



APR 15 2015

Mr. Garrett Pounds
Frito-Lay, Inc.
28801 Highway 58
Bakersfield, CA 93114

**Re: Proposed Authority to Construct/Certificate of Conformity (Minor Mod)
District Facility # S-2076
Project # S-1144554**

Dear Mr. Pounds:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The facility has proposed to modify the operating requirements for permit unit S-2076-9, a 6.0 MW MMBtu/hr gas turbine generator, by requiring continuous operation of the auxiliary burner while the gas turbine operates, except during the thermal stabilization period. As a result, the facility would not need to demonstrate compliance with Rule 4703 Section 6.3.3 by testing emissions while the auxiliary burner is operating and not operating.

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

If you have any questions, please contact Mr. Jim Swaney, Permit Services Manager, at (559) 230-5900.

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Mr. Garrett Pounds
Page 2

Thank you for your cooperation in this matter.

Sincerely,



Arnaud Marjollet
Director of Permit Services



Enclosures

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

San Joaquin Valley Air Pollution Control District
Authority to Construct Application Review
Modifying Compliance Requirements for Auxiliary Burners

Facility Name:	Frito-Lay, Inc.	Date:	March 23, 2015
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Application #(s):	S-2076-9-15		
Project #:	S-1144554		
Deemed Complete:	January 13, 2015		

I. Proposal

Frito-Lay, Inc. (hereafter referred to as FLNA) operates a cogeneration system at their food processing facility. FLNA has proposed to modify the operating requirements for permit unit S-2076-9-13, a 6.0 MW 53 MMBtu/hr gas turbine engine generator set equipped with a 40 MMBtu/hr low-pressure heat recovery steam generator with a Coen auxiliary burner.

District Rule 4703 *Stationary Gas Turbines*, Section 6.3.3 requires any gas turbine equipped with an intermittently operated auxiliary burner to demonstrate emission compliance with the auxiliary burner off and on. The proposed modification would require continuous operation of the auxiliary burner while the gas turbine operates, except during the thermal stabilization period. As a result, Rule 4703 Section 6.3.3 would not be applicable as the equipment will no longer be allowed to operate intermittently. There will be no increase in emissions as a result of this modification.

Additionally, the Eldon heat reclaimer and conditions #12, 13, and 19 will be removed with this project. Pursuant to ATC S-2076-9-11, the District approved the removal of the Eldon heat reclaimer and the corresponding conditions (#12, 13, and 19). However, the heat reclaimer and the conditions were inadvertently left on ATC S-2076-9-13; therefore, the equipment description will be corrected and conditions removed.

FLNA received their Title V Permit on January 10th, 2000. This modification can be classified as a Title V minor modification pursuant to Rule 2520, 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. FLNA must apply to administratively amend their Title V permit.

II. Applicable Rules

Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)

Rule 2410 Prevention of Significant Deterioration (6/16/11)
Rule 2520 Federally Mandated Operating Permits (6/21/01)
Rule 4001 New Source Performance Standards Subpart GG (4/14/99)
Rule 4002 National Emissions Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101 Visible Emissions (2/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4201 Particulate Matter Concentration (12/17/92)
Rule 4301 Fuel Burning Equipment (12/17/92)
Rule 4703 Stationary Gas Turbines (9/20/07)
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 28801 Highway 58, near Bakersfield, 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

The cogeneration system provides electricity and steam to FLNA food processing operations. The gas-fired turbine burns natural gas to generate electricity while the turbine exhaust waste heat is routed through a heat recovery steam generator (HRSG) to generate steam for process heating purposes.

The facility has proposed to operate the gas turbine and the auxiliary Coen burner concurrently, except during the thermal stabilization period.

V. Equipment Listing

Pre-Project Equipment Description:

S-2076-9-13: COGENERATION FACILITY INCLUDING ALLISON 6.0 MW 53 MMBTU/HR GAS-FIRED GAS TURBINE ENGINE GENERATOR SET, 40 MMBTU/HR LOW-PRESSURE HEAT RECOVERY STEAM GENERATOR WITH COEN BURNER, PRE-COMBUSTION STEAM INJECTION NOZZLE, DANATECH ENERGY SYSTEMS SCR INCLUDING 1,000 GALLON ANHYDROUS AMMONIA STORAGE TANK,

Proposed Modification:

S-2076-9-15: MODIFICATION OF COGENERATION FACILITY INCLUDING ALLISON 6.0 MW 53 MMBTU/HR GAS-FIRED GAS TURBINE ENGINE GENERATOR SET, 40 MMBTU/HR LOW-PRESSURE HEAT RECOVERY STEAM GENERATOR WITH COEN BURNER, PRE-COMBUSTION STEAM INJECTION NOZZLE, DANATECH ENERGY SYSTEMS SCR INCLUDING 1,000 GALLON

ANHYDROUS AMMONIA STORAGE TANK: REVISE CONDITION REQUIRING DEMONSTRATION OF COMPLIANCE WITH AUXILIARY BURNER OFF

Post Project Equipment Description:

S-2076-9-15: COGENERATION FACILITY INCLUDING ALLISON 6.0 MW 53 MMBTU/HR GAS-FIRED GAS TURBINE ENGINE GENERATOR SET, 40 MMBTU/HR LOW-PRESSURE HEAT RECOVERY STEAM GENERATOR WITH COEN BURNER, PRE-COMBUSTION STEAM INJECTION NOZZLE, DANATECH ENERGY SYSTEMS SCR INCLUDING 1,000 GALLON ANHYDROUS AMMONIA STORAGE TANK

VI. Emission Control Technology Evaluation

Emissions from the combustions of natural gas include NO_x, SO_x, CO, PM₁₀, and VOC.

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.

