



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

FEB 27 2012

Chris Kaji
Sensient Dehydrated Flavors Company
P.O. Box 279
Cressey, CA 95312

**Re: Proposed Authority to Construct / Certificate of Conformity (Minor Mod)
District Facility # N-1657
Project # N-1113831**

Dear Mr. Kaji:

Enclosed for your review is the District's analysis of your application for Authority to Construct for the facility identified above. You have requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. This project is for the modification of a 14.7 MMBtu/hr natural gas-fired boiler to lower the NOx emission limit for compliance with District Rule 4320.

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

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

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW:RG/st

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

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

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



San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT

FEB 27 2012

Gerardo C. Rios, Chief
Permits Office
Air Division
U.S. EPA - Region IX
75 Hawthorne St
San Francisco, CA 94105

Re: **Proposed Authority to Construct / Certificate of Conformity (Minor Mod)**
District Facility # N-1657
Project # N-1113831

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authority to Construct for Sensient Dehydrated Flavors Company, located at 9984 West Walnut Ave in Livingston, CA, which has been issued a Title V permit. Sensient Dehydrated Flavors Company is requesting that a Certificate of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. This project is for the modification of a 14.7 MMBtu/hr natural gas-fired boiler to lower the NOx emission limit for compliance with District Rule 4320.

Enclosed is the engineering evaluation of this application, a copy of the current Title V permit, and proposed Authority to Construct # N-1657-15-8 with Certificate of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 45-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW:RG/st

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

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

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

San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Rule 4320 Compliance

Facility Name: Sensient Dehydrated Flavors Company Date: January 24, 2012
Mailing Address: P.O. Box 279 Engineer: Robert Gilles
 Cressey, CA 95312 Lead Engineer: Nick Peirce
Contact Person: Chris Kaji (EHS Engineer)
Telephone: (209) 656-5826
Application #: N-1657-15-8
Project #: N-1113831
Deemed Complete: November 21, 2011

I. Proposal

Sensient Dehydrated Flavors Co. ("Sensient") submitted an Authority to Construct (ATC) application for the modification of a 14.7 MMBtu/hr natural gas-fired boiler, unit N-1657-15. This modification involves lowering the permitted NO_x emission limit for this unit for compliance with Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators and Process Heaters greater than 5.0 MMBtu/hr).

Sensient Dehydrated Flavors Co. received their Title V Permit on January 22, 2003. This modification can be classified as a Title V minor modification pursuant to Rule 2520, Section 3.20, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. Sensient must apply to administratively amend their Title V permit. The following conditions will be included on the ATC for this modification.

- *{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] Y*
- *{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] Y*

The results of the most recent source test for this unit demonstrate that the unit currently meets the NO_x and CO emission concentration limits of Rule 4320. Since this unit is in compliance with the Rule 4320 NO_x and CO limits, this project consists of no changes to the equipment or the operation of this unit. The change in permitted emissions will lower the NO_x emission limit from 15 ppmvd to 9 ppmvd @ 3% O₂.

Pursuant to District guidance document FYI 111, since there are no changes to the operation needed for this unit to comply with Rule 4320, the project does not constitute a NSR modification. Therefore, this project is not subject to Rule 2201.

Additionally, the facility currently follows Alternate Monitoring Scheme "D" (monitoring of burner mechanical adjustments and O₂ concentrations), as specified in District Policy SSP 1105, and is requesting to maintain the current monitoring arrangement for this boiler.

II. Applicable Rules

Rule 2201	New and Modified Stationary Source Review Rule (4/21/11)
Rule 2520	Federally Mandated Operating Permits (6/21/01)
Rule 4001	New Source Performance Standards (4/14/99)
Rule 4101	Visible Emissions (2/17/05)
Rule 4102	Nuisance (12/17/92)
Rule 4201	Particulate Matter Concentration (12/17/92)
Rule 4301	Fuel Burning Equipment (12/17/92)
Rule 4305	Boilers, Steam Generators and Process Heaters – Phase II (8/21/03)
Rule 4306	Boilers, Steam Generators and Process Heaters – Phase III (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 I (8/21/03)
Rule 4801	Sulfur Compounds (12/17/92)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)	
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines	

III. Project Location

The facility is located at 9984 W. Walnut in Livingston, CA. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

Sensient operates a natural gas-fired boiler used to provide steam for the dehydration of vegetables. This facility may operate up to 24 hours per day and 8,760 hours per year.

V. Equipment Listing

Pre-Project Equipment Description:

N-1657-15-7: 14.7 MMBTU/HR HURST FIRETUBE BOILER WITH A POWER FLAME MODEL NVC 8-G-30 ULTRA LOW-NOX BURNER

Post Project Equipment Description:

N-1657-15-8 14.7 MMBTU/HR HURST FIRETUBE BOILER WITH A POWER FLAME MODEL
 NVC 8-G-30 ULTRA LOW-NOX BURNER

VI. Emission Control Technology Evaluation

Emissions from natural gas-fired boilers include NO_x, CO, VOC, PM₁₀, and SO_x.

NO_x is the major pollutant of concern when burning natural gas. NO_x formation is either due to thermal fixation of atmospheric nitrogen in the combustion air (thermal NO_x) or due to conversion of chemically bound nitrogen in the fuel (fuel NO_x). Due to the low fuel nitrogen content of natural gas, nearly all NO_x emissions are thermal NO_x. Formation of thermal NO_x is affected by four furnace zone factors: (1) nitrogen concentration, (2) oxygen concentration, (3) peak temperature, and (4) time of exposure at peak temperature.

VII. General Calculations

A. Assumptions

- Maximum operating schedule is 24 hrs/day and 8,760 hrs/year;
- Unit is fired only on PUC-regulated natural gas (current permit);
- Start-up and shutdown shall not exceed 1 hour each per year (current permit);
- Start-up and shutdown shall not exceed 1 hour each per day;
- The higher heating value of natural gas is 1,000 Btu/scf (District practice);
- EPA F-factor, O₂-based, is 8,578 dscf/MMBtu (corrected to 60 °F); and
- Molar Specific Volume of a gas @ 60 °F is 379.5 ft³/lb-mole.

Other assumptions will be stated as they are made.

