



JAN 15 2014

Mr. Jeff Schultz  
ConAgra Foods  
554 S Yosemite Ave  
Oakdale, CA 95361

**Re: Proposed Authority to Construct/Certificate of Conformity (Minor Mod)  
District Facility # N-1976  
Project # N1133192**

Dear Mr. Schultz:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The project is to replace the existing burner, install a selective catalytic reduction system, establish startup/shutdown limits for NOx and CO emissions, and establish requirements for the use of a portable analyzer monitoring scheme.

After addressing all comments made during the 45-day EPA comment period, the District intends to issue the Authority to Construct with a Certificate of Conformity. Prior to operating with modifications authorized by the Authority to Construct, the facility must submit an application to modify the Title V permit as an administrative amendment, in accordance with District Rule 2520, Section 11.5.

If you have any questions, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,



David Warner  
Director of Permit Services

Enclosures

cc: Gerardo C. Rios, EPA (w/enclosure) via email

**Seyed Sadredin**  
Executive Director/Air Pollution Control Officer

**San Joaquin Valley Air Pollution Control District  
Authority to Construct  
Application Review**

Facility Name: ConAgra Foods  
Mailing Address: 544 S Yosemite Ave  
Oakdale, CA 95361  
Contact Person: Jeff Schultz  
Telephone: (209) 840-1146  
Application #(s): N-1976-4-11  
Project #: N-1133192  
Deemed Complete: October 17, 2013

Date: November 4, 2013  
Engineer: Jagmeet Kahlon  
Lead Engineer: Nick Peirce

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**I. PROPOSAL**

ConAgra Foods has proposed the following modifications to 196 MMBtu/hr natural gas fired boiler (boiler #4) under permit N-1976-4:

1. Replace the existing 196 MMBtu/hr ultra-low NO<sub>x</sub> Todd Radian burner with a 196 MMBtu/hr low-NO<sub>x</sub> Natcom (or equivalent manufacturer) burner;
2. Establish startup and shutdown limits for NO<sub>x</sub> and CO emissions;
3. Install a NBI/CRI (or equivalent manufacturer) selective catalytic reduction (SCR) system to reduce NO<sub>x</sub> emissions.

Note that the facility was authorized to install an SCR system on this boiler under Authority to Construct (ATC) N-1976-4-10. This authorization is being included in this project.

4. Establish requirements for the use of portable analyzer to measure and record NO<sub>x</sub>, CO and O<sub>2</sub> concentrations.

ConAgra Foods possesses a Title V permit. This project is a "Minor Modification" to the Title V permit per section 3.20 of Rule 2520. The applicant has requested to issue the ATC with Certificate of Conformity (COC), which is EPA's 45-day review of the draft permit prior to the issuance of the final ATC.

**II. APPLICABLE RULES**

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2410	Prevention of Significant Deterioration (11/26/12)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)

- Rule 4101 Visible Emissions (02/17/05)
- Rule 4102 Nuisance (12/17/92)
- Rule 4201 Particulate Matter Concentration (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 (3/17/05)
- Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters greater than 5.0 MMBtu/hr (10/16/08)
- Rule 4351 Boilers, Steam Generators and Process Heaters – Phase 1 (8/21/03)
- Rule 4801 Sulfur Compounds (12/17/92)
- California Health & Safety Code 41700 (Public Nuisance)
- California Health & Safety Code 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

This facility is located at 544 S. Yosemite Ave, Oakdale, California.

This unit is not located within 1,000 feet of any K-12 school. Therefore, the project will not trigger the school and public noticing requirements of Section 42301.6 of the California Health & Safety Code 42301.6.

### IV. PROCESS DESCRIPTION

The boiler will provides steam to various food manufacturing operations.

### V. EQUIPMENT LISTING

#### Pre-Project Equipment Description:

196 MMBTU/HR BABCOCK & WILCOX MODEL FF-16 NATURAL GAS-FIRED BOILER (#4) WITH A TODD MODEL RADIANT LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR)

#### Post-Project Equipment Description:

196 MMBTU/HR BABCOCK & WILCOX MODEL FF-16 NATURAL GAS-FIRED BOILER (#4) WITH A NATCOM (OR EQUIVALENT MANUFACTURER) LOW NOX BURNER WITH FLUE GAS RECIRCULATION (FGR) SYSTEM SERVED BY A NBI/CRI (OR EQUIVALENT MANUFACTURER) SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM

**VI. EMISSION CONTROL TECHNOLOGY EVALUATION**

Low-NO<sub>x</sub> burners reduce formation of NO<sub>x</sub> by producing lower flame temperatures (and longer flames) than conventional burners. Conventional burners thoroughly mix all the fuel and air in a single stage just prior to combustion, whereas low-NO<sub>x</sub> burners delay the mixing of fuel and air by introducing the fuel (or sometimes the air) in multiple stages. Generally, in the first combustion stage, the air-fuel mixture is fuel rich. In a fuel rich environment, all the oxygen will be consumed in reactions with the fuel, leaving no excess oxygen available to react with nitrogen to produce thermal NO<sub>x</sub>. In the secondary and tertiary stages, the combustion zone is maintained in a fuel-lean environment. The excess air in these stages helps to reduce the flame temperature so that the reaction between the excess oxygen with nitrogen is minimized.

The use of flue gas re-circulation (FGR) can reduce nitrogen oxides (NO<sub>x</sub>) emissions by 60% to 70%. In an FGR system, a portion of the flue gas is re-circulated back to the inlet air. As flue gas is composed mainly of nitrogen and the products of combustion, it is much lower in oxygen than the inlet air and contains virtually no combustible hydrocarbons to burn. Thus, flue gas is practically inert. The addition of an inert mass of gas to the combustion reaction serves to absorb heat without producing heat, thereby lowering the flame temperature. Since high flame temperatures form thermal NO<sub>x</sub>, the lower flame temperatures produced by FGR serve to reduce thermal NO<sub>x</sub>.

An SCR system operates as an external control device where flue gases and a reagent, in this case ammonia, are passed through an appropriate catalyst. Ammonia, will be injected upstream of the catalyst where it reacts and reduces NO<sub>x</sub>, over the catalyst bed, to form elemental nitrogen and other by-products. The use of a catalyst typically reduces the NO<sub>x</sub> emissions by up to 90%.

**VII. CALCULATIONS**

A. Assumptions

- Assumptions will be stated as they are made during the evaluation.

B. Emission Factors (EF)

1. Pre-Project Emission Factors (EF1)

Pollutant	EF2		Source
	lb/MMBtu	ppmvd @ 3% O <sub>2</sub>	
NO <sub>x</sub>	0.011	9.0	PTO N-1976-4-9
SO <sub>x</sub>	0.00285	--	
PM <sub>10</sub>	0.005	--	
CO	0.037	50	
VOC	0.0014	--	
CO <sub>2</sub> e	116.6	--	CARB's GHG factor sheet (3/10)

2. Post-Project Emission Factors (EF2)

Pollutant	EF2		Source
	lb/MMBtu	ppmvd @ 3% O <sub>2</sub>	
NO <sub>x</sub> Startup/shutdown	0.036	30	Applicant's proposal
NO <sub>x</sub> Steady-state	0.0062	5	
SO <sub>x</sub>	0.00285	--	PTO N-1976-4-9
PM <sub>10</sub>	0.005	--	
CO Startup/shutdown	0.074	100	Applicant's proposal
CO Steady-state	0.037	50	PTO N-1976-4-9
VOC	0.0014	--	
NH <sub>3</sub>	0.0042	10	Typical ammonia slip
CO <sub>2</sub> e	116.6	--	CARB' GHG factor sheet (3/10)

C. Potential to Emit

1. Pre-Project Potential to Emit (PE1)

N-1976-4-8

This permit limits the annual heat input rate to 943,272 MMBtu.

NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>, CO and VOC:

$$\text{PE1 (lb/day)} = \text{EF1 lb/MMBtu} \times 196 \text{ MMBtu/hr} \times 24 \text{ hr/day}$$

$$\text{PE1 (lb/yr)} = \text{EF1 lb/MMBtu} \times 943,272 \text{ MMBtu/yr}$$

CO<sub>2</sub>e:

$$\text{PE2 (tons/yr)} = \text{EF2 lb/MMBtu} \times 943,272 \text{ MMBtu/yr} \times \text{ton}/2,000 \text{ lb}$$

Pollutant	EF1 (lb/MMBtu)	PE1 (lb/day)	PE1 (lb/yr)
NO <sub>x</sub>	0.011	51.7	10,376
SO <sub>x</sub>	0.00285	13.4	2,688
PM <sub>10</sub>	0.005	23.5	4,716
CO	0.037	174.0	34,901
VOC	0.0014	6.6	1,321
CO <sub>2</sub> e	116.6	--	54,993 tons/yr

2. Post-Project Potential to Emit (PE2)

NO<sub>x</sub>, CO:

*Startup/shutdown:*

Per applicant, the total startup and shutdown will be no longer than 4 hr/day and 80 hr/yr. Thus,

$$\begin{aligned} \text{PE2 (lb/day)} &= \text{EF2}_{\text{Startup and shutdown}} \text{ lb/MMBtu} \times 196 \text{ MMBtu/hr} \times 4 \text{ hr/day} \\ \text{PE2 (lb/yr)} &= \text{EF2}_{\text{Startup and shutdown}} \text{ lb/MMBtu} \times 196 \text{ MMBtu/hr} \times 80 \text{ hr/yr} \end{aligned}$$

Steady state:

$$\begin{aligned} \text{PE2 (lb/day)} &= \text{EF2}_{\text{Steady-state}} \text{ lb/MMBtu} \times 196 \text{ MMBtu/hr} \times (24 - 4) \text{ hr/day} \\ \text{PE2 (lb/yr)} &= \text{EF2}_{\text{Steady-state}} \text{ lb/MMBtu} \times (943,272 - 15,680^1) \text{ MMBtu/yr} \end{aligned}$$

SO<sub>x</sub>, PM<sub>10</sub>, CO, VOC:

$$\begin{aligned} \text{PE2 (lb/day)} &= \text{EF2 lb/MMBtu} \times 196 \text{ MMBtu/hr} \times 24 \text{ hr/day} \\ \text{PE2 (lb/yr)} &= \text{EF2 lb/MMBtu} \times 943,272 \text{ MMBtu/yr} \end{aligned}$$

CO<sub>2</sub>e:

$$\text{PE2 (tons/yr)} = \text{EF2 lb/MMBtu} \times 943,272 \text{ MMBtu/yr} \times \text{ton}/2,000 \text{ lb}$$

The potential emissions using the above equations are summarized in the following table.

Pollutant	EF2 (lb/MMBtu)	PE2 (lb/day)	PE2 (lb/yr)
NO <sub>x</sub> Startup and shutdown	0.036	28.2	564
NO <sub>x</sub> Steady-state	0.0062	24.3	5,751
<b>NO<sub>x</sub> (Total)</b>	--	<b>52.5</b>	<b>6,315</b>
SO <sub>x</sub>	0.00285	13.4	2,688
PM <sub>10</sub>	0.005	23.5	4,716
CO Startup/shutdown	0.074	58.0	1,160
CO Steady-state	0.037	145.0	34,321
<b>CO (Total)</b>	--	<b>203.0</b>	<b>35,481</b>
VOC	0.0014	6.6	1,321
NH <sub>3</sub>	0.0042	19.8	3,962
CO <sub>2</sub> e	116.6	--	54,993 tons/yr

### 3. Quarterly Emissions Changes (QEC)

This calculation is required for application's emission profile, which is used for the District's internal tracking purposes. QECs are estimated as follows:

$$\text{QEC} = (\text{PE2} - \text{PE1})/4$$

<sup>1</sup>196 MMBtu/hr x 80 hr/yr = 15,680 MMBtu/yr

Pollutant	Q1	Q2	Q3	Q4
NO <sub>x</sub>	(1,015)	(1,015)	(1,015)	(1,016)
SO <sub>x</sub>	0	0	0	0
PM <sub>10</sub>	0	0	0	0
CO	145	145	145	145
VOC	0	0	0	0

#### 4. Adjusted Increase in Permitted Emissions (AIPE)

AIPE is used to determine if BACT is required for emission units that are being modified. AIPE is calculated using the equations mentioned in Section 4.3 and 4.4 of Rule 2201.

$$AIPE = PE2 - \left( \frac{EF2}{EF1} \right) (PE1)$$

The AIPE due to the proposed modifications to this unit are summarized in the following table.

Pollutant	PE2 (lb/day)	*EF2/EF1	PE1 (lb/day)	AIPE (lb/day)
NO <sub>x</sub>	52.5	1	51.7	0.8
SO <sub>x</sub>	13.4	1	13.4	0.0
PM <sub>10</sub>	23.5	1	23.5	0.0
CO	203.0	1	174.0	29.0
VOC	6.6	1	6.6	0.0

\*EF2/EF1 ratio is conservatively assumed to be 1.

#### D. Facility Emissions

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

Pursuant to Section 4.9 of District Rule 2201, SSPE1 is the Potential to Emit 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 (ERCs) which have been banked since September 19, 1991 for Actual Emissions Reductions (AERs) that have occurred at the source, and which have not been used on-site.

Except for permit unit N-1976-3, '-5 and '-6, the potential emissions for each permit unit are taken from the application review under project N-1132682. For permit units N-1976-3 and '-5, the potential emissions are estimated using the information in the PTOs. The potential emissions for permit unit N-1976-6 are taken from the application review under project N-1132615.

Permit #	Pollutants (lb/yr)				
	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
N-1976-3-7	10,696	2,771	4,862	35,977	1,361
<b>N-1976-4-9</b>	<b>10,376</b>	<b>2,688</b>	<b>4,716</b>	<b>34,901</b>	<b>1,321</b>
N-1976-5-7	6,071	1,573	4,194	20,420	552
N-1976-6-8	18,713	4,594	12,250	60,047	1,612
N-1976-14-2	47	0	1	8	2
N-1976-17-2	357	0	11	77	29
N-1976-18-2	355	0	11	77	28
N-1976-21-2	0	0	767	0	0
N-1976-22-2	0	0	37	0	0
N-1976-24-0	4,876	2,147	5,726	27,874	4,143
N-1976-26-0	0	0	0	0	0
N-1976-28-0	0	0	0	0	0
ERCs	0	0	0	0	0
SSPE1	51,491	13,773	32,575	179,381	9,048

2. Post-Project Stationary Source Potential to Emit (SSPE2)

Pursuant to Section 4.10 of District Rule 2201, the Post-Project Stationary Source Potential to Emit (SSPE2) 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 that have occurred at the source, and which have not been used on-site.

Permit #	Pollutants (lb/yr)				
	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
N-1976-3-7	10,696	2,771	4,862	35,977	1,361
<b>N-1976-4-11</b>	<b>6,315</b>	<b>2,688</b>	<b>4,716</b>	<b>35,481</b>	<b>1,321</b>
N-1976-5-7	6,071	1,573	4,194	20,420	552
N-1976-6-8	18,713	4,594	12,250	60,047	1,612
N-1976-14-2	47	0	1	8	2
N-1976-17-2	357	0	11	77	29
N-1976-18-2	355	0	11	77	28
N-1976-21-2	0	0	767	0	0
N-1976-22-2	0	0	37	0	0
N-1976-24-0	4,876	2,147	5,726	27,874	4,143
N-1976-26-0	0	0	0	0	0
N-1976-28-0	0	0	0	0	0
ERCs	0	0	0	0	0
SSPE2	47,430	13,773	32,575	179,961	9,048

### 3. 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 <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
SSPE1	51,491	13,773	32,575	179,381	9,048
SSPE2	47,430	13,773	32,575	179,961	9,048
Major Source Thresholds	20,000	140,000	140,000	200,000	20,000
Major Source?	Yes	No	No	No	No

From the above table, the facility is an existing Major Source for NO<sub>x</sub> emissions.