The cogeneration system includes a natural gas-fired turbine and proposed selective catalytic reduction (SCR). The SCR system injects ammonia (with a maximum of 10 ppm slip) upstream of a NO_x reduction catalyst to achieve 5 ppm-NO_x @ 15% O₂. In the catalyst section the ammonia, oxygen, and NO_x react to form nitrogen gas, and water. The amount of ammonia which is injected is directly dependent on the concentration of NO_x in the exhaust. Slightly more ammonia than is theoretically required is injected in order to allow for incomplete mixing and non-uniform flow. A certain amount of ammonia will not be used in the reaction and is emitted as "ammonia slip" with the stack gas. The efficiency of the SCR system depends on such parameters as ammonia injection rate, contact time, and reaction temperature.

VII. General Calculations

A. Assumptions

- No change in emission factors or potential to emit are expected (per applicant).
- F-Factor for Natural Gas: 8,578 dscf/MMBtu corrected to 60°F (40 CFR 60, Appendix B).
- Fuel Higher Heating Value (HHV) is = 1,000 Btu/scf (District Practice).
- Unit operates 24 hr/day and 8,760 hr/year (current permit).

B. Emission Factors

Project Emission Factors		
	lb/MMBtu	Source
NO _x	0.0184 (5 ppm @ 15% O ₂)	Current permit
SO _x	0.0005 lb/MMBtu as SO ₂ 0.0018 lb/MMBtu as SO ₄	Current permit
PM ₁₀	0.0133 lb/MMBtu	Current permit
CO	0.1548 lb/MMBtu	Current permit
VOC	0.0147 lb/MMBtu	Current permit

C. Calculations

1. Pre-Project Potential to Emit (PE1)

The Pre-Project Potential to Emit (PE1) was previously calculated in Project S-1101962.

PE1		
	Daily Emissions (lb/day)	Annual Emissions (lb/year)
NO _x	42.8	15,622
SO _x	1.28 (SO ₂)	467 (SO ₂)
	4.09 (SO ₄)	1,493 (SO ₄)
	5.37 (SO _x)	1,960 (SO _x)
PM ₁₀	29.76	18,862
CO	345.6	126,144
VOC	32.88	12,000

2. Post Project Potential to Emit (PE2)

There are no expected changes in emissions as a result of this project. Therefore, PE1 = PE2.

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

Pursuant to District Rule 2201, the SSPE1 is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of Emission Reduction Credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions (AER) that have occurred at the source, and which have not been used on-site. The following potential to emit totals are referenced from Project S-1114136.

Pre-Project Stationary Source Potential to Emit [SSPE1] (lb/year)					
Permit Unit	NO _x	SO _x	PM ₁₀	CO	VOC
S-2076-1-14	6,938	1,798	8,830	47,304	1,892
S-2076-2-8	0	0	26,618	0	0
S-2076-3-8	0	0	12,352	0	0
S-2076-4-8	5,983	171	7,957	29,915	329
S-2076-5-8	5,983	171	7,957	29,915	329
S-2076-6-8	0	0	2,716	0	0
S-2076-7-5	0	0	0	0	0
S-2076-8-10	0	0	11,972	0	0
S-2076-9-13	15,622	1,960	10,862	126,144	12,000
S-2076-10-5	0	0	6,132	0	0
S-2076-11-6	1,481	18	106	319	92
S-2076-12-6	1,481	18	106	319	92
S-2076-15-5	0	0	130	0	0
S-2076-16-4	0	0	0	0	0
S-2076-17-7	20,639	489	7,446	50,734	682
S-2076-18-5	29,784	263	3,154	32,047	788
S-2076-19-14	8,578	95	2,848	104,792	439
S-2076-20-10	4,417	0	533	60,481	224
S-2076-21-15	5,346	313	4,672	24,454	419
Pre-Project SSPE (SSPE1)	106,252	5,296	114,391	506,424	17,283

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

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

Post Project Stationary Source Potential to Emit [SSPE2] (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
Post Project SSPE (SSPE2)	106,252	5,296	114,391	506,424	17,283

5. Major Source Determination

Rule 2201 Major Source Determination:

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

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

Rule 2201 Major Source Determination (lb/year)						
	NO _x	SO _x	PM ₁₀	PM _{2.5}	CO	VOC
SSPE1	106,252	5,296	114,391	114,391	506,424	17,283
SSPE2	106,252	5,296	114,391	114,391	506,424	17,283
Major Source Threshold	20,000	140,000	140,000	200,000	200,000	20,000
Major Source?	Yes	No	No	No	Yes	No

Note: PM2.5 assumed to be equal to PM10

This source is an existing Major Source for NO_x and CO emissions and will remain a Major Source for NO_x and CO. No change in other pollutants are proposed or expected as a result of this project.

Rule 2410 Major Source Determination:

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

PSD Major Source Determination (tons/year)						
	NO ₂	VOC	SO ₂	CO	PM	PM ₁₀
Estimated Facility PE before Project Increase	53.1	8.6	2.6	253	57.2	57.2
PSD Major Source Thresholds	100	100	100	100	100	100
PSD Major Source ? (Y/N)	N	N	N	Y	N	N

As shown above, the facility is an existing PSD major source for at least one pollutant.

6. Baseline Emissions (BE)

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

Pursuant to District Rule 2201, BE = PE1 for:

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

otherwise,

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

As shown in Section VII.C.5 above, the facility is not a Major Source for VOC, SO_x, and PM₁₀.

Therefore Baseline Emissions (BE) are equal to the Pre-Project Potential to Emit (PE1) for VOC, SO_x, and PM₁₀.

a. BE NO_x

Clean Emissions Unit, Located at a Major Source

Pursuant to Rule 2201, a Clean Emissions Unit is defined as an emissions unit that is "equipped with an emissions control technology with a minimum control efficiency of at least 95% or is 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 emissions unit is equipped with a DanaTech Energy Systems Selective Catalytic Reduction (SCR) system, which meets the requirements for achieved-in-practice BACT. Therefore, BE=PE1.

BE = PE1 = 15,622 lb-NO_x/year

d. BE CO

The BE calculation (in lb/year) is performed on a pollutant-by-pollutant basis to determine the amount of offsets required, where necessary, when the SSPE1 is greater than the offset threshold. This project is exempt from CO offsets pursuant to Rule 2201, Section 4.6.1. Therefore, BE calculations are not required.

