



**San Joaquin Valley**  
**AIR POLLUTION CONTROL DISTRICT**

JUN 20 2013



**HEALTHY AIR LIVING™**

Mr. Wade Ingram  
 Liberty Packing Company - The Morning Star Company  
 12045 S Ingomar Grade Road  
 Los Banos, CA 93635

**Re: Proposed ATC/Certificate of Conformity (Significant Mod)**  
**District Facility # N-1399**  
**Project # N-1121905**

Dear Mr. Ingram:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. You requested that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. This project involves installation of a new 471 MMBtu/hr natural gas-fired boiler which will be served by a selective catalytic reduction system, and modifications to the permit of an existing 260 MMBtu/hr natural gas-fired boiler (N-1399-17) to lower PM<sub>10</sub> emission factor and install a continuous emissions monitoring system to measure NO<sub>x</sub>, CO and O<sub>2</sub> concentrations.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authorities to Construct with Certificates of Conformity. Please submit your comments within the 30-day public comment period, as specified in the enclosed public notice. Prior to operating with modifications authorized by the Authorities 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. Rupl 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: Mike Tollstrup, CARB (w/enclosure) via email  
 cc: Gerardo C. Rios, EPA (w/enclosure) via email

Seyed Sadredin  
 Executive Director/Air Pollution Control Officer

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**NOTICE OF PRELIMINARY DECISION  
FOR THE ISSUANCE OF AUTHORITY TO CONSTRUCT AND  
THE PROPOSED SIGNIFICANT MODIFICATION OF FEDERALLY  
MANDATED OPERATING PERMIT**

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed significant modification of Liberty Packing Company - The Morning Star Company at 12045 S Ingomar Grade Road, Los Banos, California. This project involves installation of a new 471 MMBtu/hr natural gas-fired boiler which will be served by a selective catalytic reduction system, and modifications to the permit of an existing 260 MMBtu/hr natural gas-fired boiler (N-1399-17) to lower PM10 emission factor and install a continuous emissions monitoring system to measure NOx, CO and O2 concentrations.

The District's analysis of the legal and factual basis for this proposed action, project #N-1121905 is available for public inspection at [http://www.valleyair.org/notices/public\\_notices\\_idx.htm](http://www.valleyair.org/notices/public_notices_idx.htm) and at any District office. The emissions increase from the project is not expected to cause any significant health risks to the nearby receptors or violate the ambient air quality standards. This will be the public's only opportunity to comment on the specific conditions of the modification. If requested, the District will hold a public hearing regarding issuance of this modification. For additional information, please contact the District at (209) 557-6400. Written comments on the proposed initial permit must be submitted by July 29, 2013 to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 4800 ENTERPRISE WAY, MODESTO, CA 95356-8718.**

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

Facility Name: Liberty Packing Company –  
The Morning Star Company  
Date: June 11, 2013  
Mailing Address: 12045 S Ingomar Grade Road  
Los Banos, CA 93635  
Engineer: Jagmeet Kahlon  
Lead Engineer: Nick Peirce  
Contact Person: Wade Ingram  
Telephone: (209) 829-5061  
Application #(s): N-1399-17-3 and '-24-0  
Project #: N-1121905  
Deemed Complete: April 3, 2013

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**I. PROPOSAL**

N-1399-17-3

The applicant has proposed to modify the permit of a 260 MMBtu/hr natural gas fired boiler as follows:

- Reduce PM<sub>10</sub> emissions factor from 0.0076 lb/MMBtu to 0.0074 lb/MMBtu.
- Install continuous emissions monitoring system (CEMS) to measure NO<sub>x</sub>, CO and O<sub>2</sub> concentrations. CEMS will be shared with the new boiler under N-1399-24 (below).

N-1399-24-0

The applicant has proposed to install a 471 MMBtu/hr natural gas-fired boiler. This boiler will be equipped with a selective catalytic reduction (SCR) system to reduce NO<sub>x</sub> emissions. NO<sub>x</sub>, CO and O<sub>2</sub> concentrations will be measured using CEMS. CEMS will be shared with the boiler under N-1399-17 (above).

This facility is a Major Source for NO<sub>x</sub> and greenhouse gas (GHG) emissions. This project triggers a public notice since the project is a Federal Major Modification per District Rule 2201, and it is a "significant modification" under District Rule 2520. Therefore, this project will be published in the local newspaper, Merced Sun Star, for public review and comment. The public comment period will last 30 days from the date of publication. The facility has also proposed to obtain Authorities to Construct (ATCs) with Certificate of Conformity (COC), which is EPA's 45-day review before the issuance of final ATCs. Both COC and public notice will run concurrently.

**II. APPLICABLE RULES**

Rule 1080 Stack Monitoring (12/17/92)  
Rule 1081 Source Sampling (12/16/93)

- Rule 1100 Equipment Breakdown (12/17/92)
- Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)
- Rule 2410 Prevention of Significant Deterioration (Effective on 11/26/12)
- Rule 2520 Federally Mandated Operating Permits (6/21/01)
- Rule 2550 Federally Mandated Preconstruction Review for Major Sources of Air Toxics (6/18/98)
- 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 12045 S. Ingomar Grade Road, Los Banos, California. This location is not 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 boilers will be used to provide steam for the tomato processing plant.

### **V. EQUIPMENT LISTING**

#### N-1399-17-3

260 MMBTU/HR NATURAL GAS FIRED NEBRASKA MODEL N2S-8/S-100-ECON BOILER WITH A TODD DRMB ULTRA LOW NOX BURNER AND INDUCED FLUE GAS RECIRCULATION

N-1399-24-0

471 MMBTU/HR CLEAVER BROOKS MODEL NB-ED-110 BOILER EQUIPPED WITH A COEN MODEL VARIFLAME LOW NO<sub>x</sub> BURNER INDUCED FLUE GAS RECIRCULATION, A YOKAGAWA OXYGEN CONTROLLER, AN ECONOMIZER, AND A CADASTACK (OR OTHER MANUFACTURER) SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM

**VI. EMISSION CONTROL TECHNOLOGY EVALUATION**

N-1399-17-3

Liberty Packing Company is not proposing any changes to the existing emission control technology. Therefore, emission control technology evaluation is not necessary for this unit.

N-1399-24-0

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.

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)

N-1399-17-1

This permit does not contain NO<sub>x</sub> or CO emission factors for startup or shutdown period. In general, NO<sub>x</sub> and CO emission factors during startup or shutdown are

more than the steady-state emission factors. The applicant states that during the cold startup NO<sub>x</sub> and CO emissions are expected to be at or below 30.0 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> and 200 ppmvd CO @ 3% O<sub>2</sub>.

Pollutant	EF1		Source
	lb/MMBtu	ppmvd @ 3% O <sub>2</sub>	
NO <sub>x</sub> Startup/shutdown	0.036	30.0	Applicant's statement
NO <sub>x</sub> Steady-state	0.008	7	PTO N-1399-17-1
SO <sub>x</sub>	0.00285	--	
PM <sub>10</sub>	0.0076	--	
CO Startup/shutdown	0.148	200	Applicant's statement
CO Steady-state	0.037	50	PTO N-1399-17-1
VOC	0.0042	10	
CO <sub>2</sub> e	116.6	--	CARB' GHG factor sheet (3/10)

2. Post-Project Emission Factors (EF2)

N-1399-17-3

Pollutant	EF2		Source
	lb/MMBtu	ppmvd @ 3% O <sub>2</sub>	
NO <sub>x</sub> Startup/shutdown	0.036	30.0	Applicant's statement
NO <sub>x</sub> Steady-state	0.008	7	PTO N-1399-17-1
SO <sub>x</sub>	0.00285	--	
PM <sub>10</sub>	0.0074	--	
CO Startup/shutdown	0.148	200	Applicant's statement
CO Steady-state	0.037	50	PTO N-1399-17-1
VOC	0.0042	10	
CO <sub>2</sub> e	116.6	--	CARB' GHG factor sheet (3/10)

N-1399-24-0

Pollutant	EF2		Source
	lb/MMBtu	ppmvd @ 3% O <sub>2</sub>	
NO <sub>x</sub> Startup/shutdown	0.036	30.0	Applicant's proposal
NO <sub>x</sub> Steady-state	0.0062	5.0	
SO <sub>x</sub>	0.00285	--	District Policy APR-1720
PM <sub>10</sub>	0.003	--	Applicant's proposal
CO Startup/shutdown	0.148	200	
CO Steady-state	0.037	50	
VOC	0.002	5	
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-1399-17-1

The heat input rate to the unit is limited to 1,059,019 MMBtu per year.

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

*Startup/shutdown:*

Per applicant, the total duration of startup and shutdown will not exceed 3 hours per day (2 hours for startup, 1 hour for shutdown) and 41 hours per year.

$$PE1 \text{ (lb/day)} = EF1_{\text{Startup and shutdown lb/MMBtu}} \times 260 \text{ MMBtu/hr} \times 3 \text{ hr/day}$$

$$PE1 \text{ (lb/yr)} = EF1_{\text{Startup and shutdown lb/MMBtu}} \times 260 \text{ MMBtu/hr} \times 41 \text{ hr/yr}$$

*Steady state:*

$$PE1 \text{ (lb/day)} = EF1_{\text{Steady-state lb/MMBtu}} \times 260 \text{ MMBtu/hr} \times (24 - 3) \text{ hr/day}$$

$$PE1 \text{ (lb/yr)} = EF1_{\text{Steady-state lb/MMBtu}} \times (1,059,019 - (260 \times 41)) \text{ MMBtu/yr}$$

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

$$PE1 \text{ (lb/day)} = EF1 \text{ lb/MMBtu} \times 260 \text{ MMBtu/hr} \times 24 \text{ hr/day}$$

$$PE1 \text{ (lb/yr)} = EF1 \text{ lb/MMBtu} \times 1,059,019 \text{ MMBtu/yr}$$

CO<sub>2e</sub>:

$$PE1 \text{ (tons/yr)} = EF1 \text{ lb/MMBtu} \times 1,059,019 \text{ MMBtu/yr} \times \text{ton}/2,000 \text{ lb}$$

Pollutant	EF1 (lb/MMBtu)	PE1 (lb/day)	PE1 (lb/yr)
NO <sub>x</sub> Startup and shutdown	0.036	28.1	384
NO <sub>x</sub> Steady-state	0.008	43.7	8,387
<b>NOx (Total)</b>	--	<b>71.8</b>	<b>8,771</b>
SO <sub>x</sub>	0.00285	17.8	3,018
PM <sub>10</sub>	0.0076	47.4	8,049
CO Startup/shutdown	0.148	115.4	1,578
CO Steady-state	0.037	202.0	38,789
<b>CO (Total)</b>	--	<b>317.4</b>	<b>40,367</b>
VOC	0.0042	26.2	4,448
CO <sub>2e</sub>	116.6	--	61,741 tons/yr

2. Post-Project Potential to Emit (PE2)

N-1399-17-3

Except for PM<sub>10</sub>, PE2 would be same as PE1.

PM<sub>10</sub>:

$$\text{PE2 (lb/day)} = \text{EF2 lb/MMBtu} \times 260 \text{ MMBtu/hr} \times 24 \text{ hr/day}$$

$$\text{PE2 (lb/yr)} = \text{EF2 lb/MMBtu} \times 1,059,019 \text{ MMBtu/yr}$$

Pollutant	EF2 (lb/MMBtu)	PE2 (lb/day)	PE2 (lb/yr)
NO <sub>x</sub> Startup and shutdown	0.036	28.1	384
NO <sub>x</sub> Steady-state	0.008	43.7	8,387
<b>NOx (Total)</b>	--	<b>71.8</b>	<b>8,771</b>
SO <sub>x</sub>	0.00285	17.8	3,018
PM <sub>10</sub>	0.0074	46.2	7,837
CO Startup/shutdown	0.148	115.4	1,578
CO Steady-state	0.037	202.0	38,789
<b>CO (Total)</b>	--	<b>317.4</b>	<b>40,367</b>
VOC	0.0042	26.2	4,448
CO <sub>2e</sub>	116.6	--	61,741 tons/yr

N-1399-24-0

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

*Startup/shutdown:*

Per applicant, the total duration of startup and shutdown will not exceed 5 hours per day (4 hours for startup, 1 hour for shutdown) and 41 hours per year.

$$\text{PE2 (lb/day)} = \text{EF2}_{\text{Startup and shutdown}} \text{ lb/MMBtu} \times 471 \text{ MMBtu/hr} \times 5 \text{ hr/day}$$

$$\text{PE2 (lb/yr)} = \text{EF2}_{\text{Startup and shutdown}} \text{ lb/MMBtu} \times 471 \text{ MMBtu/hr} \times 41 \text{ hr/yr}$$

*Steady state:*

$$\text{PE2 (lb/day)} = \text{EF2}_{\text{Steady-state}} \text{ lb/MMBtu} \times 471 \text{ MMBtu/hr} \times (24 - 5) \text{ hr/day}$$

$$\text{PE2 (lb/yr)} = \text{EF2}_{\text{Steady-state}} \text{ lb/MMBtu} \times 471 \text{ MMBtu/hr} \times (2,700 - 41) \text{ hr/yr}$$

SO<sub>x</sub>, PM<sub>10</sub>, CO, VOC, NH<sub>3</sub>:

$$\text{PE2 (lb/day)} = \text{EF2 (lb/MMBtu)} \times 471 \text{ MMBtu/hr} \times 24 \text{ hr/day}$$

$$\text{PE2 (lb/yr)} = \text{EF2 (lb/MMBtu)} \times 471 \text{ MMBtu/hr} \times 2,700 \text{ hr/yr}$$

CO<sub>2e</sub>:

$$\text{PE2 (tons/yr)} = \text{EF2 lb/MMBtu} \times 471 \text{ MMBtu/hr} \times 2,700 \text{ hr/yr} \times \text{ton}/2,000 \text{ lb}$$



Pollutant	EF2 (lb/MMBtu)	PE2 (lb/day)	PE2 (lb/yr)
NO <sub>x</sub> Startup and shutdown	0.036	84.8	695
NO <sub>x</sub> Steady-state	0.0062	55.5	7,765
<b>NO<sub>x</sub> (Total)</b>	--	<b>140.3</b>	<b>8,460</b>
SO <sub>x</sub>	0.00285	32.2	3,624
PM <sub>10</sub>	0.003	33.9	3,815
CO Startup/shutdown	0.148	209.1	2,858
CO Steady-state	0.037	366.0	46,338
<b>CO (Total)</b>	--	<b>575.1</b>	<b>49,196</b>
VOC	0.002	22.6	2,543
NH <sub>3</sub>	0.0042	47.5	5,341
CO <sub>2e</sub>	116.6	--	74,140 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.

This stationary source has a facility-wide limit for NO<sub>x</sub> emissions. Therefore, QEC will be calculated using the facility's pre and post project emissions as follows:

$$QEC = (SSPE2 - SSPE1)/4.$$

Note that emissions increase will be counted toward the new boiler under N-1399-24. Please refer to sections VII.D.1 and VII.D.2 for SSPE1 and SSPE2 calculations for various pollutants.

Pollutant	QEC (lb/qtr)			
	Q1	Q2	Q3	Q4
NO <sub>x</sub>	0	0	0	0
SO <sub>x</sub>	284	284	284	284
PM <sub>10</sub>	34	34	35	35
CO	7,794	7,794	7,795	7,795
VOC	42	42	42	43

### 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.

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

**N-1399-17-3**

Pollutant	PE2 (lb/day)	EF2/EF1	PE1 (lb/day)	AIPE (lb/day)
NO <sub>x</sub>	71.8	0.008/0.008	71.8	0.0
SO <sub>x</sub>	17.8	0.00285/0.00285	17.8	0.0
PM <sub>10</sub>	46.2	0.0074/0.0076	47.4	0.0
CO	317.4	0.037/0.037	317.4	0.0
VOC	26.2	0.0042/0.0042	26.2	0.0

**N-1399-24-0**

This boiler is a new emissions unit. Therefore, AIPE calculations are not required.

**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.

Please refer to Appendix III for the detailed calculations on total emissions from various units at this site. Note that this stationary source has a facility-wide limit of 33,705 lb-NO<sub>x</sub>/yr; therefore, NO<sub>x</sub> emissions are set equal to the facility-wide limit.

Permit#	Pollutants (lb/yr)				
	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
Total from N-1399-4-1, 5-1, 11-0, 13-1, 16-1, 17-1, 20-1, 21-0	33,705	11,482	30,759	113,727	17,143
ERC N-33-1	--	--	--	--	241
ERC N-33-2	90,905	--	--	--	--
ERC N-33-4	--	--	3,215	--	--
ERC N-33-5	--	34,984	--	--	--
ERC N-96-2	1,701	--	--	--	--
ERC N-96-3	--	--	--	837	--
Total without ERCs	33,705	11,482	30,759	113,727	17,143
Total with ERCs	126,311	46,466	33,974	114,564	17,384

**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.

Please refer to Appendix III for the detailed calculations on total emissions from various units at this site.

Permit#	Pollutants (lb/yr)				
	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC
Total from N-1399-4-1, 5-1, 11-0, 13-1, 16-1, 17-3, 20-1, 21-0, and 24-0	33,705	12,618	30,897	145,130	17,312
ERC N-33-1	--	--	--	--	241
ERC N-33-2	90,905	--	--	--	--
ERC N-33-4	--	--	3,215	--	--
ERC N-33-5	--	34,984	--	--	--
ERC N-96-2	1,701	--	--	--	--
ERC N-96-3	--	--	--	837	--
Total without ERCs	33,705	12,618	30,897	145,130	17,312
Total with ERCs	126,311	47,602	34,112	145,967	17,553

### 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	33,705	11,482	30,759	113,727	17,143
SSPE2	33,705	12,618	30,897	145,967	17,312
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	16.9	8.6	5.7	56.9	15.4	15.4	234,905
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.

**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>	33,705	33,705	0
SO <sub>x</sub>	12,618	11,482	1,136
PM <sub>10</sub>	30,897	30,759	138
CO	145,967	113,727	32,240
VOC	17,312	17,143	169
NH <sub>3</sub>	5,341	0	5,341

**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,

$$\begin{aligned} NEI &= \sum PE2 \\ &= PE2_{N-1399-17-3} + PE2_{N-1399-24-0} \\ &= 8,771 \text{ lb-NO}_x/\text{yr} + 8,460 \text{ lb-NO}_x/\text{yr} \\ &= 17,231 \text{ lb-NO}_x/\text{yr} < 50,000 \text{ lb-NO}_x/\text{yr} \end{aligned}$$

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

#### 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.

##### N-1399-17-3

The proposed modifications to this unit do not result in an increase in design capacity or potential to emit, 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.