B. Emission Factors (EF)

1. Pre Project Emission Factors (EF1)

Pre Project Emission Factors (EF1)			
Pollutant	Start-up/Shutdown	Steady State	Source
NO _x	30 ppmvd @ 3% O ₂	15 ppmvd @ 3% O ₂	Current PTO
SO _x	---	0.00285 lb/MMBtu	Current PTO
PM ₁₀	---	0.0076 lb/MMBtu	Current PTO
CO	100 ppmvd @ 3% O ₂	50 ppmvd @ 3% O ₂	Current PTO
VOC	---	0.0055 lb/MMBtu	Current PTO

2. Post Project Emission Factors (EF2)

Post Project Emission Factors (EF2)			
Pollutant	Start-up/Shutdown	Steady State	Source
NOx	30 ppmvd @ 3% O ₂	9 ppmvd @ 3% O ₂	Applicant Proposed
SOx	---	0.00285 lb/MMBtu	Current PTO
PM ₁₀	---	0.0076 lb/MMBtu	Current PTO
CO	100 ppmvd @ 3% O ₂	50 ppmvd @ 3% O ₂	Current PTO
VOC	---	0.0055 lb/MMBtu	Current PTO

C. Calculations

1. Pre Project Potential to Emit (PE1)

Worst case emissions from this boiler will be calculated assuming the total maximum startup/shutdown duration will be 2 hours in a day and 2 hours in a year. The following equations will be used to calculate worst case potential emissions from this boiler for each pollutant.

For SOx, PM₁₀, and VOC

$$\text{Daily PE1} = (\text{EF1, lb/MMBtu}) \times (14.7 \text{ MMBtu/hr}) \times (24 \text{ hours/day})$$

$$\text{Annual PE1} = (\text{EF1, lb/MMBtu}) \times (14.7 \text{ MMBtu/hr}) \times (8,760 \text{ hours/year})$$

For NOx and CO

$$\begin{aligned} \text{Daily PE1} &= \text{PE1}_{\text{Start-up/Shutdown}} + \text{PE1}_{\text{Steady State}} \\ &= [(\text{EF1}_{\text{Start-up/Shutdown}}) \times (14.7 \text{ MMBtu/hr}) \times (2 \text{ hr/day})] + [(\text{EF1}_{\text{Steady State}}) \\ &\quad \times (14.7 \text{ MMBtu/hr}) \times (22 \text{ hr/day})] \end{aligned}$$

$$\begin{aligned} \text{Annual} &= \text{PE1}_{\text{Start-up/Shutdown}} + \text{PE1}_{\text{Steady State}} \\ &= [(\text{EF1}_{\text{Start-up/Shutdown}}) \times (14.7 \text{ MMBtu/hr}) \times (2 \text{ hr/yr})] + [(\text{EF1}_{\text{Steady State}}) \times \\ &\quad (14.7 \text{ MMBtu/hr}) \times (8,758 \text{ hr/yr})] \end{aligned}$$

The following equation is used to convert emissions concentrations from ppmvd @ 3% O₂ to lb/MMBtu.

$$EF(\text{lb/MMBtu}) = \frac{(\text{ppmvd}) \times \left(F - \text{factor} \frac{\text{dscf}}{\text{MMBtu}} \right) \times \left(\frac{\text{MW}}{\text{lb-mol}} \right) \times \left(\frac{20.95}{20.95 - 3} \right)}{\left(379.5 \frac{\text{dscf}}{\text{lb-mol}} \right) \times (10^6)}$$

Pre Project Potential to Emit (PE1)						
Pollutant	Start-up / Shutdown			Steady State		
	EF1 (lb/MMBtu)	PE1 (lb/day)	PE1 (lb/yr)	EF1 (lb/MMBtu)	PE1 (lb/day)	PE1 (lb/yr)
NOx	0.036	1.1	1	0.018	5.8	2,317
SOx	---	---	---	0.00285	1.0	367
PM ₁₀	---	---	---	0.0076	2.7	979
CO	0.074	2.2	2	0.037	12.0	4,763
VOC	---	---	---	0.0055	1.9	708

Total daily and annual PE1 are shown in the table below.

Total PE1		
Pollutant	PE1 (lb/day)	PE1 (lb/year)
NOx	6.9	2,318
SOx	1.0	367
PM ₁₀	2.7	979
CO	14.2	4,765
VOC	1.9	708

2. Post Project Potential to Emit (PE2)

PE2 values were calculated using the post project emission factors along the equations presented in section VII.C.1 above. The following table summarizes the PE2 calculation for each pollutant.

Post Project Potential to Emit (PE2)						
Pollutant	Start-up / Shutdown			Steady State		
	EF2 (lb/MMBtu)	PE2 (lb/day)	PE2 (lb/yr)	EF2 (lb/MMBtu)	PE2 (lb/day)	PE2 (lb/yr)
NOx	0.036	1.1	1	0.011	3.6	1,416
SOx	---	---	---	0.00285	1.0	367
PM ₁₀	---	---	---	0.0076	2.7	979
CO	0.074	2.2	2	0.037	12.0	4,763
VOC	---	---	---	0.0055	1.9	708

The total daily and annual PE2 are shown in the table below.

Total PE2		
Pollutant	PE2 (lb/day)	PE2 (lb/year)
NOx	4.7	1,417
SOx	1.0	367
PM ₁₀	2.7	979
CO	14.2	4,765
VOC	1.9	708

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

Pursuant to Section 4.9 of District Rule 2201, the Pre Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

The Pre Project Stationary Source Potential to Emit (SSPE1) is summarized below (see Appendix C for details).

Pre Project Stationary Source Potential to Emit (SSPE1) [lb/year]					
	NOx	SOx	PM ₁₀	CO	VOC
Total SSPE1	296,681	8,712	37,245	1,026,969	16,988

4. 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.

The Post Project Stationary Source Potential to Emit (SSPE2) is summarized below (see Appendix D for details).

Post Project Stationary Source Potential to Emit (SSPE2) [lb/year]					
	NOx	SOx	PM ₁₀	CO	VOC
Total SSPE2	295,780	8,712	37,245	1,026,969	16,988

5. Quarterly Net Emissions Change (QNEC)

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

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

The purpose of this project is to revise the NOx emission limit for unit N-1657-15 to lower the concentration from 15 ppmvd to 9 ppmvd @ 3% O₂ for compliance with District Rule 4320. Since the unit is currently in compliance with the NOx and CO limits of District Rule 4320, as demonstrated by the most recent source test results, no modifications to the equipment or to the operation are necessary.

Pursuant to District guidance document FYI 111, this change is not a NSR modification and the project is therefore not subject to Rule 2201. No further discussion is required.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modification is a Minor Modification to the Title V Permit pursuant to Section 3.20 of this rule:

In accordance with Rule 2520, 3.20, these modifications:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
 - a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
 - b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
6. Do not seek to consolidate overlapping applicable requirements.

As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility may construct/operate under the ATC upon submittal of the Title V administrative amendment application.