7. SB 288 Major Modification

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

Since this facility is a major source for NO_x, the project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if the SB 288 Major Modification calculation is required.

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
NO _x	15,622	50,000	No

Since none of the SB 288 Major Modification Thresholds are surpassed with this project, this project does not constitute an SB 288 Major Modification.

8. Federal Major Modification

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

The determination of Federal Major Modification is based on a two-step test. For the first step, only the emission *increases* are counted. Emission decreases may not cancel out the increases for this determination.

Step 1

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

$$\text{Emission Increase} = \text{PAE} - \text{BAE} - \text{UBC}$$

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

UBC: Since this project does not result in an increase in design capacity or potential to emit, and it does not impact the ability of the emission unit to operate at a higher utilization rate, the UBC is the portion of PAE that the emission units could have accommodated during the baseline period.

The project's combined total emission increases are calculated in Section VII and compared to the Federal Major Modification Thresholds in the following table.

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb/yr)	Thresholds (lb/yr)	Federal Major Modification?
NO _x *	0	0	No
VOC*	0	0	No
PM ₁₀	0	30,000	No
PM _{2.5}	0	20,000	No
SO _x	0	80,000	No

*If there is any emission increases in NO_x or VOC, this project is a Federal Major Modification and no further analysis is required.

Since none of the Federal Major Modification Thresholds are being surpassed with this project, this project does not constitute a Federal Major Modification and no further analysis is required.

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

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

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

I. Project Location Relative to Class 1 Area

As demonstrated in the “PSD Major Source Determination” Section above, the facility was determined to be a existing PSD Major Source. Because the project is not located within 10 km (6.2 miles) of a Class 1 area (see Appendix G) – modeling of the emission increase is not required to determine if the project is subject to the requirements of Rule 2410.

II. Project Emission Increase – Significance Determination

a. Evaluation of Calculated Post-project Potential to Emit for New or Modified Emissions Units vs PSD Significant Emission Increase Thresholds

As a screening tool, the post-project potential to emit from all new and modified units is compared to the PSD significant emission increase thresholds, and if the total potentials to emit from all new and modified units are below the applicable thresholds, no further PSD analysis is needed.

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)					
	NO2	SO2	CO	PM	PM10
Total PE from New and Modified Units	7.8	1.0	63.1	9.4	6.0
PSD Significant Emission Increase Thresholds	40	40	100	25	15
PSD Significant Emission Increase?	N	N	N	N	N

As demonstrated above, because the post-project total potentials to emit from all new and modified emission units are below the PSD significant emission increase thresholds, this project is not subject to the requirements of Rule 2410 and no further discussion is required.

10. Quarterly Net Emissions Change (QNEC)

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

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

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

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

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

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

As discussed in Section I above, there are no new emissions units associated with this project. Therefore BACT for new units with PE > 2 lb/day purposes is not triggered.

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

As discussed in Section I above, there are no emissions units being relocated from one stationary source to another; therefore BACT is not triggered.

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

AIPE = PE₂ – HAPE

Where,

AIPE = Adjusted Increase in Permitted Emissions, (lb/day)

PE2 = Post-Project Potential to Emit, (lb/day)
HAPE = Historically Adjusted Potential to Emit, (lb/day)

$$HAPE = PE1 \times (EF2/EF1)$$

Where,

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

$$AIPE = PE2 - (PE1 * (EF2 / EF1))$$

The facility has not proposed to modify the current emission factors or potential to emit; PE1 = PE2 and EF1 = EF2, therefore AIPE = 0 and BACT is not triggered.

d. SB 288/Federal Major Modification

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

B. Offsets

1. Offset Applicability

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

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

Offset Determination (lb/year)					
	NO _x	SO _x	PM ₁₀	CO	VOC
SSPE2	106,252	5,296	114,391	506,424	17,283
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	Yes	No	Yes	Yes	No

2. Quantity of Offsets Required

As seen above, the facility is an existing Major Source for NO_x and CO and the SSPE2 is greater than the offset thresholds NO_x, PM10, and CO. Therefore offset calculations will be required for this project.

The quantity of offsets in pounds per year for NO_x, PM₁₀, and CO is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

Offsets Required (lb/year) = $(\Sigma[PE2 - BE] + ICCE) \times DOR$, for all new or modified emissions units in the project,

Where,

PE2 = Post Project Potential to Emit, (lb/year)

BE = Baseline Emissions, (lb/year)

ICCE = Increase in Cargo Carrier Emissions, (lb/year)

DOR = Distance Offset Ratio, determined pursuant to Section 4.8

BE = PE1 for:

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

otherwise,

BE = HAE

NO_x

As shown above, this is a Clean Emissions Unit for NO_x emissions, therefore, BE = HAE.

Offsets Required (lb/year) = $([PE2 - BE] + ICCE) \times DOR$

PE2 (NO_x) = 15,622 lb/year

BE (NO_x) = 15,622 lb/year

ICCE = 0 lb/year

Offsets Required (lb/year) = $([15,622 - 15,622] + 0) \times DOR$
= 0 lb NO_x/year

PM₁₀

According to the applicant, the permit unit is equipped with an air inlet cooler, a lube oil vent coalescer, and is fueled by natural gas; the permit unit meets BACT 3.4.3 Gas Turbine with Heat Recovery ($3 \leq MW \leq 10$) Achieved in Practice (AIP) requirements and is a Clean Emissions Unit pursuant to Rule 2201. Therefore, BE = HAE.

Offsets Required (lb/year) = $([PE2 - BE] + ICCE) \times DOR$

PE2 (NO_x) = 18,862 lb/year

BE (NO_x) = 18,862 lb/year

ICCE = 0 lb/year

Offsets Required (lb/year) = $([18,862 - 18,862] + 0) \times DOR$
= 0 lb NO_x/year

CO

CO offsets are triggered by CO emissions in excess of 200,000 lb/year for the facility. As shown previously, the SSPE2 for CO, after this project, is 506,424 lb/year, so offset requirements are triggered.