##### N-1399-24-0

For new emissions units, the increase in emissions is equal to the PE2 for each new unit included in this project.

NO<sub>x</sub> emissions from the proposed new 471 MMBtu/hr natural gas-fired boiler are 8,460 lb/yr.

$$\text{Emissions Increase} = 8,460 \text{ lb/yr}$$

The project's combined total NO<sub>x</sub> emission increases would be 8,460 lb/yr, which exceed 0 lb/yr thresholds for Federal Major Modification. Therefore, this project is a Federal Major Modification.

## VIII. COMPLIANCE

### Rule 1080 Stack Monitoring

This rule grants the APCO the authority to request the installation, use, maintenance, and inspection of continuous emissions monitors (CEMS), and specifies performance standards for the equipment and administrative requirements for recordkeeping, reporting, and notification.

The applicant has proposed to monitor NO<sub>x</sub>, CO and O<sub>2</sub> concentrations from boilers N-1399-17 and '-24 using CEMS to meet the requirements of applicable District rules and Federal regulations. Therefore, the following conditions will be placed on each permit to ensure compliance with the requirements of this rule.

- The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NO<sub>x</sub>, CO and O<sub>2</sub> concentrations. CEMS shall monitor emissions during all types of operation, including during startup and shutdown periods, provided the CEMS passes the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 2201, 4305, 4306 and 4320, 40 CFR 60.48b(1)]
- The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the CARB and the EPA. [District Rules 1080, 2201, 4305, 4306 and 4320]
- The NO<sub>x</sub>, CO and O<sub>2</sub> CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B Performance Specification 2 (PS 2) for NO<sub>x</sub>, Appendix B PS 4A for CO, and Appendix B PS 3 for O<sub>2</sub> or shall meet equivalent specifications established by mutual agreement of the District, the CARB, and the EPA. [District Rules 1080, 2201, 4305, 4306 and 4320]
- In accordance with 40 CFR Part 60, Appendix F, 5.1, NO<sub>x</sub>, CO and O<sub>2</sub> CEMS must be audited at least once each calendar quarter, by conducting cylinder gas audits (CGA) or relative accuracy audits (RAA). CGA or RAA may be conducted three of four calendar quarters, but no more than three calendar quarters in succession. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rules 1080, 2201, 4305, 4306 and 4320]

- The owner/operator shall perform a RATA for NO<sub>x</sub>, CO and O<sub>2</sub> as specified by 40 CFR Part 60, Appendix F, 5.1.1, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the CEMS equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rules 1080, 2201, 4305, 4306 and 4320]
- APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rules 1080, 2201, 4305, 4306 and 4320]
- The CEMS data shall be reduced to hourly averages as specified in 40 CFR 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [District Rules 1080, 2201, 4305, 4306 and 4320]
- Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080]
- The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. [District Rule 1080]
- Upon notice by the District that the facility's CEMS is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080]
- The permittee shall maintain the following records for CEMS equipment: (1) Date, time and duration of any malfunction; (2) Date of performance testing; (3) Date of evaluations, calibrations, checks, and adjustments; and (4) Date and time period for which CEMS was inoperative. [District Rule 1080]
- The owner or operator shall maintain records and submit a written report each calendar quarter to the District containing the following information for each steam generating unit operating day: (1) Calendar date; (2) The average hourly NO<sub>x</sub> and CO emission rates (expressed as NO<sub>2</sub>) (ppmvd @ 3% O<sub>2</sub> and lb/MMBtu heat input) measured or predicted; (3) The 30-day average NO<sub>x</sub> emission rates (lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days; (4) Identification of the steam generating unit operating days when the calculated 30-day average NO<sub>x</sub> emission rates are in excess of the NO<sub>x</sub> emissions standards under 40 CFR 60.44b (0.1 lb/MMBtu for low

heat release units (i.e., 70,000 Btu/hr-ft<sup>3</sup> of furnace volume, or less), or 0.2 lb/MMBtu for high heat release units (i.e., greater than 70,000 Btu/hr-ft<sup>3</sup> of furnace volume)), with the reasons for such excess emissions as well as a description of corrective actions taken; (5) Identification of the steam generating unit operating days when the average hourly NO<sub>x</sub> and CO emission rates are in excess of the NO<sub>x</sub> and CO limits (startup, shutdown and steady state) in this permit, with the reason for such excess emissions as well as a description of corrective actions taken; (6) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken; (7) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data; (8) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted; (9) Identification of the times when the pollutant concentration exceeded full span of the CEMS; (10) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3 or 4A; (11) Results of daily CEMS drift tests and quarterly accuracy assessments as required under Appendix F, Procedure 1 of Part 60; and (11) A negative declaration when no excess emissions occurred. The report is due on the 30th day following the end of the calendar quarter. [District Rules 1080, 2201, 4305, 4306 and 4320, 40 CFR 60.49b(g), 40 CFR 60.49b(i), and 40 CFR 60.49b(w)]

- The owner or operator of an affected facility may submit electronic quarterly reports in lieu of submitting the written reports. The format of each quarterly electronic report shall be coordinated with the District. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of this permit was achieved during the reporting period. Before submitting reports in the electronic format, the owner or operator shall coordinate with the District to obtain their agreement to submit reports in this alternative format. [District Rule 1080 and 40 CFR 60.49b(v)]

#### **Rule 1081 Source Sampling**

This Rule requires adequate and safe sampling facilities such as sampling ports, sampling platforms, access to the sampling platforms for use in sampling to determine compliance with emissions limits, and specifies methods and procedures for source testing and sample collection. The following conditions will be placed on each permit to ensure compliance with the requirements of this rule.

- The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO<sub>x</sub>, CO, and O<sub>2</sub> analyzer during District inspections. The sampling ports shall be located in



accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081]

- 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]
- Source testing shall be witnessed or authorized by District personnel and samples shall be collected by a California Air Resources Board (CARB) certified testing laboratory or a CARB certified source testing firm. [District Rule 1081]
- The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

Compliance is expected with this Rule.

#### **Rule 1100 Equipment Breakdown**

This Rule defines a breakdown condition and the procedures to follow if one occurs. The corrective action, the issuance of an emergency variance, and the reporting requirements are also specified. The following conditions will be placed on each permit to ensure compliance with the requirements of this rule.

- The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100]
- The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100]

Compliance is expected with this Rule.

#### **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>1</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.

N-1399-17-3

Per section VII.C.4 of this document, AIPE is not greater than 2.0 lb/day for any pollutant. Furthermore, the Emissions Increase (calculated under section VII.D.5 and VII.D.6) does not exceed SB-288 or Federal Major Modification threshold. Therefore, BACT is not triggered for this unit.

N-1399-24-0

Per section VII.C.2 of this document, PE2 is greater than 2.0 lb/day for NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>, CO, VOC and NH<sub>3</sub>. Total CO emissions from this facility are less than 200,000 lb/yr. Thus, BACT is triggered for NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>, VOC and NH<sub>3</sub> emissions. The District practice is not to consider BACT on emission control equipment; therefore, BACT for NH<sub>3</sub> emissions will not be evaluated.

The District conducts project-specific analyses for boilers similar to the ones in this project. BACT for units greater than 20 MMBtu/hr operating in a steady-state mode is as follows:

NO<sub>x</sub>:        7.0 ppmvd @ 3% O<sub>2</sub> (or less) – Achieved-in-practice  
                  5.0 ppmvd @ 3% O<sub>2</sub> (or less) – Technologically feasible

SO<sub>x</sub>, PM<sub>10</sub>, VOC: Use of PUC quality natural gas

The applicant's proposal to comply with 5.0 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> (or less) with SCR system and use of PUC quality natural gas would satisfy the BACT for NO<sub>x</sub>, SO<sub>x</sub>, PM<sub>10</sub>, and VOC emissions. Please refer to Appendix II of this document for Top-Down BACT Analysis.

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<sup>1</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

**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)	126,311	47,602	34,112	145,967	17,553
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.

This facility is a Major Source for NO<sub>x</sub> emissions, and operating under facility-wide NO<sub>x</sub> limit of 33,705 pounds per year. Currently, the boiler operating under permit N-1399-17 is a part of the facility-wide NO<sub>x</sub> limit. Therefore, it will be determined whether or not all units under the facility-wide NO<sub>x</sub> limit are CEUs. Note that the new boiler is going to be a part of the existing facility-wide limit. The following table summarizes clean unit determination.

Permit #	Permit NOx Limit	AIP BACT for NOx	CEU (Yes/No)
N-1399-4-1 & 5-1	7 ppmvd @ 3% O <sub>2</sub>	7.0 ppmvd @ 3% O <sub>2</sub> (or less)	Yes
N-1399-11-0	6.1 g/bhp-hr (emergency fire pump IC engine)	Certified NOx emissions of 6.9 g/bhp-hr or less (BACT Guideline 3.1.4)	Yes
N-1399-13-1	7 ppmvd @ 3% O <sub>2</sub>	7.0 ppmvd @ 3% O <sub>2</sub> (or less)	Yes
N-1399-16-1	0.0364 lb/MMBtu	Use of natural gas and operating the burner within manufacturer's specifications to minimize NOx (BACT Guideline 1.6.1)	Yes
N-1399-17-1	7 ppmvd @ 3% O <sub>2</sub>	7.0 ppmvd @ 3% O <sub>2</sub> (or less)	Yes
N-1399-20-1	7 ppmvd @ 3% O <sub>2</sub>	7.0 ppmvd @ 3% O <sub>2</sub> (or less)	Yes
N-1399-21-0	2.54 g/bhp-hr (NOx + VOC, Tier 3 Certified, emergency IC engine)	3.0 g/bhp-hr (NO <sub>x</sub> + NMHC)	Yes
N-1399-24-0	5.0 ppmvd @ 3% O <sub>2</sub>	7.0 ppmvd @ 3% O <sub>2</sub> (or less)	Yes

The units under the facility-wide NOx limit are found to be clean, therefore, BE is set equal to PE1.

$$EOQ = \Sigma(PE2 - PE1)$$

As stated previously, this facility has a facility-wide NOx limit. Therefore,

$$\begin{aligned} EOQ &= SSPE2 - SSPE1 \\ &= 33,705 \text{ lb-NOx/yr} - 33,705 \text{ lb-NOx/yr} \\ &= 0 \text{ lb-NOx/yr} \end{aligned}$$

**PM<sub>10</sub>:**

The proposed increase in PM<sub>10</sub> emissions is less than 0.5 lb/day on an average basis (138 lb-PM<sub>10</sub>/yr ÷ 365 days/yr) due to the proposed project, which is equated to zero per District Policy APR-1130. Therefore, offsets are not required for PM<sub>10</sub> emissions.

**C. Public Notification**

**1. Applicability**

Public noticing is required for:

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

- b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
- c. Any project which results in the offset thresholds being surpassed, and/or
- d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

Per section VII.D.6 of this document, this project is a Federal Major Modification. Furthermore, the potential emissions from the proposed new boiler (471 MMBtu/hr) exceed 100 pounds per day for NO<sub>x</sub> and CO emissions. The SSIPE for CO is also greater than 20,000 pounds per year per section VII.D.4 of this document. Therefore, public notice is required for this project.

## 2. Public Notice Action

Public notice is required for this project. The public notice documents, i.e., this application review along with the draft permits, will be submitted to the California Air Resources Board (CARB) and the Environmental Protection Agency (EPA) Region 9. The documents will also be posted on the Air District's website<sup>2</sup> for review and comment. A public notice will be published in the local newspaper, Merced Sun-Star, soliciting comments from the public as well as any other interested parties. The public comment period will last 30 days from the date of publication.

## 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.

### N-1399-17-3

#### 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 startup duration shall not exceed 2.0 hours per day. [District Rules 2201, 4306 and 4320]
- The shutdown duration shall not exceed 1.0 hour per day. [District Rules 2201, 4306 and 4320]

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<sup>2</sup> [http://www.valleyair.org/notices/public\\_notices\\_idx.htm#Permitting and Emission Reduction Credit Certificate Notices](http://www.valleyair.org/notices/public_notices_idx.htm#Permitting and Emission Reduction Credit Certificate Notices)

- During startup and shutdown, NO<sub>x</sub> emissions shall not exceed 30 ppmvd @ 3% O<sub>2</sub> or 0.036 lb/MMBtu over 1-hour averaging period. Each one-hour period shall commence on the hour. [District Rules 2201, 4305, 4306 and 4320]
- During startup and shutdown, CO emissions shall not exceed 200 ppmvd @ 3% O<sub>2</sub> or 0.148 lb/MMBtu over 1-hour averaging period. Each one-hour period shall commence on the hour. [District Rules 2201, 4305, 4306 and 4320]

Steady state:

- Except during startup and shutdown, NO<sub>x</sub> emissions shall not exceed 7.0 ppmvd @ 3% O<sub>2</sub> or 0.008 lb/MMBtu, referenced as NO<sub>2</sub> over 1-hour averaging period. Each one-hour period shall commence on the hour. [District Rules 2201, 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 over 1-hour averaging period. Each one-hour period shall commence on the hour. [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 0.0074 lb/MMBtu. [District Rule 2201]
- VOC emissions shall not exceed 10 ppmvd @ 3% O<sub>2</sub> or 0.0042 lb/MMBtu, referenced as methane. [District Rule 2201]

Note that one hour averaging period is established based on the monitoring requirements in section 40 CFR Part 60.13(h)(1), which requires that all data for the continuous monitoring system (other than opacity meters) to be reduced to 1-hour averages for the time period as defined in section 60.2 (i.e. one-hour period means any 60-minute period commencing on the hour).

N-1399-24-0

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 startup duration shall not exceed 4.0 hours per day. [District Rules 2201, 4306 and 4320]
- The shutdown duration shall not exceed 1.0 hour per day. [District Rules 2201, 4306 and 4320]

- During startup and shutdown, NO<sub>x</sub> emissions shall not exceed 30 ppmvd @ 3% O<sub>2</sub> or 0.036 lb/MMBtu over 1-hour averaging period. Each one-hour period shall commence on the hour. [District Rules 2201, 4305, 4306 and 4320]
- During startup and shutdown, CO emissions shall not exceed 200 ppmvd @ 3% O<sub>2</sub> or 0.148 lb/MMBtu over 1-hour averaging period. Each one-hour period shall commence on the hour. [District Rules 2201, 4305, 4306 and 4320]

Steady state:

- Except during startup and shutdown, NO<sub>x</sub> emissions shall not exceed 5.0 ppmvd @ 3% O<sub>2</sub> over 1-hour averaging period. Each one-hour period shall commence on the hour. [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 over 1-hour averaging period. Each one-hour period shall commence on the hour. [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 0.003 lb/MMBtu. [District Rule 2201]
- VOC emissions shall not exceed 5 ppmvd @ 3% O<sub>2</sub> or 0.002 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

N-1399-17-3

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

To verify the proposed NO<sub>x</sub> and CO emissions during startup and shutdown period, the applicant will be required to conduct a source test to measure NO<sub>x</sub> and CO emissions within 60-days of startup under this permit. CEMS relative accuracy evaluation is required during startup and shutdown testing.

*Steady state testing for NO<sub>x</sub> and CO:*

The existing permit requires source testing to measure NO<sub>x</sub> and CO emissions at least once every twelve months. Successful compliance demonstration on two consecutive twelve-month periodic tests may defer the following source test up to thirty-six months. These testing requirements will be replicated in this permit.

**SO<sub>x</sub>:**

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

**PM<sub>10</sub>:**

The applicant had conducted source test on unit N-1399-17 in October 2012. The PM<sub>10</sub> emissions were 0.0064 lb/MMBtu. Since the tested value is less than the proposed 0.0073 lb/MMBtu, re-testing is not considered for this unit.

**VOC:**

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

**N-1399-24-0**

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

To verify the proposed NO<sub>x</sub> and CO emissions during startup and shutdown period, the applicant will be required to conduct a source test to measure NO<sub>x</sub> and CO emissions within 60-days of startup under this permit. CEMS relative accuracy evaluation is required during startup and shutdown testing.

*Steady state testing:*

To verify the proposed NO<sub>x</sub>, CO, PM<sub>10</sub>, VOC and NH<sub>3</sub> emissions, the initial source testing will be required to be completed within 60-days of startup of the unit.

Source testing to measure NO<sub>x</sub>, CO, NH<sub>3</sub> emissions is required to be conducted 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.

**2. Monitoring**

**N-1399-17-3 and '-24-0**

The applicant has proposed to monitor NO<sub>x</sub>, CO and O<sub>2</sub> concentrations using a shared CEMS system.

NH<sub>3</sub> slip from the SCR system for unit N-1399-24 will be measured using Draeger tubes on a monthly basis.



3. Recordkeeping

N-1399-17-3 and '-24-0

The applicant 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

N-1399-17-3 and '-24-0

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

F. Ambient Air Quality Analysis (AAQA)

Pursuant to Section 4.14 of Rule 2201, 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. The following table shows the summary of AAQA:

Pollutant	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO <sub>x</sub>	Pass <sup>1</sup>	X	X	X	Pass
SO <sub>x</sub>	Pass <sup>2</sup>	Pass	X	Pass	Pass
PM <sub>10</sub>	X	X	X	Pass <sup>3</sup>	Pass <sup>3</sup>
PM <sub>2.5</sub>	X	X	X	Pass <sup>3</sup>	Pass <sup>3</sup>

<sup>1</sup>The project was compared to the 1-hour NO<sub>2</sub> National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures. The criteria pollutant 1-hour value passed using TIER I NO<sub>2</sub> NAAQS modeling

<sup>2</sup>The project was compared to the 1-hour SO<sub>2</sub> National Ambient Air Quality Standard that became effective on August 23, 2010 using the District's approved procedures.

<sup>3</sup>The maximum predicted concentration for emissions of these criteria pollutants from the proposed unit are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

The criteria modeling runs for the proposed new unit indicates that the emissions will not cause or significantly contribute to a violation of the State or National Ambient Air Quality Standards.

G. Compliance Certification

Per Section 4.15 of Rule 2201, "Compliance Certification" and "Alternative Siting Analysis" is required for any project, which constitutes a New Major Source or a Federal Major Modification.

Compliance Certification

The owner of a new Major Source or a source undergoing a Federal Major Modification to demonstrate to the satisfaction of the District that all other Major

Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. The compliance certification from the facility is included in Appendix V of this document.