Rule 4001 New Source Performance Standards (NSPS)

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

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

The Code of Federal Regulations, Chapter 40 (40 CFR), Part 60, Subpart Dc lists SO_x and PM₁₀ emission standards for steam generating units with a maximum heat input of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr that are constructed, reconstructed, or modified after 6/9/1989.

This unit is rated at 14.7 MMBtu/hr and was installed after June 9, 1989; therefore, boiler unit N-1657-15 is subject to this subpart. The following discusses the requirements of this subpart and how this unit will comply with the requirements.

Emission Standards

SOx Emission Standard (§60.42c)

Section 60.42c applies only to units that combust coal or oil. The subject unit does not burn these fuels; therefore, this subpart does not apply.

Particulate Matter Emission Standard (§60.43c)

Section 60.43c applies only to units that combust coal, wood or oil. The subject unit does not burn these fuels; therefore, this subpart does not apply.

Compliance Testing

SOx Compliance Testing (§60.44c)

Since this unit is not subject to the SOx emission limits of §60.42c of this subpart, this unit is not subject to the testing requirements of this subsection.

Particulate Matter Testing (§60.45c)

Since this unit is not subject to the PM standards of §60.43c, this unit is not subject to the testing requirements of §60.45c.

Emission Monitoring

SOx Emission Monitoring (§60.46c)

This unit is not subject to the SOx emission limits of §60.43c; therefore, this unit is not subject to the emission monitoring requirements of §60.46c.

Particulate Emission Monitoring (§60.47c)

This unit is not subject to the PM standards of §60.43c; therefore, these units are not subject to the emission monitoring requirements of §60.47c.

Reporting and Record Keeping (§60.48c)

Section 60.48c(a) states that the owner or operator of each affected facility shall submit notification of the date of construction or reconstruction, anticipated startup, and actual startup, as provided by §60.7 of this part. This notification shall include:

- (1) The design heat input capacity of the affected facility and identification of fuels to be combusted in the affected facility.

The design heat input capacity and type of fuel combusted at the facility will be listed on the unit's equipment description. No conditions are required to ensure compliance with this requirement.

- (2) If applicable, a copy of any federally enforceable requirement that limits the annual capacity factor for any fuel or mixture of fuels under §60.42c or §60.43c.

This unit is not subject to this requirement since it is not subject to the requirements of §60.42c or §60.43c.

- (3) The annual capacity factor at which the owner or operator anticipates operating the affected facility based on all fuels fired and based on each individual fuel fired.

The applicant has not proposed an annual capacity factor for this unit; therefore, one will not be required.

- (4) Notification if an emerging technology will be used for controlling SO₂ emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

This unit will not be equipped with an emerging technology to control SO₂ emissions; therefore, the information required by this subsection is not required.

Subsection 60.48c(g) requires that the owner or operator of each affected facility record and maintain records of the daily amount of fuel combusted unless an applicable alternative is provided under §60.48c(g)(2) or §60.48c(g)(3). Since only natural gas will be burned, §60.48c(g)(2) is applicable to this unit. Subsection 60.48c(g)(2) allows the owner or operator to record and maintain records of the amount of fuel combusted during each calendar month; therefore, pursuant to §60.48c(g)(2), records of the monthly heat input will be required for this unit. To ensure compliance with this subsection, the following condition will be included on the permit.

- *{Modified 2981} Records of the monthly and annual heat input of the unit shall be maintained. [District Rule 4001 and 40 CFR Part 60.48c(g)(2)]*

Section 60.48c(i) states that all records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record. District Rule 4320 requires that records be kept for five years, which is more stringent and will satisfy the recordkeeping requirements of §60.48c(i). The following condition will be included on the permit to ensure compliance with this subsection.

- *All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070;*

4305, 6.1; 4306, 6.1; 4320, 6.1; and 4351, 6.1 and 40 CFR Part 60 Subpart Dc Paragraph 60.48c(i)] Y

Rule 4101 Visible Emissions

Compliance with the requirements of this rule was previously demonstrated for this unit. Since there are no proposed changes to the operation or equipment for this project, continued compliance with this rule is expected.

Rule 4102 Nuisance

Compliance with the requirements of this rule was previously demonstrated for this unit. Since there are no proposed changes to the operation or equipment for this project, continued compliance with this rule is expected.

California Health & Safety Code 41700 (Health Risk Assessment)

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

There will be no increase in natural gas usage for this unit as a result of this project; therefore, a health risk assessment is not required.

Rule 4201 Particulate Matter Concentration

Compliance with the requirements of this rule was previously demonstrated for this unit. Since there are no proposed changes to the operation or equipment for this project, continued compliance with this rule is expected.

Rule 4301 Fuel Burning Equipment

This rule specifies maximum emission rates in lb/hr for SO₂, NO₂, and combustion contaminants (defined as total PM in Rule 1020). This rule also limits combustion contaminants to ≤ 0.1 gr/scf. The emissions rates from each boiler are shown in the table below. The following table indicates compliance with the maximum hourly emission rates of this rule; therefore, compliance with this Rule is expected.

District Rule 4301 Limits (Natural Gas Combustion)			
Pollutant	NO₂ (lb/hr)	Total PM (lb/hr)	SO₂ (lb/hr)
ATC N-1657-15-8	0.2	0.1	0.04
Rule Limit (lb/hr)	140	10	200

Rule 4304 - Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters

Rule 4304 details the tuning procedure required for boilers, steam generators, and process heaters under Rules 4305, 4306, and 4320. Tune-up requirements for this unit are discussed

in Rule 4320 below under section 6.1.3 as required by Section 6.3.1 of Rules 4305, 4306, 4320, and 4351.

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

Pursuant to Section 2.0 of District Rule 4305, this boiler is subject to District Rule 4305, *Boilers, Steam Generators and Process Heaters – Phase 2*.

The facility proposes to comply with the requirements of Rule 4320. Since the requirements of District Rule 4320 are either equivalent or more stringent than the requirements of District Rule 4305, compliance with the requirements of District Rule 4320 will satisfy requirements of District Rule 4305. No further discussion is required.

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

Pursuant to Section 2.0 of District Rule 4306, this boiler is subject to District Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3*.

The facility proposes to comply with the requirements of Rule 4320. Since the requirements of District Rule 4320 are either equivalent or more stringent than the requirements of District Rule 4306, compliance with the requirements of District Rule 4320 will satisfy requirements of District Rule 4306. No further discussion is required.

Rule 4320 - Enhanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater than 5.0 MMBtu/hr

Pursuant to Section 2.0 of District Rule 4320, this boiler is subject to District Rule 4320. The following table details how the applicant will meet the requirements of this rule for this boiler.