However, pursuant to Section 4.6.1, "Emission Offsets shall not be required for the following: increases in carbon monoxide in attainment areas if the applicant demonstrates to the satisfaction of the APCO, that the Ambient Air Quality Standards are not violated in the areas to be affected, and such emissions will be consistent with Reasonable Further Progress, and will not cause or contribute to a violation of Ambient Air Quality Standards (AAQS)."

The Technical Services Section of the San Joaquin Valley Unified Air Pollution Control District performed a CO modeling run, using the EPA AERMOD air dispersion model, to determine if the CO emissions from the new facility would exceed the State and Federal AAQS (Appendix E). Modeling of the worst case 1 hour and 8 hour CO impacts were performed; the proposed modification passed the 1 hour and 8 hour CO impacts and will not cause a violation of the CO Ambient Air Quality Standards. Therefore, CO emissions are exempt from offsets pursuant to Rule 2201 Section 4.6.1.

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.
- e. Any project which results in a Title V significant permit modification

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

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

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

b. PE > 100 lb/day

Applications which include a new emissions unit with a PE greater than 100 pounds during any one day for any pollutant will trigger public noticing requirements. There are no new emissions units associated with this project. Therefore public noticing is not required for this project for PE > 100 lb/day.

c. Offset Threshold

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

Offset Thresholds				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO _x	106,252	106,252	20,000 lb/year	No
SO _x	5,296	5,296	54,750 lb/year	No
PM ₁₀	114,391	114,391	29,200 lb/year	No
CO	506,424	506,424	200,000 lb/year	No
VOC	17,283	17,283	20,000 lb/year	No

The facility previously went through public noticing for exceeding the Offset Threshold (Project S-961013); therefore public noticing is not required for offset purposes.

d. SSIPE > 20,000 lb/year

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

SSIPE Public Notice Thresholds					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO _x	106,252	106,252	0	20,000 lb/year	No
SO _x	5,296	5,296	0	20,000 lb/year	No
PM ₁₀	114,391	114,391	0	20,000 lb/year	No
CO	506,424	506,424	0	20,000 lb/year	No
VOC	17,283	17,283	0	20,000 lb/year	No

As demonstrated above, the SSIPEs for all pollutants were less than 20,000 lb/year; therefore public noticing for SSIPE purposes is not required.

e. Title V Significant Permit Modification

As shown in the Discussion of Rule 2520 below, this project constitutes a Title V significant modification. Therefore, public noticing for Title V significant modifications is required for this project.

2. Public Notice Action

As discussed above, public noticing is required for this project for title V Significant Permit Modification. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC for this equipment.

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.

As a result of the modification, the following condition has been removed from the permit:

- Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner on and off. [40 CFR 60.335(b)(3) and District Rule 4703, 6.3.3] Y

The following condition will be added to the permit to ensure the continuous operation of the auxiliary burner, except during the thermal stabilization period:

- Except during the thermal stabilization period, the owner or operator shall not operate the gas turbine with the auxiliary burner off. [40 CFR 60.335(b)(3) and District Rules 2201 and 4703]

E. Compliance Assurance

1. Source Testing

As required by District Rule 4703, *Stationary Gas Turbines* these units are subject to source testing requirements. Monitoring requirements, in accordance with District Rule 4703 will be discussed in Section VIII, District Rule 4703, of this evaluation.

2. Monitoring

As required by District Rule 4703, *Stationary Gas Turbines* these units are subject to monitoring requirements. Monitoring requirements, in accordance with District Rule 4703 will be discussed in Section VIII, District Rule 4703, of this evaluation.

3. Recordkeeping

As required by District Rule 4703, *Stationary Gas Turbines*, the units are subject to recordkeeping requirements. Recordkeeping requirements, in accordance with District Rule 4703 will be discussed in Section VIII, District Rule 4703, of this evaluation.

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis (AAQA)

The facility emissions currently exceed the CO Offset threshold; however, CO offsets may not be required if the facility does not violate the AAQS, pursuant to Rule 2201 Section 4.6.1. Therefore, an AAQA for CO emissions shall be conducted for the purpose of determining whether this Stationary Source will cause or make worse a violation of an air quality standard. The District's Technical Services Division conducted the required analysis. Refer to Appendix E of this document for the AAQA summary sheet.

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

The following conditions will be included on the ATC to ensure that human health risks will not exceed District allowable levels:

- All exhaust stacks shall vent vertically upward. The vertical exhaust flows shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rules 2201 and 4102]
- Carbon monoxide (CO) emissions shall not exceed 0.1548 lb/MMBTU or 14.4 lb/hour. [District Rules 2201 and 4102]

Rule 2410 Prevention of Significant Deterioration

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

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modification will require the auxiliary burner to operate when the gas turbine operates, except during the thermal stabilization period. There is no increase in emissions since the current limits were based on the turbine, steam generator, and auxiliary burner operating at the same time. Furthermore, removing intermittent auxiliary burner operation is not considered a relaxation in monitoring, reporting, or recordkeeping, as the turbine will no longer be allowed to operate the burner intermittently.

Therefore, the proposed modification is a Minor Modification to the Title V Permit In accordance with the following requirements from Rule 2520:

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. The following conditions will ensure compliance:

- {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]
- {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]

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 GG applies to Stationary Gas Turbines that have a heat input at base load greater than 10.7 GJ/hr (10 MMBtu/hr) based on the lower heating value of the fuel. Therefore this subpart applies.

However, the proposed operating permit includes NO_x and SO_x limits that meet the standards of Subpart GG. These operating permit limits will not exceed the standards of this subpart as a result of this project. Reporting and notification requirements required by this subpart are also contained in the operating permit and are not subject to change.