#### Alternative Siting Analysis

The current project occurs at an existing facility. Since the boilers in the project will provide steam at the same location, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater impact.

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-1399-17 and '24	8.6	3.3	44.8	5.8	5.8	135,881
PSD Significant Emission Increase Thresholds	40	40	100	25	15	75,000
PSD Significant Emission Increase?	No	No	No	No	No	Yes

As demonstrated above, because the project has a total potential to emit from all new and modified emission units greater than PSD significant emission increase thresholds, further analysis is required to determine if the project has an emission increase greater than the PSD significant emission increase thresholds, see step below.

b. Emission Increase (EI) for Each Attainment/Unclassified Pollutant with a Significant Emission Increase vs PSD Significant Emission Increase Thresholds

In this step, the emission increase for each attainment/unclassified pollutant is compared to the PSD significant emission increase thresholds, and if the emission increase for each attainment pollutant is below this threshold, no further analysis is needed.

For the existing emissions units, the increase in emissions is calculated as follows:

$$EI = PAE - BAE - UBC$$

Where: PAE = Projected Actual Emissions, and  
BAE = Baseline Actual Emissions  
UBC = Unused baseline capacity

For new emissions units, the increase in emissions is equal to the PE2 for each new unit included in this project.

N-1399-17-3

The proposed modifications to this unit do not result in an increase in design capacity or potential to emit, and it does not impact the ability of any emission unit to operate at

a higher utilization rate. Therefore, the emission increase from this unit is presumed to be zero.

**N-1399-24-0**

For new emissions unit, the increase in emissions is equal to the PE2 for each new unit included in this project.

Pollutant	EI (lb/yr)
NOx	8,460
SOx	3,624
PM <sub>10</sub>	3,815
CO	49,196
*CO <sub>2e</sub>	74,140

\*Units for CO<sub>2e</sub> is tons/yr

The project's combined total emission increases are compared to the PSD significant emission increase thresholds in the following table.

PSD Significant Emission Increase Determination: Emission Increase (tons/year)						
Category	NO <sub>2</sub>	SO <sub>2</sub>	CO	PM	PM <sub>10</sub>	CO <sub>2e</sub>
Emission Increases (only)	4.2	1.8	24.6	1.9	1.9	74,140
PSD Significant Emission Increase Thresholds	40	40	100	25	15	75,000
PSD Significant Emission Increase?	No	No	No	No	No	No

As shown in the table above, the project's emission increase, for all new and modified emission units, does not exceed any of the PSD significant emission increase thresholds. Therefore, the project does not result in a PSD major modification due to a significant emission increase and no further discussion is required.

**Rule 2520 Federally Mandated Operating Permits**

This facility is a Major Source for NOx and GHG emissions. Therefore, this facility is subject to the requirements of this rule.

Liberty Packing Company has proposed to obtain initial Title V permit under project N1121935. The preliminary decision of the initial Title V project was made on June 10, 2013. The facility is expected to obtain Title V before the issuance of permits under this project. Therefore, the facility has requested to issue the ATCs associated with this

project with Certificate of Conformity (COC). The following conditions will be included in the permits:

- 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]

Compliance is expected with this Rule.

**Rule 2550 Federally Mandated Preconstruction Review for Major Sources of Air Toxics**

Section 2.0 states, "The provisions of this rule shall only apply to applications to construct or reconstruct a major air toxics source with Authority to Construct issued on or after June 28, 1998."

Based on the calculations in the worksheets in Appendix IV of this document, this facility is not becoming a Major HAP Source (i.e. PE >10 tons/yr for single HAP, PE > 25 tons/yr for combined HAPs). Therefore, this facility is not subject to the requirements of this Rule.

**Rule 4001 New Source Performance Standards**

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

Section 60.40b - Applicability and delegation of authority

This subpart applies to each steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 100 MMBtu/hr. The boiler under permit N-1399-17 is rated at 260 MMBtu/hr. The permit for this unit was in August, 2007, so it is reasonable to presume that the unit is likely installed few months prior to the implementation date. Since the installation date was long after the cut-off date of June 19, 1984, it is concluded that this unit is subject to the requirements of this subpart.

The new 471 MMBtu/hr boiler is likely to be constructed sometime in 2014. This unit is subject to the requirements of this subpart.

Section 60.42b - Standard for sulfur dioxide (SO<sub>2</sub>)

Section 60.42b(k)(1)(2) states that the units firing only very low sulfur oil, gaseous fuel, a

mixture of these fuels with any other fuels with a potential SO<sub>2</sub> emission rate of 0.32 lb/MMBtu heat input or less are exempt from the SO<sub>2</sub> emissions in paragraph (k)(1) of this section.

The boilers will be fired on natural gas fuel containing a maximum of 1.0 gr-S/100 scf, which equates to 0.00285 lb/MMBtu. Therefore, these units are exempt from the SO<sub>2</sub> emissions in paragraph (k)(1) of this section. The following condition will be included in permits N-1399-17-3 and '-24-0:

- The unit shall only be fired on PUC-quality natural gas with a sulfur content of no greater than 1.0 grains (gr) of sulfur per 100 standard cubic feet (scf) of natural gas. [District Rules 2201 and 4320, 40 CFR 60.42b9k)(1)(2)] N

Section 60.43b - Standard for particulate matter (PM)

This section does not list PM emission standards for natural gas fired steam generating units.

Section 60.44b - Standard for nitrogen oxides (NO<sub>x</sub>)

Section 60.44b(a) states that except as provided in paragraphs (k) and (l) of this section, no owner or operator of an affected facility that is subject to the provisions of this section and that combusts only coal, oil or natural gas shall cause to be discharged into the atmosphere from that affected facility any gases that contain NO<sub>x</sub> (expressed as NO<sub>2</sub>) in excess of 0.1 lb/MMBtu for low heat release rate ( $\leq 70,000$  Btu/hr-ft<sup>3</sup> of furnace volume) or 0.2 lb/MMBtu for high release rate ( $> 70,000$  Btu/hr-ft<sup>3</sup> of furnace volume).

Section 60.44b(h) states for the purposes of paragraph (i) of this section, the NO<sub>x</sub> standards under this section apply at all times including periods of startup, shutdown, or malfunction.

Section 60.44b(i) state that compliance with an applicable limit is determined on a 30-day rolling average basis.

The boiler N-1399-17 is permitted to emit 7 ppmvd @ 3% O<sub>2</sub> (or less), and the new boiler will be permitted to emit 5.0 ppmvd @ 3% O<sub>2</sub> (or less) during steady-state (30 ppmvd @ 3% O<sub>2</sub> during startup/shutdown period). These limits are significantly less than 82 ppmvd @ 3% O<sub>2</sub> (equates to 0.1 lb/MMBtu) most stringent NO<sub>x</sub> limit for low heat release rate units. Thus, compliance is expected with this section. The following condition(s) will be included in permits N-1399-17-3 and '-24-0:

- For 40 CFR Part 60 Subpart Db purpose, NO<sub>x</sub> emissions shall not exceed 0.1 lb/MMBtu for low heat release units (70,000 Btu/hr-ft<sup>3</sup> of furnace volume or less) and 0.2 lb/MMBtu for high heat release units (greater than 70,000 Btu/hr-ft<sup>3</sup> of furnace volume) on a 30-day rolling average basis. NO<sub>x</sub> standard shall apply at all times including periods of startup, shutdown, or malfunction. The permittee shall maintain

record of the furnace volume, which is defined as the volume bounded by the front furnace wall where the burner is located, the furnace side waterfall, and extending to the level just below or in front of the first row of convection pass tubes. [40 CFR 60.44b(a), 60.44b(h), 60.44b(i)]

Section 60.45b - Compliance and performance test methods and procedures for sulfur dioxide

Section 60.45b(j) states the owner or operator of an affected facility that only combusts very low sulfur oil, natural gas, or a mixture of these fuels with any other fuels not subject to the compliance and performance testing requirements of this section if the owner or operator obtains fuel receipts per section 60.49b(r) which requires the supplier to certify that the gaseous fuel meets the definition of natural gas. In lieu of receipts, the owner or operator may develop and submit a site-specific fuel analysis for review and approval per information in section 60.49b(r)(2).

This facility uses PUC quality natural gas supplied by PG&E, which has a transportation agreement to deliver gas with maximum sulfur content of 1.0 gr/100 scf (actual: 0.3 to 0.5 gr/100 scf, based on source testing)<sup>3</sup>. Therefore, the following condition will enforce compliance with this section:

- The owner or operator shall either obtain fuel receipts (such as a valid purchase contract, tariff sheet, or transportation contract) from the fuel supplier that certify that the gaseous fuel meets definition of natural gas (as defined in 40 CFR 60.41b) and the applicable sulfur limit (i.e., 1.0 gr-S/100 scf), or demonstrate that the combusted gas is provided from a PUC or FERC regulated source, or monitor the sulfur content within 60 days of initial startup and weekly thereafter. If the sulfur content is less than or equal to 1.0 gr/100 dscf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume until compliance is demonstrated for eight consecutive weeks. [District Rule 4320, 40 CFR 60.45b(j), 60.49b(r)(2)]

Section 60.46b - Compliance and performance test methods and procedures for particulate matter and nitrogen oxides

Section 60.46b(e) states compliance with the NO<sub>x</sub> emission limits shall be conducted using continuous system for monitoring NO<sub>x</sub> under section 60.48(b).

Section 60.46b(e)(1) states NO<sub>x</sub> from the steam generating unit are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the NO<sub>x</sub> emission standards under §60.44b. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period. The following condition(s) will be included in permits N-1399-17-3 and '-24-0:

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<sup>3</sup>The sulfur content in PUC regulated natural gas is taken from District Policy APR-1720.

- For the initial compliance test under 40 CFR Part 60 Subpart Db, NO<sub>x</sub> emissions shall be monitored for 30 successive steam generating unit operating days and the 30-day average emission rate shall be used to determine compliance with the NO<sub>x</sub> emission standard under 40 CFR 60.44b (0.1 lb/MMBtu for low heat release units (i.e., 70,000 Btu/hr-ft<sup>3</sup> of furnace volume, or less), or 0.2 lb/MMBtu for high heat release units (i.e., greater than 70,000 Btu/hr-ft<sup>3</sup> of furnace volume)). The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period. [40 CFR 60.46b(e)(1)]

Section 60.46b(e)(2) states that following the initial performance test, the owner or operator of an affected facility that has a heat input greater than 250 MMBtu/hr and that combust natural gas, distillate oil, or residual oil having a nitrogen content of 0.3 percent or less shall determine compliance with the NO<sub>x</sub> standard under section 60.44 on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO<sub>x</sub> emission data for the preceding 30 steam generating unit operating days. The following condition(s) will be included in permits N-1399-17-3 and '-24-0:

- Following the initial compliance test, the operator shall determine compliance with the NO<sub>x</sub> standard under 40 CFR 60.44 (0.1 lb/MMBtu for low heat release units (i.e., 70,000 Btu/hr-ft<sup>3</sup> of furnace volume, or less), or 0.2 lb/MMBtu for high heat release units (i.e., greater than 70,000 Btu/hr-ft<sup>3</sup> of furnace volume)) on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO<sub>x</sub> emission data for the preceding 30 steam generating unit operating days. [40 CFR 60.46b(e)(3)]

§ 60.47b Emission monitoring for sulfur dioxide

Per section 60.48b(f), the proposed units are not subject to the requirements of this section if the owner or operator maintains fuel records described in §60.49b(r). Refer to the discussion under section 60.45b above.

§ 60.48b Emission monitoring for particulate matter and nitrogen oxides

Section 60.48b(b) states that except as provided under paragraphs (g), (h) and (i), the owner or operator of an affected facility subject to a NO<sub>x</sub> standard under §60.44b shall comply with either paragraphs (b)(1) or (b)(2) of this section.

(1) Install, calibrate, maintain, and operate CEMS for measuring NO<sub>x</sub> and O<sub>2</sub> (or CO<sub>2</sub>) emissions discharged to the atmosphere, and shall record the output of the system; or

(2) If the owner or operator has installed a NO<sub>x</sub> emission rate CEMS to meet the requirements of part 75 of this chapter and is continuing to meet the ongoing



requirements of part 75 of this chapter, that CEMS may be used to meet the requirements of this section, except that the owner or operator shall also meet the requirements of §60.49b. Data reported to meet the requirements of §60.49b shall not include data substituted using the missing data procedures in subpart D of part 75 of this chapter, nor shall the data have been bias adjusted according to the procedures of part 75 of this chapter.

The applicant has proposed to install, calibrate, maintain, and operate a common CEMS to measure and record NO<sub>x</sub>, CO and O<sub>2</sub> concentrations from the boilers in this project. Therefore, compliance is expected with this section. The following condition(s) will be included in permits N-1399-17-3 and '-24-0:

- The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NO<sub>x</sub>, CO and O<sub>2</sub> concentrations. CEMS shall monitor emissions during all types of operation, including during startup and shutdown periods, provided the CEMS passes the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 2201, 4305, 4306 and 4320, 40 CFR 60.48b(1)]

Section 60.48b(c) states that the CEMS required under paragraph (b) of this section shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments. The following condition(s) will be included in permits N-1399-17-3 and '-24-0:

- The CEMS shall be operated and data recorded during all periods of operation except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments. [40 CFR 60.48b(c)]

Section 60.48b (d) states that the 1-hour average NO<sub>x</sub> emission rates measured by the continuous NO<sub>x</sub> monitor required by paragraph (b) of this section and required under §60.13(h) shall be expressed in ng/J or lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.44b. The 1-hour averages shall be calculated using the data points required under §60.13(h)(2). The following condition(s) will be included in permits N-1399-17-3 and '-24-0:

- The 1-hour average NO<sub>x</sub> emission rates measured by the continuous NO<sub>x</sub> monitor shall be expressed in lb/MMBtu heat input and shall be used to calculate the average emission rates under §60.44b. The 1-hour averages shall be calculated using the data points required under §60.13(h)(2). [40 CFR 60.48b(d)]

Section 60.48b(e) states that the procedures under §60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems. Span value for natural gas is 500 ppm NO<sub>x</sub>. The following condition(s) will be included in permits N-1399-17-3 and '-24-0:

- The procedures under §60.13 shall be followed for installation, evaluation, and operation of the CEMS. [40 CFR 60.48b(e)]

Section 60.48b(f) states that when NO<sub>x</sub> emission data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7 of appendix A of this part, Method 7A of appendix A of this part, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days. The following condition(s) will be included in permits N-1399-17-3 and '-24-0:

- When NO<sub>x</sub> data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data shall be obtained by using standby monitoring systems, Method 7 of Appendix A of Part 60, Method 7A of Appendix A of Part 60, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days. [40 CFR 60.48b(f)]

Section 60.48b(j) states that the owner or operator of an affected facility that meets the conditions in either paragraph (j)(1), (2), (3), (4), (5), or (6) of this section is not required to install or operate a continuous opacity metering system (COMS) if:

(1) The affected facility uses a PM CEMS to monitor PM emissions; or

(2) The affected facility burns only liquid (excluding residual oil) or gaseous fuels with potential SO<sub>2</sub> emissions rates of 26 ng/J (0.060 lb/MMBtu) or less and does not use a post-combustion technology to reduce SO<sub>2</sub> or PM emissions. The owner or operator must maintain fuel records of the sulfur content of the fuels burned, as described under §60.49b(r); or

(3) The affected facility burns coke oven gas alone or in combination with fuels meeting the criteria in paragraph (j)(2) of this section and does not use a post-combustion technology to reduce SO<sub>2</sub> or PM emissions; or

(4) The affected facility does not use post-combustion technology (except a wet scrubber) for reducing PM, SO<sub>2</sub>, or carbon monoxide (CO) emissions, burns only gaseous fuels or

fuel oils that contain less than or equal to 0.30 weight percent sulfur, and is operated such that emissions of CO to the atmosphere from the affected facility are maintained at levels less than or equal to 0.15 lb/MMBtu on a steam generating unit operating day average basis. Owners and operators of affected facilities electing to comply with this paragraph must demonstrate compliance according to the procedures specified in paragraphs (j)(4)(i) through (iv) of this section; or

(i) You must monitor CO emissions using a CEMS according to the procedures specified in paragraphs (j)(4)(i)(A) through (D) of this section.

(A) The CO CEMS must be installed, certified, maintained, and operated according to the provisions in §60.58b(i)(3) of subpart Eb of this part.

(B) Each 1-hour CO emissions average is calculated using the data points generated by the CO CEMS expressed in parts per million by volume corrected to 3 percent oxygen (dry basis).

(C) At a minimum, valid 1-hour CO emissions averages must be obtained for at least 90 percent of the operating hours on a 30-day rolling average basis. The 1-hour averages are calculated using the data points required in §60.13(h)(2).

(D) Quarterly accuracy determinations and daily calibration drift tests for the CO CEMS must be performed in accordance with procedure 1 in appendix F of this part.

(ii) You must calculate the 1-hour average CO emissions levels for each steam generating unit operating day by multiplying the average hourly CO output concentration measured by the CO CEMS times the corresponding average hourly flue gas flow rate and divided by the corresponding average hourly heat input to the affected source. The 24-hour average CO emission level is determined by calculating the arithmetic average of the hourly CO emission levels computed for each steam generating unit operating day.

(iii) You must evaluate the preceding 24-hour average CO emission level each steam generating unit operating day excluding periods of affected source startup, shutdown, or malfunction. If the 24-hour average CO emission level is greater than 0.15 lb/MMBtu, you must initiate investigation of the relevant equipment and control systems within 24 hours of the first discovery of the high emission incident and, take the appropriate corrective action as soon as practicable to adjust control settings or repair equipment to reduce the 24-hour average CO emission level to 0.15 lb/MMBtu or less.

(iv) You must record the CO measurements and calculations performed according to paragraph (j)(4) of this section and any corrective actions taken. The record of corrective action taken must include the date and time during which the 24-hour average CO emission level was greater than 0.15 lb/MMBtu, and the date, time, and description of the corrective action.

(5) The affected facility uses a bag leak detection system to monitor the performance of a fabric filter (baghouse) according to the most recent requirements in section §60.48Da of this part; or

(6) The affected facility burns only gaseous fuels or fuel oils that contain less than or equal to 0.30 weight percent sulfur and operates according to a written site-specific monitoring plan approved by the permitting authority. This monitoring plan must include procedures and criteria for establishing and monitoring specific parameters for the affected facility indicative of compliance with the opacity standard.