District Rule 4320 Requirements		Method of Compliance
Section 5.1 lists three options for facilities to comply with the requirements of the rule. The facility has proposed to comply with the option described in Section 5.1.1, which requires the facility to comply with the emission limits in Sections 5.2 and 5.4. Section 5.2, NOx and CO emission limits. Boiler unit N-1657-15 is subject to the emission limits listed in Table 1, Category A. All ppmv emission limits specified in this section are referenced at dry stack gas conditions and 3.0 percent (%) by volume stack gas oxygen.		With this project, this boiler will be limited by permit condition to a NOx emission concentration of 9 ppmvd @ 3% O ₂ and a CO emission concentration of 50 ppmvd @ 3% O ₂ . The NOx and CO emission limits meet the requirements of this section. The following condition will be included on the permit to ensure continued compliance with these requirements: <ul style="list-style-type: none"> • <i>Except during startup and shutdown, emissions from the natural gas-fired unit shall not exceed any of the following limits: 9 ppmvd NOx @ 3% O₂ or 0.011 lb-NOx/MMBtu; 0.00285 lb-SOx/MMBtu; 0.0076 lb-PM10/MMBtu; 50 ppmvd CO @ 3% O₂ or 0.037 lb-CO/MMBtu; or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305; 5.1 & 5.3; 4306, 5.1; 4320, 5.2; and 4351, 5.1 & 5.5] Y</i>
Emission Limits for Units Operated on Gaseous Fuel		
Category	NOx	
A. Units with a total rated heat input > 5.0 MMBtu/hr to ≤ 20.0 MMBtu/hr. <i>Standard Schedule.</i>	9 ppmv or 0.011 lb/MMBtu	400 ppmv
<i>Enhanced Schedule</i>	6 ppmv or 0.007 lb/MMBtu	

<p>Section 5.4, Particulate Matter Control Requirements, requires the operator to comply with one of the following:</p> <ol style="list-style-type: none"> 1. Fire the boiler exclusively on PUC-quality natural gas, commercial propane, or a combination of such gases. 2. Limit fuel sulfur content to no more than five grains of total sulfur per 100 standard cubic feet. 3. Install and properly operate an emission control system that reduces SO₂ emissions by at least 95%, by weight, or limit exhaust SO₂ to less than or equal to 9 ppmv, corrected to 3.0% O₂. 	<p>The boiler will be fired exclusively on PUC-quality natural gas. Therefore the requirements of Section 5.4.1 will be satisfied.</p>
<p>Section 5.6 of this rule states that neither the Section 5.2 (Table 1) NOx emission standard or the section 5.5.2 CO emission standard apply during start-up and shutdown periods provided the duration of no start-up or shutdown event is longer than 2 hours and the emissions are controlled to the maximum extent possible during these periods.</p>	<p>This unit is limited to a maximum start-up or shut-down period of 1 hour each with a NOx emission concentration of 30 ppmv. The CO emission concentration during start-up and shutdown will not exceed 100 ppmv. The following conditions will be placed on the permit:</p> <ul style="list-style-type: none"> • <i>During startup and shutdown, emissions shall not exceed any of the following limits: 30 ppmvd NOx @ 3% O₂; or 100 ppmvd CO @ 3% O₂. [District Rules 2201; 4305, 5.1 & 5.3; 4306, 5.3; 4320, 5.6; and 4351, 5.1 & 5.5] Y</i> • <i>Startup and shutdown shall not exceed 1 hour each per year. The emission control system shall be in operation, and emissions shall be minimized insofar as technologically possible during startup and shutdown. [District Rules 2201; 4305, 5.5.6; 4306, 5.3; and 4320, 5.6] Y</i>
<p>Section 5.7, Monitoring Provisions: Section 5.4.2 requires each unit subject to Section 5.1 to either install a continuous emissions monitoring system (CEMS) for NOx, CO and oxygen or implement an APCO-approved Alternate Emission Monitoring System.</p>	<p>The applicant has proposed to use Alternate Emission Monitoring System, Option A (periodic monitoring using District approved portable analyzer) from the District's pre-approved Alternate Monitoring Schemes per District Policy SSP 1105. The following conditions will be included on the permit:</p> <ul style="list-style-type: none"> • <i>The stack O₂ concentration measurement and inspection of burner mechanical settings shall be conducted at least on a weekly basis. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last week. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] Y</i> • <i>The normal range/level of stack O₂ concentration and visible mechanical burner settings shall be established by source testing this unit or other representative units per Rule 4305 and as approved by the District. The normal range/level shall be that for which compliance with applicable NOx and CO emission limits has been</i>

	<p>demonstrated through source testing at a similar firing rate. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] Y</p> <ul style="list-style-type: none">• Normal range or level for the stack O2 concentration and burner mechanical settings shall be re-established during each source test required by this permit. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] Y• If the either the stack O2 concentration or visible mechanical burner settings are less than the normal range/level, the permittee shall return the stack O2 concentration and visible mechanical burner settings to the normal range/level as soon as possible, but no longer than 1 hour of operation after detection. If the stack O2 concentration and visible mechanical burner settings are not returned to the normal range/level within 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour, and conduct a source test within 60 days of the first exceedance, to demonstrate compliance with the applicable emission limits at the new stack O2 concentration and visible mechanical burner settings. A District-approved portable analyzer may be used in lieu of a source test to demonstrate compliance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] Y• The permittee shall maintain records of the date and time of O2 measurements and burner adjustments, the measured O2 concentrations (% by volume) and firing rate at the time of O2 measurement, and the observed burner mechanical settings. The records must also include a description of any corrective action taken to maintain the O2 concentration and the burner mechanical settings within the acceptable range. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] Y
--	--