#### 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)(i). Therefore the following PSD Major Source thresholds are applicable.

PSD Major Source Determination (tons/year)							
Category	NO <sub>2</sub>	VOC	SO <sub>2</sub>	CO	PM	PM <sub>10</sub>	CO <sub>2e</sub>
Estimated Facility PE before Project Increase	25.7	4.5	6.9	89.7	16.3	16.3	237,842 <sup>2</sup>
PSD Major Source Thresholds	100	100	100	100	100	100	100,000
PSD Major Source ?	No	No	No	No	No	No	Yes

From the above table, the facility is an existing major source for PSD for GHG.

<sup>2</sup> CO<sub>2e</sub> emissions are taken from the application review under project N-1132242.

4. Stationary Source Increase in Permitted Emissions (SSIPE)

The District practice is to define SSIPE as the difference of SSPE2 and SSPE1. Negative SSIPE values will be equated zero.

Pollutant	SSPE2 (lb/yr)	SSPE1 (lb/yr)	SSIPE (lb/yr)
NO <sub>x</sub>	47,430	51,491	0
SO <sub>x</sub>	13,773	13,773	0
PM <sub>10</sub>	32,575	32,575	0
CO	179,961	179,381	580
VOC	9,048	9,048	0
NH <sub>3</sub>	12,545 <sup>3</sup>	8,583	3,962

5. SB-288 Major Modification

The purpose of Major Modification calculations is to determine the following:

- A. If Best Available Control Technology (BACT) is triggered for a new or modified emission unit that results in a Major Modification (District Rule 2201, §4.1.3); and
- B. If a public notification is triggered (District Rule 2201, §5.4.1).

Per section VII.D.3 of this document, this facility is a Major Source for NO<sub>x</sub> emissions. Thus, analysis is required to determine if this project triggers an SB-288 Major Modification.

To determine if the proposed project triggers an SB-288 major modification, net emission increase (NEI) is calculated by determining the sum of the difference of PE2 and historical emissions (HE) of all the units involved in the project. This NEI value is then compared with the SB 288 major modification threshold of 50,000 lb-NO<sub>x</sub>/yr.

$$NEI = \sum(PE2 - HE)$$

NEI would be highest if HE is set equal zero. Thus,

$$\begin{aligned} NEI &= \sum PE2 \\ &= PE2_{N-1976-4-11} \\ &= 6,315 \text{ lb-NO}_x/\text{yr} \end{aligned}$$

The total NO<sub>x</sub> emissions from the unit involved in the project are less than the SB 288 major modification threshold. Therefore, this project will not trigger an SB 288 major modification.

<sup>3</sup>SSEP2 = 3,962 lb-NH<sub>3</sub>/yr (N-1976-4-11) + 6,770 lb-NH<sub>3</sub>/yr (N-1976-6-9) + 1,813 lb-NH<sub>3</sub>/yr (N-1976-28-0) = 12,545 lb-NH<sub>3</sub>/yr

## 6. 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.

Per section VII.D.3 of this document, this facility is a Major Source for NO<sub>x</sub> emissions. Thus, analysis is required to determine if this project triggers a Federal Major Modification.

The proposed modifications to this unit do not result in an increase in design capacity or potential NO<sub>x</sub> emissions, and it does not impact the ability of any emission unit to operate at a higher utilization rate. Therefore, emission increase is presumed to be zero per guidance in District's draft policy "Implementation of Rule 2201 for SB288 Major Modifications and Federal Major Modifications"<sup>4</sup>.

## VIII. COMPLIANCE

### Rule 2201 New and Modified Stationary Source Review Rule

#### A. Best Available Control Technology (BACT)

BACT requirements shall be triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis.

Unless exempted pursuant to Section 4.2, BACT shall be required for the following actions<sup>5</sup>:

- Any new emissions unit or relocation from one Stationary Source to another of an existing emissions unit with a Potential to Emit (PE2) exceeding 2.0 pounds in any one day;
- Modifications to an existing emissions unit with a valid Permit to Operate resulting in an Adjusted Increase in Permitted Emissions (AIPE) exceeding 2.0 pounds in any one day;
- 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 in this rule.

Per section VII.C.4 of this document, AIPE is greater than 2.0 lb/day for CO emissions only. However, the facility's total CO emissions are less than 200,000 lb/yr. Thus, BACT is not triggered for CO emissions on an AIPE basis.

<sup>4</sup> <http://www.valleyair.org/busind/draft-policies/Rule2201draftmajormodpolicyFeb2011.pdf>

<sup>5</sup> 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

Further, the project is not an SB-288 or Federal Major Modification. Therefore, BACT is not triggered for any pollutant.

Note that the District practice is not to consider BACT on emission control equipment; therefore, BACT for NH<sub>3</sub> emissions from an SCR system which is a control equipment to reduce NO<sub>x</sub> is not evaluated.

B. Offsets

Offsets are examined on pollutant-by-pollutant basis. The following table summarizes SSPE2, offset thresholds, and whether or not offsets are triggered.

Category	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
SSPE2 (lb/yr)	47,430	13,773	32,575	179,961	9,048
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets Triggered?	Yes	No	Yes	No	No

NO<sub>x</sub>:

Section 4.7.1 of Rule 2201 states that for pollutants with SSPE1 greater than the emission offset threshold levels, emission offsets shall be provided for all increases in Stationary Source emissions, calculated as the differences of post-project Potential to Emit (PE2) and the Baseline Emissions (BE) of all new and modified emissions units, plus all increases in Cargo Carrier emissions. Thus,

$$EOQ = \Sigma(PE2 - BE) + ICCE, \text{ where}$$

PE2 = Post-Project Potential to Emit (lb/yr)

BE = Baseline Emissions (lb/yr)

ICCE = Increase in Cargo Carrier emissions (lb/yr)

There is no increase in Cargo Carrier emissions from this project. Thus,

$$EOQ = \Sigma(PE2 - BE)$$

Per section 3.8 of Rule 2201, BE can be set equal to PE1 for any Clean Emission Unit (CEU), located at a Major Source, provided that if the unit has a SLC, all units under the SLC also qualify as CEUs. CEU is defined in Section 3.13 of Rule 2201, as an emission unit that is either equipped with an emission control technology with a minimum control efficiency of at least 95% or equipped with emission control technology that meets the requirements for achieved-in-practice BACT as accepted by the APCO during the five years immediately prior to the submission of the complete application.