The boilers will be fired on natural gas fuel with 1.0 gr-S/100 scf or less (equates to 0.00285 lb-SO<sub>2</sub>/MMBtu); therefore, COMS is not required.

§ 60.49b Reporting and recordkeeping requirements

Section 60.49b(b) states that the owner or operator of each affected facility subject to the SO<sub>2</sub>, PM, and/or NO<sub>x</sub> emission limits under §§60.42b, 60.43b, and 60.44b shall submit to the Administrator the performance test data from the initial performance test and the performance evaluation of the CEMS using the applicable performance specifications in Appendix B of this part. The following condition(s) will be included in permits N-1399-17-3 and '-24-0:

- The owner or operator shall submit the performance test data and the performance evaluation of the CEMS using performance specification 2 (PS 2) for NO<sub>x</sub>, PS 4A for CO, and PS3 for O<sub>2</sub> in 40 CFR Part 60 Appendix B. [40 CFR 60.49b(b)]

Section 60.49(d)(1) states the owner or operator of an affected facility shall record and maintain records of the amounts of each fuel combusted during each day and calculate the annual capacity factor individually for coal, distillate oil, residual oil, natural gas, wood, and municipal-type solid waste for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month. The following condition(s) will be included in permits N-1399-17-3 and '-24-0:

- The owner or operator shall maintain records of the amount of fuel combusted during each day in this unit. [District Rule 2201 and 40 CFR 60.49b(d)(1)]
- The owner or operator shall maintain records of the annual capacity factor on a monthly basis. The annual capacity factor shall be determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month. [40 CFR 60.49b(d)(1)]

Section 60.49(g) states that except as provided under paragraph (p) of this section, the owner or operator of an affected facility subject to the NO<sub>x</sub> standards under §60.44b shall

maintain records of the following information for each steam generating unit operating day:

- (1) Calendar date;
- (2) The average hourly NO<sub>x</sub> emission rates (expressed as NO<sub>2</sub>) (ng/J or lb/MMBtu heat input) measured or predicted;
- (3) The 30-day average NO<sub>x</sub> emission rates (ng/J or lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days;
- (4) Identification of the steam generating unit operating days when the calculated 30-day average NO<sub>x</sub> emission rates are in excess of the NO<sub>x</sub> emissions standards under §60.44b, with the reasons for such excess emissions as well as a description of corrective actions taken;
- (5) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;
- (6) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;
- (7) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted;
- (8) Identification of the times when the pollutant concentration exceeded full span of the CEMS;
- (9) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and
- (10) Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

The following condition(s) will be included in permits N-1399-17-3 and '-24-0:

- The owner or operator shall maintain records and submit a written report each calendar quarter to the District containing the following information for each steam generating unit operating day: (1) Calendar date; (2) The average hourly NO<sub>x</sub> and CO emission rates (expressed as NO<sub>2</sub>) (ppmvd @ 3% O<sub>2</sub> and lb/MMBtu heat input) measured or predicted; (3) The 30-day average NO<sub>x</sub> emission rates (lb/MMBtu heat

input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days; (4) Identification of the steam generating unit operating days when the calculated 30-day average NO<sub>x</sub> emission rates are in excess of the NO<sub>x</sub> emissions standards under 40 CFR 60.44b (0.1 lb/MMBtu for low heat release units (i.e., 70,000 Btu/hr-ft<sup>3</sup> of furnace volume, or less), or 0.2 lb/MMBtu for high heat release units (i.e., greater than 70,000 Btu/hr-ft<sup>3</sup> of furnace volume)), with the reasons for such excess emissions as well as a description of corrective actions taken; (5) Identification of the steam generating unit operating days when the average hourly NO<sub>x</sub> and CO emission rates are in excess of the NO<sub>x</sub> and CO limits (startup, shutdown and steady state) in this permit, with the reason for such excess emissions as well as a description of corrective actions taken; (6) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken; (7) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data; (8) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted; (9) Identification of the times when the pollutant concentration exceeded full span of the CEMS; (10) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3 or 4A; (11) Results of daily CEMS drift tests and quarterly accuracy assessments as required under Appendix F, Procedure 1 of Part 60; and (11) A negative declaration when no excess emissions occurred. The report is due on the 30th day following the end of the calendar quarter. [District Rules 1080, 2201, 4305, 4306 and 4320, 40 CFR 60.49b(g), 40 CFR 60.49b(i), and 40 CFR 60.49b(w)]

Section 60.49b(h) states that the owner or operator is required to submit excess emission reports for any excess emissions that occurred during the reporting period. Item 4 in the requirement 60.49b(g), given in the above condition, would satisfy an on-going compliance with this section.

Section 60.49b(i) states the owner or operator of any affected facility subject to the continuous monitoring requirements for NO<sub>x</sub> under §60.48(b) shall submit reports containing the information recorded under paragraph (g) of this section. The condition under section 60.49b(g) would satisfy an on-going compliance with this section.

Section 60.49b(o) requires that all records shall be maintained by the owner or operator for a period of 2 years following the date of such record.

The District will require the owner or operator to maintain records of required monitoring data and support information for a period of at least five years from the date of data entry of each record. The following condition(s) will be included in permits N-1399-17-3 and '-24-0:

- The owner or operator shall maintain all records of required monitoring data and support information for a period of five years from the date of data entry and shall make such records available to the District upon request. [District Rules 1070, 2201, 4305, 4306, and 4320, 40 CFR 60.49b(o)]

Section 60.49b(v) states the owner or operator of an affected facility may submit electronic quarterly reports for SO<sub>2</sub> and/or NO<sub>x</sub> and/or opacity in lieu of submitting the written reports required under paragraphs (h), (i), (j), (k) or (l) of this section. The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of this subpart was achieved during the reporting period. Before submitting reports in the electronic format, the owner or operator shall coordinate with the permitting authority to obtain their agreement to submit reports in this alternative format. The following condition(s) will be included in permits N-1399-17-3 and '-24-0:

- The owner or operator of an affected facility may submit electronic quarterly reports in lieu of submitting the written reports. The format of each quarterly electronic report shall be coordinated with the District. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of this permit was achieved during the reporting period. Before submitting reports in the electronic format, the owner or operator shall coordinate with the District to obtain their agreement to submit reports in this alternative format. [District Rule 1080 and 40 CFR 60.49b(v)]

Section 60.49b(w) states the reporting period for the reports required under this subpart is each 6 month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.

The reports are required to be submitted on a quarterly basis. Therefore, compliance is expected with this section. Please refer to the condition under section 60.48b(g) above.

Compliance is expected with this Regulation.

#### **Rule 4002 National Emissions Standards for Hazardous Air Pollutants (NESHAP)**

Pursuant to Section 2.0, "All sources of hazardous air pollution shall comply with the standards, criteria, and requirements set forth therein". Therefore, the requirements of this rule apply to this facility. However, there are no applicable requirements for a non-major HAP source. As discussed under Rule 2550, this facility is not a major HAP source; therefore, no actions are necessary to determine compliance with this rule.

**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. The risk management review analysis summary is as follows:

Risk Management Review Summary			
Categories	Unit 24-0	Project Totals	Facility Totals
Prioritization Score	0.05	0.05	>1
Acute Hazard Index	0.00	0.00	0.00
Chronic Hazard Index	0.00	0.00	0.01
Maximum Individual Cancer Risk ( $10^{-6}$ )	0.3	0.3	0.5
T-BACT Required?	No		
Special Permit Conditions?	Yes		

The acute and chronic indices are below 1.0; and the cancer risk 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 following permit condition will be included in N-1399-24-0:



- 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]

Note that there is no increase in hazardous air pollutants (HAPs) from the modifications proposed to unit N-1399-17-3. Therefore, risk management review was not performed for unit N-1399-17-3.

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-1399-17-3

The applicant is not proposing to increase the existing PM emission factor rate or heat input rate. Thus, continued compliance is expected with this rule.

N-1399-24-0

PM <sub>10</sub> emissions	= 1.413 lb-PM <sub>10</sub> /hr (0.003 lb/MMBtu x 471 MMBtu/hr)
Fraction (lb-PM <sub>10</sub> /lb-PM)	= 100 %
Exhaust Temperature	= 285°F
Exhaust flow rate	= 128,400 acfm
Moisture in exhaust	= 7% (assumed)

$$PM\left(\frac{gr}{dscf}\right) = \frac{\left(1.413 \frac{lb-PM}{hr}\right)\left(7,000 \frac{gr-PM}{lb-PM}\right)\left(\frac{hr}{60 \text{ min}}\right)}{\left(128,400 \frac{ft^3}{min}\right)\left(\frac{459.67 + 60}{459.67 + 285}\right)(1 - 0.07)} = 0.002 \frac{gr-PM}{dscf}$$

The following condition will be listed in permits N-1399-17-3 and '-24-0:

- 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

N-1399-17-3:

NO<sub>x</sub> (lb/hr) = (0.008 lb/MMBtu)(260 MMBtu/hr) = 2.1 lb/hr  
 SO<sub>x</sub> (lb/hr) = (0.00285 lb/MMBtu)(260 MMBtu/hr) = 0.7 lb/hr

$$\begin{aligned}
 \text{PM} \left( \frac{\text{gr}}{\text{dscf}} \right) &= \frac{\text{PM Emissions} \left( \frac{\text{lb} - \text{PM}}{\text{MMBtu}} \right) \times 7,000 \frac{\text{gr} - \text{PM}}{\text{lb} - \text{PM}}}{F_{\text{factor CO}_2} \left( \frac{\text{dscf}}{\text{MMBtu}} \right) \times \left( \frac{100\%}{12\%} \right)} \\
 &= \frac{\left( 0.0073 \frac{\text{lb} - \text{PM}}{\text{MMBtu}} \right) \left( 7,000 \frac{\text{gr} - \text{PM}}{\text{lb} - \text{PM}} \right)}{\left( 1,024.2 \frac{\text{dscf}}{\text{MMBtu}} \right) \left( \frac{100\%}{12\%} \right)} \\
 &= 0.006 \frac{\text{gr} - \text{PM}}{\text{dscf}}
 \end{aligned}$$

N-1399-24-0:

NO<sub>x</sub> (lb/hr) = (0.036 lb/MMBtu)(471 MMBtu/hr) = 17.0 lb/hr  
 SO<sub>x</sub> (lb/hr) = (0.00285 lb/MMBtu)(471 MMBtu/hr) = 1.3 lb/hr

$$\begin{aligned}
 \text{PM} \left( \frac{\text{gr}}{\text{dscf}} \right) &= \frac{\text{PM Emissions} \left( \frac{\text{lb} - \text{PM}}{\text{MMBtu}} \right) \times 7,000 \frac{\text{gr} - \text{PM}}{\text{lb} - \text{PM}}}{F_{\text{factor CO}_2} \left( \frac{\text{dscf}}{\text{MMBtu}} \right) \times \left( \frac{100\%}{12\%} \right)} \\
 &= \frac{\left( 0.003 \frac{\text{lb} - \text{PM}}{\text{MMBtu}} \right) \left( 7,000 \frac{\text{gr} - \text{PM}}{\text{lb} - \text{PM}} \right)}{\left( 1,024.2 \frac{\text{dscf}}{\text{MMBtu}} \right) \left( \frac{100\%}{12\%} \right)} \\
 &= 0.0025 \frac{\text{gr} - \text{PM}}{\text{dscf}}
 \end{aligned}$$

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**

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.

NO<sub>x</sub>, CO and O<sub>2</sub> concentrations from the boilers (N-1399-17 and 24) will be measured using CEMS; 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 each boiler is greater than 5 MMBtu/hr. Therefore, these units are 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 7 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> (or less) and 50 ppmvd CO @ 3% O<sub>2</sub> (or less) for boiler under permit N-1399-17, and 5 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> (or less) and 50 ppmvd CO @ 3% O<sub>2</sub> (or less) for boiler under permit N-1399-24. Since the proposed limits for both units 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. These boilers are not limited to a heat input rate of less than 9 billion Btu per calendar year. Therefore, this section is not applicable to these units.

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.

**N-1399-17-3:**

The proposed duration of each startup and shutdown will be 2.0 hours and 1.0 hour, respectively. Therefore, compliance is expected with this rule.

**N-1399-24-0:**

This boiler will be equipped with an SCR system which includes catalyst bed, catalyst housing, and ammonia injection system. Ammonia injection can start only after the catalyst bed is elevated to a minimum operating temperature (typically around 400°F) to prevent sulfate and nitrate deposits on the catalyst surface. This means, the temperature of flue gases has to be at or above 450°F. The boiler manufacturer recommends gradual warm up during a cold startup (i.e., after 12-24 hour offline) at a rate of approximately 100°F stack temperature per one hour period to enhance lifespan of the refractory end walls. The warm up may be accelerated due to the presence of an FGR system. However, to ensure that the catalyst bed has an adequate time to stabilize and reach its operating temperature, it would still need at least 4 hours during the cold startup to attain the proposed steady state NO<sub>x</sub> emissions. Therefore, the proposed 4 hour startup time is acceptable in this case.

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 the meter due to this section.

Section 5.4.2 requires the operator to install and maintain an operational APCO approved Continuous Emissions Monitoring System (CEMS) for NO<sub>x</sub>, CO, and oxygen, or implement an APCO-approved Alternate Monitoring System. An APCO approved CEMS shall comply with the requirements of 40 Code of Federal Regulations (CFR) Part 51, 40 CFR Parts 60.7 and 60.13 (except subsection h), 40 CFR Part 60 Appendix B (Performance Specifications) and 40 CFR Part 60 Appendix F (Quality Assurance Procedures, and applicable provisions of Rule 1080 (Stack Monitoring).

The applicant has proposed to install CEMS to monitor NO<sub>x</sub>, CO and O<sub>2</sub> for both boilers (N-1399-17 and '-24). The following conditions will be listed in permits N-1399-17 and '-24:

- The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NO<sub>x</sub>, CO and O<sub>2</sub> concentrations. CEMS shall monitor emissions during all types of operation, including during startup and shutdown periods, provided the CEMS passes the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 2201, 4305, 4306 and 4320, 40 CFR 60.48b(2)]
- The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the CARB and the EPA. [District Rules 1080, 2201, 4305, 4306 and 4320]
- The NO<sub>x</sub>, CO and O<sub>2</sub> CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B Performance Specification 2 (PS 2) for NO<sub>x</sub>, Appendix B PS 4A for CO, and Appendix B PS 3 for O<sub>2</sub> or shall meet equivalent specifications established by mutual agreement of the District, the CARB, and the EPA. [District Rules 1080, 2201, 4305, 4306 and 4320]
- In accordance with 40 CFR Part 60, Appendix F, 5.1, NO<sub>x</sub>, CO and O<sub>2</sub> CEMS must be audited at least once each calendar quarter, by conducting cylinder gas audits (CGA) or relative accuracy audits (RAA). CGA or RAA may be conducted three of four calendar quarters, but no more than three calendar quarters in succession. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rules 1080, 2201, 4305, 4306 and 4320]
- The owner/operator shall perform a RATA for NO<sub>x</sub>, CO and O<sub>2</sub> as specified by 40 CFR Part 60, Appendix F, 5.1.1, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rules 1080, 2201, 4305, 4306 and 4320]
- APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rules 1080, 2201, 4305, 4306 and 4320]
- The CEMS data shall be reduced to hourly averages as specified in 40 CFR 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [District Rules 1080, 2201, 4305, 4306 and 4320]

- Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080]
- The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. [District Rule 1080]
- Upon notice by the District that the facility's CEMS is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080]
- The permittee shall maintain the following records for CEMS equipment: (1) Date, time and duration of any malfunction; (2) Date of performance testing; (3) Date of evaluations, calibrations, checks, and adjustments; and (4) Date and time period for which CEMS was inoperative. [District Rule 1080]
- The owner or operator shall maintain records and submit a written report each calendar quarter to the District containing the following information for each steam generating unit operating day: (1) Calendar date; (2) The average hourly NO<sub>x</sub> and CO emission rates (expressed as NO<sub>2</sub>) (ppmvd @ 3% O<sub>2</sub> and lb/MMBtu heat input) measured or predicted; (3) The 30-day average NO<sub>x</sub> emission rates (lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days; (4) Identification of the steam generating unit operating days when the calculated 30-day average NO<sub>x</sub> emission rates are in excess of the NO<sub>x</sub> emissions standards under 40 CFR 60.44b (0.1 lb/MMBtu for low heat release units (i.e., 70,000 Btu/hr-ft<sup>3</sup> of furnace volume, or less), or 0.2 lb/MMBtu for high heat release units (i.e., greater than 70,000 Btu/hr-ft<sup>3</sup> of furnace volume)), with the reasons for such excess emissions as well as a description of corrective actions taken; (5) Identification of the steam generating unit operating days when the average hourly NO<sub>x</sub> and CO emission rates are in excess of the NO<sub>x</sub> and CO limits (startup, shutdown and steady state) in this permit, with the reason for such excess emissions as well as a description of corrective actions taken; (6) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken; (7) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data; (8) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted; (9) Identification of the times when the pollutant concentration exceeded full span of the CEMS; (10) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply

with Performance Specification 2 or 3 or 4A; (11) Results of daily CEMS drift tests and quarterly accuracy assessments as required under Appendix F, Procedure 1 of Part 60; and (11) A negative declaration when no excess emissions occurred. The report is due on the 30th day following the end of the calendar quarter. [District Rules 1080, 2201, 4305, 4306 and 4320, 40 CFR 60.49b(g), 40 CFR 60.49b(i), and 40 CFR 60.49b(w)]

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 applicant has proposed to comply with the concentrations (ppmv) limit. Therefore, compliance is expected with this section.

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 conditions will be listed in permits N-1399-17 and '-24:

- 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 following conditions will be listed in permits N-1399-17 and '-24:

- The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the CARB and the EPA. [District Rules 1080, 2201, 4305, 4306 and 4320]

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 applicant has proposed to use CEMS for measuring NO<sub>x</sub>, CO and O<sub>2</sub> concentrations. Therefore, this section does not apply.

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 conditions will be listed in permits N-1399-17 and '-24:

- 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 conditions will be listed in permits N-1399-17 and '-24:

- The owner or operator shall maintain all records of required monitoring data and support information for a period of five years from the date of data entry and shall make such records available to the District upon request. [District Rules 1070, 2201, 4305, 4306, and 4320, 40 CFR 60.49b(o)]

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 conditions will be listed in permits N-1399-17 and '-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]
- NO<sub>x</sub> emissions for source test purposes shall be determined using EPA Method 7E or CARB Method 100 on a ppmv 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 will be included in permit N-1399-24:

- Source testing for ammonia slip shall be conducted utilizing BAAQMD Method ST-1B. [District Rule 2201]

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.