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

This rule incorporates NESHAPs from Part 61, Chapter I, Subchapter C, Title 40, CFR and the NESHAPs from Part 63, Chapter I, Subchapter C, Title 40, CFR; and applies to all sources of hazardous air pollution listed in 40 CFR Part 61 or 40 CFR Part 63. As shown in Appendix F, the facility is not a Major Source of HAP emissions. Therefore, 40 CFR 63 Subpart YYYY is not applicable.

Rule 4101 Visible Emissions

Per Section 5.0, no person shall discharge into the atmosphere emissions of any air contaminant aggregating more than 3 minutes in any hour which is as dark as or darker than Ringelmann 1 (or 20% opacity). As the IC engine is fired solely on natural gas, visible emissions are not expected to exceed Ringelmann 1 or 20% opacity. Also, based on past inspections of the facility continued compliance is expected.

Rule 4102 Nuisance

Rule 4102 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, compliance with this rule is expected.

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.

As demonstrated above, there are no increases in emissions associated with this project, therefore a health risk assessment is not necessary and no further risk analysis is required.

Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot.

The following condition will ensure continued compliance with this rule:

- Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1]

Rule 4301 Fuel Burning Equipment

Rule 4301 applies to any fuel burning equipment except air pollution control equipment which is exempted according to Section 4.0.

Section 3.1 of this Rule defines fuel burning equipment as:

Fuel Burning Equipment: any furnace, boiler, apparatus, stack, and all appurtenances thereto, used in the process of burning fuel for the primary purpose of producing heat or power by indirect heat transfer.

The stationary combustion turbine primarily produces power through mechanical means where the combustion of gas is passed across the turbine blades to drive the turbine shaft, which, in turn, drives an electrical generator shaft to produce electricity. Therefore, the turbines do not meet the definition of fuel burning equipment and this rule does not apply

Rule 4703 Stationary Gas Turbines

The provisions of this rule apply to all stationary gas turbine systems, which are subject to District permitting requirements, and with ratings equal to or greater than 0.3 megawatt (MW) or a maximum heat input rating of more than 3,000,000 Btu per hour, except as provided in Section 4.0.

The subject turbine is subject to District permitting and maximum heat input ratings are above 3 MMBtu/hr; therefore, this turbine is subject to the provisions of this rule.

FLNA has proposed to require continuous operation of the Coen burner equipped on the gas turbine system, except during thermal stabilization periods. Since the auxiliary burner and gas turbine would operate simultaneously, the burner would no longer be considered an intermittently operated auxiliary burner, and Section 6.3.3 would no longer be applicable.

Therefore, the gas turbine system would not be required to demonstrate compliance with the auxiliary burner off. The following conditions will ensure compliance with this section:

- Except during the thermal stabilization period, the auxiliary burner shall be in operation whenever the gas turbine is in operation. [40 CFR 60.335(b)(3) and District Rule 4703, 6.3.3]
- The owner or operator shall maintain daily records that demonstrate the auxiliary burner is in operation whenever the gas turbine is in operation. [District Rule 4703]

Furthermore, the following condition will be removed from the permit:

- Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner on and off. [40 CFR 60.335(b)(3) and District Rule 4703, 6.3.3] Y

The facility previously submitted ATCs S-2076-9-11 and '-13 to demonstrate compliance with the emissions requirements of this rule (see Project S-1101962). There are no proposed modifications to the existing emissions requirements; therefore, compliance is expected and no further discussion is required.

California Health & Safety Code 42301.6 (School Notice)

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

California Environmental Quality Act (CEQA)

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

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

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 has determined that potential emission increases would have a less than significant health impact on sensitive receptors.

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. Pending a successful EPA review period, issue Authority to Construct S-2076-9-15 subject to the permit conditions on the attached draft Authority to Construct in Appendix A.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
S-2076-9-15	3020-08A-D	6.0 MW	\$3,062.00

Appendixes

- A: Draft ATC
- B: Current PTO
- C: Quarterly Net Emissions Change
- D: Emissions Profile
- E: AAQA Summary
- F: Major HAP Source Determination
- G: PSD Class 1 Area Map

APPENDIX A
Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: S-2076-9-15

LEGAL OWNER OR OPERATOR: FRITO-LAY, INC.
MAILING ADDRESS: 28801 HIGHWAY 58
BAKERSFIELD, CA 93314-9000

LOCATION: 28801 HIGHWAY 58
BAKERSFIELD, CA 93314

SECTION: 20 **TOWNSHIP:** 29S **RANGE:** 25E

EQUIPMENT DESCRIPTION:

MODIFICATION OF COGENERATION FACILITY INCLUDING ALLISON 6.0 MW 53 MMBTU/HR GAS-FIRED GAS TURBINE ENGINE GENERATOR SET, 40 MMBTU/HR LOW-PRESSURE HEAT RECOVERY STEAM GENERATOR WITH COEN BURNER, PRE-COMBUSTION STEAM INJECTION NOZZLE, DANATECH ENERGY SYSTEMS SCR INCLUDING 1,000 GALLON ANHYDROUS AMMONIA STORAGE TANK: REVISE CONDITION REQUIRING DEMONSTRATION OF COMPLIANCE WITH AUXILIARY BURNER OFF

CONDITIONS

1. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: control system operating parameters, elapsed time of operation, the fuel consumption and the ratio of water to fuel being fired in the turbine. [40 CFR 60.334(a) and District Rule 4703] Federally Enforceable Through Title V Permit
2. This unit shall be fired exclusively on natural gas as defined in 40 CFR 60.331(u) which has a total sulfur content of less than or equal to 1.0 gr/100 scf. [40 CFR 60.333(b), District Rule 4201, Kern County Rule 407] Federally Enforceable Through Title V Permit
3. Duct burner shall be fired exclusively with PUC quality or equivalent natural gas or propane. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Duct burner auxiliary air shall be supplied only in sub-stoichiometric quantities. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (661) 392-5500 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director / APCO

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Arnaud Marjollet, Director of Permit Services
9-2076-9-15 Apr 14 2015 2:57PM - YOSHIMUJ : Joint Inspection NOT Required

