steady state period, in MMBtu/day and in MMBtu/year on a rolling 12 consecutive month period, and (9) the combined total heat input rate to each RTO in MMBtu/day and in MMBtu/year on a rolling 12 consecutive month period. [District Rule 2201]
57. Each RTO system (i.e., RTO, duct work, sensors, and other equipment) shall be installed, operated, and maintained per the manufacturer's (vendor) recommendations. A copy of manufacturer's recommendations shall be kept on site at all times. [District Rule 2201]
58. The owner or operator shall maintain all records of maintenance for each RTO system including date, RTO identification, reason for the maintenance, description of the maintenance activity, name of the individual performing the inspection and company affiliation. [District Rules 2201 and 4102]
59. All records shall be maintained and retained on-site for minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 2201 and 4309]
60. Authority to Construct (ATC) permits N-8234-10-1 and N-8234-11-1 shall be implemented prior to, or concurrently with the implementation of this permit. [District Rule 2201]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: N-8234-10-1

LEGAL OWNER OR OPERATOR: DIAMOND PET FOOD PROCESSORS OF RIPON
MAILING ADDRESS: 942 S STOCKTON AVE
RIPON, CA 95366

LOCATION: 942 S STOCKTON AVE
RIPON, CA 95366

EQUIPMENT DESCRIPTION:

MODIFICATION OF 14.65 MMBTU/HR CLEAVER BROOKS CBLE 700-350, 150# BOILER EQUIPPED WITH CLEAVER BROOKS CB-350 LOW NOX BURNER VENTED TO C&C PANASIA MODEL PANOX CP-12 SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM (BOILER #1): TO ESTABLISH COMBINED ANNUAL HEAT INPUT RATE FOR BOILERS (N-8234-10 AND N-8234-11)

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. {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]
3. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. 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]
5. {4355} The unit shall only be fired on PUC-quality natural gas. [District Rules 2201 and 4320]
6. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rule 2201 and 40 CFR 60.48c(g)]
7. The combined total heat input rate to the boilers under permits N-8234-10 and N-8234-11 shall not exceed 128,334 MMBtu in any 12 consecutive month rolling period. [District Rule 2201]
8. NOx emissions shall not exceed 9.0 ppmvd @ 3% O2 (0.011 lb/MMBtu) referenced as NO2. [District Rules 2201, 4305, 4306 and 4320]
9. CO emissions shall not exceed 50 ppmvd @ 3% O2 (0.037 lb/MMBtu). [District Rules 2201, 4305, 4306 and 4320]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

Arnaud Marjollet, Director of Permit Services

N-8234-10-1 Issued 22-2010 5:19PM - KAH/LONJ - Joint Inspection NOT Required

10. SOx emissions shall not exceed 0.00285 lb/MMBtu. [District Rule 2201]
11. PM10 emissions shall not exceed 0.003 lb/MMBtu. [District Rule 2201]
12. VOC emissions shall not exceed 0.004 lb/MMBtu. [District Rule 2201]
13. NH3 emissions from the SCR shall not exceed 10.0 ppmvd @ 3% O2. [District Rule 2201]
14. {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
15. Source testing to measure NOx, CO, and NH3 emissions from this unit while fired on natural gas shall be conducted at least once every twelve months. After demonstrating compliance on two consecutive annual source tests when unit is fired on natural gas, the unit shall be tested not less than once every thirty-six months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve months. [District Rules 2201, 4305, 4306 and 4320]
16. {4346} NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320]
17. {4347} CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320]
18. {4348} Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320]
19. {3278} Source testing for ammonia slip shall be conducted utilizing BAAQMD Method ST-1B. [District Rule 1081]
20. {4349} Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320]
21. {4350} The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]
22. {4351} All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320]
23. {4352} For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]
24. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
25. The permittee shall monitor and record the stack concentration of NOx, CO, NH3 and O2 at least once during each month in which source testing is not performed. NOx, CO and O2 monitoring shall be conducted utilizing a portable analyzer that meets District specifications. NH3 monitoring shall be conducted utilizing gas detection tubes (Draeger brand or District approved equivalent). Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless it has been performed within the last month. [District Rules 2201, 4305, 4306 and 4320]
26. If either the NOx, CO or NH3 concentrations, as measured by the portable analyzer or the District approved ammonia monitoring equipment, exceed the permitted levels the permittee shall return the emissions to compliant levels as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer or the ammonia monitoring equipment continue to show emission limit violations after 1 hour of operation following detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation that is subject to enforcement action has occurred. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306 and 4320]

27. All NO_x, CO, O₂ and ammonia emission readings shall be taken with the unit operating at conditions representative of normal operation or under the conditions specified in the Permit to Operate. The NO_x, CO and O₂ analyzer as well as the NH₃ emission monitoring equipment shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Analyzer readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306 and 4320]
28. Ammonia emissions readings shall be conducted at the time the NO_x, CO and O₂ readings are taken. The readings shall be converted to ppmvd @ 3% O₂. [District Rules 2201, 4305 and 4306]
29. The permittee shall maintain records of: (1) the date and time of NO_x, CO, NH₃ and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x, CO and NH₃ concentrations corrected to 3% O₂, (3) make and model of the portable analyzer, (4) portable analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rules 2201, 4305, 4306 and 4320]
30. {4356} Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320]
31. The permittee shall maintain records of the date, type of fuel, amount of the fuel combusted (scf/day) by the boiler. [40 CFR 60.48c(g)]
32. The permittee shall maintain monthly records of the total heat input rate (MMBtu) to the boilers under permits N-8234-10 and N-8234-11 in the previous 12 consecutive months. [District Rule 2201]
33. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, 4305, 4306 and 4320]

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San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: N-8234-11-1

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: DIAMOND PET FOOD PROCESSORS OF RIPON
MAILING ADDRESS: 942 S STOCKTON AVE
RIPON, CA 95366

LOCATION: 942 S STOCKTON AVE
RIPON, CA 95366

EQUIPMENT DESCRIPTION:

MODIFICATION OF 14.65 MMBTU/HR CLEAVER BROOKS CBLE 700-350, 150# BOILER EQUIPPED WITH CLEAVER BROOKS CB-350 LOW NOX BURNER VENTED TO C&C PANASIA MODEL PANOX CP-12 SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM (BOILER #2): TO ESTABLISH COMBINED ANNUAL HEAT INPUT RATE FOR BOILERS (N-8234-10 AND N-8234-11)

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. {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]
3. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. 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]
5. {4355} The unit shall only be fired on PUC-quality natural gas. [District Rules 2201 and 4320]
6. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [District Rule 2201 and 40 CFR 60.48c(g)]
7. The combined total heat input rate to the boilers under permits N-8234-10 and N-8234-11 shall not exceed 128,334 MMBtu in any 12 consecutive month rolling period. [District Rule 2201]
8. NOx emissions shall not exceed 9.0 ppmvd @ 3% O2 (0.011 lb/MMBtu) referenced as NO2. [District Rules 2201, 4305, 4306 and 4320]
9. CO emissions shall not exceed 50 ppmvd @ 3% O2 (0.037 lb/MMBtu). [District Rules 2201, 4305, 4306 and 4320]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

Arnaud Marjolle, Director of Permit Services
N-8234-11-1: Feb 22 2018 5:18PM -- KAHLOJ Joint Inspection NOT Required

10. SOx emissions shall not exceed 0.00285 lb/MMBtu. [District Rule 2201]
11. PM10 emissions shall not exceed 0.003 lb/MMBtu. [District Rule 2201]
12. VOC emissions shall not exceed 0.004 lb/MMBtu. [District Rule 2201]
13. NH3 emissions from the SCR shall not exceed 10.0 ppmvd @ 3% O2. [District Rule 2201]
14. {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
15. Source testing to measure NOx, CO, and NH3 emissions from this unit while fired on natural gas shall be conducted at least once every twelve months. After demonstrating compliance on two consecutive annual source tests when unit is fired on natural gas, the unit shall be tested not less than once every thirty-six months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve months. [District Rules 2201, 4305, 4306 and 4320]
16. {4346} NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320]
17. {4347} CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320]
18. {4348} Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320]
19. {3278} Source testing for ammonia slip shall be conducted utilizing BAAQMD Method ST-1B. [District Rule 1081]
20. {4349} Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320]
21. {4350} The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]
22. {4351} All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320]
23. {4352} For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]
24. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
25. The permittee shall monitor and record the stack concentration of NOx, CO, NH3 and O2 at least once during each month in which source testing is not performed. NOx, CO and O2 monitoring shall be conducted utilizing a portable analyzer that meets District specifications. NH3 monitoring shall be conducted utilizing gas detection tubes (Dräger brand or District approved equivalent). Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless it has been performed within the last month. [District Rules 2201, 4305, 4306 and 4320]
26. If either the NOx, CO or NH3 concentrations, as measured by the portable analyzer or the District approved ammonia monitoring equipment, exceed the permitted levels the permittee shall return the emissions to compliant levels as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer or the ammonia monitoring equipment continue to show emission limit violations after 1 hour of operation following detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation that is subject to enforcement action has occurred. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306 and 4320]

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CONDITIONS CONTINUE ON NEXT PAGE

27. All NO_x, CO, O₂ and ammonia emission readings shall be taken with the unit operating at conditions representative of normal operation or under the conditions specified in the Permit to Operate. The NO_x, CO and O₂ analyzer as well as the NH₃ emission monitoring equipment shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Analyzer readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306 and 4320]
28. Ammonia emissions readings shall be conducted at the time the NO_x, CO and O₂ readings are taken. The readings shall be converted to ppmvd @ 3% O₂. [District Rules 2201, 4305 and 4306]
29. The permittee shall maintain records of: (1) the date and time of NO_x, CO, NH₃ and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x, CO and NH₃ concentrations corrected to 3% O₂, (3) make and model of the portable analyzer, (4) portable analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rules 2201, 4305, 4306 and 4320]
30. {4356} Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320]
31. The permittee shall maintain records of the date, type of fuel, amount of the fuel combusted (scf/day) by the boiler. [40 CFR 60.48c(g)]
32. The permittee shall maintain monthly records of the total heat input rate (MMBtu) to the boilers under permits N-8234-10 and N-8234-11 in the previous 12 consecutive months. [District Rule 2201]
33. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, 4305, 4306 and 4320]

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Appendix B

Current PTOs

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-8234-4-5

EXPIRATION DATE: 04/30/2020

EQUIPMENT DESCRIPTION:
PET FOOD PROCESSING LINE #1

PERMIT UNIT REQUIREMENTS

1. **Material Dispensing, Kibble Manufacturing, and Conveying Systems:** The material from the extruder surge bin is dispensed into an extruder bin from where the material is transferred into an EXTRU-TECH 24X144 steam-conditioner system. The material is extruded to form kibbles. The kibbles are pneumatically conveyed using HEPA filtered air into a dryer receiving chamber using HORIZON SYSTEMS HT-68 high volume cyclone with a static sock filter. The owner or operator shall install, maintain, and operate Uniqair's, 7.2 kW, 6 plasma cylinders, cold plasma injection system to abate odors in the air stream from the wet cyclone (Horizon HT-68) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]
2. **Dryer System:** The system consists of an EXTRU-TECH 1053-2P-AF11, 10 MMBtu/hr (total) direct-fired natural gas fired dryer with five drying sections, each section is equipped with an ECLIPSE WINNOX WX0200 burner with a maximum heat input rate of 2.0 MMBtu/hr. The dryer exhaust is vented to a MAC HE60 high efficiency cyclone. The owner or operator shall install, maintain, and operate Uniqair's, 18 kW, 15 plasma cylinders, cold plasma injection system to abate odors in the air stream from the dryer cyclone (MAC HE60) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]
3. **Cooler and Conveying System:** The system consists of three cooler sections, all vented to a MAC high efficiency cyclone, a discharge conveyor for the transfer of dried kibbles into a hopper. The material from the hopper is pneumatically conveyed to an enclosed shaker screener. The owner or operator shall install, maintain, and operate Uniqair's, 10.8 kW, 9 plasma cylinders, cold plasma injection system to abate odors in the air stream from the dryer cooler cyclone (MAC) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]
4. **Fines Collection and Conveying System:** This system collects fines from two locations in the dryer, the dryer cyclone discharge, and the cooler cyclone discharge, and vents these fines to a HORIZON SYSTEMS 285 WRDL8 baghouse. This baghouse is vented indoors. [District Rule 2201]
5. **Screening and Conveying System.** The system consists of an enclosed shaker screener, an enclosed surge bin, and an enclosed weigh belt. The fines (rejects) are conveyed to the totes in the basement. The surge bin shall be vented to a HORIZON SYSTEMS MODEL 21VFTC6 cartridge dust collector system. Each tote shall have a tight-fitting lid with a static sock filter. [District Rule 2201]
6. **Coating and Conveying System:** The system consists of a hopper where material from a weight belt is sprayed with chicken fat and canola oil (or other similar ingredients) and a coating reel where dry dog/cat digest and probiotics (or other similar ingredients) are sprinkled to be absorbed into the kibbles. The kibbles are then conveyed pneumatically to a vertical cooler system using a filter receiver system with a static sock filter. [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