<p>Section 5.7.6 outlines requirements for monitoring SO_x emissions. Section 5.7.6.1 requires the operator of any unit that proposes to comply with Section 5.4.1.1 (fired exclusively on PUC-quality natural gas, commercial propane, butane, LPG, or a combination of these fuel gases) or Section 5.4.1.2 (fuel sulfur content limit of 5 grains/100 scf) to provide an annual fuel analysis.</p>	<p>The boiler will be fired exclusively on PUC-Quality natural gas, which per District Policy APR 1720, the District assumes has a sulfur content not exceeding 1.0 grains/100 scf. Therefore, the District will accept analyses or other equivalent certification documents from the fuel supplier for demonstrating compliance with the SO_x emission monitoring requirement. The following condition will be included on the permit:</p> <ul style="list-style-type: none"> • <i>Operator shall maintain copies of fuel invoices and supplier certifications. [District Rules 2520, 9.3.2; and 4351, 6.1.1] Y</i>
<p>Section 5.8.1 requires that the operator of any unit shall have the option of complying with either the applicable heat input (lb/MMBtu) emission limits or the concentration (ppmv) emission limits specified in Section 5.2. The emission limits selected to demonstrate compliance shall be specified in the source test proposal pursuant to Rule 1081 (Source Sampling).</p>	<p>To ensure compliance with this section, the following condition will be listed on the permit:</p> <ul style="list-style-type: none"> • <i>The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1; 4306, 5.5.1; 4320, 5.8.1; and 4351, 5.7.1] Y</i>
<p>Section 5.8.2 requires that 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.</p>	<p>Therefore, the following permit condition will be listed on the permit as follows:</p> <ul style="list-style-type: none"> • <i>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, 5.5.2; 4306, 5.5.2; 4320, 5.7.2; and 4351, 5.7.2] Y</i>
<p>Section 5.8.5 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.</p>	<p>Therefore, the following permit condition will be listed on the permit as follows:</p> <ul style="list-style-type: none"> • <i>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, 5.5.5; 4306, 5.5.5; and 4320, 5.8.5] Y</i>
<p>Section 6.1 requires that the records required by Sections 6.1.1 through 6.1.5 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.</p>	<p>The following permit condition will be listed on the permit as shown below:</p> <ul style="list-style-type: none"> • <i>All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070; 4305, 6.1; 4306, 6.1; 4320, 6.1; and 4351, 6.1 and 40 CFR Part 60 Subpart Dc Paragraph 60.48c(i)] Y</i>
<p>Section 6.1.2 requires that the operator of a unit subject to Section 5.5 shall record the amount of fuel use at least on a monthly basis.</p>	<p>Since this unit is not subject to the requirements listed in Section 5.5, it is not subject to Section 6.1.2 requirements.</p>

<p>Section 6.1.3 requires that the operator of a unit subject to Section 5.5.1 or 6.3.1 shall maintain records to verify that the required tune-up and the required monitoring of the operational characteristics have been performed.</p>	<p>This unit is subject to the requirements of Section 6.3.1; therefore, the following condition will be included on the permit to ensure compliance with the requirements of this section.</p> <ul style="list-style-type: none"> • <i>During the 36-month source testing interval, the owner/operator shall have unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters); and shall monitor, at least on a monthly basis, the unit's operational characteristics recommended by the manufacturer to ensure compliance with the emission limits. Records to verify that the required tune-ups and the required monitoring of the operational characteristics of the unit have been performed shall be maintained. [District Rules 4305, 6.3.1 & 6.1.4; 4306, 6.3.1 & 6.1.3; 4320, 6.3.1 & 6.1.3; and 4351, 6.3.1] Y</i> • <i>If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. [District Rules 4306, 5.2.1; 4320, 5.5.1; and 4351, 5.2.1] Y</i>
<p>Section 6.1.4 requires that the operator of a unit with startup or shutdown provisions keep records of the duration of the startup or shutdowns.</p>	<p>The applicant has proposed that the NOx emissions from this boiler will be different during start-up or shutdown events, The following condition will be included on the permit:</p> <ul style="list-style-type: none"> • <i>The permittee shall maintain records of the duration of each startup and shutdown occurrence. [District Rules 4305, 6.1.5; 4306, 6.1.4 and 4320, 6.1.4] Y</i>
<p>Section 6.1.5 requires that the operator of a unit fired on liquid fuel during PUC-quality natural gas curtailment periods record the sulfur content of the fuel, amount of fuel used, and duration of the natural gas curtailment period.</p>	<p>The applicant has not proposed the use of curtailment fuels; therefore, the requirements of this section do not apply.</p>

<p>Section 6.2, Test Methods, identifies the test methods as District-approved source testing methods for all applicable pollutants.</p>	<p>The following permit conditions will be listed on the permit to ensure the applicable source test are performed:</p> <ul style="list-style-type: none"> • <i>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] Y</i> • <i>NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 6.2.2 & 6.2.5; 4306, 6.2.2 & 6.2.5; 4320, 6.2.2 & 6.2.5; and 4351, 6.2.2 & 6.2.5] Y</i> • <i>CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 6.2.3; 4306, 6.2.3; 4320, 6.2.3; and 4351, 6.2.3] Y</i> • <i>Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. Stack gas velocity shall be determined using EPA Method 2. Stack gas moisture content shall be determined using EPA Method 4. [District Rules 4305, 6.2.4, 6.2.6 & 6.2.7; 4306, 6.2.4, 6.2.6 & 6.2.7; 4320, 6.2.4, 6.2.6 & 6.2.7; and 4351, 6.2.4, 6.2.6 & 6.2.7] Y</i>
<p>Section 6.3.1 requires that units be tested to determine compliance with the applicable requirements of section 5.1 and 5.3 not less than once every 12 months. Upon demonstrating compliance on two consecutive compliance source tests, the following source test may be deferred for up to thirty-six months.</p>	<p>The following conditions will be included on the permit to verify compliance with the proposed NOx and CO emission limits:</p> <ul style="list-style-type: none"> • <i>Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months until the source demonstrates compliance on two (2) consecutive annual source tests, in which case source testing shall revert back to once every thirty-six (36) months. [District Rules 4305, 6.3.1; 4306, 6.3.1; 4320, 6.3.1; and 4351, 6.3.1] Y</i>The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Y

Rule 4351 Boilers, Steam Generators and Process Heaters – Phase I

Compliance with the requirements of this rule was previously demonstrated for this unit. Since there are no proposed changes to the operation or equipment for this project, continued compliance with this rule is expected.

California Health & Safety Code 42301.6 (School Notice)

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

California Environmental Quality Act (CEQA)

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; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

The District performed an Engineering Evaluation (this document) for the proposed project and determined that all project specific emission unit(s) are exempt from Best Available Control Technology (BACT) requirements. Furthermore, the District conducted a Risk Management Review and concludes that potential health impacts are less than significant.

Issuance of permits for emissions units not subject to BACT requirements and with health impact less than significant is a matter of ensuring conformity with applicable District rules and regulations and does not require discretionary judgment or deliberation. Thus, the District concludes that this permitting action constitutes a ministerial approval. Section 21080 of the Public Resources Code exempts from the application of CEQA those projects over which a public agency exercises only ministerial approval. Therefore, the District finds that this project is exempt from the provisions of CEQA.