5. The owner or operator shall not operate the gas turbine under load conditions, excluding the thermal stabilization period or reduced load period, which results in the measured NO_x emissions concentration at cogeneration system exhaust exceeding 5 ppmv @ 15% O₂. [40 CFR 60.332(a)(1), (a)(2), District Rules 2201 and 4703, 5.1] Federally Enforceable Through Title V Permit
6. The owner or operator shall not operate the gas turbine under load conditions, excluding the thermal stabilization period or reduced load period, which results in the measured CO emissions concentration exceeding 200 ppmv @ 15% O₂. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
7. Except during the thermal stabilization period, the auxiliary burner shall be in operation whenever the gas turbine is in operation. [40 CFR 60.335(b)(3) and District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
8. Allison, Model 501, gas-fired gas turbine engine shall have a nominal heat input rating of 53 MMBTU/hr (LHV) and a maximum capability of 56 MMBTU/hr (LHV). [District Rule 2201] Federally Enforceable Through Title V Permit
9. Low pressure heat recovery steam generator with Coen duct burner shall have maximum heat input rating of 40 MMBTU/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Gas turbine engine shall exhaust only to heat recovery steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Heat recovery steam generator shall be equipped with 20 hp auxiliary air blower to duct burner. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Gas turbine engine and duct burner shall each be equipped with continuously recording fuel flow monitors. [District Rule 2201] Federally Enforceable Through Title V Permit
13. Gas turbine engine shall be equipped with pre-combustion and post-combustion steam injection systems for NO_x control. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Gas turbine engine shall be equipped with continuously recording steam injection rate monitor accurate to within 5%. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Gas turbine engine shall be equipped with selective catalytic reduction. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Exhaust stack shall be equipped with permanent sampling ports, platform, and access ladder facilitating collection of gas samples consistent with EPA test methods. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
17. Gas turbine engine steam injection rate shall be maintained at a steam-to-fuel ratio such that CO emission rate does not exceed 14.4 lb/hr, except for periods of start-up or shutdown or maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Maximum emission rates on any day shall not exceed 29.76 lb of PM-10, 4.09 lb of SO₄, 1.28 lb of SO₂, 42.8 lb of NO_x, 32.88 lb of VOCs, and 345.6 lb of CO. [District Rule 2201] Federally Enforceable Through Title V Permit
19. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
20. Ammonia emissions shall not exceed 10 ppmv @ 15% O₂ [District Rule 2201] Federally Enforceable Through Title V Permit
21. Particulate matter (PM-10) emissions shall not exceed 0.0133 lb/MMBtu except during periods when the steam injection system is down for maintenance or during periods of startup or shutdown. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Sulfur oxides emissions as SO₂ shall not exceed 0.0005 lb/MMBTU. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Sulfur oxides emissions as SO₄ shall not exceed 0.0018 lb/MMBTU. [District Rule 2201] Federally Enforceable Through Title V Permit
24. Volatile organic compound (VOC) emissions shall not exceed 0.0147 lb/MMBTU. [District Rule 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

25. Carbon monoxide (CO) emissions shall not exceed 0.1548 lb/MMBTU or 14.4 lb/hour. [District Rules 2201 and 4102] Federally Enforceable Through Title V Permit
26. Gas turbine engine shall not be operated when steam injection system is not operating, unless steam injection shutdown is required for maintenance and does not exceed 30 minutes in one day or is during start-up or shutdown. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Compliance with NO_x, CO, SO_x, and NH₃ emission limits shall be demonstrated by District-witnessed sampling by an independent laboratory annually 60 days prior to permit anniversary date, and test data/results shall be submitted within 60 days of sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
28. On any day maintenance of steam injection system is conducted or turbine start-up/shutdown occurs, permittee shall demonstrate compliance with emission limits by daily fuel usage and established emission factors for PM₁₀, SO₄, SO₂, and VOC's. [District Rule 2201] Federally Enforceable Through Title V Permit
29. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during each period of start-up or shutdown. [District Rule 2201] Federally Enforceable Through Title V Permit
30. Start-up and shutdown of the gas turbine, as defined in 40 CFR Subpart A 60.2, shall not exceed two hours per occurrence. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
31. On any day maintenance of steam injection system is conducted or turbine start-up/shutdown occurs, permittee shall demonstrate compliance with emission limits by PEM calculations for NO_x and CO. [District Rule 2201] Federally Enforceable Through Title V Permit
32. Reduced Load Period shall be defined as the time during which a gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate not exceeding one hour. [District Rule 4703] Federally Enforceable Through Title V Permit
33. Thermal Stabilization Period shall be defined as the start up or shut down time during which the exhaust gas is not within the normal operating temperature range, not to exceed two hours [District Rule 4703] Federally Enforceable Through Title V Permit
34. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly using ASTM Methods D4084, D5504, D6228, or Gas Processors Association Standard 2377. If sulfur content is less than 1.0 gr/100 scf for 8 consecutive weeks, then the Monitoring frequency shall be every six (6) months. If any six (6) month monitoring show an exceedance, weekly monitoring shall resume. [40 CFR 60.334(h)(3) and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
35. Performance testing shall be conducted annually to measure NO_x and CO emission concentrations using the following test methods: EPA Methods 7E or 20 for NO_x emissions, EPA Methods 10 or 10B for CO emissions, EPA Methods 3, 3A, or 20 for Oxygen content of the exhaust gas. The 3-run tests shall be performed at four evenly spaced load points in the normal operating range of the gas turbine. The measured NO_x concentrations shall be averaged over a three hour period, using consecutive 15-minute sampling periods. [40 CFR 60.335(a), (b)(2) and District Rule 4703, 5.1, 6.3.1, 6.3.2, & 6.4] Federally Enforceable Through Title V Permit
36. During the performance testing, the steam or water to fuel ratio shall be monitored concurrently with each testing run to establish acceptable values and ranges. This performance data may be supplemented with engineering analyses, design specifications, manufacturer's recommendations, and other relevant information to define acceptable parametric ranges more precisely. [40 CFR 60.334(g) and 40 CFR 60.335(b)(3)] Federally Enforceable Through Title V Permit
37. The owner or operator shall be required to conform to the sampling facilities and testing procedures described in District Rule 1081, 3.0, & 6.0 (as amended 12/16/93). [District Rule 1081, 3.0 & 6.0] Federally Enforceable Through Title V Permit
38. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for District approval 15 days prior to such testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit
39. Performance testing shall be witnessed or authorized District personnel. Test results must be submitted to the District within 60 days of performance testing. [District Rule 1081, 7.2, 7.3] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