N-1399-17-3:

NO<sub>x</sub>, CO and O<sub>2</sub> concentrations will be measured using CEMS. Therefore, no periodic tune-ups are required.

The applicant is not proposing any changes to the existing NO<sub>x</sub> or CO emission factor; therefore, initial testing is not required for these pollutants. Note that applicant had conducted source test on this unit in October 2012 to measure PM<sub>10</sub> emissions. The measured value was 0.0064 lb/MMBtu, which is less than the proposed value of 0.0073 lb/MMBtu, and therefore, PM<sub>10</sub> testing is not required. The following conditions will be listed in permit N-1399-17:

- Source testing to measure NO<sub>x</sub> and CO 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]

N-1399-24-0:

NO<sub>x</sub>, CO and O<sub>2</sub> concentrations will be measured using CEMS. Therefore, no periodic tune-ups are required. The following conditions will be listed in permit N-1399-24:

- 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. [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 proposed new 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*

This new boiler is expected to be operating in compliance with this rule after initial startup. 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 each boiler is greater than 5 MMBtu/hr. Therefore, these units are 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.

N-1399-17

NO<sub>x</sub>: 7.0 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.

N-1399-24

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.

For each boiler, the duration of each startup is 2.0 hour and each shutdown is one hour. Therefore, compliance is expected with this rule.

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:

- The owner or operator shall either obtain fuel receipts (such as a valid purchase contract, tariff sheet, or transportation contract) from the fuel supplier that certify that the gaseous fuel meets definition of natural gas (as defined in 40 CFR 60.41b) and the applicable sulfur limit (i.e., 1.0 gr-S/100 scf), or demonstrate that the combusted gas is provided from a PUC or FERC regulated source, or monitor the sulfur content within 60 days of initial startup and weekly thereafter. If the sulfur content is less than or equal to 1.0 gr/100 dscf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring

demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume until compliance is demonstrated for eight consecutive weeks. [District Rule 4320, 40 CFR 60.45b(j), 60.49b(r)(2)]

- 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. The compliance deadline has long been passed for these units. The recent source testing in June 2011 indicates that these units are operating in compliance with the requirements of this rule.

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:

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

SO<sub>x</sub> emissions from the boilers 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 each 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.

### **Greenhouse Gas (GHG) Significance Determination**

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

On December 17, 2009, the District's Governing Board adopted the District's policy for addressing GHG emission impacts when the District is Lead Agency under CEQA and approved the District's guidance document for use by other agencies when addressing GHG impacts as lead agencies under CEQA. Under this policy, the District's determination of significance of project-specific GHG emissions is founded on the principal that projects with GHG emission reductions consistent with AB 32 emission reduction targets are considered to have a less than significant impact on global climate change.

The California Air Resources Board (ARB) adopted a Cap and Trade regulation as part one of the strategies identified for AB 32. This Cap and Trade regulation is a statewide plan for reducing or mitigating GHG emissions from targeted industries. Facilities subject to the Cap and Trade regulation are subject to an industry-wide cap on overall GHG emissions. Any growth in emissions must be accounted for under that cap such that a corresponding and equivalent reduction in emissions must occur to allow any increase. The District finds that compliance with ARB's Cap and Trade regulation would avoid or substantially lessen the impact of project-specific GHG emissions on global climate change.

Facility N-1399 is subject to the Cap and Trade regulation. The District therefore concludes that the project would have a less than significant individual and cumulative impact on global climate change.

**District CEQA Findings**

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15031 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

**IX. RECOMMENDATION**

Issuance of the ATCs N-1399-17-3 and 24-0 is recommended upon addressing comments from the applicant, CARB, EPA and the public.

**X. BILLING INFORMATION**

Permit #	Fee Schedule	Fee Description	Previous Fee Schedule
N-1399-17-3	3020-02H	260 MMBtu/hr	3020-02H
N-1399-24-0	3020-02H	471 MMBtu/hr	None

**APPENDICES**

- Appendix I: Draft Authority to Construct Permits
- Appendix II: Top-Down BACT Analysis
- Appendix III: Pre-project and Post-project Potential to Emit
- Appendix IV: HAP/Toxic Emission Calculations
- Appendix V: Compliance Certification
- Appendix VI: Risk Management Review and Ambient Air Quality Analysis

**Appendix I**  
**Draft Authority to Construct Permits**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

**ISSUANCE DATE: DRAFT**

**PERMIT NO:** N-1399-17-3

**LEGAL OWNER OR OPERATOR:** LIBERTY PACKING CO - THE MORNING STAR CO  
**MAILING ADDRESS:** 12045 S INGOMAR GRADE RD  
LOS BANOS, CA 93635

**LOCATION:** 12045 S INGOMAR GRADE RD  
LOS BANOS, CA 93635

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF 260 MMBTU/HR NATURAL GAS FIRED NEBRASKA MODEL N2S-8/S-100-ECON BOILER WITH A TODD DRMB ULTRA LOW NOX BURNER AND INDUCED FLUE GAS RECIRCULATION: TO INSTALL A CONTINUOUS EMISSION MONITORING SYSTEM (CEMS) FOR MEASURING NOX, CO AND O2 CONCENTRATION AND REDUCE PM10 EMISSION FACTOR FROM 0.0076 LB/MMBTU TO 0.0074 LB/MMBTU

**CONDITIONS**

1. {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
2. {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
3. The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100]
4. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100]
5. The facility-wide NOx emissions shall not exceed 33,705 pounds during any 12 consecutive month rolling period. [District Rule 2201]

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

**DAVID WARNER, Director of Permit Services**  
N-1399-17-3 - Jun 12 2013 10:56AM - KAHLONJ - Joint Inspection NOT Required



6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
7. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
8. {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]
9. The unit shall only be fired on PUC-quality natural gas with a sulfur content of no greater than 1.0 grains (gr) of sulfur per 100 standard cubic feet (scf) of natural gas. [District Rules 2201 and 4320, 40 CFR 60.42b9k)(1)(2)]
10. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in this unit shall be installed, utilized and maintained. [District Rule 2201, 40 CFR 60.49b(d)(1)]
11. Heat input to this unit shall not exceed 1,059,019 MMBtu during any 12 consecutive month rolling period. [District Rule 2201]
12. During start-up or shutdown, the emissions control system (i.e. FGR system) shall be in operation, and emissions shall be minimized insofar as technologically possible. [District Rules 2201, 4305, 4306 and 4320]
13. The startup duration shall not exceed 2.0 hours per day. [District Rules 2201, 4306 and 4320]
14. The shutdown duration shall not exceed 1.0 hour per day. [District Rules 2201, 4306 and 4320]
15. The total duration of startups and shutdowns shall not exceed 41 hours during any 12 consecutive month rolling period. [District Rule 2201]
16. During startup and shutdown, NOx emissions shall not exceed 30.0 ppmvd @ 3% O2 or 0.036 lb/MMBtu over 1-hour averaging period. Each one-hour period shall commence on the hour. [District Rules 2201, 4305, 4306 and 4320, 40 CFR Part 60.13(h)(1)]
17. During startup and shutdown, CO emissions shall not exceed 200 ppmvd @ 3% O2 or 0.148 lb/MMBtu over 1-hour averaging period. Each one-hour period shall commence on the hour. [District Rules 2201, 4305, 4306 and 4320, 40 CFR Part 60.13(h)(1)]
18. Except during startup and shutdown, NOx emissions shall not exceed 7.0 ppmvd @ 3% O2 or 0.008 lb/MMBtu, referenced as NO2 over 1-hour averaging period. Each one-hour period shall commence on the hour. [District Rules 2201, 4305, 4306 and 4320, 40 CFR Part 60.13(h)(1)]
19. Except during startup and shutdown, CO emissions shall not exceed 50 ppmvd @ 3% O2 or 0.037 lb/MMBtu over 1-hour averaging period. Each one-hour period shall commence on the hour. [District Rules 2201, 4305, 4306 and 4320, 40 CFR Part 60.13(h)(1)]
20. SOx emissions shall not exceed 0.00285 lb/MMBtu. [District Rule 2201]
21. PM10 emissions shall not exceed 0.0074 lb/MMBtu. [District Rule 2201]
22. VOC emissions shall not exceed 10 ppmvd @ 3% O2 or 0.0042 lb/MMBtu, referenced as methane. [District Rule 2201]
23. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [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]
25. Source testing to measure startup and shutdown NOx and CO emissions shall be conducted within 60 days of initial startup under this permit. CEMS relative accuracy for NOx and CO shall be determined during startup and shutdown source testing in accordance with 40 CFR 60, Appendix F (Relative Accuracy Audit). [District Rule 2201]

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CONDITIONS CONTINUE ON NEXT PAGE

26. Source testing to measure NO<sub>x</sub> and CO 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]
27. {4346} 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]
28. {4347} CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320]
29. {4348} 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]
30. {4349} Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320]
31. {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]
32. {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 4306. [District Rules 4305, 4306 and 4320]
33. {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]
34. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
35. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NO<sub>x</sub>, CO and O<sub>2</sub> concentrations. CEMS shall monitor emissions during all types of operation, including during startup and shutdown periods, provided the CEMS passes the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 2201, 4305, 4306 and 4320, 40 CFR 60.48b(1)]
36. The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the CEMS. [40 CFR 60.48b(e)]
37. The CEMS shall be operated and data recorded during all periods of operation except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments. [40 CFR 60.48b(c)]
38. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the CARB and the EPA. [District Rules 1080, 2201, 4305, 4306 and 4320]
39. The NO<sub>x</sub>, CO and O<sub>2</sub> CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B Performance Specification 2 (PS 2) for NO<sub>x</sub>, Appendix B PS 4A for CO, and Appendix B PS 3 for O<sub>2</sub> or shall meet equivalent specifications established by mutual agreement of the District, the CARB, and the EPA. [District Rules 1080, 2201, 4305, 4306 and 4320]
40. In accordance with 40 CFR Part 60, Appendix F, 5.1, NO<sub>x</sub>, CO and O<sub>2</sub> CEMS must be audited at least once each calendar quarter, by conducting cylinder gas audits (CGA) or relative accuracy audits (RAA). CGA or RAA may be conducted three of four calendar quarters, but no more than three calendar quarters in succession. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rules 1080, 2201, 4305, 4306 and 4320]
41. The owner/operator shall perform a RATA for NO<sub>x</sub>, CO and O<sub>2</sub> as specified by 40 CFR Part 60, Appendix F, 5.1.1, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the CEMS equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rules 1080, 2201, 4305, 4306 and 4320]

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42. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rules 1080, 2201, 4305, 4306 and 4320]
43. The CEMS data shall be reduced to hourly averages as specified in 40 CFR 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [District Rules 1080, 2201, 4305, 4306 and 4320]
44. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080]
45. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. [District Rule 1080]
46. Upon notice by the District that the facility's CEMS is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080]
47. The permittee shall maintain the following records for CEMS equipment: (1) Date, time and duration of any malfunction; (2) Date of performance testing; (3) Date of evaluations, calibrations, checks, and adjustments; and (4) Date and time period for which CEMS was inoperative. [District Rule 1080]
48. The owner or operator shall submit the performance test data and the performance evaluation of the CEMS using performance specification 2 (PS 2) for NOx, PS 4A for CO, and PS3 for O2 in 40 CFR Part 60 Appendix B. [40 CFR 60.49b(b)]
49. For 40 CFR Part 60 Subpart Db purpose, NOx emissions shall not exceed 0.1 lb/MMBtu for low heat release units (70,000 Btu/hr-ft<sup>3</sup> of furnace volume or less) and 0.2 lb/MMBtu for high heat release units (greater than 70,000 Btu/hr-ft<sup>3</sup> of furnace volume) on a 30-day rolling average basis. NOx standard shall apply at all times including periods of startup, shutdown, or malfunction. The permittee shall maintain record of the furnace volume, which is defined as the volume bounded by the front furnace wall where the burner is located, the furnace side waterfall, and extending to the level just below or in front of the first row of convection pass tubes. [40 CFR 60.44b(a), 60.44b(h), 60.44b(i)]
50. For the initial compliance test under 40 CFR Part 60 Subpart Db, NOx emissions shall be monitored for 30 successive steam generating unit operating days and the 30-day average emission rate shall be used to determine compliance with the NOx emission standard under 40 CFR 60.44b (0.1 lb/MMBtu for low heat release units (i.e., 70,000 Btu/hr-ft<sup>3</sup> of furnace volume, or less), or 0.2 lb/MMBtu for high heat release units (i.e., greater than 70,000 Btu/hr-ft<sup>3</sup> of furnace volume)). The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period. [40 CFR 60.46b(e)(1)]
51. Following the initial compliance test, the operator shall determine compliance with the NOx standard under 40 CFR 60.44 (0.1 lb/MMBtu for low heat release units (i.e., 70,000 Btu/hr-ft<sup>3</sup> of furnace volume, or less), or 0.2 lb/MMBtu for high heat release units (i.e., greater than 70,000 Btu/hr-ft<sup>3</sup> of furnace volume)) on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NOx emission data for the preceding 30 steam generating unit operating days. [40 CFR 60.46b(e)(3)]
52. The 1-hour average NOx emission rates measured by the continuous NOx monitor shall be expressed in lb/MMBtu heat input and shall be used to calculate the average emission rates under 40 CFR 60.44b (0.1 lb/MMBtu for low heat release units (i.e., 70,000 Btu/hr-ft<sup>3</sup> of furnace volume, or less), or 0.2 lb/MMBtu for high heat release units (i.e., greater than 70,000 Btu/hr-ft<sup>3</sup> of furnace volume)). The 1-hour averages shall be calculated using the data points required under 40 CFR 60.13(h)(2). [40 CFR 60.48b(d)]
53. When NOx data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data shall be obtained by using standby monitoring systems, Method 7 of Appendix A of Part 60, Method 7A of Appendix A of Part 60, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days. [40 CFR 60.48b(d)]

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54. The owner or operator shall maintain records of the amount of fuel combusted during each day in this unit. [District Rule 2201 and 40 CFR 60.49b(d)(1)]
55. The owner or operator shall maintain records of the annual capacity factor on a monthly basis. The annual capacity factor shall be determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month. [40 CFR 60.49b(d)(1)]
56. The owner or operator shall either obtain fuel receipts (such as a valid purchase contract, tariff sheet, or transportation contract) from the fuel supplier that certify that the gaseous fuel meets definition of natural gas (as defined in 40 CFR 60.41b) and the applicable sulfur limit (i.e., 1.0 gr-S/100 scf), or demonstrate that the combusted gas is provided from a PUC or FERC regulated source, or monitor the sulfur content within 60 days of initial startup and weekly thereafter. If the sulfur content is less than or equal to 1.0 gr/100 dscf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume until compliance is demonstrated for eight consecutive weeks. [District Rule 4320, 40 CFR 60.45b(j), 60.49b(r)(2)]
57. The owner or operator shall maintain records and submit a written report each calendar quarter to the District containing the following information for each steam generating unit operating day: (1) Calendar date; (2) The average hourly NOx and CO emission rates (expressed as NO2) (ppmvd @ 3% O2 and lb/MMBtu heat input) measured or predicted; (3) The 30-day average NOx emission rates (lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days; (4) Identification of the steam generating unit operating days when the calculated 30-day average NOx emission rates are in excess of the NOx emissions standards under 40 CFR 60.44b (0.1 lb/MMBtu for low heat release units (i.e., 70,000 Btu/hr-ft<sup>3</sup> of furnace volume, or less), or 0.2 lb/MMBtu for high heat release units (i.e., greater than 70,000 Btu/hr-ft<sup>3</sup> of furnace volume)), with the reasons for such excess emissions as well as a description of corrective actions taken; (5) Identification of the steam generating unit operating days when the average hourly NOx and CO emission rates are in excess of the NOx and CO limits (startup, shutdown and steady state) in this permit, with the reason for such excess emissions as well as a description of corrective actions taken; (6) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken; (7) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data; (8) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted; (9) Identification of the times when the pollutant concentration exceeded full span of the CEMS; (10) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3 or 4A; (11) Results of daily CEMS drift tests and quarterly accuracy assessments as required under Appendix F, Procedure 1 of Part 60; and (11) A negative declaration when no excess emissions occurred. The report is due on the 30th day following the end of the calendar quarter. [District Rules 1080, 2201, 4305, 4306 and 4320, 40 CFR 60.49b(g), 40 CFR 60.49b(i), and 40 CFR 60.49b(w)]
58. The owner or operator of an affected facility may submit electronic quarterly reports in lieu of submitting the written reports. The format of each quarterly electronic report shall be coordinated with the District. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of this permit was achieved during the reporting period. Before submitting reports in the electronic format, the owner or operator shall coordinate with the District to obtain their agreement to submit reports in this alternative format. [District Rule 1080 and 40 CFR 60.49b(v)]
59. The owner or operator shall keep records of the date, duration of each startup (hours), and duration of each shutdown (hours). [District Rule 2201]
60. The owner or operator shall keep records of the total duration of startups and shutdowns (hours) on a rolling 12 consecutive month total basis, and shall be updated at least monthly. [District Rule 2201]
61. The owner or operator shall keep record of the facility-wide NOx emissions (in pounds). The record shall be on a rolling 12 consecutive month total basis and shall be updated at least weekly. [District Rule 2201]
62. The owner or operator shall keep record of the annual heat input to this unit (in MMBtu). The record shall be kept on a rolling 12 consecutive month total basis and shall be updated at least weekly. [District Rule 2201]

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63. The owner or operator shall maintain all records of required monitoring data and support information for a period of five years from the date of data entry and shall make such records available to the District upon request. [District Rules 1070, 2201, 4305, 4306, and 4320, 40 CFR 60.49b(o)]

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San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT

PERMIT NO: N-1399-24-0

LEGAL OWNER OR OPERATOR: LIBERTY PACKING CO - THE MORNING STAR CO  
MAILING ADDRESS: 12045 S INGOMAR GRADE RD  
LOS BANOS, CA 93635