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Issue Authority to Construct (ATC) N-1657-15-8 subject to the permit conditions on the attached draft ATC in Appendix A.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Previous Schedule
N-1657-15-8	3020-02-G	14.7 MMBtu/hr boiler	3020-02-G

Appendices

- A: Draft ATC
- B: Current PTO
- C: SSPE1 Calculations
- D: SSPE2 Calculations
- E: Compliance Certification

Attachments

- I: QNEC Calculation

APPENDIX A
Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT

PERMIT NO: N-1657-15-8

LEGAL OWNER OR OPERATOR: SENSIENT DEHYDRATED FLAVORS COMPANY
MAILING ADDRESS: ATTN: CHRIS KAJI, EHS ENGINEER
PO BOX 485
LIVINGSTON, CA 95334

LOCATION: 9984 WEST WALNUT AVENUE
LIVINGSTON, CA 95334

EQUIPMENT DESCRIPTION:

MODIFICATION OF 14.7 MMBTU/HR HURST FIRETUBE BOILER WITH A POWER FLAME MODEL NVC 8-G-30 ULTRA LOW-NOX BURNER TO REDUCE THE NOX EMISSIONS LIMIT FROM 15 TO 9 PPMVD @ 3% O2 FOR DISTRICT RULE 4320 COMPLIANCE.

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. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
4. {469} Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO2, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
5. Except during startup and shutdown, emissions from the natural gas-fired unit shall not exceed any of the following limits: 9 ppmvd NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201; 4305, 5.1 & 5.3; 4306, 5.1; 4320, 5.2; and 4351, 5.1 & 5.5] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director APCO

DAVID WARNER, Director of Permit Services

N-1657-15-8 - Feb 14 2012 2:19PM -- GILLESPIE - John Inspection NOT Required

6. During startup and shutdown, emissions shall not exceed any of the following limits: 30 ppmvd NO_x @ 3% O₂ or 0.036 lb-NO_x/MMBtu, or 100 ppmvd CO @ 3% O₂ or 0.074 lb-CO/MMBtu [District Rules 2201; 4305, 5.1 & 5.3; 4306, 5.3; 4320, 5.6; and 4351, 5.1 & 5.5] Federally Enforceable Through Title V Permit
7. Startup and shutdown shall not exceed 1 hour each per year. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during start-up and shutdown. [District Rules 2201; 4305, 5.5.6; 4306, 5.3; and 4320, 5.6] Federally Enforceable Through Title V Permit
8. The unit shall only be fired on PUC-regulated natural gas. [District Rules 2201] Federally Enforceable Through Title V Permit
9. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months until the source demonstrates compliance on two (2) consecutive annual source tests, in which case source testing shall revert back to once every thirty-six (36) months. [District Rules 4305, 6.3.1; 4306, 6.3.1; 4320, 6.3.1; and 4351, 6.3.1] Federally Enforceable Through Title V Permit
10. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1; 4306, 5.5.1; 4320, 5.8.1; and 4351, 5.7.1] Federally Enforceable Through Title V Permit
11. All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 5.5.2; 4306, 5.5.2; 4320, 5.7.2; and 4351, 5.7.2] Federally Enforceable Through Title V Permit
12. 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, 5.5.5; 4306, 5.5.5; and 4320, 5.8.5] Federally Enforceable Through Title V Permit
13. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
14. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 6.2.2 & 6.2.5; 4306, 6.2.2 & 6.2.5; 4320, 6.2.2 & 6.2.5; and 4351, 6.2.2 & 6.2.5] Federally Enforceable Through Title V Permit
15. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 6.2.3; 4306, 6.2.3; 4320, 6.2.3; and 4351, 6.2.3] Federally Enforceable Through Title V Permit
16. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. Stack gas velocity shall be determined using EPA Method 2. Stack gas moisture content shall be determined using EPA Method 4. [District Rules 4305, 6.2.4, 6.2.6 & 6.2.7; 4306, 6.2.4, 6.2.6 & 6.2.7; 4320, 6.2.4, 6.2.6 & 6.2.7; and 4351, 6.2.4, 6.2.6 & 6.2.7] Federally Enforceable Through Title V Permit
17. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
18. During the 36-month source testing interval, the owner/operator shall have unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters); and shall monitor, at least on a monthly basis, the unit's operational characteristics recommended by the manufacturer to ensure compliance with the emission limits. Records to verify that the required tune-ups and the required monitoring of the operational characteristics of the unit have been performed shall be maintained. [District Rules 4305, 6.3.1 & 6.1.4; 4306, 6.3.1 & 6.1.3; 4320, 6.3.1 & 6.1.3; and 4351, 6.3.1] Federally Enforceable Through Title V Permit

DRAFT

CONDITIONS CONTINUE ON NEXT PAGE

19. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. [District Rules 4306, 5.2.1; 4320, 5.5.1; and 4351, 5.2.1] Federally Enforceable Through Title V Permit
20. The stack O2 concentration measurement and inspection of burner mechanical settings shall be conducted at least on a weekly basis. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last week. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] Federally Enforceable Through Title V Permit
21. The normal range/level of stack O2 concentration and visible mechanical burner settings shall be established by source testing this unit or other representative units per Rule 4305 and as approved by the District. The normal range/level shall be that for which compliance with applicable NOx and CO emission limits has been demonstrated through source testing at a similar firing rate. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] Federally Enforceable Through Title V Permit
22. Normal range or level for the stack O2 concentration and burner mechanical settings shall be re-established during each source test required by this permit. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] Federally Enforceable Through Title V Permit
23. If the either the stack O2 concentration or visible mechanical burner settings are less than the normal range/level, the permittee shall return the stack O2 concentration and visible mechanical burner settings to the normal range/level as soon as possible, but no longer than 1 hour of operation after detection. If the stack O2 concentration and visible mechanical burner settings are not returned to the normal range/level within 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour, and conduct a source test within 60 days of the first exceedance, to demonstrate compliance with the applicable emission limits at the new stack O2 concentration and visible mechanical burner settings. A District-approved portable analyzer may be used in lieu of a source test to demonstrate compliance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] Federally Enforceable Through Title V Permit
24. The permittee shall maintain records of the date and time of O2 measurements and burner adjustments, the measured O2 concentrations (% by volume) and firing rate at the time of O2 measurement, and the observed burner mechanical settings. The records must also include a description of any corrective action taken to maintain the O2 concentration and the burner mechanical settings within the acceptable range. [District Rules 4305, 5.4.2; 4306, 5.4.2; and 4320, 5.7.1] Federally Enforceable Through Title V Permit
25. The permittee shall maintain records of the duration of each startup and shutdown occurrence. [District Rules 4305, 6.1.5; 4306, 6.1.4 and 4320, 6.1.4] Federally Enforceable Through Title V Permit
26. Records of the monthly and annual heat input of the unit shall be maintained. [District Rule 4001 and 40 CFR Part 60 Subpart Dc Paragraph 60.48c(g)(2)] Federally Enforceable Through Title V Permit
27. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070; 4305, 6.1; 4306, 6.1; 4320, 6.1; and 4351, 6.1 and 40 CFR Part 60 Subpart Dc Paragraph 60.48c(i)] Federally Enforceable Through Title V Permit
28. NOx, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
29. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty minute test runs for NOx and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit

DRAFT
CONDITIONS CONTINUE ON NEXT PAGE

30. Operator shall maintain copies of fuel invoices and supplier certifications. [District Rules 2520, 9.3.2; and 4351, 6.1.1] Federally Enforceable Through Title V Permit
31. Operator shall provide that fuel hhv be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2.1; 4320, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
32. {464} Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Rule 405 (Madera), Rule 408 (Fresno), Rule 408.2 (Merced) and 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin); Rule 402 (Madera) and 404 (all seven remaining counties in the San Joaquin Valley); SJVUAPCD Rule 4301. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
33. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Rule 407 (Merced); SJVUAPCD Rule 4801. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
34. {474} Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rule 4201 and 4301. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
35. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rule 1081. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
36. {501} Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rule 4305, Sec. 4.2, 5.1.1, 5.1.2,, 5.4, 6.1.1, 6.2 (excepting 6.2.324), 6.3, 8.1 and Rule 4351 Sec 4.2, 5.2.2.1, 5.2.2.2, 6.1.1, 6.2 (excepting 6.2.324), 8.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
37. {1672} This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

DRAFT

APPENDIX B
Current PTO

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-1657-15-7

EXPIRATION DATE: 09/30/2015

EQUIPMENT DESCRIPTION:

14.7 MMBTU/HR HURST FIRETUBE BOILER WITH A POWER FLAME MODEL NVC 8-G-30 ULTRA LOW-NOX BURNER

PERMIT UNIT REQUIREMENTS

1. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
2. Particulate matter emissions shall not exceed 0.1 grain/dscf at operating conditions, nor 0.1 grain/dscf calculated to 12% CO₂, nor 10 lb/hr. [District Rule 4201 and District Rule 4301, 5.1 and 5.2.3] Federally Enforceable Through Title V Permit
3. Except for NO_x and CO during startup and shutdown, emissions from the natural gas-fired unit shall not exceed any of the following limits: 15 ppmvd NO_x @ 3% O₂ or 0.018 lb-NO_x/MMBtu, 0.0029 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 50 ppmvd CO @ 3% O₂ or 0.037 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201; 4305, 5.1 & 5.3; 4306, 5.1; and 4351, 5.1 & 5.5] Federally Enforceable Through Title V Permit
4. During startup and shutdown, emissions shall not exceed any of the following limits: 30 ppmvd NO_x @ 3% O₂ or 0.036 lb-NO_x/MMBtu, or 100 ppmvd CO @ 3% O₂ or 0.074 lb-CO/MMBtu [District Rules 2201; 4305, 5.1 & 5.3; 4306, 5.3; and 4351, 5.1 & 5.5] Federally Enforceable Through Title V Permit
5. Startup and shutdown shall not exceed 1 hour each per year. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during start-up and shutdown. [District Rules 2201 and 4306, 5.3] Federally Enforceable Through Title V Permit
6. The unit shall only be fired on PUC-regulated natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months until the source demonstrates compliance on two (2) consecutive annual source tests, in which case source testing shall revert back to once every thirty-six (36) months. [District Rules 4305, 6.3.1; 4306, 6.3.1; and 4351, 6.3.1] Federally Enforceable Through Title V Permit
8. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 5.5.1; 4306, 5.5.1; and 4351, 5.7.1] Federally Enforceable Through Title V Permit
9. 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, 5.5.2; 4306, 5.5.2; and 4351, 5.7.2] Federally Enforceable Through Title V Permit
10. 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, 5.5.5 and 4306, 5.5.5] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
12. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 6.2.2 & 6.2.5; 4306, 6.2.2 & 6.2.5; and 4351, 6.2.2 & 6.2.5] Federally Enforceable Through Title V Permit
13. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 6.2.3; 4306, 6.2.3; and 4351, 6.2.3] Federally Enforceable Through Title V Permit
14. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. Stack gas velocity shall be determined using EPA Method 2. Stack gas moisture content shall be determined using EPA Method 4. [District Rules 4305, 6.2.4, 6.2.6 & 6.2.7; 4306, 6.2.4, 6.2.6 & 6.2.7; and 4351, 6.2.4, 6.2.6 & 6.2.7] Federally Enforceable Through Title V Permit
15. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
16. During the 36-month source testing interval, the owner/operator shall have unit tuned at least twice each calendar year, from four to eight months apart, in which it operates, by a technician that is qualified, to the satisfaction of the APCO, in accordance with the procedure described in Rule 4304 (Equipment Tuning Procedure for Boilers, Steam Generators, and Process Heaters); and shall monitor, at least on a monthly basis, the unit's operational characteristics recommended by the manufacturer to ensure compliance with the emission limits. Records to verify that the required tune-ups and the required monitoring of the operational characteristics of the unit have been performed shall be maintained. [District Rules 4305, 6.3.1 & 6.1.4; 4306, 6.3.1 & 6.1.3; and 4351, 6.3.1] Federally Enforceable Through Title V Permit
17. If the unit does not operate throughout a continuous six-month period within a calendar year, only one tune-up is required for that calendar year. No tune-up is required for any unit that is not operated during that calendar year; this unit may be test fired to verify availability of the unit for its intended use, but once the test firing is completed the unit shall be shutdown. [District Rule 4306, 5.2.1] Federally Enforceable Through Title V Permit
18. The stack O₂ concentration measurement and inspection of burner mechanical settings shall be conducted at least on a weekly basis. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last week. Records must be maintained of the dates of non-operation to validate extended monitoring frequencies. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit
19. The normal range/level of stack O₂ concentration and visible mechanical burner settings shall be established by source testing this unit or other representative units per Rule 4305 and as approved by the District. The normal range/level shall be that for which compliance with applicable NO_x and CO emission limits has been demonstrated through source testing at a similar firing rate. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit
20. Normal range or level for the stack O₂ concentration and burner mechanical settings shall be re-established during each source test required by this permit. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