7. Vertical Cooler and Conveying System: A vertical cooler vented to a MAC HE52 high efficiency cyclone. The dried material falls on a vibratory pan on sliding rails. The material (accepts) from the vibratory pan drops into a hopper from where the dried kibbles are pneumatically conveyed to 14 finished product bins. Each bin shall be vented to a HORIZON SYSTEMS MODEL 21VFTC6 cartridge dust collector system. The fines (rejects) from MAC HE52 cyclone discharge and vibratory pan are conveyed to the totes in the basement. Each tote shall have a tight-fitting lid with a static sock filter. The owner or operator shall install, maintain, and operate Uniqair's, 3.6 kW, 3 plasma cylinders, cold plasma injection system to abate odors in the air stream from the vertical cooler cyclone (MAC HE52) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]
8. Each reactor of the plasma injector system shall be installed, operated, and maintained per the manufacturer's (vendor) recommendations. A copy of manufacturer's recommendations shall be kept on site at all times. [District Rule 2201]
9. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
10. Particulate matter, at the exhaust of each dust collector system (baghouse, cartridge dust collector, cyclone etc.), shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
11. All exhaust stacks under this permit 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]
12. 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]
13. Visible emissions, at the exhaust of each dust collector system (baghouse, cartridge dust collector, cyclone etc.) shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201]
14. PM10 emissions from the operations covered under this permit shall not exceed 0.0612 pounds per ton of finished material produced. [District Rule 2201]
15. VOC emissions from the operations covered under this permit shall not exceed 0.047 pounds per ton of finished material produced. [District Rule 2201]
16. Total NOx emissions from the operations covered under this permit shall not exceed 0.529 pounds per hour. [District Rules 2201 and 4102]
17. Total VOC emissions from the operations covered under this permit shall not exceed 1.529 pounds per hour. [District Rule 4102]
18. No more than 36 tons of ground meat, excluding moisture, shall be injected into the steam-conditioner in any one day. [District Rule 2201]
19. The amount of finished product produced under this line shall not exceed 780 tons in any one day. [District Rule 2201]
20. The combined amount of finished product produced through all pet food manufacturing lines (N-8234-4, '-5 and '-6) shall not exceed 780 tons in any one day. [District Rule 2201]
21. The dryer shall only be fired on PUC-quality natural gas. [District Rule 2201]
22. Emissions from the dryer shall not exceed any of the following limits: 2.1 ppmvd NOx @ 19% O2 (0.024 lb-NOx/MMBtu), 16.5 ppmvd CO @ 19% O2 (0.112 lb-CO/MMBtu) and 0.00285 lb-SOx/MMBtu. [District Rules 2201 and 4309]
23. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081]
24. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4309. [District Rules 2201 and 4309]
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2201 and 4309]
27. Source testing to determine NOx and CO emissions from the dryer at the exhaust stack of the MAC HE60 cyclone by obtaining samples upstream of the plasma injection system shall be conducted at least once every 24 months. [District Rule 4309]
28. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rule 4309]
29. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rule 4309]
30. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rule 4309]
31. All dryer test results for NOx and CO shall be reported in ppmv @ 19% O2 (or no correction if measured above 19% O2), corrected to dry stack conditions. [District Rule 4309]
32. Stack gas velocity or volumetric flow rate shall be determined using EPA Methods 2, 2A, or 2D. [District Rule 2201]
33. A sellable pet food product, containing at least 3% (by weight) of ground meat, shall be produced during VOC source testing and odor control efficiency testing. [District Rules 2201 and 4102]
34. The District may, at its discretion, require VOC source testing and odor panel testing at any time should conditions at the facility or the surrounding area warrant such testing. [District Rules 2201 and 4201]
35. The amount of ground meat injected into the steam-conditioner, finished product produced, and all other applicable parameters (exhaust flow rate, temperature, pressure, etc.), shall be recorded during VOC source testing and odor panel testing. [District Rules 2201 and 4102]
36. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
37. The permittee shall monitor and record the stack concentration of NOx and O2 downstream of each plasma injection system using a portable emission monitor that meets District specifications, within 30 days of the date the respective plasma injection system becomes fully operational. Alternatively, the permittee may elect to conduct a source test to measure the stack concentration of NOx and O2 downstream of each plasma injection system using CARB Method 100 or EPA Method 7E, or another agreed upon source test method, within 60 days of the date the respective plasma injection system becomes fully operational. The results shall be converted into hourly NOx emissions (lb/hour) using exhaust flow rate (dscfm) from the latest source test report. For the purpose of this condition, fully operational is defined as the physical state when all variable frequency drives and plasma reaction cylinders on a respective plasma injection unit are operating normally, demonstrated by consistent operation for at least a two week period. The permittee shall keep record of the date on which each plasma injection system becomes fully operational, following the issuance date on this permit. [District Rule 2201]
38. Total NOx emissions (lb/hour) shall include NOx emissions from the following release points by taking portable analyzer measurements according to the manufacturer recommended procedures, or by conducting a District-approved source test, downstream of the cold plasma injection system serving: (1) Hot kibble conveying cyclone (HT-68), (2) dryer cyclone (MAC HE60), (3) dryer cooler cyclone (MAC), and (4) vertical cooler cyclone (MAC HE-52). [District Rule 2201]
39. The permittee shall maintain records of: (1) date and time of NOx and O2 measurements, (2) identification of the stack (e.g., hot kibble conveying cyclone (HT-68), dryer cyclone (MAC HE60), etc.) (3) O2 concentration in percent and the measured NOx concentrations, (4) exhaust flow rate (dscfm) in the latest NOx and CO source testing report, (5) NOx emissions (lb/hour), (6) total NOx emissions (lb/hour) from the operations covered under this permit unit, (7) make and model of exhaust gas analyzer, and (8) exhaust gas analyzer calibration records. [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

40. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201 and 4309]
41. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ of the dryer (at the exhaust stack of the MAC HE60 cyclone, upstream of the plasma injection system), at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4309]
42. If either the dryer NO_x or CO concentrations corrected to 19% O₂ (or no correction if measured above 19% O₂), as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4309]
43. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 19% O₂ (or no correction if measured above 19% O₂), (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4309]
44. The owner or operator shall continuously monitor and record the following parameters for each cold plasma injection system: (1) date, (2) pressure drop across pre-filter (DP3), (3) pressure drop across high efficiency filter (DP2), (4) pressure drop across cold plasma reactor (DP1), (5) plasma air velocity (AV1) after the cold plasma reactor, and (6) variable frequency drive (VFD) signal (ON/OFF). The set point for each parameter shall be as follows: DP3 < 400 Pa, DP2 < 400 Pa, DP1 < 4,000 Pa, AV1 > 2 m/sec, and VFD signal in ON status. These parameters shall be recorded at least once every 15-minutes. The recorded parameters (except for VFD signal) shall be averaged over 60-minute blocks and compared with the established acceptable set points. Upon detecting any excursion, the owner or operator shall investigate the excursion and take corrective action to minimize odorous emissions and prevent recurrence of the excursion as expeditiously as practical, but no longer than 1 hour of operation after detection. If the monitoring equipment continues to show non-conformity with the established parameter(s) after 1 hour of operation following detection, the permittee shall notify the District within the following 1 hour and conduct a thorough inspection, and repair of the cold plasma injection system within 24 hours of the first exceedance. In lieu of conducting a thorough inspection and repair of the cold plasma injection system, the owner or operator may stipulate a violation that is subject to enforcement action has occurred. The owner or operator must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the excursions are the result of a qualifying breakdown condition pursuant to Rule 1100, the owner or operator may fully comply with Rule 1100 in lieu of performing the notification required by this condition. [District Rule 4102]
45. The owner or operator shall maintain records of the date, the ground meat injection rate, excluding moisture, into the steam conditioner (tons/day), amount of finished product produced by this line (tons/day), and the combined amount of finished product produced by all pet food manufacturing lines (N-8234-4, '-5 and '-6, tons/day). The combined amount of finished product produced by all pet food manufacturing lines (N-8234-4, '-5 and '-6, tons/day) may be used to demonstrate compliance with the amount of finished product produced by this line (tons/day). [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

46. The owner or operator shall maintain all records of maintenance for cold plasma injector systems including any cold plasma reactor replacements. [District Rule 4102]
47. All records shall be maintained and retained on-site for minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 2201 and 4309]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-8234-5-5

EXPIRATION DATE: 04/30/2020

EQUIPMENT DESCRIPTION:
PET FOOD PROCESSING LINE #2

PERMIT UNIT REQUIREMENTS

1. **Material Dispensing, Kibble Manufacturing, and Conveying Systems:** The material from the extruder surge bin is dispensed into an extruder bin from where the material is transferred into an EXTRU-TECH 24X144 steam-conditioner system. The material is extruded to form kibbles. The kibbles are pneumatically conveyed using HEPA filtered air into a dryer receiving chamber using HORIZON SYSTEMS HT-68 high volume cyclone with a static sock filter. The owner or operator shall install, maintain, and operate Uniqair's, 7.2 kW, 6 plasma cylinders, cold plasma injection system to abate odors in the air stream from the wet cyclone (Horizon HT-68) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]
2. **Dryer System:** The system consists of an EXTRU-TECH 1053-2P-AF11, 10 MMBtu/hr (total) direct-fired natural gas fired dryer with five drying sections, each section is equipped with an ECLIPSE WINNOX WX0200 burner with a maximum heat input rate of 2.0 MMBtu/hr. The dryer exhaust is vented to a MAC HE60 high efficiency cyclone. The owner or operator shall install, maintain, and operate Uniqair's, 18 kW, 15 plasma cylinders, cold plasma injection system to abate odors in the air stream from the dryer cyclone (MAC HE60) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]
3. **Cooler and Conveying System:** The system consists of three cooler sections, all vented to a MAC high efficiency cyclone, a discharge conveyor for the transfer of dried kibbles into a hopper. The material from the hopper is pneumatically conveyed to an enclosed shaker screener. The owner or operator shall install, maintain, and operate Uniqair's, 10.8 kW, 9 plasma cylinders, cold plasma injection system to abate odors in the air stream from the dryer cooler cyclone (MAC) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]
4. **Fines Collection and Conveying System:** This system collects fines from two locations in the dryer, the dryer cyclone discharge, and the cooler cyclone discharge, and vents these fines to a HORIZON SYSTEMS 285 WRDL8 baghouse. This baghouse is vented indoors. [District Rule 2201]
5. **Screening and Conveying System.** The system consists of an enclosed shaker screener, an enclosed surge bin, and an enclosed weigh belt. The fines (rejects) are conveyed to the totes in the basement. The surge bin shall be vented to a HORIZON SYSTEMS MODEL 21VFTC6 cartridge dust collector system. Each tote shall have a tight-fitting lid with a static sock filter. [District Rule 2201]
6. **Coating and Conveying System:** The system consists of a hopper where material from a weight belt is sprayed with chicken fat and canola oil (or other similar ingredients) and a coating reel where dry dog/cat digest and probiotics (or other similar ingredients) are sprinkled to be absorbed into the kibbles. The kibbles are then conveyed pneumatically to a vertical cooler system using a filter receiver system with a static sock filter. [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

7. Vertical Cooler and Conveying System: A vertical cooler vented to a MAC HE52 high efficiency cyclone. The dried material falls on a vibratory pan on sliding rails. The material (accepts) from the vibratory pan drops into a hopper from where the dried kibbles are pneumatically conveyed to 14 finished product bins. Each bin shall be vented to a HORIZON SYSTEMS MODEL 21VFTC6 cartridge dust collector system. The fines (rejects) from MAC HE52 cyclone discharge and vibratory pan are conveyed to the totes in the basement. Each tote shall have a tight-fitting lid with a static sock filter. The owner or operator shall install, maintain, and operate Uniqair's, 3.6 kW, 3 plasma cylinders, cold plasma injection system to abate odors in the air stream from the vertical cooler cyclone (MAC HE52) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]
8. Each reactor of the plasma injector system shall be installed, operated, and maintained per the manufacturer's (vendor) recommendations. A copy of manufacturer's recommendations shall be kept on site at all times. [District Rule 2201]
9. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
10. Particulate matter, at the exhaust of each dust collector system (baghouse, cartridge dust collector, cyclone etc.), shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
11. All exhaust stacks under this permit 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]
12. 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]
13. Visible emissions, at the exhaust of each dust collector system (baghouse, cartridge dust collector, cyclone etc.) shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201]
14. PM10 emissions from the operations covered under this permit shall not exceed 0.0612 pounds per ton of finished material produced. [District Rule 2201]
15. VOC emissions from the operations covered under this permit shall not exceed 0.047 pounds per ton of finished material produced. [District Rule 2201]
16. Total NOx emissions from the operations covered under this permit shall not exceed 0.529 pounds per hour. [District Rules 2201 and 4102]
17. Total VOC emissions from the operations covered under this permit shall not exceed 1.529 pounds per hour. [District Rule 4102]
18. No more than 36 tons of ground meat, excluding moisture, shall be injected into the steam-conditioner in any one day. [District Rule 2201]
19. The amount of finished product produced under this line shall not exceed 780 tons in any one day. [District Rule 2201]
20. The combined amount of finished product produced through all pet food manufacturing lines (N-8234-4, '-5 and '-6) shall not exceed 780 tons in any one day. [District Rule 2201]
21. The dryer shall only be fired on PUC-quality natural gas. [District Rule 2201]
22. Emissions from the dryer shall not exceed any of the following limits: 2.1 ppmvd NOx @ 19% O2 (0.024 lb-NOx/MMBtu), 16.5 ppmvd CO @ 19% O2 (0.112 lb-CO/MMBtu) and 0.00285 lb-SOx/MMBtu. [District Rules 2201 and 4309]
23. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081]
24. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4309. [District Rules 2201 and 4309]
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2201 and 4309]
27. Source testing to determine NO_x and CO emissions from the dryer at the exhaust stack of the MAC HE60 cyclone by obtaining samples upstream of the plasma injection system shall be conducted at least once every 24 months. [District Rule 4309]
28. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rule 4309]
29. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rule 4309]
30. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rule 4309]
31. All dryer test results for NO_x and CO shall be reported in ppmv @ 19% O₂ (or no correction if measured above 19% O₂), corrected to dry stack conditions. [District Rule 4309]
32. Stack gas velocity or volumetric flow rate shall be determined using EPA Methods 2, 2A, or 2D. [District Rule 2201]
33. A sellable pet food product, containing at least 3% (by weight) of ground meat, shall be produced during VOC source testing and odor control efficiency testing. [District Rules 2201 and 4102]
34. The District may, at its discretion, require VOC source testing and odor panel testing at any time should conditions at the facility or the surrounding area warrant such testing. [District Rules 2201 and 4201]
35. The amount of ground meat injected into the steam-conditioner, finished product produced, and all other applicable parameters (exhaust flow rate, temperature, pressure, etc.), shall be recorded during VOC source testing and odor panel testing. [District Rules 2201 and 4102]
36. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
37. The permittee shall monitor and record the stack concentration of NO_x and O₂ downstream of each plasma injection system using a portable emission monitor that meets District specifications, within 30 days of the date the respective plasma injection system becomes fully operational. Alternatively, the permittee may elect to conduct a source test to measure the stack concentration of NO_x and O₂ downstream of each plasma injection system using CARB Method 100 or EPA Method 7E, or another agreed upon source test method, within 60 days of the date the respective plasma injection system becomes fully operational. The results shall be converted into hourly NO_x emissions (lb/hour) using exhaust flow rate (dscfm) from the latest source test report. For the purpose of this condition, fully operational is defined as the physical state when all variable frequency drives and plasma reaction cylinders on a respective plasma injection unit are operating normally, demonstrated by consistent operation for at least a two week period. The permittee shall keep record of the date on which each plasma injection system becomes fully operational, following the issuance date on this permit. [District Rule 2201]
38. Total NO_x emissions (lb/hour) shall include NO_x emissions from the following release points by taking portable analyzer measurements according to the manufacturer recommended procedures, or by conducting a District-approved source test, downstream of the cold plasma injection system serving: (1) Hot kibble conveying cyclone (HT-68), (2) dryer cyclone (MAC HE60), (3) dryer cooler cyclone (MAC), and (4) vertical cooler cyclone (MAC HE-52). [District Rule 2201]
39. The permittee shall maintain records of: (1) date and time of NO_x and O₂ measurements, (2) identification of the stack (e.g., hot kibble conveying cyclone (HT-68), dryer cyclone (MAC HE60), etc.) (3) O₂ concentration in percent and the measured NO_x concentrations, (4) exhaust flow rate (dscfm) in the latest NO_x and CO source testing report, (5) NO_x emissions (lb/hour), (6) total NO_x emissions (lb/hour) from the operations covered under this permit unit, (7) make and model of exhaust gas analyzer, and (8) exhaust gas analyzer calibration records. [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

40. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201 and 4309]
41. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ of the dryer (at the exhaust stack of the MAC HE60 cyclone, upstream of the plasma injection system), at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4309]
42. If either the dryer NO_x or CO concentrations corrected to 19% O₂ (or no correction if measured above 19% O₂), as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4309]
43. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 19% O₂ (or no correction if measured above 19% O₂), (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4309]
44. The owner or operator shall continuously monitor and record the following parameters for each cold plasma injection system: (1) date, (2) pressure drop across pre-filter (DP3), (3) pressure drop across high efficiency filter (DP2), (4) pressure drop across cold plasma reactor (DP1), (5) plasma air velocity (AV1) after the cold plasma reactor, and (6) variable frequency drive (VFD) signal (ON/OFF). The set point for each parameter shall be as follows: DP3 < 400 Pa, DP2 < 400 Pa, DP1 < 4,000 Pa, AV1 > 2 m/sec, and VFD signal in ON status. These parameters shall be recorded at least once every 15-minutes. The recorded parameters (except for VFD signal) shall be averaged over 60-minute blocks and compared with the established acceptable set points. Upon detecting any excursion, the owner or operator shall investigate the excursion and take corrective action to minimize odorous emissions and prevent recurrence of the excursion as expeditiously as practical, but no longer than 1 hour of operation after detection. If the monitoring equipment continues to show non-conformity with the established parameter(s) after 1 hour of operation following detection, the permittee shall notify the District within the following 1 hour and conduct a thorough inspection, and repair of the cold plasma injection system within 24 hours of the first exceedance. In lieu of conducting a thorough inspection and repair of the cold plasma injection system, the owner or operator may stipulate a violation that is subject to enforcement action has occurred. The owner or operator must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the excursions are the result of a qualifying breakdown condition pursuant to Rule 1100, the owner or operator may fully comply with Rule 1100 in lieu of performing the notification required by this condition. [District Rule 4102]
45. The owner or operator shall maintain records of the date, the ground meat injection rate, excluding moisture, into the steam conditioner (tons/day), amount of finished product produced by this line (tons/day), and the combined amount of finished product produced by all pet food manufacturing lines (N-8234-4, '-5 and '-6, tons/day). The combined amount of finished product produced by all pet food manufacturing lines (N-8234-4, '-5 and '-6, tons/day) may be used to demonstrate compliance with the amount of finished product produced by this line (tons/day). [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

46. The owner or operator shall maintain all records of maintenance for cold plasma injector systems including any cold plasma reactor replacements. [District Rule 4102]
47. All records shall be maintained and retained on-site for minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 2201 and 4309]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-8234-6-5

EXPIRATION DATE: 04/30/2020

EQUIPMENT DESCRIPTION:
PET FOOD PROCESSING LINE #3

PERMIT UNIT REQUIREMENTS

1. **Material Dispensing, Kibble Manufacturing, and Conveying Systems:** The material from the extruder surge bin is dispensed into an extruder bin from where the material is transferred into an EXTRU-TECH 24X144 steam-conditioner system. The material is extruded to form kibbles. The kibbles are pneumatically conveyed using HEPA filtered air into a dryer receiving chamber using HORIZON SYSTEMS HT-68 high volume cyclone with a static sock filter. The owner or operator shall install, maintain, and operate Uniqair's, 7.2 kW, 6 plasma cylinders, cold plasma injection system to abate odors in the air stream from the wet cyclone (Horizon HT-68) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]
2. **Dryer System:** The system consists of an EXTRU-TECH 1053-2P-AF11, 10 MMBtu/hr (total) direct-fired natural gas fired dryer with five drying sections, each section is equipped with an ECLIPSE WINNOX WX0200 burner with a maximum heat input rate of 2.0 MMBtu/hr. The dryer exhaust is vented to a MAC HE60 high efficiency cyclone. The owner or operator shall install, maintain, and operate Uniqair's, 18 kW, 15 plasma cylinders, cold plasma injection system to abate odors in the air stream from the dryer cyclone (MAC HE60) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]
3. **Cooler and Conveying System:** The system consists of three cooler sections, all vented to a MAC high efficiency cyclone, a discharge conveyor for the transfer of dried kibbles into a hopper. The material from the hopper is pneumatically conveyed to an enclosed shaker screener. The owner or operator shall install, maintain, and operate Uniqair's, 10.8 kW, 9 plasma cylinders, cold plasma injection system to abate odors in the air stream from the dryer cooler cyclone (MAC) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]
4. **Fines Collection and Conveying System:** This system collects fines from two locations in the dryer, the dryer cyclone discharge, and the cooler cyclone discharge, and vents these fines to a HORIZON SYSTEMS 285 WRDL8 baghouse. This baghouse is vented indoors. [District Rule 2201]
5. **Screening and Conveying System.** The system consists of an enclosed shaker screener, an enclosed surge bin, and an enclosed weigh belt. The fines (rejects) are conveyed to the totes in the basement. The surge bin shall be vented to a HORIZON SYSTEMS MODEL 21VFTC6 cartridge dust collector system. Each tote shall have a tight-fitting lid with a static sock filter. [District Rule 2201]
6. **Coating and Conveying System:** The system consists of a hopper where material from a weight belt is sprayed with chicken fat and canola oil (or other similar ingredients) and a coating reel where dry dog/cat digest and probiotics (or other similar ingredients) are sprinkled to be absorbed into the kibbles. The kibbles are then conveyed pneumatically to a vertical cooler system using a filter receiver system with a static sock filter. [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

7. Vertical Cooler and Conveying System: A vertical cooler vented to a MAC HE52 high efficiency cyclone. The dried material falls on a vibratory pan on sliding rails. The material (accepts) from the vibratory pan drops into a hopper from where the dried kibbles are pneumatically conveyed to 14 finished product bins. Each bin shall be vented to a HORIZON SYSTEMS MODEL 21VFTC6 cartridge dust collector system. The fines (rejects) from MAC HE52 cyclone discharge and vibratory pan are conveyed to the totes in the basement. Each tote shall have a tight-fitting lid with a static sock filter. The owner or operator shall install, maintain, and operate Uniqair's, 3.6 kW, 3 plasma cylinders, cold plasma injection system to abate odors in the air stream from the vertical cooler cyclone (MAC HE52) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]
8. Each reactor of the plasma injector system shall be installed, operated, and maintained per the manufacturer's (vendor) recommendations. A copy of manufacturer's recommendations shall be kept on site at all times. [District Rule 2201]
9. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
10. Particulate matter, at the exhaust of each dust collector system (baghouse, cartridge dust collector, cyclone etc.), shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
11. All exhaust stacks under this permit 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]
12. 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]
13. Visible emissions, at the exhaust of each dust collector system (baghouse, cartridge dust collector, cyclone etc.) shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201]
14. PM10 emissions from the operations covered under this permit shall not exceed 0.0612 pounds per ton of finished material produced. [District Rule 2201]
15. VOC emissions from the operations covered under this permit shall not exceed 0.047 pounds per ton of finished material produced. [District Rule 2201]
16. Total NOx emissions from the operations covered under this permit shall not exceed 0.529 pounds per hour. [District Rules 2201 and 4102]
17. Total VOC emissions from the operations covered under this permit shall not exceed 1.529 pounds per hour. [District Rule 4102]
18. No more than 36 tons of ground meat, excluding moisture, shall be injected into the steam-conditioner in any one day. [District Rule 2201]
19. The amount of finished product produced under this line shall not exceed 780 tons in any one day. [District Rule 2201]
20. The combined amount of finished product produced through all pet food manufacturing lines (N-8234-4, '-5 and '-6) shall not exceed 780 tons in any one day. [District Rule 2201]
21. The dryer shall only be fired on PUC-quality natural gas. [District Rule 2201]
22. Emissions from the dryer shall not exceed any of the following limits: 2.1 ppmvd NOx @ 19% O2 (0.024 lb-NOx/MMBtu), 16.5 ppmvd CO @ 19% O2 (0.112 lb-CO/MMBtu) and 0.00285 lb-SOx/MMBtu. [District Rules 2201 and 4309]
23. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081]
24. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

Facility Name: DIAMOND PET FOOD PROCESSORS OF RIPON

Location: 942 S STOCKTON AVE, RIPON, CA 95366

N-8234-6-5 Jan 28 2018 2:53PM - KAH/LONJ

25. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4309. [District Rules 2201 and 4309]
26. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2201 and 4309]
27. Source testing to determine NO_x and CO emissions from the dryer at the exhaust stack of the MAC HE60 cyclone by obtaining samples upstream of the plasma injection system shall be conducted at least once every 24 months. [District Rule 4309]
28. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rule 4309]
29. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rule 4309]
30. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rule 4309]
31. All dryer test results for NO_x and CO shall be reported in ppmv @ 19% O₂ (or no correction if measured above 19% O₂), corrected to dry stack conditions. [District Rule 4309]
32. Stack gas velocity or volumetric flow rate shall be determined using EPA Methods 2, 2A, or 2D. [District Rule 2201]
33. A sellable pet food product, containing at least 3% (by weight) of ground meat, shall be produced during VOC source testing and odor control efficiency testing. [District Rules 2201 and 4102]
34. The District may, at its discretion, require VOC source testing and odor panel testing at any time should conditions at the facility or the surrounding area warrant such testing. [District Rules 2201 and 4201]
35. The amount of ground meat injected into the steam-conditioner, finished product produced, and all other applicable parameters (exhaust flow rate, temperature, pressure, etc.), shall be recorded during VOC source testing and odor panel testing. [District Rules 2201 and 4102]
36. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
37. The permittee shall monitor and record the stack concentration of NO_x and O₂ downstream of each plasma injection system using a portable emission monitor that meets District specifications, within 30 days of the date the respective plasma injection system becomes fully operational. Alternatively, the permittee may elect to conduct a source test to measure the stack concentration of NO_x and O₂ downstream of each plasma injection system using CARB Method 100 or EPA Method 7E, or another agreed upon source test method, within 60 days of the date the respective plasma injection system becomes fully operational. The results shall be converted into hourly NO_x emissions (lb/hour) using exhaust flow rate (dscfm) from the latest source test report. For the purpose of this condition, fully operational is defined as the physical state when all variable frequency drives and plasma reaction cylinders on a respective plasma injection unit are operating normally, demonstrated by consistent operation for at least a two week period. The permittee shall keep record of the date on which each plasma injection system becomes fully operational, following the issuance date on this permit. [District Rule 2201]
38. Total NO_x emissions (lb/hour) shall include NO_x emissions from the following release points by taking portable analyzer measurements according to the manufacturer recommended procedures, or by conducting a District-approved source test, downstream of the cold plasma injection system serving: (1) Hot kibble conveying cyclone (HT-68), (2) dryer cyclone (MAC HE60), (3) dryer cooler cyclone (MAC), and (4) vertical cooler cyclone (MAC HE-52). [District Rule 2201]
39. The permittee shall maintain records of: (1) date and time of NO_x and O₂ measurements, (2) identification of the stack (e.g., hot kibble conveying cyclone (HT-68), dryer cyclone (MAC HE60), etc.) (3) O₂ concentration in percent and the measured NO_x concentrations, (4) exhaust flow rate (dscfm) in the latest NO_x and CO source testing report, (5) NO_x emissions (lb/hour), (6) total NO_x emissions (lb/hour) from the operations covered under this permit unit, (7) make and model of exhaust gas analyzer, and (8) exhaust gas analyzer calibration records. [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

40. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201 and 4309]
41. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ of the dryer (at the exhaust stack of the MAC HE60 cyclone, upstream of the plasma injection system), at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4309]
42. If either the dryer NO_x or CO concentrations corrected to 19% O₂ (or no correction if measured above 19% O₂), as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4309]
43. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 19% O₂ (or no correction if measured above 19% O₂), (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4309]
44. The owner or operator shall continuously monitor and record the following parameters for each cold plasma injection system: (1) date, (2) pressure drop across pre-filter (DP3), (3) pressure drop across high efficiency filter (DP2), (4) pressure drop across cold plasma reactor (DP1), (5) plasma air velocity (AV1) after the cold plasma reactor, and (6) variable frequency drive (VFD) signal (ON/OFF). The set point for each parameter shall be as follows: DP3 < 400 Pa, DP2 < 400 Pa, DP1 < 4,000 Pa, AV1 > 2 m/sec, and VFD signal in ON status. These parameters shall be recorded at least once every 15-minutes. The recorded parameters (except for VFD signal) shall be averaged over 60-minute blocks and compared with the established acceptable set points. Upon detecting any excursion, the owner or operator shall investigate the excursion and take corrective action to minimize odorous emissions and prevent recurrence of the excursion as expeditiously as practical, but no longer than 1 hour of operation after detection. If the monitoring equipment continues to show non-conformity with the established parameter(s) after 1 hour of operation following detection, the permittee shall notify the District within the following 1 hour and conduct a thorough inspection, and repair of the cold plasma injection system within 24 hours of the first exceedance. In lieu of conducting a thorough inspection and repair of the cold plasma injection system, the owner or operator may stipulate a violation that is subject to enforcement action has occurred. The owner or operator must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the excursions are the result of a qualifying breakdown condition pursuant to Rule 1100, the owner or operator may fully comply with Rule 1100 in lieu of performing the notification required by this condition. [District Rule 4102]
45. The owner or operator shall maintain records of the date, the ground meat injection rate, excluding moisture, into the steam conditioner (tons/day), amount of finished product produced by this line (tons/day), and the combined amount of finished product produced by all pet food manufacturing lines (N-8234-4, '-5 and '-6, tons/day). The combined amount of finished product produced by all pet food manufacturing lines (N-8234-4, '-5 and '-6, tons/day) may be used to demonstrate compliance with the amount of finished product produced by this line (tons/day). [District Rule 2201]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

46. The owner or operator shall maintain all records of maintenance for cold plasma injector systems including any cold plasma reactor replacements. [District Rule 4102]
47. All records shall be maintained and retained on-site for minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 2201 and 4309]

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-8234-10-0

EXPIRATION DATE: 04/30/2020

EQUIPMENT DESCRIPTION:

14.65 MMBTU/HR CLEAVER BROOKS CBLE 700-350, 150# BOILER EQUIPPED WITH CLEAVER BROOKS CB-350 LOW NOX BURNER VENTED TO C&C PANASIA MODEL PANOX CP-12 SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM (BOILER #1)

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. 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]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. 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]
5. The unit shall only be fired on PUC-quality natural gas. [District Rules 2201 and 4320]
6. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [40 CFR 60.48c(g)]
7. NOx emissions shall not exceed 9.0 ppmvd @ 3% O2 (0.011 lb/MMBtu) referenced as NO2. [District Rules 2201, 4305, 4306 and 4320]
8. CO emissions shall not exceed 50 ppmvd @ 3% O2 (0.037 lb/MMBtu). [District Rules 2201, 4305, 4306 and 4320]
9. SOx emissions shall not exceed 0.00285 lb/MMBtu. [District Rule 2201]
10. PM10 emissions shall not exceed 0.0076 lb/MMBtu. [District Rule 2201]
11. VOC emissions shall not exceed 0.004 lb/MMBtu. [District Rule 2201]
12. NH3 emissions from the SCR shall not exceed 10.0 ppmvd @ 3% O2. [District Rule 2201]
13. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
14. Source testing to measure NOx, CO, and NH3 emissions from this unit while fired on natural gas shall be conducted at least once every twelve months. After demonstrating compliance on two consecutive annual source tests when unit is fired on natural gas, the unit shall be tested not less than once every thirty-six months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve months. [District Rules 2201, 4305, 4306 and 4320]
15. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320]
16. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

17. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320]
18. Source testing for ammonia slip shall be conducted utilizing BAAQMD Method ST-1B. [District Rule 1081]
19. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320]
20. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]
21. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320]
22. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]
23. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
24. The permittee shall monitor and record the stack concentration of NO_x, CO, NH₃ and O₂ at least once during each month in which source testing is not performed. NO_x, CO and O₂ monitoring shall be conducted utilizing a portable analyzer that meets District specifications. NH₃ monitoring shall be conducted utilizing gas detection tubes (Draeger brand or District approved equivalent). Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless it has been performed within the last month. [District Rules 2201, 4305, 4306 and 4320]
25. If either the NO_x, CO or NH₃ concentrations, as measured by the portable analyzer or the District approved ammonia monitoring equipment, exceed the permitted levels the permittee shall return the emissions to compliant levels as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer or the ammonia monitoring equipment continue to show emission limit violations after 1 hour of operation following detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation that is subject to enforcement action has occurred. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306 and 4320]
26. All NO_x, CO, O₂ and ammonia emission readings shall be taken with the unit operating at conditions representative of normal operation or under the conditions specified in the Permit to Operate. The NO_x, CO and O₂ analyzer as well as the NH₃ emission monitoring equipment shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Analyzer readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306 and 4320]
27. Ammonia emissions readings shall be conducted at the time the NO_x, CO and O₂ readings are taken. The readings shall be converted to ppmvd @ 3% O₂. [District Rules 2201, 4305 and 4306]
28. The permittee shall maintain records of: (1) the date and time of NO_x, CO, NH₃ and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x, CO and NH₃ concentrations corrected to 3% O₂, (3) make and model of the portable analyzer, (4) portable analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rules 2201, 4305, 4306 and 4320]
29. Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

30. The permittee shall maintain records of the date, type of fuel, amount of the fuel combusted (scf/day) by the boiler. [40 CFR 60.48c(g)]
31. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, 4305, 4306 and 4320]

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

Facility Name: DIAMOND PET FOOD PROCESSORS OF RIPON

Location: 942 S STOCKTON AVE, RIPON, CA 95366

N-8234-10-0 Jan 28 2016 2:58PM -- KAHILONJ

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-8234-11-0

EXPIRATION DATE: 04/30/2020

EQUIPMENT DESCRIPTION:

14.65 MMBTU/HR CLEAVER BROOKS CBLE 700-350, 150# BOILER EQUIPPED WITH CLEAVER BROOKS CB-350 LOW NOX BURNER VENTED TO C&C PANASIA MODEL PANOX CP-12 SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM (BOILER #2)

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. 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]
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. The unit shall only be fired on PUC-quality natural gas. [District Rules 2201 and 4320]
5. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [40 CFR 60.48c(g)]
6. NOx emissions shall not exceed 9.0 ppmvd @ 3% O₂ (0.011 lb/MMBtu) referenced as NO₂. [District Rules 2201, 4305, 4306 and 4320]
7. CO emissions shall not exceed 50 ppmvd @ 3% O₂ (0.037 lb/MMBtu). [District Rules 2201, 4305, 4306 and 4320]
8. SOx emissions shall not exceed 0.00285 lb/MMBtu. [District Rule 2201]
9. PM₁₀ emissions shall not exceed 0.0076 lb/MMBtu. [District Rule 2201]
10. VOC emissions shall not exceed 0.004 lb/MMBtu. [District Rule 2201]
11. NH₃ emissions from the SCR shall not exceed 10.0 ppmvd @ 3% O₂. [District Rule 2201]
12. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
13. Source testing to measure NOx, CO, and NH₃ emissions from this unit while fired on natural gas shall be conducted at least once every twelve months. After demonstrating compliance on two consecutive annual source tests when unit is fired on natural gas, the unit shall be tested not less than once every thirty-six months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve months. [District Rules 2201, 4305, 4306 and 4320]
14. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306, and 4320]
15. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306, and 4320]
16. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306, and 4320]
17. Source testing for ammonia slip shall be conducted utilizing BAAQMD Method ST-1B. [District Rule 1081]

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

18. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320]
19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]
20. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306, and 4320]
21. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]
22. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
23. The permittee shall monitor and record the stack concentration of NO_x, CO, NH₃ and O₂ at least once during each month in which source testing is not performed. NO_x, CO and O₂ monitoring shall be conducted utilizing a portable analyzer that meets District specifications. NH₃ monitoring shall be conducted utilizing gas detection tubes (Draeger brand or District approved equivalent). Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless it has been performed within the last month. [District Rules 2201, 4305, 4306 and 4320]
24. If either the NO_x, CO or NH₃ concentrations, as measured by the portable analyzer or the District approved ammonia monitoring equipment, exceed the permitted levels the permittee shall return the emissions to compliant levels as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer or the ammonia monitoring equipment continue to show emission limit violations after 1 hour of operation following detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation that is subject to enforcement action has occurred. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rules 2201, 4305, 4306 and 4320]
25. All NO_x, CO, O₂ and ammonia emission readings shall be taken with the unit operating at conditions representative of normal operation or under the conditions specified in the Permit to Operate. The NO_x, CO and O₂ analyzer as well as the NH₃ emission monitoring equipment shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Analyzer readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201, 4305, 4306 and 4320]
26. Ammonia emissions readings shall be conducted at the time the NO_x, CO and O₂ readings are taken. The readings shall be converted to ppmvd @ 3% O₂. [District Rules 2201, 4305 and 4306]
27. The permittee shall maintain records of: (1) the date and time of NO_x, CO, NH₃ and O₂ measurements, (2) the O₂ concentration in percent by volume and the measured NO_x, CO and NH₃ concentrations corrected to 3% O₂, (3) make and model of the portable analyzer, (4) portable analyzer calibration records, (5) the method of determining the NH₃ emission concentration, and (6) a description of any corrective action taken to maintain the emissions at or below the acceptable levels. [District Rules 2201, 4305, 4306 and 4320]
28. Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320]
29. The permittee shall maintain records of the date, type of fuel, amount of the fuel combusted (scf/day) by the boiler. [40 CFR 60.48c(g)]
30. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070, 2201, 4305, 4306 and 4320]

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

Appendix C
ATC N-8234-4-8, '-5-8 and '-6-8



San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT


HEALTHY AIR LIVING™

AUTHORITY TO CONSTRUCT

PERMIT NO: N-8234-4-8

ISSUANCE DATE: 07/12/2017

LEGAL OWNER OR OPERATOR: DIAMOND PET FOOD PROCESSORS OF RIPON

MAILING ADDRESS: 942 S STOCKTON AVE
RIPON, CA 95366

LOCATION: 942 S STOCKTON AVE
RIPON, CA 95366

EQUIPMENT DESCRIPTION:

MODIFICATION OF PET FOOD PROCESSING LINE #1: TO INCREASE DAILY AND ANNUAL ODOR COUNTERACTANT USAGE

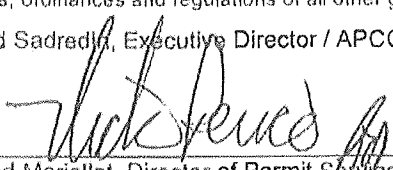
CONDITIONS

1. Authority to Construct (ATC) N-8234-4-7 shall be implemented prior to, or concurrently with the implementation of this permit. [District Rule 2201]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Particulate matter, at the exhaust of each dust collector system (baghouse, cartridge dust collector, cyclone etc.), shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. All exhaust stacks under this permit 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]
5. 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. Material Dispensing, Kibble Manufacturing, and Conveying Systems: The material from the extruder surge bin is dispensed into an extruder bin from where the material is transferred into an EXTRU-TECH 24X144 steam-conditioner system. The material is extruded to form kibbles. The kibbles are pneumatically conveyed using HEPA filtered air into a dryer receiving chamber using HORIZON SYSTEMS HT-68 high volume cyclone with a static sock filter. The owner or operator shall install, maintain, and operate Uniqair's, 7.2 kW, 6 plasma cylinders, cold plasma injection system to abate odors in the air stream from the wet cyclone (Horizon HT-68) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadreddin, Executive Director / APCO