LOCATION: 12045 S INGOMAR GRADE RD  
LOS BANOS, CA 93635

**EQUIPMENT DESCRIPTION:**

471 MMBTU/HR CLEAVER BROOKS MODEL NB-ED-110 BOILER EQUIPPED WITH A COEN MODEL VARIFLAME LOW NOX BURNER INDUCED FLUE GAS RECIRCULATION SERVED BY A CADASTACK (OR OTHER MANUFACTURER) SELECTIVE CATALYTIC REDUCTION (SCR) SYSTEM

**CONDITIONS**

1. {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
2. {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
3. The owner or operator shall notify the District of any breakdown condition as soon as reasonably possible, but no later than one hour after its detection, unless the owner or operator demonstrates to the District's satisfaction that the longer reporting period was necessary. [District Rule 1100]
4. The District shall be notified in writing within ten days following the correction of any breakdown condition. The breakdown notification shall include a description of the equipment malfunction or failure, the date and cause of the initial failure, the estimated emissions in excess of those allowed, and the methods utilized to restore normal operations. [District Rule 1100]
5. The facility-wide NOx emissions shall not exceed 33,705 pounds during any 12 consecutive month rolling period. [District Rule 2201]
6. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

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**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

DAVID WARNER, Director of Permit Services  
N-1399-24-0: Jun 12 2013 10:56AM - KAHLOHJ : Joint Inspection NOT Required

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7. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
8. {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]
9. The unit shall only be fired on PUC-quality natural gas with a sulfur content of no greater than 1.0 grains (gr) of sulfur per 100 standard cubic feet (scf) of natural gas. [District Rules 2201 and 4320, 40 CFR 60.42b9k)(1)(2)]
10. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in this unit shall be installed, utilized and maintained. [District Rule 2201, 40 CFR 60.49b(d)(1)]
11. Heat input to this unit shall not exceed 1,271,700 MMBtu during any 12 consecutive month rolling period. [District Rule 2201]
12. 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]
13. The startup duration shall not exceed 4.0 hours per day. [District Rules 2201, 4306 and 4320]
14. The shutdown duration shall not exceed 1.0 hour per day. [District Rules 2201, 4306 and 4320]
15. The total duration of startups and shutdowns shall not exceed 41 hours during any 12 consecutive month rolling period. [District Rule 2201]
16. During startup and shutdown, NOx emissions shall not exceed 30.0 ppmvd @ 3% O2 or 0.036 lb/MMBtu over 1-hour averaging period. Each one-hour period shall commence on the hour. [District Rules 2201, 4305, 4306 and 4320, 40 CFR Part 60.13(h)(1)]
17. During startup and shutdown, CO emissions shall not exceed 200 ppmvd @ 3% O2 or 0.148 lb/MMBtu over 1-hour averaging period. Each one-hour period shall commence on the hour. [District Rules 2201, 4305, 4306 and 4320, 40 CFR Part 60.13(h)(1)]
18. Except during startup and shutdown, NOx emissions shall not exceed 5.0 ppmvd @ 3% O2 or 0.0062 lb/MMBtu, referenced as NO2 over 1-hour averaging period. Each one-hour period shall commence on the hour. [District Rules 2201, 4305, 4306 and 4320, 40 CFR Part 60.13(h)(1)]
19. Except during startup and shutdown, CO emissions shall not exceed 50 ppmvd @ 3% O2 or 0.037 lb/MMBtu over 1-hour averaging period. Each one-hour period shall commence on the hour. [District Rules 2201, 4305, 4306 and 4320, 40 CFR Part 60.13(h)(1)]
20. SOx emissions shall not exceed 0.00285 lb/MMBtu. [District Rule 2201]
21. PM10 emissions shall not exceed 0.003 lb/MMBtu. [District Rule 2201]
22. VOC emissions shall not exceed 5 ppmvd @ 3% O2 or 0.002 lb/MMBtu, referenced as methane. [District Rule 2201]
23. NH3 emissions shall not exceed 10 ppmvd @ 3% O2. [District Rule 2201]
24. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Emission Monitoring and Testing. [District Rule 1081]
25. 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]
26. Source testing to measure startup and shutdown NOx and CO emissions shall be conducted within 60 days of initial startup under this permit. CEMS relative accuracy for NOx and CO shall be determined during startup and shutdown source testing in accordance with 40 CFR 60, Appendix F (Relative Accuracy Audit). [District Rule 2201]
27. Source testing to measure steady state NOx, CO, PM10, VOC and NH3 emissions shall be conducted within 60-days of the initial startup. [District Rules 2201, 4305, 4306 and 4320]

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28. 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]
29. {4346} 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]
30. {4347} CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320]
31. {4348} 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]
32. {4349} Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320]
33. Source testing for ammonia slip shall be conducted utilizing BAAQMD Method ST-1B. [District Rule 2201]
34. {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]
35. {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 4306. [District Rules 4305, 4306 and 4320]
36. {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]
37. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]
38. The owner or operator shall install, certify, maintain, operate and quality-assure a Continuous Emission Monitoring System (CEMS) which continuously measures and records the exhaust gas NO<sub>x</sub>, CO and O<sub>2</sub> concentrations. CEMS shall monitor emissions during all types of operation, including during startup and shutdown periods, provided the CEMS passes the relative accuracy requirement for startups and shutdowns specified herein. If relative accuracy of CEMS cannot be demonstrated during startup conditions, CEMS results during startup and shutdown events shall be replaced with startup emission rates obtained from source testing to determine compliance with emission limits contained in this document. [District Rules 1080, 2201, 4305, 4306 and 4320, 40 CFR 60.48b(1)]
39. The owner or operator shall monitor and record the stack concentration of NH<sub>3</sub> at least once during each month in which source testing is not performed. NH<sub>3</sub> monitoring shall be conducted utilizing Draeger tubes or a District approved equivalent method. Monitoring shall not be required if 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(s) unless it has been performed within the last month. [District Rule 2201]
40. The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the CEMS. [40 CFR 60.48b(e)]
41. The CEMS shall be operated and data recorded during all periods of operation except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments. [40 CFR 60.48b(c)]
42. The CEMS shall complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each 15-minute quadrant of the hour or shall meet equivalent specifications established by mutual agreement of the District, the CARB and the EPA. [District Rules 1080, 2201, 4305, 4306 and 4320]
43. The NO<sub>x</sub>, CO and O<sub>2</sub> CEMS shall meet the requirements in 40 CFR 60, Appendix F Procedure 1 and Part 60, Appendix B Performance Specification 2 (PS 2) for NO<sub>x</sub>, Appendix B PS 4A for CO, and Appendix B PS 3 for O<sub>2</sub> or shall meet equivalent specifications established by mutual agreement of the District, the CARB, and the EPA. [District Rules 1080, 2201, 4305, 4306 and 4320]

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44. In accordance with 40 CFR Part 60, Appendix F, 5.1, NO<sub>x</sub>, CO and O<sub>2</sub> CEMS must be audited at least once each calendar quarter, by conducting cylinder gas audits (CGA) or relative accuracy audits (RAA). CGA or RAA may be conducted three of four calendar quarters, but no more than three calendar quarters in succession. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rules 1080, 2201, 4305, 4306 and 4320]
45. The owner/operator shall perform a RATA for NO<sub>x</sub>, CO and O<sub>2</sub> as specified by 40 CFR Part 60, Appendix F, 5.1.1, at least once every four calendar quarters. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the CEMS equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rules 1080, 2201, 4305, 4306 and 4320]
46. APCO or an authorized representative shall be allowed to inspect, as determined to be necessary, the required monitoring devices to ensure that such devices are functioning properly. [District Rules 1080, 2201, 4305, 4306 and 4320]
47. The CEMS data shall be reduced to hourly averages as specified in 40 CFR 60.13(h), or by other methods deemed equivalent by mutual agreement with the District, the CARB, and the EPA. [District Rules 1080, 2201, 4305, 4306 and 4320]
48. Upon written notice from the District, the owner or operator shall provide a summary of the data obtained from the CEMS. This summary shall be in the form and the manner prescribed by the District. [District Rule 1080]
49. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEMS data polling software system and shall make CEMS data available to the District's automated polling system on a daily basis. [District Rule 1080]
50. Upon notice by the District that the facility's CEMS is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEMS data is sent to the District by a District-approved alternative method. [District Rule 1080]
51. The permittee shall maintain the following records for CEMS equipment: (1) Date, time and duration of any malfunction; (2) Date of performance testing; (3) Date of evaluations, calibrations, checks, and adjustments; and (4) Date and time period for which CEMS was inoperative. [District Rule 1080]
52. The owner or operator shall submit the performance test data and the performance evaluation of the CEMS using performance specification 2 (PS 2) for NO<sub>x</sub>, PS 4A for CO, and PS3 for O<sub>2</sub> in 40 CFR Part 60 Appendix B. [40 CFR 60.49b(b)]
53. For 40 CFR Part 60 Subpart Db purpose, NO<sub>x</sub> emissions shall not exceed 0.1 lb/MMBtu for low heat release units (70,000 Btu/hr-ft<sup>3</sup> of furnace volume or less) and 0.2 lb/MMBtu for high heat release units (greater than 70,000 Btu/hr-ft<sup>3</sup> of furnace volume) on a 30-day rolling average basis. NO<sub>x</sub> standard shall apply at all times including periods of startup, shutdown, or malfunction. The permittee shall maintain record of the furnace volume, which is defined as the volume bounded by the front furnace wall where the burner is located, the furnace side waterfall, and extending to the level just below or in front of the first row of convection pass tubes. [40 CFR 60.44b(a), 60.44b(h), 60.44b(i)]
54. For the initial compliance test under 40 CFR Part 60 Subpart Db, NO<sub>x</sub> emissions shall be monitored for 30 successive steam generating unit operating days and the 30-day average emission rate shall be used to determine compliance with the NO<sub>x</sub> emission standard under 40 CFR 60.44b (0.1 lb/MMBtu for low heat release units (i.e., 70,000 Btu/hr-ft<sup>3</sup> of furnace volume, or less), or 0.2 lb/MMBtu for high heat release units (i.e., greater than 70,000 Btu/hr-ft<sup>3</sup> of furnace volume)). The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period. [40 CFR 60.46b(e)(1)]
55. Following the initial compliance test, the operator shall determine compliance with the NO<sub>x</sub> standard under 40 CFR 60.44 (0.1 lb/MMBtu for low heat release units (i.e., 70,000 Btu/hr-ft<sup>3</sup> of furnace volume, or less), or 0.2 lb/MMBtu for high heat release units (i.e., greater than 70,000 Btu/hr-ft<sup>3</sup> of furnace volume)) on a continuous basis through the use of a 30-day rolling average emission rate. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NO<sub>x</sub> emission data for the preceding 30 steam generating unit operating days. [40 CFR 60.46b(e)(3)]

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56. The 1-hour average NOx emission rates measured by the continuous NOx monitor shall be expressed in lb/MMBtu heat input and shall be used to calculate the average emission rates under 40 CFR 60.44b (0.1 lb/MMBtu for low heat release units (i.e., 70,000 Btu/hr-ft<sup>3</sup> of furnace volume, or less), or 0.2 lb/MMBtu for high heat release units (i.e., greater than 70,000 Btu/hr-ft<sup>3</sup> of furnace volume)). The 1-hour averages shall be calculated using the data points required under 40 CFR 60.13(h)(2). [40 CFR 60.48b(d)]
57. When NOx data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data shall be obtained by using standby monitoring systems, Method 7 of Appendix A of Part 60, Method 7A of Appendix A of Part 60, or other approved reference methods to provide emission data for a minimum of 75 percent of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days. [40 CFR 60.48b(f)]
58. The owner or operator shall maintain records of the amount of fuel combusted during each day in this unit. [District Rule 2201 and 40 CFR 60.49b(d)(1)]
59. The owner or operator shall maintain records of the annual capacity factor on a monthly basis. The annual capacity factor shall be determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month. [40 CFR 60.49b(d)(1)]
60. The owner or operator shall either obtain fuel receipts (such as a valid purchase contract, tariff sheet, or transportation contract) from the fuel supplier that certify that the gaseous fuel meets definition of natural gas (as defined in 40 CFR 60.41b) and the applicable sulfur limit (i.e., 1.0 gr-S/100 scf), or demonstrate that the combusted gas is provided from a PUC or FERC regulated source, or monitor the sulfur content within 60 days of initial startup and weekly thereafter. If the sulfur content is less than or equal to 1.0 gr/100 dscf for eight consecutive weeks, then the monitoring frequency shall be every six months. If the result of any six month monitoring demonstrates that the fuel does not meet the fuel sulfur content limit, weekly monitoring shall resume until compliance is demonstrated for eight consecutive weeks. [District Rule 4320, 40 CFR 60.45b(j), 60.49b(r)(2)]
61. The owner or operator shall maintain records and submit a written report each calendar quarter to the District containing the following information for each steam generating unit operating day: (1) Calendar date; (2) The average hourly NOx and CO emission rates (expressed as NO<sub>2</sub>) (ppmvd @ 3% O<sub>2</sub> and lb/MMBtu heat input) measured or predicted; (3) The 30-day average NOx emission rates (lb/MMBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly nitrogen oxide emission rates for the preceding 30 steam generating unit operating days; (4) Identification of the steam generating unit operating days when the calculated 30-day average NOx emission rates are in excess of the NOx emissions standards under 40 CFR 60.44b (0.1 lb/MMBtu for low heat release units (i.e., 70,000 Btu/hr-ft<sup>3</sup> of furnace volume, or less), or 0.2 lb/MMBtu for high heat release units (i.e., greater than 70,000 Btu/hr-ft<sup>3</sup> of furnace volume)), with the reasons for such excess emissions as well as a description of corrective actions taken; (5) Identification of the steam generating unit operating days when the average hourly NOx and CO emission rates are in excess of the NOx and CO limits (startup, shutdown and steady state) in this permit, with the reason for such excess emissions as well as a description of corrective actions taken; (6) Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken; (7) Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data; (8) Identification of "F" factor used for calculations, method of determination, and type of fuel combusted; (9) Identification of the times when the pollutant concentration exceeded full span of the CEMS; (10) Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3 or 4A; (11) Results of daily CEMS drift tests and quarterly accuracy assessments as required under Appendix F, Procedure 1 of Part 60; and (11) A negative declaration when no excess emissions occurred. The report is due on the 30th day following the end of the calendar quarter. [District Rules 1080, 2201, 4305, 4306 and 4320, 40 CFR 60.49b(g), 40 CFR 60.49b(i), and 40 CFR 60.49b(w)]
62. The owner or operator of an affected facility may submit electronic quarterly reports in lieu of submitting the written reports. The format of each quarterly electronic report shall be coordinated with the District. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the owner or operator, indicating whether compliance with the applicable emission standards and minimum data requirements of this permit was achieved during the reporting period. Before submitting reports in the electronic format, the owner or operator shall coordinate with the District to obtain their agreement to submit reports in this alternative format. [District Rule 1080 and 40 CFR 60.49b(v)]

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63. The owner or operator shall keep records of the date and time, measured NH<sub>3</sub> concentration, O<sub>2</sub> concentration in percent, and NH<sub>3</sub> concentration corrected to 3% O<sub>2</sub>. [District Rule 2201]
64. The owner or operator shall keep records of the date, duration of each startup (hours), and duration of each shutdown (hours). [District Rule 2201]
65. The owner or operator shall keep records of the total duration of startups and shutdowns (hours) on a rolling 12 consecutive month total basis, and shall be updated at least monthly. [District Rule 2201]
66. The owner or operator shall keep record of the facility-wide NO<sub>x</sub> emissions (in pounds). The record shall be on a rolling 12 consecutive month total basis and shall be updated at least weekly. [District Rule 2201]
67. The owner or operator shall keep record of the annual heat input to this unit (in MMBtu). The record shall be kept on a rolling 12 consecutive month total basis and shall be updated at least weekly. [District Rule 2201]
68. The owner or operator shall maintain all records of required monitoring data and support information for a period of five years from the date of data entry and shall make such records available to the District upon request. [District Rules 1070, 2201, 4305, 4306, and 4320, 40 CFR 60.49b(o)]

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Appendix II  
Top-Down BACT Analysis

## Top-Down BACT Analysis for NO<sub>x</sub> for N-1399-24-0

### **Step 1: Identify All Possible Control Technologies**

The District considers the following NO<sub>x</sub> emissions limits:

Achieved-in-Practice:

7.0 ppmvd @ 3% O<sub>2</sub> (0.008 lb/MMBtu)

Technologically Feasible:

5.0 ppmvd @ 3% O<sub>2</sub> (0.0062 lb/MMBtu)

Alternate Basic Equipment:

None

### **Step 2: Eliminate Technologically Infeasible Options**

All control options listed in step 1 are technologically feasible.

### **Step 3: Rank Remaining Control Technologies by Control Effectiveness**

1. 5.0 ppmvd @ 3% O<sub>2</sub> (0.0062 lb/MMBtu) - Technologically Feasible
2. 7.0 ppmvd @ 3% O<sub>2</sub> (0.011 lb/MMBtu) - Achieved-in-Practice

### **Step 4: Cost Effectiveness Analysis**

Option 1: 5.0 ppmvd @ 3% O<sub>2</sub> (0.0062 lb/MMBtu)

The applicant has proposed to emit 5.0 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> or less from the new boiler; therefore, cost effectiveness analysis is not required.

### **Step 5: Select BACT**

BACT requirement is to achieve 7.0 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> (or less) concentrations. However, the applicant has proposed to achieve 5.0 ppmvd NO<sub>x</sub> @ 3% O<sub>2</sub> (or less).

## Top-Down BACT Analysis for SO<sub>x</sub>, PM<sub>10</sub> and VOC for N-1399-24-0

### **Step 1: Identify All Possible Control Technologies**

The following techniques are considered to reduce SO<sub>x</sub>, PM<sub>10</sub> or VOC emissions.

Achieved-in-Practice:

Use natural gas, or LPG fuel

Technologically Feasible:

None

Alternate Basic Equipment:

None

### **Step 2: Eliminate Technologically Infeasible Options**

All control options listed in step 1 are technologically feasible.

### **Step 3: Rank Remaining Control Technologies by Control Effectiveness**

1. use of natural gas or LPG fuel

### **Step 4: Cost Effectiveness Analysis**

There is no technologically feasible option in Step 3. Therefore, cost-effectiveness analysis is not required.

### **Step 5: Select BACT**

BACT requirement is to use natural gas or LPG fuels to reduce SO<sub>x</sub>, PM<sub>10</sub> and VOC emissions.