The proposed unit is found to be CEU as it is operating below the achieved-in-practice BACT level of 7 ppmvd @ 3% O<sub>2</sub> based on the latest source test results of July 2013. Therefore, BE is set equal to PE1.

$$\begin{aligned}\text{EOQ} &= \text{PE2} - \text{PE1} \\ &= 6,315 \text{ lb-NO}_x/\text{yr} - 10,376 \text{ lb-NO}_x/\text{yr} \\ &= -4,061 \text{ lb-NO}_x/\text{yr} \\ &\approx 0 \text{ lb-NO}_x/\text{yr}\end{aligned}$$

PM<sub>10</sub>:

Section 4.7.1 of Rule 2201 states that for pollutants with SSPE1 greater than the emission offset threshold levels, emission offsets shall be provided for all increases in Stationary Source emissions, calculated as the differences of post-project Potential to Emit (PE2) and the Baseline Emissions (BE) of all new and modified emissions units, plus all increases in Cargo Carrier emissions. Thus,

EOQ =  $\Sigma(\text{PE2} - \text{BE}) + \text{ICCE}$ , where

$$\begin{aligned}\text{PE2} &= \text{Post-Project Potential to Emit (lb/yr)} \\ \text{BE} &= \text{Baseline Emissions (lb/yr)} \\ \text{ICCE} &= \text{Increase in Cargo Carrier emissions (lb/yr)}\end{aligned}$$

There is no increase in Cargo Carrier emissions from this project. Thus,

$$\text{EOQ} = \Sigma(\text{PE2} - \text{BE})$$

Per section 3.8 of Rule 2201, BE can be set equal to PE1 for any Clean Emission Unit (CEU), located at a Major Source, provided that if the unit has a SLC, all units under the SLC also qualify as CEUs. CEU is defined in Section 3.13 of Rule 2201, as an emission unit that is either equipped with an emission control technology with a minimum control efficiency of at least 95% or equipped with emission control technology that meets the requirements for achieved-in-practice BACT as accepted by the APCO during the five years immediately prior to the submission of the complete application.

The proposed unit is complying with the achieved-in-practice BACT standard since the unit is fired on natural gas. Therefore, BE is set equal to PE1.

$$\begin{aligned}\text{EOQ} &= \text{PE2} - \text{PE1} \\ &= 4,716 \text{ lb-PM}_{10}/\text{yr} - 4,716 \text{ lb-PM}_{10}/\text{yr} \\ &= 0 \text{ lb-PM}_{10}/\text{yr}\end{aligned}$$

C. Public Notification

District Rule 2201, section 5.4, requires a public notification for the affected pollutants from the following types of projects:

- New Major Sources
- Major Modifications (SB-288 or Federal)
- New emission units with a PE>100 lb/day of any one pollutant
- Modifications with SSPE1 below an Offset threshold and SSPE2 above an Offset threshold on a pollutant-by-pollutant basis
- New stationary sources with SSPE2 exceeding Offset thresholds
- Any permitting action with a SSPE exceeding 20,000 lb/yr for any one pollutant

Per section VII of this document, the proposed project does not exceed thresholds in any of the above items. Thus, public notice is not required for this project.

#### D. Daily Emission Limits (DELs)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.17 to restrict a unit's maximum daily emissions. The following DELs will be included in the permit:

##### Startup/shutdown:

- During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. [District Rules 2201, 4305, 4306 and 4320]
- The total duration of startup and shutdown period shall not exceed 4.0 hours in any one day.[District Rule 2201]
- During startup and shutdown, NO<sub>x</sub> emissions shall not exceed 30 ppmvd @ 3% O<sub>2</sub> or 0.036 lb/MMBtu. [District Rule 2201]
- During startup and shutdown, CO emissions shall not exceed 100 ppmvd @ 3% O<sub>2</sub> or 0.074 lb/MMBtu.[District Rule 2201]

##### Steady state:

- Except during startup and shutdown, NO<sub>x</sub> emissions shall not exceed 5.0 ppmvd @ 3% O<sub>2</sub> or 0.0062 lb/MMBtu, referenced as NO<sub>2</sub>. [District Rules 2201, 4305, 4306 and 4320]
- Except during startup and shutdown, CO emissions shall not exceed 50 ppmvd @ 3% O<sub>2</sub> or 0.037 lb/MMBtu. [District Rules 2201, 4305, 4306 and 4320]

##### Startup/shutdown/steady state:

- SO<sub>x</sub> emissions shall not exceed 0.00285 lb/MMBtu. [District Rule 2201]
- PM<sub>10</sub> emissions shall not exceed 0.005 lb/MMBtu. [District Rule 2201]

- VOC emissions shall not exceed 0.0014 lb/MMBtu, referenced as methane. [District Rule 2201]
- NH<sub>3</sub> emissions from the SCR system shall not exceed 10 ppmvd @ 3% O<sub>2</sub>. [District Rule 2201]

## E. Compliance Assurance

### 1. Source Testing

#### *Startup/shutdown testing for NO<sub>x</sub> and CO emissions:*

ConAgra will be required to conduct a source test to measure NO<sub>x</sub> and CO emissions within 60-days of the initial startup.

#### *Steady state testing for measuring NO<sub>x</sub>, CO, PM<sub>10</sub>, VOC and NH<sub>3</sub> emissions:*

ConAgra will be required to conduct a source test to measure NO<sub>x</sub>, CO, PM<sub>10</sub>, VOC and NH<sub>3</sub> emissions within 60-days of the initial startup. Further, a periodic source test to measure NO<sub>x</sub>, CO and NH<sub>3</sub> emissions will also be required at least once every twelve month. Successful compliance demonstration on two consecutive twelve-month periodic tests may defer the following source test up to thirty-six months. This testing frequency is consistent with the requirements in the boiler Rules 4306 and 4320 and other permitted boilers equipped with SCR systems. Note that PM<sub>10</sub> and VOC testing is required since the facility is proposing to replace the existing burner system and the proposed emission factors are stringent than the generally accepted emission factors.

### 2. Monitoring

ConAgra has proposed to monitor NO<sub>x</sub>, CO and O<sub>2</sub> concentrations using portable analyzer on a monthly basis. NH<sub>3</sub> slip from the SCR system is required to be measured using Draeger tubes (or other District approved equivalent technique) at least on a monthly basis at the time NO<sub>x</sub>, CO and O<sub>2</sub> measurements are taken.

### 3. Recordkeeping

ConAgra will be required to maintain all records to verify compliance with the permitted limits. The records are required to be kept for a period of at least 5 years from the date such records is entered in a logbook.

### 4. Reporting

ConAgra will be required to submit source test reports within 60 days after completing the test.

Compliance is expected with this Rule.

**Rule 2410 Prevention of Significant Deterioration**

Rule 2410 applies to pollutants for which the District is in attainment or for unclassified, pollutants. The pollutants addressed in the PSD applicability determination are listed as follows:

- NO<sub>2</sub> (as a primary pollutant)
- SO<sub>2</sub> (as a primary pollutant)
- CO
- PM
- PM<sub>10</sub>
- Greenhouse gases (GHG): CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub>, HFCs, PFCs, and SF<sub>6</sub>

**Step 1:**

The first step of this PSD evaluation consists of determining whether the facility is an existing PSD Major Source or not. Per section VII.D.3 of this document, this facility is an existing PSD Major Source.

**Step 2:**

The second step of the PSD evaluation is to determine if the project results in a PSD significant increase.

**I. Project Location Relative to Class 1 Area**

This facility is not located within 10 km of a Class 1 area, which in this case is "Yosemite National Park" – modeling of the emission increase is not required to determine if the project is subject to the requirements of Rule 2410.

**II. Significance of Project Emission Increase Determination**

**a. Potential to Emit of attainment/unclassified pollutant for New or Modified Emission Units vs PSD Significant Emission Increase Thresholds**

As a screening tool, the potential to emit from all new and modified units is compared to the PSD significant emission increase thresholds, and if total potential to emit from all new and modified units is below this threshold, no further analysis will be needed.

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)						
Category	NO <sub>2</sub>	SO <sub>2</sub>	CO	PM	PM <sub>10</sub>	CO <sub>2e</sub>
N-1976-4-11	3.2	1.3	17.7	2.4	2.4	54,993
PSD Significant Emission Increase Thresholds	40	40	100	25	15	75,000
PSD Significant Emission Increase?	No	No	No	No	No	No

As demonstrated above, because the project has a total potential to emit from the modified unit below the PSD significant emission increase thresholds, this project is not subject to the requirements of Rule 2410 due to a significant emission increase and no further discussion is required.