Arnaud Marjollet, Director of Permit Services

N-8234-4-8 Jul 12 2017 9:15AM - KAHLOUJ Joint Inspection 7/23/17

7. **Dryer System:** The system consists of an EXTRU-TECH 1053-2P-AF11, 10 MMBtu/hr (total) direct-fired natural gas fired dryer with five drying sections, each section is equipped with an ECLIPSE WINNOX WX0200 burner with a maximum heat input rate of 2.0 MMBtu/hr. The dryer exhaust is vented to a MAC HE60 high efficiency cyclone. The owner or operator shall install, maintain, and operate Uniqair's, 18 kW, 15 plasma cylinders, cold plasma injection system to abate odors in the air stream from the dryer cyclone (MAC HE60) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]
8. **Cooler and Conveying System:** The system consists of three cooler sections, all vented to a MAC high efficiency cyclone, a discharge conveyor for the transfer of dried kibbles into a hopper. The material from the hopper is pneumatically conveyed to an enclosed shaker screener. The owner or operator shall install, maintain, and operate Uniqair's, 10.8 kW, 9 plasma cylinders, cold plasma injection system to abate odors in the air stream from the dryer cooler cyclone (MAC) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]
9. **Fines Collection and Conveying System:** This system collects fines from two locations in the dryer, the dryer cyclone discharge, and the cooler cyclone discharge, and vents these fines to a HORIZON SYSTEMS 285 WRDL8 baghouse. This baghouse is vented indoors. [District Rule 2201]
10. **Screening and Conveying System.** The system consists of an enclosed shaker screener, an enclosed surge bin, and an enclosed weigh belt. The fines (rejects) are conveyed to the totes in the basement. The surge bin shall be vented to a HORIZON SYSTEMS MODEL 21VFTC6 cartridge dust collector system. Each tote shall have a tight-fitting lid with a static sock filter. [District Rule 2201]
11. **Coating and Conveying System:** The system consists of a hopper where material from a weight belt is sprayed with chicken fat and canola oil (or other similar ingredients) and a coating reel where dry dog/cat digest and probiotics (or other similar ingredients) are sprinkled to be absorbed into the kibbles. The kibbles are then conveyed pneumatically to a vertical cooler system using a filter receiver system with a static sock filter. [District Rule 2201]
12. **Vertical Cooler and Conveying System:** A vertical cooler vented to a MAC HE52 high efficiency cyclone. The dried material falls on a vibratory pan on sliding rails. The material (accepts) from the vibratory pan drops into a hopper from where the dried kibbles are pneumatically conveyed to 14 finished product bins. Each bin shall be vented to a HORIZON SYSTEMS MODEL 21VFTC6 cartridge dust collector system. The fines (rejects) from MAC HE52 cyclone discharge and vibratory pan are conveyed to the totes in the basement. Each tote shall have a tight-fitting lid with a static sock filter. The owner or operator shall install, maintain, and operate Uniqair's, 3.6 kW, 3 plasma cylinders, cold plasma injection system to abate odors in the air stream from the vertical cooler cyclone (MAC HE52) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]
13. **Odorant Injection System:** This system shall consist of a pump, an odor counteractant holding reservoir, and associated piping network. The system shall inject odor counteractant upstream of the blower and downstream of plasma injection system in any process stack (i.e., wet cyclone, dryer stack, cooler stack, or vertical cooler stack). The odorant injection system may be a stand-alone system for each stack, or a centrally located system to be shared among all process stacks under permits N-8234-4, '-5 and '-6. [District Rule 2201]
14. Each reactor of the plasma injector system shall be installed, operated, and maintained per the manufacturer's (vendor) recommendations. A copy of manufacturer's recommendations shall be kept on site at all times. [District Rule 2201]
15. OdoLoc-L100 shall be the only odor counteractant used. [District Rule 2201]
16. VOC emissions from odor counteractant use for each pet food manufacturing line shall not exceed any of the following limits: 22.5 lb/day and 5,475 lb/year. These limits equate to the use of 22.5 lb/day and 5,475 lb/year of OdoLoc-L100. [District Rule 2201]
17. Combined VOC emissions from odor counteractant use for all pet food manufacturing lines (N-8234-4, N-8234-5 and N-8234-6) shall not exceed any of the following limits: 22.5 lb/day and 5,475 lb/year. These limits equate to the use of 22.5 lb/day and 5,475 lb/year of OdoLoc-L100. [District Rule 2201]
18. Visible emissions, at the exhaust of each dust collector system (baghouse, cartridge dust collector, cyclone etc.) shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201]
19. PM10 emissions from the operations covered under this permit shall not exceed 0.0612 pounds per ton of finished material produced. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

20. VOC emissions from the operations (not including odorant injection VOCs) covered under this permit shall not exceed 0.047 pounds per ton of finished material produced. [District Rule 2201]
21. Total NOx emissions from the operations covered under this permit shall not exceed 0.529 pounds per hour. [District Rules 2201 and 4102]
22. Total VOC emissions from the operations (not including odorant injection VOCs) covered under this permit shall not exceed 1.529 pounds per hour. [District Rule 4102]
23. No more than 36 tons of ground meat, excluding moisture, shall be injected into the steam-conditioner in any one day. [District Rule 2201]
24. The amount of finished product produced under this line shall not exceed 780 tons in any one day. [District Rule 2201]
25. The combined amount of finished product produced through all pet food manufacturing lines (N-8234-4, '-5 and '-6) shall not exceed 780 tons in any one day. [District Rule 2201]
26. The dryer shall only be fired on PUC-quality natural gas. [District Rule 2201]
27. Emissions from the dryer shall not exceed any of the following limits: 2.1 ppmvd NOx @ 19% O2 (0.024 lb-NOx/MMBtu), 16.5 ppmvd CO @ 19% O2 (0.112 lb-CO/MMBtu) and 0.00285 lb-SOx/MMBtu. [District Rules 2201 and 4309]
28. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081]
29. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
30. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4309. [District Rules 2201 and 4309]
31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2201 and 4309]
32. Source testing to determine NOx and CO emissions from the dryer at the exhaust stack of the MAC HE60 cyclone by obtaining samples upstream of the plasma injection system shall be conducted at least once every 24 months. [District Rule 4309]
33. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rule 4309]
34. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rule 4309]
35. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rule 4309]
36. All dryer test results for NOx and CO shall be reported in ppmv @ 19% O2 (or no correction if measured above 19% O2), corrected to dry stack conditions. [District Rule 4309]
37. Stack gas velocity or volumetric flow rate shall be determined using EPA Methods 2, 2A, or 2D. [District Rule 2201]
38. A sellable pet food product, containing at least 3% (by weight) of ground meat, shall be produced during VOC source testing and odor control efficiency testing. [District Rules 2201 and 4102]
39. The District may, at its discretion, require VOC source testing and odor panel testing at any time should conditions at the facility or the surrounding area warrant such testing. [District Rules 2201 and 4201]
40. The amount of ground meat injected into the steam-conditioner, finished product produced, and all other applicable parameters (exhaust flow rate, temperature, pressure, etc.), shall be recorded during VOC source testing and odor panel testing. [District Rules 2201 and 4102]

CONDITIONS CONTINUE ON NEXT PAGE

41. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
42. The permittee shall monitor and record the stack concentration of NO_x and O₂ downstream of each plasma injection system using a portable emission monitor that meets District specifications, within 30 days of the date the respective plasma injection system becomes fully operational. Alternatively, the permittee may elect to conduct a source test to measure the stack concentration of NO_x and O₂ downstream of each plasma injection system using CARB Method 100 or EPA Method 7E, or another agreed upon source test method, within 60 days of the date the respective plasma injection system becomes fully operational. The results shall be converted into hourly NO_x emissions (lb/hour) using exhaust flow rate (dscfm) from the latest source test report. For the purpose of this condition, fully operational is defined as the physical state when all variable frequency drives and plasma reaction cylinders on a respective plasma injection unit are operating normally, demonstrated by consistent operation for at least a two week period. The permittee shall keep record of the date on which each plasma injection system becomes fully operational, following the issuance date on this permit. [District Rule 2201]
43. Total NO_x emissions (lb/hour) shall include NO_x emissions from the following release points by taking portable analyzer measurements according to the manufacturer recommended procedures, or by conducting a District-approved source test, downstream of the cold plasma injection system serving: (1) Hot kibble conveying cyclone (HT-68), (2) dryer cyclone (MAC HE60), (3) dryer cooler cyclone (MAC), and (4) vertical cooler cyclone (MAC HE-52). [District Rule 2201]
44. The permittee shall maintain records of: (1) date and time of NO_x and O₂ measurements, (2) identification of the stack (e.g., hot kibble conveying cyclone (HT-68), dryer cyclone (MAC HE60), etc.) (3) O₂ concentration in percent and the measured NO_x concentrations, (4) exhaust flow rate (dscfm) in the latest NO_x and CO source testing report, (5) NO_x emissions (lb/hour), (6) total NO_x emissions (lb/hour) from the operations covered under this permit unit, (7) make and model of exhaust gas analyzer, and (8) exhaust gas analyzer calibration records. [District Rule 2201]
45. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201 and 4309]
46. The permittee shall monitor and record the stack concentration of NO_x, CO, and O₂ of the dryer (at the exhaust stack of the MAC HE60 cyclone, upstream of the plasma injection system), at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4309]
47. If either the dryer NO_x or CO concentrations corrected to 19% O₂ (or no correction if measured above 19% O₂), as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4309]
48. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x and CO concentrations corrected to 19% O₂ (or no correction if measured above 19% O₂), (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4309]

CONDITIONS CONTINUE ON NEXT PAGE

49. The owner or operator shall continuously monitor and record the following parameters for each cold plasma injection system: (1) date, (2) pressure drop across pre-filter (DP3), (3) pressure drop across high efficiency filter (DP2), (4) pressure drop across cold plasma reactor (DP1), (5) plasma air velocity (AV1) after the cold plasma reactor, and (6) variable frequency drive (VFD) signal (ON/OFF). The set point for each parameter shall be as follows: DP3 < 400 Pa, DP2 < 400 Pa, DP1 < 4,000 Pa, AV1 > 2 m/sec, and VFD signal in ON status. These parameters shall be recorded at least once every 15-minutes. The recorded parameters (except for VFD signal) shall be averaged over 60-minute blocks and compared with the established acceptable set points. Upon detecting any excursion, the owner or operator shall investigate the excursion and take corrective action to minimize odorous emissions and prevent recurrence of the excursion as expeditiously as practical, but no longer than 1 hour of operation after detection. If the monitoring equipment continues to show non-conformity with the established parameter(s) after 1 hour of operation following detection, the permittee shall notify the District within the following 1 hour and conduct a thorough inspection, and repair of the cold plasma injection system within 24 hours of the first exceedance. In lieu of conducting a thorough inspection and repair of the cold plasma injection system, the owner or operator may stipulate a violation that is subject to enforcement action has occurred. The owner or operator must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the excursions are the result of a qualifying breakdown condition pursuant to Rule 1100, the owner or operator may fully comply with Rule 1100 in lieu of performing the notification required by this condition. [District Rule 4102]
50. The owner or operator shall maintain records of the date, the ground meat injection rate, excluding moisture, into the steam conditioner (tons/day), amount of finished product produced by this line (tons/day), and the combined amount of finished product produced by all pet food manufacturing lines (N-8234-4, '-5 and '-6, tons/day). The combined amount of finished product produced by all pet food manufacturing lines (N-8234-4, '-5 and '-6, tons/day) may be used to demonstrate compliance with the amount of finished product produced by this line (tons/day). [District Rule 2201]
51. The owner or operator shall maintain all records of maintenance for cold plasma injector systems including any cold plasma reactor replacements. [District Rule 4102]
52. The owner or operator shall keep records of the following items for odorant injection system: (1) date, (2) odor counteractant used in pounds per day for this line, (3) total odor counteractant use in pounds per day for all pet food lines (N-8234-4, '-5 and '-6). If the odor counteractant injection rate is constant, the owner or operator may use 7-day weekly records to calculate the daily odor counteractant use by dividing the amount of the odor counteractant used in a given week (pounds per week) by the number of days of operation of odorant injection system (days per week). Any exceedance of daily permitted use of the odor counteractant calculated from weekly records would constitute a violation for each of the seven days. If the odor counteractant injection rate is not constant, the owner or operator shall keep daily records of the odor counteractant use. [District Rule 2201]
53. The owner or operator shall keep records of daily and annual VOC emissions due to odor counteractant use. [District Rule 2201]
54. The owner or operator shall maintain records of the latest version of the Safety Data Sheet (SDS) and purchase receipts containing date of purchase, name of the supplier, name and amount of the odor counteractant purchased. [District Rule 2201]
55. All records shall be maintained and retained on-site for minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 2201 and 4309]



San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT


HEALTHY AIR LIVING™

AUTHORITY TO CONSTRUCT

PERMIT NO: N-8234-5-8

ISSUANCE DATE: 07/12/2017

LEGAL OWNER OR OPERATOR: DIAMOND PET FOOD PROCESSORS OF RIPON

MAILING ADDRESS: 942 S STOCKTON AVE
RIPON, CA 95366

LOCATION: 942 S STOCKTON AVE
RIPON, CA 95366

EQUIPMENT DESCRIPTION:

MODIFICATION OF PET FOOD PROCESSING LINE #2: TO INCREASE DAILY AND ANNUAL ODOR COUNTERACTANT USAGE

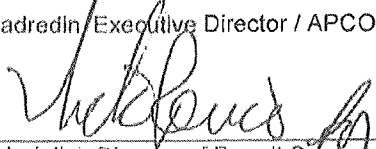
CONDITIONS

1. Authority to Construct (ATC) N-8234-5-7 shall be implemented prior to, or concurrently with the implementation of this permit. [District Rule 2201]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Particulate matter, at the exhaust of each dust collector system (baghouse, cartridge dust collector, cyclone etc.), shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. All exhaust stacks under this permit 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]
5. 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. Material Dispensing, Kibble Manufacturing, and Conveying Systems: The material from the extruder surge bin is dispensed into an extruder bin from where the material is transferred into an EXTRU-TECH 24X144 steam-conditioner system. The material is extruded to form kibbles. The kibbles are pneumatically conveyed using HEPA filtered air into a dryer receiving chamber using HORIZON SYSTEMS HT-68 high volume cyclone with a static sock filter. The owner or operator shall install, maintain, and operate Uniqair's, 7.2 kW, 6 plasma cylinders, cold plasma injection system to abate odors in the air stream from the wet cyclone (Horizon HT-68) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances, and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO



Arnaud Marjollet, Director of Permit Services

N-8234-5-6 : Jul 12 2017 8:15AM - KAHLONU : Joint Inspection NOT Required

7. **Dryer System:** The system consists of an EXTRU-TECH 1053-2P-AF11, 10 MMBtu/hr (total) direct-fired natural gas fired dryer with five drying sections, each section is equipped with an ECLIPSE WINNOX WX0200 burner with a maximum heat input rate of 2.0 MMBtu/hr. The dryer exhaust is vented to a MAC HE60 high efficiency cyclone. The owner or operator shall install, maintain, and operate Uniqair's, 18 kW, 15 plasma cylinders, cold plasma injection system to abate odors in the air stream from the dryer cyclone (MAC HE60) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]
8. **Cooler and Conveying System:** The system consists of three cooler sections, all vented to a MAC high efficiency cyclone, a discharge conveyor for the transfer of dried kibbles into a hopper. The material from the hopper is pneumatically conveyed to an enclosed shaker screener. The owner or operator shall install, maintain, and operate Uniqair's, 10.8 kW, 9 plasma cylinders, cold plasma injection system to abate odors in the air stream from the dryer cooler cyclone (MAC) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]
9. **Fines Collection and Conveying System:** This system collects fines from two locations in the dryer, the dryer cyclone discharge, and the cooler cyclone discharge, and vents these fines to a HORIZON SYSTEMS 285 WRDL8 baghouse. This baghouse is vented indoors. [District Rule 2201]
10. **Screening and Conveying System.** The system consists of an enclosed shaker screener, an enclosed surge bin, and an enclosed weigh belt. The fines (rejects) are conveyed to the totes in the basement. The surge bin shall be vented to a HORIZON SYSTEMS MODEL 21VFTC6 cartridge dust collector system. Each tote shall have a tight-fitting lid with a static sock filter. [District Rule 2201]
11. **Coating and Conveying System:** The system consists of a hopper where material from a weight belt is sprayed with chicken fat and canola oil (or other similar ingredients) and a coating reel where dry dog/cat digest and probiotics (or other similar ingredients) are sprinkled to be absorbed into the kibbles. The kibbles are then conveyed pneumatically to a vertical cooler system using a filter receiver system with a static sock filter. [District Rule 2201]
12. **Vertical Cooler and Conveying System:** A vertical cooler vented to a MAC HE52 high efficiency cyclone. The dried material falls on a vibratory pan on sliding rails. The material (accepts) from the vibratory pan drops into a hopper from where the dried kibbles are pneumatically conveyed to 14 finished product bins. Each bin shall be vented to a HORIZON SYSTEMS MODEL 21VFTC6 cartridge dust collector system. The fines (rejects) from MAC HE52 cyclone discharge and vibratory pan are conveyed to the totes in the basement. Each tote shall have a tight-fitting lid with a static sock filter. The owner or operator shall install, maintain, and operate Uniqair's, 3.6 kW, 3 plasma cylinders, cold plasma injection system to abate odors in the air stream from the vertical cooler cyclone (MAC HE52) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]
13. **Odorant Injection System:** This system shall consist of a pump, an odor counteractant holding reservoir, and associated piping network. The system shall inject odor counteractant upstream of the blower and downstream of plasma injection system in any process stack (i.e., wet cyclone, dryer stack, cooler stack, or vertical cooler stack). The odorant injection system may be a stand-alone system for each stack, or a centrally located system to be shared among all process stacks under permits N-8234-4, '-5 and '-6. [District Rule 2201]
14. Each reactor of the plasma injector system shall be installed, operated, and maintained per the manufacturer's (vendor) recommendations. A copy of manufacturer's recommendations shall be kept on site at all times. [District Rule 2201]
15. OdoLoc-L100 shall be the only odor counteractant used. [District Rule 2201]
16. VOC emissions from odor counteractant use for each pet food manufacturing line shall not exceed any of the following limits: 22.5 lb/day and 5,475 lb/year. These limits equate to the use of 22.5 lb/day and 5,475 lb/year of OdoLoc-L100. [District Rule 2201]
17. Combined VOC emissions from odor counteractant use for all pet food manufacturing lines (N-8234-4, N-8234-5 and N-8234-6) shall not exceed any of the following limits: 22.5 lb/day and 5,475 lb/year. These limits equate to the use of 22.5 lb/day and 5,475 lb/year of OdoLoc-L100. [District Rule 2201]
18. Visible emissions, at the exhaust of each dust collector system (baghouse, cartridge dust collector, cyclone etc.) shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201]
19. PM10 emissions from the operations covered under this permit shall not exceed 0.0612 pounds per ton of finished material produced. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

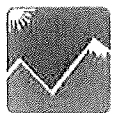
20. VOC emissions from the operations (not including odorant injection VOCs) covered under this permit shall not exceed 0.047 pounds per ton of finished material produced. [District Rule 2201]
21. Total NOx emissions from the operations covered under this permit shall not exceed 0.529 pounds per hour. [District Rules 2201 and 4102]
22. Total VOC emissions from the operations (not including odorant injection VOCs) covered under this permit shall not exceed 1.529 pounds per hour. [District Rule 4102]
23. No more than 36 tons of ground meat, excluding moisture, shall be injected into the steam-conditioner in any one day. [District Rule 2201]
24. The amount of finished product produced under this line shall not exceed 780 tons in any one day. [District Rule 2201]
25. The combined amount of finished product produced through all pet food manufacturing lines (N-8234-4, '-5 and '-6) shall not exceed 780 tons in any one day. [District Rule 2201]
26. The dryer shall only be fired on PUC-quality natural gas. [District Rule 2201]
27. Emissions from the dryer shall not exceed any of the following limits: 2.1 ppmvd NOx @ 19% O2 (0.024 lb-NOx/MMBtu), 16.5 ppmvd CO @ 19% O2 (0.112 lb-CO/MMBtu) and 0.00285 lb-SOx/MMBtu. [District Rules 2201 and 4309]
28. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081]
29. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
30. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4309. [District Rules 2201 and 4309]
31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2201 and 4309]
32. Source testing to determine NOx and CO emissions from the dryer at the exhaust stack of the MAC HE60 cyclone by obtaining samples upstream of the plasma injection system shall be conducted at least once every 24 months. [District Rule 4309]
33. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rule 4309]
34. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rule 4309]
35. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rule 4309]
36. All dryer test results for NOx and CO shall be reported in ppmv @ 19% O2 (or no correction if measured above 19% O2), corrected to dry stack conditions. [District Rule 4309]
37. Stack gas velocity or volumetric flow rate shall be determined using EPA Methods 2, 2A, or 2D. [District Rule 2201]
38. A sellable pet food product, containing at least 3% (by weight) of ground meat, shall be produced during VOC source testing and odor control efficiency testing. [District Rules 2201 and 4102]
39. The District may, at its discretion, require VOC source testing and odor panel testing at any time should conditions at the facility or the surrounding area warrant such testing. [District Rules 2201 and 4201]
40. The amount of ground meat injected into the steam-conditioner, finished product produced, and all other applicable parameters (exhaust flow rate, temperature, pressure, etc.), shall be recorded during VOC source testing and odor panel testing. [District Rules 2201 and 4102]

CONDITIONS CONTINUE ON NEXT PAGE

41. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
42. The permittee shall monitor and record the stack concentration of NOx and O2 downstream of each plasma injection system using a portable emission monitor that meets District specifications, within 30 days of the date the respective plasma injection system becomes fully operational. Alternatively, the permittee may elect to conduct a source test to measure the stack concentration of NOx and O2 downstream of each plasma injection system using CARB Method 100 or EPA Method 7E, or another agreed upon source test method, within 60 days of the date the respective plasma injection system becomes fully operational. The results shall be converted into hourly NOx emissions (lb/hour) using exhaust flow rate (dscfm) from the latest source test report. For the purpose of this condition, fully operational is defined as the physical state when all variable frequency drives and plasma reaction cylinders on a respective plasma injection unit are operating normally, demonstrated by consistent operation for at least a two week period. The permittee shall keep record of the date on which each plasma injection system becomes fully operational, following the issuance date on this permit. [District Rule 2201]
43. Total NOx emissions (lb/hour) shall include NOx emissions from the following release points by taking portable analyzer measurements according to the manufacturer recommended procedures, or by conducting a District-approved source test, downstream of the cold plasma injection system serving: (1) Hot kibble conveying cyclone (HT-68), (2) dryer cyclone (MAC HE60), (3) dryer cooler cyclone (MAC), and (4) vertical cooler cyclone (MAC HE-52). [District Rule 2201]
44. The permittee shall maintain records of: (1) date and time of NOx and O2 measurements, (2) identification of the stack (e.g., hot kibble conveying cyclone (HT-68), dryer cyclone (MAC HE60), etc.) (3) O2 concentration in percent and the measured NOx concentrations, (4) exhaust flow rate (dscfm) in the latest NOx and CO source testing report, (5) NOx emissions (lb/hour), (6) total NOx emissions (lb/hour) from the operations covered under this permit unit, (7) make and model of exhaust gas analyzer, and (8) exhaust gas analyzer calibration records. [District Rule 2201]
45. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201 and 4309]
46. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 of the dryer (at the exhaust stack of the MAC HE60 cyclone, upstream of the plasma injection system), at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4309]
47. If either the dryer NOx or CO concentrations corrected to 19% O2 (or no correction if measured above 19% O2), as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4309]
48. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 19% O2 (or no correction if measured above 19% O2), (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4309]

CONDITIONS CONTINUE ON NEXT PAGE

49. The owner or operator shall continuously monitor and record the following parameters for each cold plasma injection system: (1) date, (2) pressure drop across pre-filter (DP3), (3) pressure drop across high efficiency filter (DP2), (4) pressure drop across cold plasma reactor (DP1), (5) plasma air velocity (AV1) after the cold plasma reactor, and (6) variable frequency drive (VFD) signal (ON/OFF). The set point for each parameter shall be as follows: DP3 < 400 Pa, DP2 < 400 Pa, DP1 < 4,000 Pa, AV1 > 2 m/sec, and VFD signal in ON status. These parameters shall be recorded at least once every 15-minutes. The recorded parameters (except for VFD signal) shall be averaged over 60-minute blocks and compared with the established acceptable set points. Upon detecting any excursion, the owner or operator shall investigate the excursion and take corrective action to minimize odorous emissions and prevent recurrence of the excursion as expeditiously as practical, but no longer than 1 hour of operation after detection. If the monitoring equipment continues to show non-conformity with the established parameter(s) after 1 hour of operation following detection, the permittee shall notify the District within the following 1 hour and conduct a thorough inspection, and repair of the cold plasma injection system within 24 hours of the first exceedance. In lieu of conducting a thorough inspection and repair of the cold plasma injection system, the owner or operator may stipulate a violation that is subject to enforcement action has occurred. The owner or operator must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the excursions are the result of a qualifying breakdown condition pursuant to Rule 1100, the owner or operator may fully comply with Rule 1100 in lieu of performing the notification required by this condition. [District Rule 4102]
50. The owner or operator shall maintain records of the date, the ground meat injection rate, excluding moisture, into the steam conditioner (tons/day), amount of finished product produced by this line (tons/day), and the combined amount of finished product produced by all pet food manufacturing lines (N-8234-4, '-5 and '-6, tons/day). The combined amount of finished product produced by all pet food manufacturing lines (N-8234-4, '-5 and '-6, tons/day) may be used to demonstrate compliance with the amount of finished product produced by this line (tons/day). [District Rule 2201]
51. The owner or operator shall maintain all records of maintenance for cold plasma injector systems including any cold plasma reactor replacements. [District Rule 4102]
52. The owner or operator shall keep records of the following items for odorant injection system: (1) date, (2) odor counteractant used in pounds per day for this line, (3) total odor counteractant use in pounds per day for all pet food lines (N-8234-4, '-5 and '-6). If the odor counteractant injection rate is constant, the owner or operator may use 7-day weekly records to calculate the daily odor counteractant use by dividing the amount of the odor counteractant used in a given week (pounds per week) by the number of days of operation of odorant injection system (days per week). Any exceedance of daily permitted use of the odor counteractant calculated from weekly records would constitute a violation for each of the seven days. If the odor counteractant injection rate is not constant, the owner or operator shall keep daily records of the odor counteractant use. [District Rule 2201]
53. The owner or operator shall keep records of daily and annual VOC emissions due to odor counteractant use. [District Rule 2201]
54. The owner or operator shall maintain records of the latest version of the Safety Data Sheet (SDS) and purchase receipts containing date of purchase, name of the supplier, name and amount of the odor counteractant purchased. [District Rule 2201]
55. All records shall be maintained and retained on-site for minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 2201 and 4309]



AUTHORITY TO CONSTRUCT

PERMIT NO: N-8234-6-8

ISSUANCE DATE: 07/12/2017

LEGAL OWNER OR OPERATOR: DIAMOND PET FOOD PROCESSORS OF RIPON

MAILING ADDRESS: 942 S STOCKTON AVE
RIPON, CA 95366

LOCATION: 942 S STOCKTON AVE
RIPON, CA 95366

EQUIPMENT DESCRIPTION:

MODIFICATION OF PET FOOD PROCESSING LINE #3: TO INCREASE DAILY AND ANNUAL ODOR
COUNTERACTANT USAGE

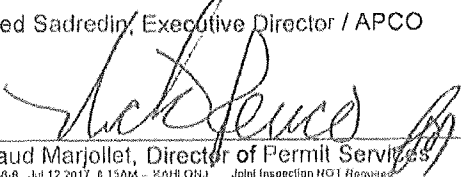
CONDITIONS

1. Authority to Construct (ATC) N-8234-6-7 shall be implemented prior to, or concurrently with the implementation of this permit. [District Rule 2201]
2. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
3. Particulate matter, at the exhaust of each dust collector system (baghouse, cartridge dust collector, cyclone etc.), shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. All exhaust stacks under this permit 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]
5. 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. Material Dispensing, Kibble Manufacturing, and Conveying Systems: The material from the extruder surge bin is dispensed into an extruder bin from where the material is transferred into an EXTRU-TECH 24X144 steam-conditioner system. The material is extruded to form kibbles. The kibbles are pneumatically conveyed using HEPA filtered air into a dryer receiving chamber using HORIZON SYSTEMS HT-68 high volume cyclone with a static sock filter. The owner or operator shall install, maintain, and operate Uniqair's, 7.2 kW, 6 plasma cylinders, cold plasma injection system to abate odors in the air stream from the wet cyclone (Horizon HT-68) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-6400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO


Arnaud Marjollet, Director of Permit Services

N-8234-6-8 Jul 12 2017 4:15AM - KAIR.ONG Joint Inspection NOT Required

7. **Dryer System:** The system consists of an EXTRU-TECH 1053-2P-AF11, 10 MMBtu/hr (total) direct-fired natural gas fired dryer with five drying sections, each section is equipped with an ECLIPSE WINNOX WX0200 burner with a maximum heat input rate of 2.0 MMBtu/hr. The dryer exhaust is vented to a MAC HE60 high efficiency cyclone. The owner or operator shall install, maintain, and operate Uniqair's, 18 kW, 15 plasma cylinders, cold plasma injection system to abate odors in the air stream from the dryer cyclone (MAC HE60) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]
8. **Cooler and Conveying System:** The system consists of three cooler sections, all vented to a MAC high efficiency cyclone, a discharge conveyor for the transfer of dried kibbles into a hopper. The material from the hopper is pneumatically conveyed to an enclosed shaker screener. The owner or operator shall install, maintain, and operate Uniqair's, 10.8 kW, 9 plasma cylinders, cold plasma injection system to abate odors in the air stream from the dryer cooler cyclone (MAC) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]
9. **Fines Collection and Conveying System:** This system collects fines from two locations in the dryer, the dryer cyclone discharge, and the cooler cyclone discharge, and vents these fines to a HORIZON SYSTEMS 285 WRDL8 baghouse. This baghouse is vented indoors. [District Rule 2201]
10. **Screening and Conveying System.** The system consists of an enclosed shaker screener, an enclosed surge bin, and an enclosed weigh belt. The fines (rejects) are conveyed to the totes in the basement. The surge bin shall be vented to a HORIZON SYSTEMS MODEL 21VFTC6 cartridge dust collector system. Each tote shall have a tight-fitting lid with a static sock filter. [District Rule 2201]
11. **Coating and Conveying System:** The system consists of a hopper where material from a weight belt is sprayed with chicken fat and canola oil (or other similar ingredients) and a coating reel where dry dog/cat digest and probiotics (or other similar ingredients) are sprinkled to be absorbed into the kibbles. The kibbles are then conveyed pneumatically to a vertical cooler system using a filter receiver system with a static sock filter. [District Rule 2201]
12. **Vertical Cooler and Conveying System:** A vertical cooler vented to a MAC HE52 high efficiency cyclone. The dried material falls on a vibratory pan on sliding rails. The material (accepts) from the vibratory pan drops into a hopper from where the dried kibbles are pneumatically conveyed to 14 finished product bins. Each bin shall be vented to a HORIZON SYSTEMS MODEL 21VFTC6 cartridge dust collector system. The fines (rejects) from MAC HE52 cyclone discharge and vibratory pan are conveyed to the totes in the basement. Each tote shall have a tight-fitting lid with a static sock filter. The owner or operator shall install, maintain, and operate Uniqair's, 3.6 kW, 3 plasma cylinders, cold plasma injection system to abate odors in the air stream from the vertical cooler cyclone (MAC HE52) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]
13. **Odorant Injection System:** This system shall consist of a pump, an odor counteractant holding reservoir, and associated piping network. The system shall inject odor counteractant upstream of the blower and downstream of plasma injection system in any process stack (i.e., wet cyclone, dryer stack, cooler stack, or vertical cooler stack). The odorant injection system may be a stand-alone system for each stack, or a centrally located system to be shared among all process stacks under permits N-8234-4, '-5 and '-6. [District Rule 2201]
14. Each reactor of the plasma injector system shall be installed, operated, and maintained per the manufacturer's (vendor) recommendations. A copy of manufacturer's recommendations shall be kept on site at all times. [District Rule 2201]
15. OdoLoc-L100 shall be the only odor counteractant used. [District Rule 2201]
16. VOC emissions from odor counteractant use for each pet food manufacturing line shall not exceed any of the following limits: 22.5 lb/day and 5,475 lb/year. These limits equate to the use of 22.5 lb/day and 5,475 lb/year of OdoLoc-L100. [District Rule 2201]
17. Combined VOC emissions from odor counteractant use for all pet food manufacturing lines (N-8234-4, N-8234-5 and N-8234-6) shall not exceed any of the following limits: 22.5 lb/day and 5,475 lb/year. These limits equate to the use of 22.5 lb/day and 5,475 lb/year of OdoLoc-L100. [District Rule 2201]
18. Visible emissions, at the exhaust of each dust collector system (baghouse, cartridge dust collector, cyclone etc.) shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201]
19. PM10 emissions from the operations covered under this permit shall not exceed 0.0612 pounds per ton of finished material produced. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

20. VOC emissions from the operations (not including odorant injection VOCs) covered under this permit shall not exceed 0.047 pounds per ton of finished material produced. [District Rule 2201]
21. Total NOx emissions from the operations covered under this permit shall not exceed 0.529 pounds per hour. [District Rules 2201 and 4102]
22. Total VOC emissions from the operations (not including odorant injection VOCs) covered under this permit shall not exceed 1.529 pounds per hour. [District Rule 4102]
23. No more than 36 tons of ground meat, excluding moisture, shall be injected into the steam-conditioner in any one day. [District Rule 2201]
24. The amount of finished product produced under this line shall not exceed 780 tons in any one day. [District Rule 2201]
25. The combined amount of finished product produced through all pet food manufacturing lines (N-8234-4, '-5 and '-6) shall not exceed 780 tons in any one day. [District Rule 2201]
26. The dryer shall only be fired on PUC-quality natural gas. [District Rule 2201]
27. Emissions from the dryer shall not exceed any of the following limits: 2.1 ppmvd NOx @ 19% O2 (0.024 lb-NOx/MMBtu), 16.5 ppmvd CO @ 19% O2 (0.112 lb-CO/MMBtu) and 0.00285 lb-SOx/MMBtu. [District Rules 2201 and 4309]
28. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081]
29. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
30. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4309. [District Rules 2201 and 4309]
31. For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 2201 and 4309]
32. Source testing to determine NOx and CO emissions from the dryer at the exhaust stack of the MAC HE60 cyclone by obtaining samples upstream of the plasma injection system shall be conducted at least once every 24 months. [District Rule 4309]
33. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rule 4309]
34. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rule 4309]
35. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rule 4309]
36. All dryer test results for NOx and CO shall be reported in ppmv @ 19% O2 (or no correction if measured above 19% O2), corrected to dry stack conditions. [District Rule 4309]
37. Stack gas velocity or volumetric flow rate shall be determined using EPA Methods 2, 2A, or 2D. [District Rule 2201]
38. A sellable pet food product, containing at least 3% (by weight) of ground meat, shall be produced during VOC source testing and odor control efficiency testing. [District Rules 2201 and 4102]
39. The District may, at its discretion, require VOC source testing and odor panel testing at any time should conditions at the facility or the surrounding area warrant such testing. [District Rules 2201 and 4201]
40. The amount of ground meat injected into the steam-conditioner, finished product produced, and all other applicable parameters (exhaust flow rate, temperature, pressure, etc.), shall be recorded during VOC source testing and odor panel testing. [District Rules 2201 and 4102]

CONDITIONS CONTINUE ON NEXT PAGE

41. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
42. The permittee shall monitor and record the stack concentration of NOx and O2 downstream of each plasma injection system using a portable emission monitor that meets District specifications, within 30 days of the date the respective plasma injection system becomes fully operational. Alternatively, the permittee may elect to conduct a source test to measure the stack concentration of NOx and O2 downstream of each plasma injection system using CARB Method 100 or EPA Method 7E, or another agreed upon source test method, within 60 days of the date the respective plasma injection system becomes fully operational. The results shall be converted into hourly NOx emissions (lb/hour) using exhaust flow rate (dscfm) from the latest source test report. For the purpose of this condition, fully operational is defined as the physical state when all variable frequency drives and plasma reaction cylinders on a respective plasma injection unit are operating normally, demonstrated by consistent operation for at least a two week period. The permittee shall keep record of the date on which each plasma injection system becomes fully operational, following the issuance date on this permit. [District Rule 2201]
43. Total NOx emissions (lb/hour) shall include NOx emissions from the following release points by taking portable analyzer measurements according to the manufacturer recommended procedures, or by conducting a District-approved source test, downstream of the cold plasma injection system serving: (1) Hot kibble conveying cyclone (HT-68), (2) dryer cyclone (MAC HE60), (3) dryer cooler cyclone (MAC), and (4) vertical cooler cyclone (MAC HE-52). [District Rule 2201]
44. The permittee shall maintain records of: (1) date and time of NOx and O2 measurements, (2) identification of the stack (e.g., hot kibble conveying cyclone (HT-68), dryer cyclone (MAC HE60), etc.) (3) O2 concentration in percent and the measured NOx concentrations, (4) exhaust flow rate (dscfm) in the latest NOx and CO source testing report, (5) NOx emissions (lb/hour), (6) total NOx emissions (lb/hour) from the operations covered under this permit unit, (7) make and model of exhaust gas analyzer, and (8) exhaust gas analyzer calibration records. [District Rule 2201]
45. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rules 2201 and 4309]
46. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 of the dryer (at the exhaust stack of the MAC HE60 cyclone, upstream of the plasma injection system), at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4309]
47. If either the dryer NOx or CO concentrations corrected to 19% O2 (or no correction if measured above 19% O2), as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4309]
48. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 19% O2 (or no correction if measured above 19% O2), (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4309]

CONDITIONS CONTINUE ON NEXT PAGE

49. The owner or operator shall continuously monitor and record the following parameters for each cold plasma injection system: (1) date, (2) pressure drop across pre-filter (DP3), (3) pressure drop across high efficiency filter (DP2), (4) pressure drop across cold plasma reactor (DP1), (5) plasma air velocity (AV1) after the cold plasma reactor, and (6) variable frequency drive (VFD) signal (ON/OFF). The set point for each parameter shall be as follows: DP3 < 400 Pa, DP2 < 400 Pa, DP1 < 4,000 Pa, AV1 > 2 m/sec, and VFD signal in ON status. These parameters shall be recorded at least once every 15-minutes. The recorded parameters (except for VFD signal) shall be averaged over 60-minute blocks and compared with the established acceptable set points. Upon detecting any excursion, the owner or operator shall investigate the excursion and take corrective action to minimize odorous emissions and prevent recurrence of the excursion as expeditiously as practical, but no longer than 1 hour of operation after detection. If the monitoring equipment continues to show non-conformity with the established parameter(s) after 1 hour of operation following detection, the permittee shall notify the District within the following 1 hour and conduct a thorough inspection, and repair of the cold plasma injection system within 24 hours of the first exceedance. In lieu of conducting a thorough inspection and repair of the cold plasma injection system, the owner or operator may stipulate a violation that is subject to enforcement action has occurred. The owner or operator must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the excursions are the result of a qualifying breakdown condition pursuant to Rule 1100, the owner or operator may fully comply with Rule 1100 in lieu of performing the notification required by this condition. [District Rule 4102]
50. The owner or operator shall maintain records of the date, the ground meat injection rate, excluding moisture, into the steam conditioner (tons/day), amount of finished product produced by this line (tons/day), and the combined amount of finished product produced by all pet food manufacturing lines (N-8234-4, '-5 and '-6, tons/day). The combined amount of finished product produced by all pet food manufacturing lines (N-8234-4, '-5 and '-6, tons/day) may be used to demonstrate compliance with the amount of finished product produced by this line (tons/day). [District Rule 2201]
51. The owner or operator shall maintain all records of maintenance for cold plasma injector systems including any cold plasma reactor replacements. [District Rule 4102]
52. The owner or operator shall keep records of the following items for odorant injection system: (1) date, (2) odor counteractant used in pounds per day for this line, (3) total odor counteractant use in pounds per day for all pet food lines (N-8234-4, '-5 and '-6). If the odor counteractant injection rate is constant, the owner or operator may use 7-day weekly records to calculate the daily odor counteractant use by dividing the amount of the odor counteractant used in a given week (pounds per week) by the number of days of operation of odorant injection system (days per week). Any exceedance of daily permitted use of the odor counteractant calculated from weekly records would constitute a violation for each of the seven days. If the odor counteractant injection rate is not constant, the owner or operator shall keep daily records of the odor counteractant use. [District Rule 2201]
53. The owner or operator shall keep records of daily and annual VOC emissions due to odor counteractant use. [District Rule 2201]
54. The owner or operator shall maintain records of the latest version of the Safety Data Sheet (SDS) and purchase receipts containing date of purchase, name of the supplier, name and amount of the odor counteractant purchased. [District Rule 2201]
55. All records shall be maintained and retained on-site for minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 2201 and 4309]

Appendix D

HRA Summary

San Joaquin Valley Air Pollution Control District

Risk Management Review

To: Jag Kahlon – Permit Services

From: Georgia Stewart – Technical Services

Date: December 26, 2017

Facility Name: Diamond Pet Food Processors of Ripon

Location: 942 S Stockton Ave, Ripon, CA

Application #(s): N-8234-4-10, 5-10 and 6-10

Project #: N-1173791

A. RMR SUMMARY

RMR Summary						
Units	Prioritization Score	Acute Hazard Index	Chronic Hazard Index	Maximum Individual Cancer Risk	T-BACT Required?	Special Permit Requirements?
Unit 4-10 (Regenerative Thermal Oxidizer)	3.26E-03	8.37E-05	1.44E-06	2.35E-09	No	Yes
Unit 5-10 (Regenerative Thermal Oxidizer)	3.26E-03	8.37E-05	1.43E-06	2.37E-09	No	Yes
Unit 6-10 (Regenerative Thermal Oxidizer)	3.26E-03	8.37E-05	1.41E-06	2.41E-09	No	Yes
Project Totals	9.77E-03	2.52E-04	4.28E-06	7.14E-09		
Facility Totals	>1	1.74E-01	2.29E-04	6.62E-08		

Proposed Permit Requirements

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

Units # 4-10, 5-10 and 6-10

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.