40. The owner or operator shall submit a semi-annual excess NOx emissions and monitor down time report to the APCO. Excess emissions shall be reported for all periods of operation, including startup, shutdown and malfunction. The report, post marked by 30th day following the end of every other calendar quarter, shall include the following: Time intervals, average steam or water to fuel ratio, turbine load, nature and the cause of excess emissions (if known), and corrective actions taken and preventive measures adopted. [40 CFR 60.334(j), (j)(5) and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
41. Excess emissions shall be defined as any operating hour for which steam or water to fuel ratio established during the most recent source test, as measured by continuous monitoring system, falls below established steam or water to fuel ratio. Any operating hour in which no steam or water is injected into turbine shall also be considered an excess emissions. [40 CFR 60.334(J)(1)(i)(A)] Federally Enforceable Through Title V Permit
42. Monitor downtime shall be any unit operating hour in which water or steam is injected into the turbine, but essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid. [40 CFR 60.334(j)(1)(i)(B)] Federally Enforceable Through Title V Permit
43. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
44. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
45. All exhaust stacks shall vent vertically upward. The vertical exhaust flows shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rules 2201 and 4102]
46. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
47. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332 (a)(1), (a)(2), 60.333 (b); 60.334(b), (g), (h)(3), (j), (j)(1)(i)(A), (j)(1)(i)(B), and (j)(5); 60.335(a), (b)(2), (b)(3); and District Rule 4703 (as amended 4/25/02), Sections 5.1.2.1, 5.2, 6.2.2, 6.4, and 6.2.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
48. Compliance with permit conditions in the Title V permit shall be deemed compliance with District Rules 1081 (as amended 12/16/93), Section 3.0, 6.0, 7.1, 7.2, and 7.3 and 4201 (as amended 12/17/92). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
49. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 4703, 6.2.2; 40 CFR 60.332 (a) and (b); 60.333(a) and (b); 60.334 (a), (b), and (c)(1); 60.335 (a), (b), (c), and (e). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
50. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: SJVUAPCD Rule 4703, sections 5.0, 5.1.1, 6.2.1, 6.2.4, 6.3, 6.4.1, 6.4.3, 6.4.5, 6.4.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
51. Owner or operator shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation, type and quantity of fuel used. [District Rule 4703] Federally Enforceable Through Title V Permit
52. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2 and 4703, 6.2.4] Federally Enforceable Through Title V Permit
53. The owner or operator shall maintain daily records that demonstrate the auxiliary burner is in operation whenever the gas turbine is in operation. [District Rule 4703] Federally Enforceable Through Title V Permit
54. Permittee shall keep records of the date, time and duration of each primary re-ignition period. [District Rule 4703] Federally Enforceable Through Title V Permit
55. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

56. {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
57. {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

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APPENDIX B
Current PTO

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: S-2076-9-13

EXPIRATION DATE: 06/30/2014

SECTION: 20 **TOWNSHIP:** 29S **RANGE:** 25E

EQUIPMENT DESCRIPTION:

COGENERATION FACILITY INCLUDING ALLISON 6.0 MW 53 MMBTU/HR GAS-FIRED GAS TURBINE ENGINE GENERATOR SET, 40 MMBTU/HR LOW-PRESSURE HEAT RECOVERY STEAM GENERATOR WITH COEN BURNER, PRE-COMBUSTION STEAM INJECTION NOZZLE, DANATECH ENERGY SYSTEMS SCR INCLUDING 1,000 GALLON ANHYDROUS AMMONIA STORAGE TANK

PERMIT UNIT REQUIREMENTS

1. The owner or operator shall operate and maintain in calibration a system which continuously measures and records: control system operating parameters, elapsed time of operation, the fuel consumption and the ratio of water to fuel being fired in the turbine. [40 CFR 60.334(a) and District Rule 4703] Federally Enforceable Through Title V Permit
2. This unit shall be fired exclusively on natural gas as defined in 40 CFR 60.331(u) which has a total sulfur content of less than or equal to 1.0 gr/100 scf. [40 CFR 60.333(b), District Rule 4201, Kern County Rule 407] Federally Enforceable Through Title V Permit
3. Duct burner shall be fired exclusively with PUC quality or equivalent natural gas or propane. [District Rule 2201] Federally Enforceable Through Title V Permit
4. Duct burner auxiliary air shall be supplied only in sub-stoichiometric quantities. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The owner or operator shall not operate the gas turbine under load conditions, excluding the thermal stabilization period or reduced load period, which results in the measured NOx emissions concentration at cogeneration system exhaust exceeding 5 ppmv @ 15% O2. [40 CFR 60.332(a)(1), (a)(2), District Rules 2201 and 4703, 5.1] Federally Enforceable Through Title V Permit
6. The owner or operator shall not operate the gas turbine under load conditions, excluding the thermal stabilization period or reduced load period, which results in the measured CO emissions concentration exceeding 200 ppmv @ 15% O2. [District Rule 4703, 5.2] Federally Enforceable Through Title V Permit
7. Any gas turbine with an intermittently operated auxiliary burner shall demonstrate compliance with the auxiliary burner on and off. [40 CFR 60.335(b)(3) and District Rule 4703, 6.3.3] Federally Enforceable Through Title V Permit
8. Allison, Model 501, gas-fired gas turbine engine shall have a nominal heat input rating of 53 MMBTU/hr (LHV) and a maximum capability of 56 MMBTU/hr (LHV). [District Rule 2201] Federally Enforceable Through Title V Permit
9. Low pressure heat recovery steam generator with Coen duct burner shall have maximum heat input rating of 40 MMBTU/hr. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Gas turbine engine shall exhaust only to heat recovery steam generator. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Heat recovery steam generator shall be equipped with 20 hp auxiliary air blower to duct burner. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Steam generator shall be equipped with un-fired 0.96 MMBTU/hr Eldon heat reclaimer with circulating pump and suction blower. [District Rule 2201] 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.