### **Rule 2520 Federally Mandated Operating Permits**

ConAgra is a Major Source for NOx and GHG emissions. Therefore, this facility is subject to the requirements of this rule. The proposed project is a "Minor Modification" to the Title V permit per section 3.20 of Rule 2520. Note that the proposed monitoring to use a portable analyzer and associated frequency is considered equivalent to the existing monitoring scheme in District's Policy SSP-1105 (4/28/08). Therefore, this change is not viewed as a relaxation under this rule.

ConAgra has proposed to process this project with COC. The following conditions will be included in the permit:

- This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201]
- Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4]

In accordance with Rule 2520, the application meets the procedural requirements of section 11.4 by including:

- A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs and
- The source's suggested draft permit (Appendix I of this document) and
- Certification by a responsible official that the proposed modification meets the criteria for use of major permit modification procedures and a request that such procedures be used (Appendix II of this document).

Section 5.3.4 of this rule requires the permittee shall file an application for administrative permit amendments prior to implementing the requested change except when allowed by the operational flexibility provisions of section 6.4 of this rule. ConAgra Foods is expected to notify the District by filing TV Form-008 upon implementing the ATC. The District Compliance Division is expected to submit a change order to implement ATC into Permit to Operate (PTO).

Compliance is expected with this Rule.

## **Rule 4001 New Source Performance Standards**

### 40 CFR Part 60, Subpart Db - Standards of Performance for Industrial-Commercial-Institutional Steam Generating Units

The requirements of the Code of Federal Regulations, Chapter 40 (40 CFR), Part 60, Subpart Db applies to any steam generating unit with a maximum heat input of greater than 100 MMBtu/hr that has commenced construction, modification, or reconstruction after June 19, 1984.

The boiler under permit N-1976-4 is rated at 196 MMBtu/hr and may be subject to the requirements of this subpart. The historical records in District's permit database indicate that the application for the boiler was submitted on February 19, 1975<sup>6</sup>. The boiler is presumed to be installed sometime in 1975. This boiler does not appear to have been modified in a way that would result an increase in air pollutants since its installation. Therefore, this unit is not subject to subpart to the requirements of this subpart.

## **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 placed on 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 placed on 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 performs an analysis to determine the possible impact to the nearest resident or worksite.

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<sup>6</sup> Information taken from 544125.PDF scanned in the EDMS. This boiler's serial number is 22815.

The ammonia emissions increase due to the SCR installation was evaluated under project N-1113624 (ATC N-1976-4-10), which indicate no significant health risks to the nearby receptors. These results are still valid for this project. Therefore, no additional health risk analysis is required.

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.

PM <sub>10</sub> emissions	= 0.98 lb-PM <sub>10</sub> /hr (0.005 lb/MMBtu × 196 MMBtu/hr)
Fraction (lb-PM <sub>10</sub> /lb-PM)	= 100 %
Exhaust Temperature	= 250°F
Exhaust flow rate	= 31,198 acfm
Moisture in exhaust	= 7% (assumed)

$$PM \left( \frac{gr}{dscf} \right) = \frac{\left( 0.98 \frac{lb-PM}{hr} \right) \left( 7,000 \frac{gr-PM}{lb-PM} \right) \left( \frac{hr}{60 \text{ min}} \right)}{\left( 31,198 \frac{ft^3}{min} \right) \left( \frac{459.67 + 60}{459.67 + 250} \right) (1 - 0.07)} = 0.005 \frac{gr-PM}{dscf}$$

The following condition will be listed in the permit:

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

Compliance is expected with this Rule.

### 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% CO<sub>2</sub> and 10 lb/hr.
- SO<sub>x</sub> emissions - Not to exceed 200 lb/hr
- NO<sub>x</sub> emissions - Not to exceed 140 lb/hr

$$NO_x \text{ (lb/hr)} = (0.036 \text{ lb/MMBtu, startup})(196 \text{ MMBtu/hr}) = 7.1 \text{ lb/hr (max)}$$

$$SO_x \text{ (lb/hr)} = (0.00285 \text{ lb/MMBtu})(196 \text{ MMBtu/hr}) = 0.6 \text{ lb/hr}$$

$$\begin{aligned}
 \text{PM} \left( \frac{\text{gr}}{\text{dscf}} \right) &= \frac{\text{PM Emissions} \left( \frac{\text{lb - PM}}{\text{MMBtu}} \right) \times 7,000 \frac{\text{gr - PM}}{\text{lb - PM}}}{F_{\text{factor CO}_2} \left( \frac{\text{dscf}}{\text{MMBtu}} \right) \times \left( \frac{100\%}{12\%} \right)} \\
 &= \frac{\left( 0.005 \frac{\text{lb - PM}}{\text{MMBtu}} \right) \left( 7,000 \frac{\text{gr - PM}}{\text{lb - PM}} \right)}{\left( 1,024.2 \frac{\text{dscf}}{\text{MMBtu}} \right) \left( \frac{100\%}{12\%} \right)} \\
 &= 0.004 \frac{\text{gr - PM}}{\text{dscf}}
 \end{aligned}$$

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**

Pursuant to District Rules 4305 and 4306, Section 6.3.1, boilers are required to be tested at least once every 12-months. Gaseous fuel fired units demonstrating compliance on two consecutive 12-month source tests may defer the following source test for up to 36 months. During 36-month source testing interval, the operator shall tune the boiler according to section 5.2.1 (tune up at least once each calendar year by qualified technician in accordance with Rule 4304). Tune-ups required by Sections 5.2.1 and 6.3.1 do not need to be performed for units that operate and maintain an APCO approved CEMS or an APCO approved Alternate Monitoring System where the applicable emission limits are periodically monitored.

NOx, CO and O<sub>2</sub> concentrations from the boiler will be measured using a portable analyzer monitor on a monthly basis. This monitoring scheme is approved under District Policy SSP-1105; therefore, boiler tune-ups are not required.

**Rule 4305 Boilers, Steam Generators and Process Heaters – Phase 2**

Since the emission limits of District Rule 4306 and all other requirements are equivalent or more stringent than District Rule 4305 requirements, compliance with District Rule 4306 requirements will satisfy requirements of District Rule 4305.

**Rule 4306 Boilers, Steam Generators and Process Heaters – Phase 3**

*Section 2.0 - Applicability*

This rule applies to any gaseous fuel or liquid fuel fired boiler, steam generator, or process heater with a total rated heat input greater than 5 million Btu per hour.

The heat input rate to the boiler is greater than 5 MMBtu/hr. Therefore, this unit is subject to the requirements of this rule.

*Section 5.0 - Requirements*

Section 5.1.1 limits NO<sub>x</sub> and CO emissions to 9 ppmvd @ 3% O<sub>2</sub> and 400 ppmvd @ 3% O<sub>2</sub> respectively.

The applicant has proposed to achieve 5.0 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> (or less) and 50 ppmvd CO @ 3% O<sub>2</sub> (or less) for the boiler in this project. Since the proposed limits are below the rule limits, compliance is expected with this section.

Section 5.2 lists the requirements for boilers limited to a heat input rate of less than 9 billion Btu per calendar year. The boiler will not be limited to a heat input rate of less than 9 billion Btu per calendar year. Therefore, this section is not applicable.

Section 5.3 states that the NO<sub>x</sub> and CO emission limits shall not apply to this unit during start-up and shutdown period provided that the duration of each start-up or each shutdown is not greater than 2.0 hours, and the emission control system is utilized during these periods. An operator may submit a request to allow more than two hours for each startup or each shutdown provided the operator meets all of the conditions specified in sections 5.3.3.1 to 5.3.3.3.