RMR REPORT

I. Project Description

Technical Services received a request on December 21, 2017, to perform an Ambient Air Quality Analysis and a Risk Management Review for a proposed installation of three natural gas-fired Durr Systems Inc.'s Ecopure RL-60 regenerative thermal oxidizer (RTO) systems. These RTO systems will be used to abate odorous compounds from three pet food manufacturing lines. The facility will remove the existing cold plasma injection and odorant injection systems.

II. Analysis

Toxic emissions for these proposed units were calculated using 2001 Ventura County's Air Pollution Control District's emission factors for Natural Gas Fired external combustion and input into the San Joaquin Valley APCD's Hazard Assessment and Reporting Program (SHARP). In accordance with the District's Risk Management Policy for Permitting New and Modified Sources (APR 1905, May 28, 2015), risks from the proposed unit's toxic emissions were prioritized using the procedure in the 1990 CAPCOA Facility Prioritization Guidelines. The prioritization score for this facility was greater than 1.0 (see RMR Summary Table). Therefore, a refined health risk assessment was required. The AERMOD model was used, with the parameters outlined below and meteorological data for 2010-2014 from Modesto to determine the dispersion factors (i.e., the predicted concentration or X divided by the normalized source strength or Q) for a receptor grid. These dispersion factors were input into the SHARP Program, which then used the Air Dispersion Modeling and Risk Tool (ADMRT) of the Hot Spots Analysis and Reporting Program Version 2 (HARP 2) to calculate the chronic and acute hazard indices and the carcinogenic risk for the project.

The following parameters were used for the review:

Analysis Parameters Units 4-10, 5-10 and 6-10			
Source Type	Point	Location Type	Urban
Stack Height (m)	9.14	Closest Receptor (m)	280
Stack Diameter. (m)	1.52	Type of Receptor	Business
Stack Exit Velocity (m/s)	16.1		
Stack Exit Temp. (°K)	376.33	Fuel Type	NG
Fuel Usage (MMscf/hr)	0.1204	Fuel Usage (MMscf/yr)	41.53

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

Unit #	NO _x (Lbs.)		SO _x (Lbs.)		CO (Lbs.)		PM ₁₀ (Lbs.)	
	Hr.	Yr.	Hr.	Yr.	Hr.	Yr.	Hr.	Yr.
4-10, 5-10 and 6-10	5.298	3,159	0.017	118	8.46	49.859	1.104	315

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

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

*Results were taken from the attached PSD spreadsheet.

¹The project was compared to the 1-hour NO₂ National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures

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

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

III. Conclusion

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

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

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

IV. Attachments

- A. RMR request from the project engineer
- B. Additional information from the applicant/project engineer
- C. Prioritization score w/ toxic emissions summary
- D. Facility Summary
- E. AAQA Summary

Appendix E
Quarterly Net Emissions Change

Quarterly Net Emissions Change (QNEC)

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

$QNEC = PE2 - PE1$, where:

QNEC = Quarterly Net Emissions Change for each emissions unit, lb/qtr.

PE2 = Post Project Potential to Emit for each emissions unit, lb/qtr.

PE1 = Pre-Project Potential to Emit for each emissions unit, lb/qtr.

N-8234-4-10 or '5-10 or '6-10:

The quarterly pre-project emissions (lb) are summarized in the following table:

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

PE1 (quarterly, pounds)					
Permit #	NOx	SOx	PM ₁₀	CO	VOC
N-8234-4-8	1,158.5	62.5	4,352.75	2,452.75	4,717.75
N-8234-5-8	1,158.5	62.5		2,452.75	
N-8234-6-8	1,158.5	62.5		2,452.75	

The quarterly post-project emissions (lb) are summarized in the following table:

NOx, SOx, CO:

$PE2_{quarterly} = (PE2_{annual} \div 4 \text{ quarters/year})_{\text{Dryer and Process}} + (PE2_{annual} \div 4 \text{ quarters/year} + 3 \text{ RTOs})_{\text{RTO}}$

PM₁₀ & VOC:

$PE2_{quarterly} = (PE2_{annual} \div 4 \text{ quarters/year})_{\text{Dryer and Process}} + (PE2_{annual} \div 4 \text{ quarters/year})_{\text{RTO}}$

PE2 (quarterly, pounds)					
Permit #	NOx	SOx	PM ₁₀	CO	VOC
N-8234-4-10	1,315.25 (525.5+789.75)	92 (62.5+29.5)	4,589 (4,352.75+236.25)	14,917.5 (2,452.75+12,464.75)	527 (356+171)
N-8234-5-10	1,315.25 (525.5+789.75)	92 (62.5+29.5)		14,917.5 (2,452.75+12,464.75)	
N-8234-6-10	1,315.25 (525.5+789.75)	92 (62.5+29.5)		14,917.5 (2,452.75+12,464.75)	

The quarterly net emission changes (lb) are summarized in the following table:

QNEC (quarterly, pounds)					
Permit #	NOx	SOx	PM ₁₀	CO	VOC
N-8234-4-8	156.75	29.5	236.25	12,464.75	-4,190.75
N-8234-5-8	156.75	29.5		12,464.75	
N-8234-6-8	156.75	29.5		12,464.75	

N-8234-10-1, or '-11-1:

Since the annual heat input is established for both boilers, the potential emission reduction will be distributed equally among the units.

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

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

$QNEC = PE2 - PE1$

Quarterly NEC [QNEC]				
Pollutant	PE2 (lb/qtr) for both units	PE1 (lb/qtr) For both units	QNEC (lb/qtr) for both unit	QNEC (lb/qtr) for each unit
NO _x	353	706	-353	-176.5
SO _x	91.5	183	-91.5	-45.75
PM ₁₀	96.25	192.5	-96.25	-48
CO	1,187	2,374	-1,187	-593.5
VOC	128.25	256.5	-128.25	-64

Appendix F
Changes to permits N-8234-4, '-5 and '-6 to match "as-built"
configuration

Changes to permits N-8234-4, '-5 and '-6 to match "as-built" configuration

Diamond has proposed changes to the permit requirements to match the "as-built" configuration of this plant. These changes do not result in an increase in permitted emissions, and are recommended to be approved as part of this project (~~strikethrough~~ = delete, **bold** underline = added/New text)

*****Diamond's proposed changes to condition 6 in permits N-8234-4-8, '-5-8 and '-6-8*****

Material Dispensing, Kibble Manufacturing, and Conveying Systems: The material from the extruder surge bin is dispensed into an extruder bin from where the material is transferred into an EXTRU-TECH 24X144 steam-conditioner system. The material is extruded to form kibbles. The **moist** kibbles are pneumatically conveyed using HEPA filtered air into a dryer receiving chamber using HORIZON SYSTEMS HT-68 high volume cyclone with a static sock filter. ~~The owner or operator shall install, maintain, and operate Uniqair's, 7.2 kW, 6 plasma cylinders, cold plasma injection system to abate odors in the air stream from the wet cyclone (Horizon HT-68) prior to its discharge into the atmosphere. [District Rules 2201 and 4102] N~~

District's recommendation:

The potential emissions from moist kibble conveying process are calculated using the existing configuration, that is, cyclone without the use of a static sock filter. Therefore, removing "static sock filter" will have no impact on the permitted emissions. Note that hot kibble conveying operation releases wet moist air through the Horizon Systems HT-68 cyclone, and it may not be practical to use a static sock filter unless significant amount of moisture is condensed from the exhaust stream. Note that the cold plasma injection system will be replaced with Durr System Inc's RTO system; therefore, associated language is removed.

This condition is recommend to be stated in the following manner:

Material Dispensing, Kibble Manufacturing, and Conveying Systems: The material from the extruder surge bin is dispensed into an extruder bin from where the material is transferred into an EXTRU-TECH 24X144 steam-conditioner system. The material is extruded to form kibbles. The kibbles are pneumatically conveyed using HEPA filtered air into a dryer receiving chamber using HORIZON SYSTEMS HT-68 high volume cyclone. The owner or operator shall install and maintain a duct work to discharge exhaust from the wet cyclone (Horizon HT-68) into the duct connected to the RTO. [District Rules 2201 and 4201]

*****Diamond's proposed changes to condition 9 in permits N-8234-4-8, '-5-8 and '-6-8*****

Fines Collection and Conveying System: This system collects fines from two locations in the dryer, the dryer cyclone discharge, and the cooler cyclone discharge, and vents these fines to a HORIZON SYSTEMS 285 **28S** WRDL8 baghouse. This baghouse is vented indoors. [District Rule 2201]

District's recommendation:

The proposed changes is a typographical error in the permit, and is recommended to be amended.

*****Diamond's proposed changes to condition 10 in permits N-8234-4-8, '-5-8 and '-6-8*****

Screening and Conveying System. The system consists of an enclosed shaker screener, an enclosed surge bin, and an enclosed weigh belt. The fines (rejects) are conveyed dropped to the totes in the basement dumpsters that are equipped with. The surge bin shall be vented to a ~~HORIZON SYSTEMS MODEL 21VFTC6 cartridge dust collector system~~. Each tote shall have a tight-fitting lid with a static sock filter. [District Rule 2201]

District's recommendation:

Since the surge bin is fully enclosed, the air displaced during the process will eventually release through the dumpsters equipped with static sock filters. Therefore, the proposed change will not result in an increase in permitted emissions.

This condition is recommended to be stated in the following manner:

Screening and Conveying System. The system consists of an enclosed shaker screener, an enclosed surge bin, and an enclosed weigh belt. The fines (rejects) are dropped to the dumpsters. Each dumpster receiving fines (rejects) shall be equipped with a tight-fitting lid with a static sock filter. [District Rule 2201]

*****Diamond's proposed changes to condition 12 in permits N-8234-4-8, '-5-8 and '-6-8*****

Vertical Cooler and Conveying System: A vertical cooler vented to a MAC HE52 high efficiency cyclone. The dried material falls on a vibratory pan on sliding rails. The material (accepts) from the vibratory pan drops into a hopper from where the dried kibbles are pneumatically conveyed to ~~44~~ **19** finished product bins. Each bin shall be vented to a ~~HORIZON SYSTEMS MODEL 21VFTC6 cartridge dust collector system~~ a static sock filter. The fines (rejects) from MAC HE52 cyclone discharge and vibratory pan are conveyed to the totes in the basement a barrel. Each ~~tote~~ barrel shall have a tight-fitting lid with a static sock filter. The owner or operator shall install, maintain, and operate Uniqair's, 3.6 kW, 3 plasma cylinders, cold plasma injection system to abate odors in the air stream from the vertical cooler cyclone (MAC HE52) prior to its discharge into the atmosphere. [District Rules 2201 and 4102]

District's recommendation:

The number of finished bins is recommended to be retained at 14. Due to large size of pet food kibbles, these kibbles will likely generate minimal amount of particulate matter emissions. Therefore, use of sock filters will be sufficient to reduce the particulate matter emissions for the finished bins. Use of sock filter in lieu of required dust collector will not cause an increase in particulate matter emissions.

Further, the fines (rejects) from the MAC HE52 cyclone discharge and vibratory pan are minimal, and will be conveyed into a barrel with tight fitting light. Any dust generated by the fines will likely settle inside the barrel; however, an option will be provided to equip each barrel with a sock filter.

This condition is recommended to be stated in the following manner:

Vertical Cooler and Conveying System: A vertical cooler vented to a MAC HE52 high efficiency cyclone. The dried material falls on a vibratory pan on sliding rails. The material (accepts) from the vibratory pan drops into a hopper from where the dried kibbles are pneumatically conveyed to 14 finished product bins. Each bin shall be vented to a static sock filter. The fines (rejects) from MAC HE52 cyclone discharge and vibratory pan are conveyed to a barrel. Each barrel shall have a tight-fitting lid with an optional static sock filter. The owner or operator shall install and maintain a duct work to discharge exhaust from the vertical cooler cyclone (MAC HE 52) into the duct connected to the RTO. [District Rules 2201 and 4102]