**Appendix III**  
**Pre-project and Post-project Potential to Emit**

Pre-Project Potential to Emit Calculations

Permit #	Description	Heat Input			Process rate			Rating	Steady state			EF1 (lb/MMBtu, steady state for natural gas combustion, g/bhp-hr for IC engines, lb/lb-material for smoke chamber) <sup>(8)</sup>					EF1 (lb/MMBtu for natural gas combustion, and smoke chamber, g/bhp-hr for IC engines) <sup>(12)</sup>	PE1 (lb/day) <sup>(9)</sup>					PE1 (lb/yr) <sup>(10)</sup>				
		MMBtu/hr <sup>(1)</sup>	MMBtu/yr <sup>(2)</sup>	MMBtu/ton <sup>(1)</sup>	lb/hr <sup>(4)</sup>	lb/day <sup>(5)</sup>	lb/yr		bhp <sup>(6)</sup>	hr/day	hr/yr <sup>(7)</sup>	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC		GHG	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO
N-1399-4-1	220 MMBtu/hr natural gas-fired Nebraska boiler	220	1056019					24			0.008	0.00285	0.0076	0.018	0.004	116.6	42.2	15.0	40.1	95.0	22.2	8,448	3,010	8,026	19,008	4,435	61,566
N-1399-5-1	220 MMBtu/hr natural gas-fired Nebraska boiler	220						24			0.008	0.00285	0.0076	0.018	0.004	116.6	42.2	15.0	40.1	95.0	22.2						
N-1399-11-0	94 bhp John Deere diesel-fueled fire pump engine						94	24	100	6.1	0.0051	0.04	0.2	0.29	535.2	30.3	0.0	0.2	1.0	1.4	126	0	1	4	6	6	
N-1399-13-1	180 MMBtu/hr natural gas-fired Nebraska boiler	180						24	8760	0.008	0.00285	0.0076	0.022	0.004	116.6	34.6	12.3	32.8	95.0	18.1	12,614	4,494	11,984	34,690	6,623	91,927	
N-1399-16-1	Natural gas-fired tomato roasting	10						24	2160	0.036	0.00285	0.0076	0.369	0.006	116.6	8.7	0.7	1.8	88.6	1.3	786	62	164	7,970	119	1,259	
	Smoke chamber smoking operation (wood chips)		7.6	10	240				2160			0.0063		0.008	208.5	0.0	0.0	1.5	0.0	2.0	0	0	135	0	180	9	
N-1399-17-1 <sup>(13)</sup>	260 MMBtu/hr natural gas-fired Nebraska boiler	260	1059019													71.8	17.8	47.4	317.4	26.2	8,771	3,018	8,049	40,367	4,448	61,741	
N-1399-20-1	36 MMBtu/hr natural gas-fired Nebraska boiler	36						24	8760	0.008	0.00285	0.0076	0.037	0.004	116.6	6.9	2.5	6.6	32.0	3.6	2,523	899	2,397	11,668	1,325	18,385	
N-1399-21-0	389 bhp diesel-fueled emergency IC engine						389	24	50	2.37	0.0051	0.097	0.45	0.17	535.2	48.8	0.1	2.0	9.3	3.5	102	0	4	19	7	11	
TOTAL																					33,705 <sup>(11)</sup>	11,482	30,759	113,727	17,143	234,905	

Notes:

- 1, 2, 5, 6, 8 Information taken from the existing permits
- 3 Heating value of wood with 45% moisture
- 4 Process rate calculated assuming 24 hr/day of operation
- 7 Except for full time operational hours (8,760 hr/yr), the other numbers are taken from the existing permits
- 9 PE1 (lb/day) = EF1 (lb/MMBtu) x Heat input rate (MMBtu/hr) x 24 (hr/day) for natural gas combustion units (except unit N-1399-17, see section VII.C.2 for PE1 from N-1399-17); PE1 (lb/day) = EF1 (g/bhp-hr) x Engine rating (bhp) x 24 hr/day x lb/453.6 g for IC engines.
- 9 PE1 (lb/day) = EF1 (lb/lb-material) x process rate (lb-material/day) for smoke chamber
- 10 PE1 (lb/yr) = EF1 (lb/MMBtu) x Heat input rate (MMBtu/yr) for boilers N-1399-4 and 5; Refer to section VII.C.2 for PE1 (lb/yr) for boiler N-1399-17; PE1 (lb/yr) = EF1 (lb/MMBtu) x Heat input rate (MMBtu/hr) x Hours of operation (hr/yr) for N-1399-13, 16 and 20; PE1 (lb/yr) = EF1 (g/bhp-hr) x Engine rating (bhp) x Hours of operation (hr/yr) x lb/453.6 g for IC engines; PE1 (lb/yr) = EF1 (lb/lb-material) x process rate (lb-material/hr) x Hour of operation (hr/yr) for smoke chamber
- 11 Facility-wide NOx limit
- 12 EF estimated using ARB's GHG worksheet (March 2010); GHG for smoke chamber are assumed to be same as GHG from biomass
- 13 PE are taken from section VII.C.2 of the application review (this document)



## Post-Project Potential Emissions

### SOx Emissions

The following steps were followed to determine the maximum SOx emissions under facility-wide NOx SLC after the proposed modification.

1. Calculate SOx/NOx ratio such that emissions from the units with high SOx/NOx ratio should be counted first, in other words, this step is to line-up the units based on SOx/NOx ratio in a descending order to be used for Step 2.

Permit	Description	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC	SO <sub>x</sub> /NO <sub>x</sub>
N-1399-4-1 and '5-1	220 MMBtu/hr boilers	8,448	3,010	8,026	19,008	4,435	0.36
N-1399-11-0	94 bhp diesel IC engine	126	0	1	4	6	0.00
N-1399-13-1	180 MMBtu/hr boiler	12,614	4,494	11,984	34,690	6,623	0.36
N-1399-16-1	10 MMBtu/hr tomato roaster and	786	62	299	7,970	299	0.08
N-1399-17-3	260 MMBtu/hr boiler	8,771	3,018	7,837	40,367	4,448	0.34
N-1399-20-1	36 MMBtu/hr boiler	2,523	899	2,397	11,668	1,325	0.36
N-1399-21-0	389 bhp diesel IC engine	102	0	4	19	7	0.00
N-1399-24-0	471 MMBtu/hr boiler	8,460	3,624	3,815	49,196	2,543	0.43

2. Calculate the total NOx by adding potential emissions of individual units (lined-up based on SOx/NOx ratio in Step 1) without exceeding the facility-wide limit.

Unit	PE (lb/yr)
N-1399-24-0	8,460
N-1399-20-1	2,523
N-1399-13-1	12,614
N-1399-4-1 and '5-1	8,448
Total:	32,045

3. Determine the difference between NOx SLC and Total NOx in Step 2

$$33,705 \text{ lb/yr} - 32,045 \text{ lb/yr} = 1,660 \text{ lb/yr}$$

4. Calculate operational hours for a unit (next in line according to the SOx/NOx ratio in Step 1) by dividing the value in Step 3 (lb-NOx/yr) with the hourly NOx emissions (lb-NOx/hr).

$$(1,660 \text{ lb-NOx/yr}) \div (0.008 \text{ lb-NOx/MMBtu} \times 260 \text{ MMBtu/hr for unit N-1399-17-3}) = 798 \text{ hr/yr}$$

5. Calculate the total SOx emissions by adding the individual SOx potential emissions from the unit(s) including the potential SOx emissions from the unit in Step 4 calculated using EF (lb/MMBtu), operational hours (hr/yr), and the heat input rate to the unit (MMBtu/hr).

Unit	EF (lb/MMBtu)	PE (lb/yr)
N-1399-24-0	--	3,624
N-1399-20-1	--	899
N-1399-13-1	--	4,494
N-1399-4-1 and '5-1	--	3,010
N-1399-17-3	0.00285	591
PE		<b>12,618</b>

The maximum SOx emissions from this facility after meeting the maximum NOx limit would be **12,618 lb/yr**.

**PM<sub>10</sub> Emissions**

The following steps were followed to determine the maximum PM<sub>10</sub> emissions under facility-wide NOx SLC after the proposed modification.

1. Calculate PM<sub>10</sub>/NOx ratio such that emissions from the units with high PM<sub>10</sub>/NOx ratio should be counted first, in other words, this step is to line-up the units based on PM<sub>10</sub>/NOx ratio in a descending order to be used for Step 2.

Permit	Description	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC	PM <sub>10</sub> /NO <sub>x</sub>
N-1399-4-1 and '5-1	220 MMBtu/hr boilers	8,448	3,010	8,026	19,008	4,435	0.95
N-1399-11-0	94 bhp diesel IC engine	126	0	1	4	6	0.01
N-1399-13-1	180 MMBtu/hr boiler	12,614	4,494	11,984	34,690	6,623	0.95
N-1399-16-1	10 MMBtu/hr tomato roaster and	786	62	299	7,970	299	0.38
N-1399-17-3	260 MMBtu/hr boiler	8,771	3,018	7,837	40,367	4,448	0.89
N-1399-20-1	36 MMBtu/hr boiler	2,523	899	2,397	11,668	1,325	0.95
N-1399-21-0	389 bhp diesel IC engine	102	0	4	19	7	0.04
N-1399-24-0	471 MMBtu/hr boiler	8,460	3,624	3,815	49,196	2,543	0.45

2. Calculate the total NOx by adding potential emissions of the units lined-up based on PM<sub>10</sub>/NOx ratio in Step 1 without exceeding the facility-wide limit.

Unit	PE (lb/yr)
N-1399-4-1 and '5-1	8,448
N-1399-13-1	12,614
N-1399-20-1	2,523
N-1399-17-3	8,771
Total:	32,356

3. Determine the difference between NOx SLC and Total NOx in Step 2

$$33,705 \text{ lb/yr} - 32,356 \text{ lb/yr} = 1,349 \text{ lb/yr}$$

4. Calculate operational hours for a unit (next in line according to the PM<sub>10</sub>/NOx ratio in Step 1) by dividing the value in Step 3 (lb-NOx/yr) with the hourly NOx emissions (lb-NOx/hr).

$$(1,349 \text{ lb-NOx/yr}) \div (0.0062 \text{ lb-NOx/MMBtu} \times 471 \text{ MMBtu/hr for unit N-1399-24-0}) = 462 \text{ hr/yr}$$

5. Calculate the total PM<sub>10</sub> emissions by adding the individual PM<sub>10</sub> potential emissions from the unit(s) including the potential PM<sub>10</sub> emissions from the unit in Step 4 calculated using EF (lb/MMBtu), operational hours (hr/yr), and the heat input rate to the unit (MMBtu/hr).

Unit	EF (lb/MMBtu)	PE (lb/yr)
N-1399-4-1 and '5-1	--	8,026
N-1399-13-1	--	11,984
N-1399-20-1	--	2,397
N-1399-17-3	--	7,837
N-1399-24-0	0.003	653
PE		<b>30,897</b>

The maximum PM<sub>10</sub> emissions from this facility after meeting the maximum NOx limit would be **30,897 lb/yr**.

## CO Emissions

The following steps were followed to determine the maximum CO emissions under facility-wide NOx SLC after the proposed modification.

1. Calculate CO/NOx ratio such that emissions from the units with high CO/NOx ratio should be counted first, in other words, this step is to line-up the units based on CO/NOx ratio in a descending order to be used for Step 2.

Permit	Description	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC	CO/NO <sub>x</sub>
N-1399-4-1 and '5-1	220 MMBtu/hr boilers	8,448	3,010	8,026	19,008	4,435	2.25
N-1399-11-0	94 bhp diesel IC engine	126	0	1	4	6	0.03
N-1399-13-1	180 MMBtu/hr boiler	12,614	4,494	11,984	34,690	6,623	2.75
N-1399-16-1	10 MMBtu/hr tomato roaster and	786	62	299	7,970	299	10.14
N-1399-17-3	260 MMBtu/hr boiler	8,771	3,018	7,837	40,367	4,448	4.60
N-1399-20-1	36 MMBtu/hr boiler	2,523	899	2,397	11,668	1,325	4.62
N-1399-21-0	389 bhp diesel IC engine	102	0	4	19	7	0.19
N-1399-24-0	471 MMBtu/hr boiler	8,460	3,624	3,815	49,196	2,543	5.82

2. Calculate the total NOx by adding potential emissions of the units lined-up based on CO/NOx ratio in Step 1 without exceeding the facility-wide limit.

Unit	PE (lb/yr)
N-1399-16-1	786
N-1399-24-0	8,460
N-1399-20-1	2,523
N-1399-17-3	8,771
N-1399-13-1	12,614
Total:	33,154

3. Determine the difference between NOx SLC and Total NOx in Step 2

$$33,705 \text{ lb/yr} - 33,154 \text{ lb/yr} = 551 \text{ lb/yr}$$

4. Calculate operational hours for a unit (next in line according to the CO/NOx ratio in Step 1) by dividing the value in Step 3 (lb-NOx/yr) with the hourly NOx emissions (lb-NOx/hr).

$$(551 \text{ lb-NOx/yr}) \div (0.008 \text{ lb-NOx/MMBtu} \times 220 \text{ MMBtu/hr for unit N-1399-4-1 or 5-1}) = 313 \text{ hr/yr}$$

5. Calculate the total CO emissions by adding the individual CO potential emissions from the unit(s) including the potential CO emissions from the unit in Step 4 calculated using EF (lb/MMBtu), operational hours (hr/yr), and the heat input rate to the unit (MMBtu/hr).

Unit	EF (lb/MMBtu)	PE (lb/yr)
N-1399-16-1	--	7,970
N-1399-24-0	--	49,196
N-1399-20-1	--	11,668
N-1399-17-3	--	40,367
N-1399-13-1	--	34,690
N-1399-4-1 and '5-1	0.018	1,239
PE		<b>145,130</b>

The maximum CO emissions from this facility after meeting the maximum NOx limit would be **145,130 lb/yr**.

## VOC Emissions

The following steps were followed to determine the maximum VOC emissions under facility-wide NOx SLC after the proposed modification.

1. Calculate VOC/NOx ratio such that emissions from the units with high VOC/NOx ratio should be counted first, in other words, this step is to line-up the units based on VOC/NOx ratio in a descending order to be used for Step 2.

Permit	Description	NO <sub>x</sub>	SO <sub>x</sub>	PM <sub>10</sub>	CO	VOC	VOC/NO <sub>x</sub>
N-1399-4-1 and '5-1	220 MMBtu/hr boilers	8,448	3,010	8,026	19,008	4,435	0.52
N-1399-11-0	94 bhp diesel IC engine	126	0	1	4	6	0.05
N-1399-13-1	180 MMBtu/hr boiler	12,614	4,494	11,984	34,690	6,623	0.53
N-1399-16-1	10 MMBtu/hr tomato roaster and	786	62	299	7,970	299	0.38
N-1399-17-3	260 MMBtu/hr boiler	8,771	3,018	7,837	40,367	4,448	0.51
N-1399-20-1	36 MMBtu/hr boiler	2,523	899	2,397	11,668	1,325	0.53
N-1399-21-0	389 bhp diesel IC engine	102	0	4	19	7	0.07
N-1399-24-0	471 MMBtu/hr boiler	8,460	3,624	3,815	49,196	2,543	0.30

2. Calculate the total NOx by adding potential emissions of the units lined-up based on VOC/NOx ratio in Step 1 without exceeding the facility-wide limit.

Unit	PE (lb/yr)
N-1399-13-1	12,614
N-1399-20-1	2,523
N-1399-4-1 and '5-1	8,448
N-1399-17-3	8,771
N-1399-16-1	786
Total:	33,142

3. Determine the difference between NOx SLC and Total NOx in Step 2

$$33,705 \text{ lb/yr} - 33,142 \text{ lb/yr} = 563 \text{ lb/yr}$$

4. Calculate operational hours for a unit (next in line according to the VOC/NOx ratio in Step 1) by dividing the value in Step 3 (lb-NOx/yr) with the hourly NOx emissions (lb-NOx/hr).

$$(563 \text{ lb-NOx/yr}) \div (0.0062 \text{ lb-NOx/MMBtu} \times 471 \text{ MMBtu/hr for unit N-1399-24-0}) = 193 \text{ hr/yr}$$

5. Calculate the total VOC emissions by adding the individual VOC potential emissions from the unit(s) including the potential VOC emissions from the unit in Step 4 calculated using EF (lb/MMBtu), operational hours (hr/yr), and the heat input rate to the unit (MMBtu/hr).

Unit	EF (lb/MMBtu)	PE (lb/yr)
N-1399-13-1	--	6,623
N-1399-17-3	--	4,448
N-1399-20-1	--	1,325
N-1399-4-1 and '5-1	--	4,435
N-1399-16-1	--	299
N-1399-24-0	0.002	182
PE		17,312

The maximum VOC emissions from this facility after meeting the maximum NOx limit would be **17,312 lb/yr**.