The proposed duration of each startup and shutdown will be 2.0 hours. The following condition(s) will be included in the permit:

- Duration of each startup and each shutdown shall not exceed 2.0 hours. [District Rule 4306 and 4320]

Section 5.4.1 requires the operator to install and maintain a non-resettable, totalizing mass or volumetric flow meter for the units, which simultaneously uses gaseous and liquid fuels and is subject to the requirements of Section 5.1. The applicant is proposing to use gaseous fuel only. Therefore, they are not required to install and maintain a fuel flow meter due to this section.

Section 5.4.2 requires that the units subject to District Rule 4306, Section 5.1 emissions limits, shall either install and maintain Continuous Emission Monitoring (CEM) equipment for NO<sub>x</sub>, CO and O<sub>2</sub>, or install and maintain APCO-approved alternate monitoring. In order to satisfy the requirements of District Rule 4306, the applicant has proposed to use pre-approved alternate monitoring scheme "H" of District Policy SSP-1105, which requires periodic monitoring of NO<sub>x</sub>, CO, NH<sub>3</sub> and O<sub>2</sub> exhaust emissions concentrations. The following condition(s) will be included in the permit:

- The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, NH<sub>3</sub> and O<sub>2</sub> at least once during each month in which source testing is not performed. NO<sub>x</sub>, CO and O<sub>2</sub> monitoring shall be conducted utilizing a portable analyzer that meets District specifications. NH<sub>3</sub> 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]

- If either the NO<sub>x</sub>, CO or NH<sub>3</sub> 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]
- All NO<sub>x</sub>, CO, O<sub>2</sub> 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<sub>x</sub>, CO and O<sub>2</sub> analyzer as well as the NH<sub>3</sub> 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]
- Ammonia emissions readings shall be conducted at the time the NO<sub>x</sub>, CO and O<sub>2</sub> readings are taken. The readings shall be converted to ppmvd @ 3% O<sub>2</sub>. [District Rules 2201, 4305, 4306 and 4320]
- The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, NH<sub>3</sub> and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent by volume and the measured NO<sub>x</sub>, CO and NH<sub>3</sub> concentrations corrected to 3% O<sub>2</sub>, (3) make and model of the portable analyzer, (4) portable analyzer calibration records, (5) the method of determining the NH<sub>3</sub> 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]

Section 5.5.1 states the operator of any unit have the option of complying with either the applicable heat input (lb/MMBtu) emission limits or the concentration (ppmv) emission limit. The following condition(s) will be included in the permit:

- The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]

Section 5.5.2 requires 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. The following condition(s) will be included in the permit:

- 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 4306. [District Rules 4305, 4306 and 4320]

Section 5.5.3 requires that all CEMS data shall be averaged over a period of 15-consecutive minutes to demonstrate compliance with the applicable emission limits in this rule. The proposed boiler emissions will not be measured using CEMS system; therefore, this section is not applicable.

Section 5.5.4 requires emissions monitoring pursuant to Sections 5.4.2, 5.4.2.1, and 6.3.1 using a portable NO<sub>x</sub> analyzer as part of an APCO approved Alternate Emissions Monitoring System, emission readings 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. The following condition(s) will be included in the permit:

- All NO<sub>x</sub>, CO, O<sub>2</sub> 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<sub>x</sub>, CO and O<sub>2</sub> analyzer as well as the NH<sub>3</sub> 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]

Section 5.5.5 requires that for emissions source testing performed pursuant to Section 6.3.1 for the purpose of determining compliance with an applicable standard or numerical limitation of this rule, 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. The following condition(s) will be included in the permit:

- 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]

*Section 6.0 – Administrative Requirements*

Section 6.1 requires that the records required by Sections 6.1.1 through 6.1.3 shall be maintained for five calendar years and shall be made available to the APCO upon request. Failure to maintain records or information contained in the records that demonstrate noncompliance with the applicable requirements of this rule shall constitute a violation of this rule. The following condition(s) will be included in the permit:

- 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]

Section 6.2 identifies the test methods for determining higher heating value of fuel, NO<sub>x</sub>, CO, O<sub>2</sub>, stack gas velocities, and stack gas moisture content. The following conditions will be listed on each permit. The following condition(s) will be included in the permit:

- 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]
- NO<sub>x</sub> emissions for source test purposes shall be determined using EPA Method 7E or CARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320]
- CO emissions for source test purposes shall be determined using EPA Method 10 or CARB Method 100. [District Rules 4305, 4306 and 4320]
- Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or CARB Method 100. [District Rules 4305, 4306 and 4320]

In addition, the ammonia slip is required to be measured using BAAQMD Method ST-1B. The following condition(s) will be included in the permit:

- Source testing for ammonia slip shall be conducted utilizing BAAQMD Method ST-1B. [District Rule 1081]

Section 6.3.1 requires that this unit be tested to determine compliance with the applicable requirements of section 5.1 and 5.2.3 not less than once every 12 months. Units that demonstrate compliance on two consecutive 12-month source tests may defer the following 12-month source test for up to 36 months (no more than 30 days before or after the required 36-month source test date). During the 36-month source testing interval, the operator shall

tune the unit in accordance with the provisions of Section 5.2.1, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer to ensure compliance with the applicable emission limits specified in Sections 5.1 or 5.2.3. Tune-ups required by Sections 5.2.1 and 6.3.1 do not need to be performed for units that operate and maintain an APCO approved CEMS or an APCO approved Alternate Monitoring System where the applicable emission limits are periodically monitored.

NO<sub>x</sub>, CO and O<sub>2</sub> concentrations will be measured on monthly basis using portable analyzer. Therefore, no periodic tune-ups are required. The following condition(s) will be included in the permit:

- Source testing to measure steady state NO<sub>x</sub>, CO, PM<sub>10</sub>, VOC and NH<sub>3</sub> emissions shall be conducted within 60-days of the initial startup under this permit. [District Rules 2201, 4305, 4306 and 4320]
- Source testing to measure NO<sub>x</sub>, CO and NH<sub>3</sub> emissions during steady state operation shall be conducted at least once every 12 months. After demonstrating compliance on 2 consecutive annual source tests, the unit shall be tested not less than once every 36 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 12 months. [District Rules 4305, 4306 and 4320]

Section 6.3.2 lists compliance testing procedure for units that represent a group of units. The heat input rate of the boilers at this site significantly varies from one boiler to another; therefore, group testing cannot be considered.

Section 6.4 discusses emission control plan (ECP). The permit application for the boiler satisfies the requirements of the Emission Control Plan, as listed in Section 6.4 of District Rule 4306. No further discussion is necessary.

*Section 7.0 – Compliance Schedule*

The boiler is expected to be operated in compliance with the requirements of this rule. Therefore, no further discussion is required.

Compliance is expected with this Rule.

**Rule 4320 Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters greater than 5.0 MMBtu/hr**

*Section 2.0 - Applicability*

Section 2.0 states that this rule applies to any gaseous fuel or liquid fuel fired boiler, steam generator, or process heater with a total rated heat input greater than 5 million Btu per hour.

The heat input rate to the boiler is greater than 5 MMBtu/hr. Therefore, this unit is subject to the requirements of this rule.

*Section 5.0 – Requirements*

Section 5.1 states that an operator of a unit(s) subject to this rule shall comply with all applicable requirements of the rule and one of the following, on a unit-by-unit basis:

- Operate the unit to comply with the emission limits specified in Sections 5.2 and 5.4; or
- Pay an annual emissions fee to the District as specified in Section 5.3 and comply with the control requirements specified in Section 5.4; or
- Comply with the applicable Low-use Unit requirements of Section 5.5.

The facility had chosen to comply with the emission limits specified in Section 5.2 and 5.4. These limits are summarized below:

NO<sub>x</sub>: 7 ppmvd @ 3% O<sub>2</sub>

CO: 400 ppmvd @ 3% O<sub>2</sub>

Particulate Matter: Use PUC-quality natural gas, commercial propane, butane, or LPG, or combination of such gases with fuel sulfur content of 5 grains/100 scf or less.