21. If either the stack O₂ concentration or visible mechanical burner settings are less than the normal range/level, the permittee shall return the stack O₂ concentration and visible mechanical burner settings to the normal range/level as soon as possible, but no longer than 1 hour of operation after detection. If the stack O₂ concentration and visible mechanical burner settings are not returned to the normal range/level within 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour, and conduct a source test within 60 days of the first exceedance, to demonstrate compliance with the applicable emission limits at the new stack O₂ concentration and visible mechanical burner settings. A District-approved portable analyzer may be used in lieu of a source test to demonstrate compliance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit
22. The permittee shall maintain records of the date and time of O₂ measurements and burner adjustments, the measured O₂ concentrations (% by volume) and firing rate at the time of O₂ measurement, and the observed burner mechanical settings. The records must also include a description of any corrective action taken to maintain the O₂ concentration and the burner mechanical settings within the acceptable range. [District Rules 4305, 5.4.2 and 4306, 5.4.2] Federally Enforceable Through Title V Permit
23. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070; 4305, 6.1; 4306, 6.1; and 4351, 6.1] Federally Enforceable Through Title V Permit
24. NO_x, and CO emissions shall be measured with source testing conducted by independent testing laboratory and shall be witnessed or authorized by the District. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
25. Emissions for this unit shall be calculated using the arithmetic mean, pursuant to District Rule 1081 (Amended December 16, 1993), of 3 thirty minute test runs for NO_x and CO. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
26. Operator shall maintain copies of fuel invoices and supplier certifications. [District Rule 2520, 9.3.2; and 4351, 6.1.1] Federally Enforceable Through Title V Permit
27. Operator shall provide that fuel hhv be certified by third party fuel supplier or determined by: ASTM D 1826 or D 1945 in conjunction with ASTM D 3588 for gaseous fuels. [District Rule 2520, 9.4.2; 4305, 6.2.1; 4306, 6.2.1; and 4351, 6.2.1] Federally Enforceable Through Title V Permit
28. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Rule 405 (Madera), Rule 408 (Fresno), Rule 408.2 (Merced) and 407.2 (Kern, Tulare, Kings, Stanislaus, and San Joaquin); Rule 402 (Madera) and 404 (all seven remaining counties in the San Joaquin Valley); SJVUAPCD Rule 4301. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
29. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Rule 407 (Merced); SJVUAPCD Rule 4801. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
30. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rule 4201 and 4301. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
31. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rule 1081. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

32. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following requirements: SJVUAPCD Rule 4305, Sec. 4.2, 5.1.1, 5.1.2,, 5.4, 6.1.1, 6.2 (excepting 6.2.324), 6.3, 8.1 and Rule 4351 Sec 4.2, 5.2.2.1, 5.2.2.2, 6.1.1, 6.2 (excepting 6.2.324), 8.1. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
33. This unit has not been used to produce electricity for sale in 1985 or on or after November 15, 1990. Therefore, the requirements of 40 CFR 72.6(b) do not apply to this source. A permit shield is granted from this requirement. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit

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

APPENDIX C
SSPE1 Calculations

Pre Project Stationary Source Potential to Emit (SSPE1) Calculation

The values in the table below were gathered from the application review for Project N-1110269.

Pre Project Stationary Source Potential to Emit (SSPE1) [lb/year]					
Permit Unit #	NOx	SOx	PM₁₀	CO	VOC
N-1657-1-5	37,865	826	2,164	105,054	1,566
N-1657-2-6	48,769	1,275	3,400	165,099	2,461
N-1657-3-6					
N-1657-4-2	0	0	5,840	0	0
N-1657-5-2	21,024	610	1,598	77,579	1,156
N-1657-6-4	0	0	0	0	0
N-1657-7-2	0	0	365	0	0
N-1657-8-5	0	0	1,314	0	0
N-1657-9-4	47,742	1,248	3,329	161,622	2,409
N-1657-10-4	33,419	874	2,330	113,135	1,686
N-1657-12-3	50,390	1,099	2,879	139,803	2,084
N-1657-13-2	0	0	3,431	0	0
N-1657-14-2	0	0	2,263	0	0
N-1657-15-7	2,318	367	979	4,765	708
N-1657-18-3	7,008	203	533	25,860	400
N-1657-21-3	0	0	292	0	0
N-1657-22-7	11,038	1,226	3,679	90,754	1,533
N-1657-24-2	0	0	0	0	0
N-1657-25-2	0	0	0	0	0
N-1657-30-2	0	0	80	0	235
N-1657-31-2	242	13	16	9,657	451
N-1657-32-2	242	13	16	9,657	451
N-1657-33-0	36,624	958	2,554	123,984	1,848
N-1657-34-0					
N-1657-36-3	0	0	183	0	0
Total SSPE1	296,681	8,712	37,245	1,026,969	16,988

APPENDIX D
SSPE2 Calculations

Post Project Stationary Source Potential to Emit (SSPE2) Calculation

The only change with this project was the lowering of the NOx emission factor for unit N-1657-15. The table below reflects the annual PE2 values for N-1657-15-8 as calculated in Section VII.C.2.

Post Project Stationary Source Potential to Emit (SSPE2) [lb/year]					
Permit Unit #	NOx	SOx	PM ₁₀	CO	VOC
N-1657-1-5	37,865	826	2,164	105,054	1,566
N-1657-2-6	48,769	1,275	3,400	165,099	2,461
N-1657-3-6					
N-1657-4-2	0	0	5,840	0	0
N-1657-5-2	21,024	610	1,598	77,579	1,156
N-1657-6-4	0	0	0	0	0
N-1657-7-2	0	0	365	0	0
N-1657-8-5	0	0	1,314	0	0
N-1657-9-4	47,742	1,248	3,329	161,622	2,409
N-1657-10-4	33,419	874	2,330	113,135	1,686
N-1657-12-3	50,390	1,099	2,879	139,803	2,084
N-1657-13-2	0	0	3,431	0	0
N-1657-14-2	0	0	2,263	0	0
N-1657-15-8	1,417	367	979	4,765	708
N-1657-18-3	7,008	203	533	25,860	400
N-1657-21-3	0	0	292	0	0
N-1657-22-7	11,038	1,226	3,679	90,754	1,533
N-1657-24-2	0	0	0	0	0
N-1657-25-2	0	0	0	0	0
N-1657-30-2	0	0	80	0	235
N-1657-31-2	242	13	16	9,657	451
N-1657-32-2	242	13	16	9,657	451
N-1657-33-0	36,624	958	2,554	123,984	1,848
N-1657-34-0					
N-1657-36-3	0	0	183	0	0
Total SSPE1	295,780	8,712	37,245	1,026,969	16,988

APPENDIX E
Compliance Certification Form

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

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

- SIGNIFICANT PERMIT MODIFICATION ADMINISTRATIVE
 MINOR PERMIT MODIFICATION AMENDMENT

COMPANY NAME: Sensient Dehydrated Flavors	FACILITY ID: N - 1657
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name: Sensient Technologies Corporation	
3. Agent to the Owner: Joesph Martins	

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:

Joseph Martins
Signature of Responsible Official

11-9-2011
Date

Joseph Martins
Name of Responsible Official (please print)

Director of Manufacturing
Title of Responsible Official (please print)