Appendix IV  
HAP/Toxic Emission Calculations

N-1399-4 and '5 (220 MMBtu/hr each, combined heat input rate of 1,056,019 MMBtu/yr)

HAP	Emission Factor (lb/MMBtu) <sup>(1)</sup>	Maximum Hourly Emissions (lb/hr) <sup>(2)</sup>	Maximum Annual Emissions (lb/yr) <sup>(3)</sup>	Maximum Annual Emissions (tpy)	
Acetaldehyde	9.00E-07	1.98E-04	1	0.0	
Acrolein	8.00E-07	1.76E-04	1	0.0	
Benzene	1.70E-06	3.74E-04	2	0.0	
1,3-Butadiene	n/a	--	--	--	
Ethyl benzene	2.00E-06	4.40E-04	2	0.0	
Formaldehyde	3.60E-06	7.92E-04	4	0.0	
Hexane	1.30E-06	2.86E-04	1	0.0	
Naphthalene	3.00E-07	6.60E-05	0	0.0	
PAHs excluding naphthalene	1.00E-07	2.20E-05	0	0.0	
Propylene Oxide	n/a	--	--	--	
Toluene	7.80E-06	1.72E-03	8	0.0	
Xylene	5.80E-06	1.28E-03	6	0.0	
<b>Total</b>				<b>0.0</b>	
Notes:					
1. These emission factors are obtained from Ventura County APCD, "AB2588 Combustion Emission Factors" natural gas fired external combustion equipment greater than 100 MMBtu/hr, available at <a href="http://www.vcapcd.org/pubs/Engineering/AirToxics/combem.pdf">http://www.vcapcd.org/pubs/Engineering/AirToxics/combem.pdf</a>					
2. Hourly emissions = EF (lb/MMBtu) x 220 (MMBtu/hr)					
3. Annual emissions = EF (lb/MMBtu) x 1,056,019 (MMBtu/yr) for both units					

N-1399-11 (96 bhp diesel-fueled emergency fire pump engine)

HAP	Emission Factor (lb/MMBtu) <sup>(1)</sup>	Maximum Hourly Emissions (lb/hr) <sup>(2)</sup>	Maximum Annual Emissions (lb/yr) <sup>(3)</sup>	Maximum Annual Emissions (tpy)	
Acetaldehyde	7.67E-04	5.37E-04	0.1	0.0	
Acrolein	9.25E-05	6.48E-05	0.0	0.0	
Benzene	9.33E-04	6.53E-04	0.1	0.0	
1,3-Butadiene	3.91E-05	2.74E-05	0.0	0.0	
Ethyl benzene	--	--	--	--	
Formaldehyde	1.18E-03	8.26E-04	0.1	0.0	
Hexane	n/a	--	--	--	
Naphthalene	8.48E-05	5.94E-05	0.0	0.0	
PAHs	8.32E-05	5.82E-05	0.0	0.0	
Propylene Oxide	n/a	--	--	--	
Toluene	4.09E-04	2.86E-04	0.0	0.0	
Xylene	2.85E-04	2.00E-04	0.0	0.0	
<b>Total</b>				<b>0.0</b>	
Notes:					
1. The emission are taken from AP-42 Table 3.3-2 (10/96)					
2. Hourly emissions are based on a heat input rate of 0.7 MMBtu/hr (5.09 gal/hr x 0.137 MMBtu/gal)					
3. Annual emissions are based on non-emergency hours of operations (100 hr/yr)					

N-1399-13 (180 MMBtu/hr boiler)

HAP	Emission Factor (lb/MMBtu) <sup>(1)</sup>	Maximum Hourly Emissions (lb/hr) <sup>(2)</sup>	Maximum Annual Emissions (lb/yr) <sup>(3)</sup>	Maximum Annual Emissions (tpy)	
Acetaldehyde	9.00E-07	1.62E-04	1	0.0	
Acrolein	8.00E-07	1.44E-04	1	0.0	
Benzene	1.70E-06	3.06E-04	3	0.0	
1,3-Butadiene	n/a	--	--	--	
Ethyl benzene	2.00E-06	3.60E-04	3	0.0	
Formaldehyde	3.60E-06	6.48E-04	6	0.0	
Hexane	1.30E-06	2.34E-04	2	0.0	
Naphthalene	3.00E-07	5.40E-05	0	0.0	
PAHs <sup>(4)</sup>	1.00E-07	1.80E-05	0	0.0	
Propylene Oxide	n/a	--	--	--	
Toluene	7.80E-06	1.40E-03	12	0.0	
Xylene	5.80E-06	1.04E-03	9	0.0	
<b>Total</b>				<b>0.0</b>	
Notes:					
1. These emission factors are obtained from Ventura County APCD, "AB2588 Combustion Emission Factors" natural gas fired external combustion equipment greater than 100 MMBtu/hr, available at <a href="http://www.vcapcd.org/pubs/Engineering/AirToxics/combem.pdf">http://www.vcapcd.org/pubs/Engineering/AirToxics/combem.pdf</a>					
2. Hourly emissions = EF (lb/MMBtu) x 180 (MMBtu/hr)					
3. Annual emissions = EF (lb/MMBtu) x 180 (MMBtu/hr) x 8,760 (hr/yr)					



N-1399-16 (10 MMBtu/hr tomato roaster)

HAP	Emission Factor (lb/MMBtu) <sup>(1)</sup>	Maximum Hourly Emissions (lb/hr) <sup>(2)</sup>	Maximum Annual Emissions (lb/yr) <sup>(3)</sup>	Maximum Annual Emissions (tpy)	
Acetaldehyde	3.10E-06	3.10E-05	0	0.0	
Acrolein	2.70E-06	2.70E-05	0	0.0	
Benzene	5.80E-06	5.80E-05	0	0.0	
1,3-Butadiene	n/a	--	--	--	
Ethyl benzene	6.90E-06	6.90E-05	0	0.0	
Formaldehyde	1.23E-05	1.23E-04	0	0.0	
Hexane	4.60E-06	4.60E-05	0	0.0	
Naphthalene	3.00E-07	3.00E-06	0	0.0	
PAHs	1.00E-07	1.00E-06	0	0.0	
Propylene Oxide	n/a	--	--	--	
Toluene	2.65E-05	2.65E-04	1	0.0	
Xylene	6.40E-08	6.40E-07	0	0.0	
<b>Total</b>				<b>0.0</b>	
Notes:					
1. These emission factors are obtained from Ventura County APCD, "AB2588 Combustion Emission Factors" natural gas fired external combustion equipment 10-100 MMBtu/hr, available at <a href="http://www.vcapcd.org/pubs/Engineering/AirToxics/combem.pdf">http://www.vcapcd.org/pubs/Engineering/AirToxics/combem.pdf</a>					
2. Hourly emissions = EF (lb/MMBtu) x 10 (MMBtu/hr)					
3. Annual emissions = EF (lb/MMBtu) x 10 (MMBtu/hr) x 24 (hr/day) x 90 (days/yr)					

N-1399-17 (260 MMBtu/hr natural gas fired boiler)

HAP	Emission Factor (lb/MMBtu) <sup>(1)</sup>	Maximum Hourly Emissions (lb/hr) <sup>(2)</sup>	Maximum Annual Emissions (lb/yr) <sup>(3)</sup>	Maximum Annual Emissions (tpy)	
Acetaldehyde	9.00E-07	2.34E-04	1	0.0	
Acrolein	8.00E-07	2.08E-04	1	0.0	
Benzene	1.70E-06	4.42E-04	2	0.0	
1,3-Butadiene	--	--	--	--	
Ethyl benzene	2.00E-06	5.20E-04	2	0.0	
Formaldehyde	3.60E-06	9.36E-04	4	0.0	
Hexane	1.30E-06	3.38E-04	1	0.0	
Naphthalene	3.00E-07	7.80E-05	0	0.0	
PAHs <sup>(4)</sup>	1.00E-07	2.60E-05	0	0.0	
Propylene Oxide	--	--	--	--	
Toluene	7.80E-06	2.03E-03	8	0.0	
Xylene	5.80E-06	1.51E-03	6	0.0	
<b>Total</b>				<b>0.0</b>	
Notes:					
1. These emission factors are obtained from Ventura County APCD, "AB2588 Combustion Emission Factors" natural gas fired external combustion equipment greater than 100 MMBtu/hr, available at <a href="http://www.vcapcd.org/pubs/Engineering/AirToxics/combem.pdf">http://www.vcapcd.org/pubs/Engineering/AirToxics/combem.pdf</a>					
2. Hourly emissions = EF (lb/MMBtu) x 260 (MMBtu/hr)					
3. Annual emissions = EF (lb/MMBtu) x 1,059,019 (MMBtu/yr)					

N-1399-20 (36 MMBtu/hr natural gas fired boiler)

HAP	Emission Factor (lb/MMBtu) <sup>(1)</sup>	Maximum Hourly Emissions (lb/hr) <sup>(2)</sup>	Maximum Annual Emissions (lb/yr) <sup>(3)</sup>	Maximum Annual Emissions (tpy)	
Acetaldehyde	3.10E-06	1.12E-04	1	0.0	
Acrolein	2.70E-06	9.72E-05	1	0.0	
Benzene	5.80E-06	2.09E-04	2	0.0	
1,3-Butadiene	n/a	--	--	--	
Ethyl benzene	6.90E-06	2.48E-04	2	0.0	
Formaldehyde	1.23E-05	4.43E-04	4	0.0	
Hexane	4.60E-06	1.66E-04	1	0.0	
Naphthalene	3.00E-07	1.08E-05	0	0.0	
PAHs <sup>(4)</sup>	1.00E-07	3.60E-06	0	0.0	
Propylene Oxide	n/a	--	--	--	
Toluene	2.65E-05	9.54E-04	8	0.0	
Xylene	6.40E-08	2.30E-06	0	0.0	
<b>Total</b>				<b>0.0</b>	
Notes:					
1. These emission factors are obtained from Ventura County APCD, "AB2588 Combustion Emission Factors" natural gas fired external combustion equipment 10-100 MMBtu/hr, available at <a href="http://www.vcapcd.org/pubs/Engineering/AirToxics/combem.pdf">http://www.vcapcd.org/pubs/Engineering/AirToxics/combem.pdf</a>					
2. Hourly emissions = EF (lb/MMBtu) x 36 (MMBtu/hr)					
3. Annual emissions = EF (lb/MMBtu) x 36 (MMBtu/hr) x 8,760 (hr/yr)					

N-1399-21

(389 bhp diesel-fueled emergency IC engine powering electric generator)

HAP	Emission Factor (lb/MMBtu) <sup>(1)</sup>	Maximum Hourly Emissions (lb/hr) <sup>(2)</sup>	Maximum Annual Emissions (lb/yr) <sup>(3)</sup>	Maximum Annual Emissions (tpy)	
Acetaldehyde	7.67E-04	2.15E-03	0.1	0.0	
Acrolein	9.25E-05	2.59E-04	0.0	0.0	
Benzene	9.33E-04	2.61E-03	0.1	0.0	
1,3-Butadiene	3.91E-05	1.09E-04	0.0	0.0	
Ethyl benzene	--	--	--	--	
Formaldehyde	1.18E-03	3.30E-03	0.2	0.0	
Hexane	n/a	--	--	--	
Naphthalene	8.48E-05	2.37E-04	0.0	0.0	
PAHs	8.32E-05	2.33E-04	0.0	0.0	
Propylene Oxide	n/a	--	--	--	
Toluene	4.09E-04	1.15E-03	0.1	0.0	
Xylene	2.85E-04	7.98E-04	0.0	0.0	
<b>Total</b>				<b>0.0</b>	
Notes:					
1. The emission are taken from AP-42 Table 3.3-2 (10/96)					
2. Hourly emissions are based on a heat input rate of 2.8 MMBtu/hr (20.6 gal/hr x 0.137 MMBtu/gal)					
3. Annual emissions are based on non-emergency hours of operations (50 hr/yr)					

N-1399-24 (471 MMBtu/hr natural gas fired boiler)

HAP	Emission Factor (lb/MMBtu) <sup>(1)</sup>	Maximum Hourly Emissions (lb/hr) <sup>(2)</sup>	Maximum Annual Emissions (lb/yr) <sup>(3)</sup>	Maximum Annual Emissions (tpy)
Acetaldehyde	9.00E-07	4.24E-04	1	0
Acrolein	8.00E-07	3.77E-04	1	0
Benzene	1.70E-06	8.01E-04	2	0
1,3-Butadiene	n/a	--	--	--
Ethyl benzene	2.00E-06	9.42E-04	3	0
Formaldehyde	3.60E-06	1.70E-03	5	0
Hexane	1.30E-06	6.12E-04	2	0
Naphthalene	3.00E-07	1.41E-04	0	0
PAHs excluding naphthalene	1.00E-07	4.71E-05	0	0
Propylene Oxide	n/a	--	--	--
Toluene	7.80E-06	3.67E-03	10	0
Xylene	5.80E-06	2.73E-03	7	0
<b>Total</b>				<b>0</b>
Notes:				
1. These emission factors are obtained from Ventura County APCD, "AB2588 Combustion Emission Factors" natural gas fired external combustion equipment greater than 100 MMBtu/hr, available at <a href="http://www.vcapcd.org/pubs/Engineering/AirToxics/combem.pdf">http://www.vcapcd.org/pubs/Engineering/AirToxics/combem.pdf</a>				
2. Hourly emissions = EF (lb/MMBtu) x 471 (MMBtu/hr)				
3. Annual emissions = EF (lb/MMBtu) x 471 (MMBtu/hr) x 2,700 (hr/yr)				

**Appendix V**  
**Compliance Certification**

July 3, 2012



Mr. Rupi Gill  
San Joaquin Valley Air Pollution Control District  
4800 Enterprise Way  
Modesto CA 95356-8718

RECEIVED

JUL 09 2012

SJVAPCD  
NORTHERN REGION

Subject: Compliance Statement for Liberty Packing Company

Dear Mr. Gill:

In accordance with Rule 2201, Section 4.15, "Additional Requirements for New Major Sources and Federal Major Modifications," Liberty Packing Company is pleased to provide this compliance statement regarding its proposed tomato processing project N-1399.

All major stationary sources in California owned or operated by Liberty Packing Company, or by any entity controlling, controlled by, or under common control with Morning Star Company, and which are subject to emission limitations, are in compliance or on a schedule for compliance with all applicable emission limitation and standards. These sources include one or more of the following facilities:

Facility #1: Morning Star Packing Company  
13448 S. Volta Rd  
Los Banos, CA 93635

Facility #2: Morning Star Packing Company, L.P.  
2211 Old Highway 99  
Williams, CA 95987

Based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Please contact me if you have any questions regarding this certification.

Sincerely,

Wade Ingram, Steam Generating Colleague

Liberty Packing Company

RECEIVED

JUN 11 2013

SJVAPCD  
NORTHERN REGION

**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
- MINOR PERMIT MODIFICATION
- ADMINISTRATIVE AMENDMENT

COMPANY NAME: Liberty Packing Co. – The Morning Star Co.	FACILITY ID: --
1. Type of Organization: <input type="checkbox"/> Corporation <input checked="" type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: Chris Rufer	
3. Agent to the Owner: Wade Ingram	

**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:

Wade Ingram  
Signature of Responsible Official

6/11/2013  
Date

Wade Ingram  
Name of Responsible Official (please print)

Steam Generating Colleague  
Title of Responsible Official (please print)



Appendix VI  
Risk Management Review and Ambient Air Quality Analysis

## San Joaquin Valley Air Pollution Control District Risk Management Review

To: Jag Kahlon, AQE – Permit Services  
 From: Trevor Joy, AQS – Technical Services  
 Date: April 10, 2013  
 Facility Name: Liberty Packing  
 Location: Grade Rd, Los Banos  
 Application #(s): N-1399-17-3, and -24-0  
 Project #: 1121905

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### A. RMR SUMMARY

Categories	Units 24-0	Project Totals	Facility Totals
Prioritization Score	0.05	0.05	>1
Acute Hazard Index	0.00	0.00	0.00
Chronic Hazard Index	0.00	0.00	0.01
Maximum Individual Cancer Risk ( $10^{-6}$ )	0.3	0.3	0.5
T-BACT Required?	No		
Special Permit Conditions?	Yes		

### Proposed Permit Conditions

To ensure that human health risks will not exceed District allowable levels; the following permit conditions must be included for:

#### Unit # 24

{1898} The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 4102] N

**B. RMR REPORT**

**I. Project Description**

Technical Services received a revised request on April 4, 2013 to perform an Ambient Air Quality Analysis and a Risk Management Review for the proposed installation of a new boiler, unit 24. The project also includes the proposed lowering of the emission factor for unit 17-3; since this change will not result in an increase in emissions, no further analysis was required.

**II. Analysis**

Technical Services performed a prioritization using the District's HEARTs database. Emissions were calculated using "NG >100 MMBTU/Hr External Combustion" emission factors as well as ammonia emissions supplied by the engineer. In accordance with the District's *Risk Management Policy for Permitting New and Modified Sources* (APR 1905, March 2, 2001), risks from the proposed unit's toxic emissions were prioritized using the procedure in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEARTs database. The prioritization score for this proposed unit was less than 1 (see RMR Summary Table). Therefore, no further analysis was necessary. AERMOD was used for the AAQA analysis, with the parameters outlined below and meteorological data for Los Banos 2004 – 2008 to determine the maximum dispersion factors.

The following parameters were used for the review:

<b>Analysis Parameter Unit 24-0</b>			
<b>Closest Receptor - Business (m)</b>	<b>2226</b>	<b>Closest Receptor – Resident (m)</b>	<b>466</b>
<b>NG usage (MMScf/hr)</b>	<b>0.471</b>	<b>NG usage (MMScf/yr)</b>	<b>1271.7</b>
<b>Release Height (m)</b>	<b>9.1</b>	<b>Gas Exit Temperature (K)</b>	<b>414</b>
<b>Stack Inside Diameter (m)</b>	<b>2.3</b>	<b>Gas Exit Velocity (m/s)</b>	<b>14.6</b>

Technical Services also performed modeling for criteria pollutants CO, NO<sub>x</sub>, SO<sub>x</sub> and PM<sub>10</sub>; as well as a RMR. The emission rates used for criteria pollutant modeling were

	<b>NO<sub>x</sub></b>	<b>Sox</b>	<b>CO</b>	<b>PM10</b>	<b>PM2.5</b>
<b>Lbs/hr</b>	2.92	1.342	69.7	1.413	1.413
<b>Lbs/yr</b>	8460	3624	49196	3815	3815

The results from the Criteria Pollutant Modeling are as follows:

**Criteria Pollutant Modeling Results\***  
Values are in µg/m<sup>3</sup>

<b>Steam Generator</b>	<b>1 Hour</b>	<b>3 Hours</b>	<b>8 Hours.</b>	<b>24 Hours</b>	<b>Annual</b>
<b>CO</b>	Pass	X	Pass	X	X
<b>NO<sub>x</sub></b>	Pass <sup>1</sup>	X	X	X	Pass
<b>SO<sub>x</sub></b>	Pass <sup>2</sup>	Pass	X	Pass	Pass
<b>PM<sub>10</sub></b>	X	X	X	Pass <sup>3</sup>	Pass <sup>3</sup>
<b>PM2.5</b>	X	X	X	Pass <sup>3</sup>	Pass <sup>3</sup>

\*Results were taken from the attached PSD spreadsheet.

<sup>1</sup>The project was compared to the 1-hour NO<sub>2</sub> National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures. The criteria pollutant 1-hour value passed using TIER I NO<sub>2</sub> NAAQS modeling

<sup>2</sup>The project was compared to the 1-hour SO<sub>2</sub> National Ambient Air Quality Standard that became effective on August 23, 2010 using the District's approved procedures.

<sup>3</sup>The maximum predicted concentration for emissions of these criteria pollutants from the proposed unit are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

### **III. Conclusion**

The acute and chronic hazard indices were below 1.0; and the cancer risk is less than or equal to 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 conditions listed on page 1 of this report must be included for this proposed unit.

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

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

#### **Attachments:**

- A. RMR request from the project engineer
- B. Prioritization score with toxic emissions summary
- C. HEARTS – Facility Summary
- D. AAQA spreadsheet