The applicant has proposed the following limits:

NO<sub>x</sub>: 5.0 ppmvd @ 3% O<sub>2</sub> (or less);

CO: 50 ppmvd @ 3% O<sub>2</sub> (or less);

Particulate Matter: Use PUC-quality natural gas.

Therefore, compliance is expected with this section.

Section 5.3 states that the NO<sub>x</sub> and CO emission limits shall not apply to this unit during start-up and shutdown period provided that the duration of each start-up or each shutdown is not greater than 2.0 hours, and the emission control system is utilized during these periods.

The duration of each startup and shutdown is 2.0 hours. The following condition(s) will be included in the permit:

- Duration of each startup and each shutdown shall not exceed 2.0 hours. [District Rule 4306 and 4320]

Section 5.7 discusses monitoring provisions to comply with NO<sub>x</sub> and CO limits. These provisions are similar to the provisions in Rule 4306 (discussed previously).

Section 5.7.6 requires the operator to provide annual fuel sulfur content analysis. The following conditions will satisfy the requirements of this section:

- 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 Rule 4320]
- Fuel sulfur content shall be determined using EPA Method 11 or EPA Method 15 or District, CARB and EPA approved alternative methods. [District Rule 4320]

Section 5.8 discusses compliance determination. The requirements in this section are similar to the requirements in Rule 4306 (discussed previously).

*Section 6.0 – Administrative Requirements*

Recordkeeping requirements of this Rule are similar to that of the Rule 4306. Please refer to section 6.0 of Rule 4306.

*Section 7.0 – Compliance Schedule*

This section refers to “Authority to Construct” and “Compliance Deadline” dates for existing units. This boiler is expected to be operating in compliance with this rule by January 1, 2014.

Compliance is expected with this Rule.

**Rule 4351 Boilers, Steam Generators, and Process Heaters – Phase 1**

Since the emission limits of District Rule 4306 and 4320 and all other requirements are equivalent or more stringent than this Rule, compliance with District Rule 4306 and 4320 requirements will satisfy requirements of District Rule 4351.

**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 (SO<sub>2</sub>) 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:

$$\frac{(2000 \text{ ppmvd}) \left( 8.578 \frac{\text{dscf}}{\text{MMBtu}} \right) \left( 64 \frac{\text{lb} - \text{SO}_x}{\text{lb} - \text{mol}} \right)}{\left( 379.5 \frac{\text{dscf}}{\text{lb} - \text{mol}} \right) (10^6)} \approx 2.9 \frac{\text{lb} - \text{SO}_x}{\text{MMBtu}}$$

SO<sub>x</sub> emissions from the boiler 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, it is expected that the boiler will operate in compliance with this Rule.

## California Environmental Quality Act (CEQA)

The California Environmental Quality Act (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 San Joaquin Valley Unified Air Pollution Control District (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.
- 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.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the proposed modifications do not trigger Best Available Control Technology (BACT) requirements. Furthermore, the District conducted a Risk Management Review and concludes that potential health impacts from the proposed modifications are less than significant. Therefore, this project does not require discretionary judgment or deliberation. Consequently, this permitting action constitutes a ministerial approval. Section 21080 of the Public Resources Code exempts CEQA for those projects over which a public agency exercises only ministerial approval; therefore, the District finds that this project to be exempt from the provisions of CEQA.

## IX. RECOMMENDATION

Issuance of the ATC N-1976-4-11 is recommended upon addressing comments from the applicant and EPA.

## X. BILLING INFORMATION

Permit #	Fee Schedule	Fee Description	Previous Fee Schedule
N-1976-4-11	3020-02H	196 MMBtu/hr	3020-02H

## APPENDICES

- Appendix I: Draft Authority to Construct Permit  
Appendix II: Compliance Certification  
Appendix III: Permit to Operate N-1976-4-9

**Appendix I**  
**Draft Authority to Construct Permit**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: N-1976-4-11

LEGAL OWNER OR OPERATOR: CONAGRA FOODS  
MAILING ADDRESS: 554 S YOSEMITE AVE  
OAKDALE, CA 95361

LOCATION: 554 S YOSEMITE AVE  
OAKDALE, CA 95361

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 196 MMBTU/HR BABCOCK & WILCOX MODEL FF-16 NATURAL GAS-FIRED BOILER (#4) WITH A TODD MODEL RADIAN LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR): TO REPLACE THE EXISTING BURNER WITH 196 MMBTU/HR NATCOM (OR EQUIVALENT MANUFACTURER) LOW-NOX BURNER AND INSTALL NBI/CRI (OR EQUIVALENT MANUFACTURER) SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM. THE POST-PROJECT EQUIPMENT DESCRIPTION WILL BE: 196 MMBTU/HR BABCOCK & WILCOX MODEL FF-16 NATURAL GAS-FIRED BOILER (#4) WITH A NATCOM (OR EQUIVALENT MANUFACTURER) LOW NOX BURNER WITH INDUCED FLUE GAS RECIRCULATION (FGR) SYSTEM SERVED BY A NBI/CRI (OR EQUIVALENT MANUFACTURER) SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM

**CONDITIONS**

1. This permit cancels and replaces the Authority to Construct N-1976-4-10. [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
3. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
4. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

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

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DAVID WARNER, Director of Permit Services

N-1976-4-11 Nov 4 2013 8:30AM - KAHLOM - Joint Inspection NOT Required

6. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
7. 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] Federally Enforceable Through Title V Permit
8. The unit shall only be fired on PUC-quality natural gas. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
9. 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] Federally Enforceable Through Title V Permit
10. Heat input to this boiler shall not exceed 943,272 MMBtu in any 12 consecutive month rolling period. [District Rule 2201] Federally Enforceable Through Title V Permit
11. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
12. Duration of each startup and each shutdown shall not exceed 2.0 hours. [District Rule 4306 and 4320] Federally Enforceable Through Title V Permit
13. The total duration of startup and shutdown period shall not exceed 4.0 hours in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The total duration of startup and shutdown period shall not exceed 80 hours during any 12 consecutive month rolling period. [District Rule 2201] Federally Enforceable Through Title V Permit
15. During startup and shutdown, NO<sub>x</sub> emissions shall not exceed 30 ppmvd @ 3% O<sub>2</sub> or 0.036 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
16. During startup and shutdown, CO emissions shall not exceed 100 ppmvd @ 3% O<sub>2</sub> or 0.074 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Except during startup and shutdown, NO<sub>x</sub> emissions shall not exceed 5.0 ppmvd @ 3% O<sub>2</sub> or 0.0062 lb/MMBtu, referenced as NO<sub>2</sub>. [District Rules 2201, 4305, 4306, and 4320] Federally Enforceable Through Title V Permit
18. Except during startup and shutdown, CO emissions shall not exceed 50 ppmvd @ 3% O<sub>2</sub> or 0.037 lb/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
19. SO<sub>x</sub> emissions shall not exceed 0.00285 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
20. PM<sub>10</sub> emissions shall not exceed 0.005 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
21. VOC emissions shall not exceed 0.0014 lb/MMBtu, referenced as methane. [District Rule 2201] Federally Enforceable Through Title V Permit
22. NH<sub>3</sub> emissions from the SCR system shall not exceed 10.0 ppmvd @ 3% O<sub>2</sub>. [District Rule 2201] Federally Enforceable Through Title V Permit
23. 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] Federally Enforceable Through Title V Permit
24. Source testing to measure startup and shutdown NO<sub>x</sub> and CO emissions shall be conducted within 60 days of initial startup under this permit. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Source testing to measure steady state NO<sub>x</sub>, CO, PM<sub>10</sub>, VOC and NH<sub>3</sub> emissions shall be conducted within 60-days of the initial startup under this permit. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

26. Source testing to measure NO<sub>x</sub>, CO and NH<sub>3</sub> emissions during steady state operation shall be conducted at least once every 12 months. After demonstrating compliance on 2 consecutive annual source tests, the unit shall be tested not less than once every 36 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 12 months. [District Rule 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
27. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
28. 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 4306. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
29. 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] Federally Enforceable Through Title V Permit
30. NO<sub>x</sub> 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] Federally Enforceable Through Title V Permit
31. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
32. Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
33. Source testing for ammonia slip shall be conducted utilizing BAAQMD Method ST-1B. [District Rule 1081] Federally Enforceable Through Title V Permit
34. Source testing to measure PM<sub>10</sub> shall be conducted using either: EPA Method 201 or 201A, and 202; or CARB Method 5 in combination with 501. Should the applicant decided to use different methodology, the methodology must be approved by the District prior to its use. [District Rule 2201] Federally Enforceable Through Title V Permit
35. In lieu of performing a source test for PM<sub>10</sub>, the results of the total particulate test may be used for compliance with the PM<sub>10</sub> emissions limit provided the results include both the filterable and condensable (back half) particulate, and that all particulate matter is assumed to be PM<sub>10</sub>. Source testing to measure concentrations of total particulate emissions shall be conducted using EPA method 5. [District Rule 2201] Federally Enforceable Through Title V Permit
36. Source testing to measure VOC emissions shall be conducted using EPA Method 18 or 25A. Should the applicant decided to use different methodology, the methodology must be approved by the District prior to its use. [District Rule 2201] Federally Enforceable Through Title V Permit
37. Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320] Federally Enforceable Through Title V Permit
38. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
39. The permittee shall monitor and record the stack concentration of NO<sub>x</sub>, CO, NH<sub>3</sub> and O<sub>2</sub> at least once during each month in which source testing is not performed. NO<sub>x</sub>, CO and O<sub>2</sub> monitoring shall be conducted utilizing a portable analyzer that meets District specifications. NH<sub>3</sub> 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] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

40. If either the NO<sub>x</sub>, CO or NH<sub>3</sub> 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] Federally Enforceable Through Title V Permit
41. All NO<sub>x</sub>, CO, O<sub>2</sub> 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<sub>x</sub>, CO and O<sub>2</sub> analyzer as well as the NH<sub>3</sub> 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] Federally Enforceable Through Title V Permit
42. Ammonia emissions readings shall be conducted at the time the NO<sub>x</sub>, CO and O<sub>2</sub> readings are taken. The readings shall be converted to ppmvd @ 3% O<sub>2</sub>. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
43. The permittee shall maintain records of: (1) the date and time of NO<sub>x</sub>, CO, NH<sub>3</sub> and O<sub>2</sub> measurements, (2) the O<sub>2</sub> concentration in percent by volume and the measured NO<sub>x</sub>, CO and NH<sub>3</sub> concentrations corrected to 3% O<sub>2</sub>, (3) make and model of the portable analyzer, (4) portable analyzer calibration records, (5) the method of determining the NH<sub>3</sub> 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] Federally Enforceable Through Title V Permit
44. 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] Federally Enforceable Through Title V Permit
45. The permittee shall maintain record of the following items: (1) date; (2) duration of each startup (hours); (3) duration of each shutdown (hours); (4) total start-up and shutdown durations per day (hour/day); (5) total start-up and shutdown durations per month (hours/month); (6) total startup and shutdown duration in a 12 consecutive month period. [District Rule 2201, 4306 and 4320] Federally Enforceable Through Title V Permit
46. The permittee shall maintain records of fuel use (standard cubic feet) on monthly basis and use those records to calculate heat input rate (MMBtu) to the unit in a 12 consecutive month rolling period. [District Rule 2201] Federally Enforceable Through Title V Permit
47. 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] Federally Enforceable Through Title V Permit

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**Appendix II**  
**Compliance Certification**

**San Joaquin Valley  
Unified Air Pollution Control District**

**TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM**

**I. TYPE OF PERMIT ACTION (Check appropriate box)**

- SIGNIFICANT PERMIT MODIFICATION                       ADMINISTRATIVE  
 MINOR PERMIT MODIFICATION                                       AMENDMENT

COMPANY NAME: ConAgra Foods	FACILITY ID: N - 1976
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: ConAgra Foods	
3. Agent to the Owner:	

**II. COMPLIANCE CERTIFICATION (Read each statement carefully and initial all circles for confirmation):**

- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).
- Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.
- Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.
- Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

Jeff Schultz  
Signature of Responsible Official

9/26/13  
Date

Jeff Schultz  
Name of Responsible Official (please print)

Plant Engg & Env Manager  
Title of Responsible Official (please print)

Appendix III  
Permit to Operate N-1976-4-9

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** N-1976-4-9

**EXPIRATION DATE:** 07/31/2017

**EQUIPMENT DESCRIPTION:**

196 MMBTU/HR BABCOCK & WILCOX MODEL FF-16 NATURAL GAS-FIRED BOILER (#4) WITH A TODD MODEL RADIANT LOW NOX BURNER AND FLUE GAS RECIRCULATION (FGR)

## PERMIT UNIT REQUIREMENTS

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1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. The unit shall only be fired on PUC-regulated natural gas. [District Rule 2201, and 4320] Federally Enforceable Through Title V Permit
3. Natural gas usage for this boiler shall not exceed 943,272 MMBtu in any one calendar year. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. Emissions rates from the natural gas-fired unit shall not exceed any of the following limits: 9.0 ppmv NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.005 lb-PM10/MMBtu, 50 ppmv CO @ 3% O2 or 0.036 lb-CO/MMBtu, or 0.0014 lb-VOC/MMBtu. [District Rule 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
6. The flue gas recirculation valve(s) setting shall be monitored at least on a weekly basis. 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 week. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
7. The acceptable settings for the flue gas recirculation valve(s) shall be established by source testing this unit or other representative units per Rule 4305 and as approved by the District. The normal range/level shall be that for which compliance with applicable NOx and CO emissions rates have been demonstrated through source testing at a similar firing rate. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
8. Normal range or level for the flue gas recirculation valve(s) settings shall be re-established during each source test required by this permit. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
9. If the flue gas recirculation valve(s) setting is less than the normal range/level, the permittee shall return the flue gas recirculation valve(s) setting to the normal range/level as soon as possible, but no longer than 1 hour of operation after detection. If the flue gas recirculation valve(s) setting is not returned to the normal range/level within 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour, and conduct a source test within 60 days of the first exceedance, to demonstrate compliance with the applicable emission limits at the new flue gas recirculation valve(s) setting. A District-approved portable analyzer may be used in lieu of a source test to demonstrate compliance. 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 the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

10. The permittee shall maintain records of the date and time of flue gas recirculation valve(s) settings, the observed setting, and the firing rate at the time of the flue gas recirculation valve(s) setting measurements. The records must also include a description of any corrective action taken to maintain the flue gas recirculation valve(s) setting within the acceptable range. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
11. 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 4306. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
12. Source testing to measure natural gas-combustion NO<sub>x</sub> and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) 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 (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
13. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
14. During the 36-month source testing interval, the owner/operator shall have unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters). [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
15. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
16. 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] Federally Enforceable Through Title V Permit
17. NO<sub>x</sub> 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 and 4306] Federally Enforceable Through Title V Permit
18. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
19. Stack gas oxygen (O<sub>2</sub>) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
20. 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 and 4306] Federally Enforceable Through Title V Permit
21. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
22. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit
23. The permittee shall submit an Authority to Construct application to comply with the Table 1, Category B, NO<sub>x</sub> Limit b of District Rule 4320 (adopted October 16, 2008) by January 1, 2013, and shall be in compliance with the rule by January 1, 2014. [District Rule 4320] Federally Enforceable Through Title V Permit

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