13. Eldon heat reclaimer shall vent only to turbine engine exhaust stack. [District Rule 2201] Federally Enforceable Through Title V Permit
14. Gas turbine engine and duct burner shall each be equipped with continuously recording fuel flow monitors. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Gas turbine engine shall be equipped with pre-combustion and post-combustion steam injection systems for NOx control. [District Rule 2201] Federally Enforceable Through Title V Permit
16. Gas turbine engine shall be equipped with continuously recording steam injection rate monitor accurate to within 5%. [District Rule 2201] Federally Enforceable Through Title V Permit
17. Gas turbine engine shall be equipped with selective catalytic reduction. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Exhaust stack shall be equipped with permanent sampling ports, platform, and access ladder facilitating collection of gas samples consistent with EPA test methods. [District Rules 1081 and 2201] Federally Enforceable Through Title V Permit
19. Piping to and from Eldon heat reclaimer shall be leak free and gas tight, i.e. no detectable emissions. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Gas turbine engine steam injection rate shall be maintained at a steam-to-fuel ratio such that CO emission rate does not exceed 14.4 lb/hr, except for periods of start-up or shutdown or maintenance. [District Rule 2201] Federally Enforceable Through Title V Permit
21. Maximum emission rates on any day shall not exceed 29.76 lb of PM-10, 4.09 lb of SO4, 1.28 lb of SO2, 42.8 lb of NOx, 32.88 lb of VOCs, and 345.6 lb of CO. [District Rule 2201] Federally Enforceable Through Title V Permit
22. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
23. Ammonia emissions shall not exceed 10 ppmv @ 15% O2 [District Rule 2201] Federally Enforceable Through Title V Permit
24. Particulate matter (PM-10) emissions shall not exceed 0.0133 lb/MMBtu except during periods when the steam injection system is down for maintenance or during periods of startup or shutdown. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Sulfur oxides emissions as SO2 shall not exceed 0.0005 lb/MMBTU. [District Rule 2201] Federally Enforceable Through Title V Permit
26. Sulfur oxides emissions as SO4 shall not exceed 0.0018 lb/MMBTU. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Volatile organic compound (VOC) emissions shall not exceed 0.0147 lb/MMBTU. [District Rule 2201] Federally Enforceable Through Title V Permit
28. Carbon monoxide (CO) emissions shall not exceed 0.1548 lb/MMBTU. [District Rule 2201] Federally Enforceable Through Title V Permit
29. Gas turbine engine shall not be operated when steam injection system is not operating, unless steam injection shutdown is required for maintenance and does not exceed 30 minutes in one day or is during start-up or shutdown. [District Rule 2201] Federally Enforceable Through Title V Permit
30. Compliance with NOx, CO, SOx, and NH3 emission limits shall be demonstrated by District-witnessed sampling by an independent laboratory annually 60 days prior to permit anniversary date, and test data/results shall be submitted within 60 days of sampling. [District Rule 2201] Federally Enforceable Through Title V Permit
31. On any day maintenance of steam injection system is conducted or turbine start-up/shutdown occurs, permittee shall demonstrate compliance with emission limits by daily fuel usage and established emission factors for PM10, SO4, SO2, and VOC's. [District Rule 2201] 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. The emission control system shall be in operation and emissions shall be minimized insofar as technologically feasible during each period of start-up or shutdown. [District Rule 2201] Federally Enforceable Through Title V Permit
33. Start-up and shutdown of the gas turbine, as defined in 40 CFR Subpart A 60.2, shall not exceed two hours per occurrence. [District Rules 2201 and 4703] Federally Enforceable Through Title V Permit
34. On any day maintenance of steam injection system is conducted or turbine start-up/shutdown occurs, permittee shall demonstrate compliance with emission limits by PEM calculations for NOx and CO. [District Rule 2201] Federally Enforceable Through Title V Permit
35. Reduced Load Period shall be defined as the time during which a gas turbine is operated at less than rated capacity in order to change the position of the exhaust gas diverter gate not exceeding one hour. [District Rule 4703] Federally Enforceable Through Title V Permit
36. Thermal Stabilization Period shall be defined as the start up or shut down time during which the exhaust gas is not within the normal operating temperature range, not to exceed two hours [District Rule 4703] Federally Enforceable Through Title V Permit
37. The sulfur content of each fuel source shall be: (i) documented in a valid purchase contract, a supplier certification, a tariff sheet or transportation contract or (ii) monitored weekly using ASTM Methods D4084, D5504, D6228, or Gas Processors Association Standard 2377. If sulfur content is less than 1.0 gr/100 scf for 8 consecutive weeks, then the Monitoring frequency shall be every six (6) months. If any six (6) month monitoring show an exceedance, weekly monitoring shall resume. [40 CFR 60.334(h)(3) and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
38. Performance testing shall be conducted annually to measure NOx and CO emission concentrations using the following test methods: EPA Methods 7E or 20 for NOx emissions, EPA Methods 10 or 10B for CO emissions, EPA Methods 3, 3A, or 20 for Oxygen content of the exhaust gas. The 3-run tests shall be performed at four evenly spaced load points in the normal operating range of the gas turbine. The measured NOx concentrations shall be averaged over a three hour period, using consecutive 15-minute sampling periods. [40 CFR 60.335(a), (b)(2) and District Rule 4703, 5.1, 6.3.1, 6.3.2, & 6.4] Federally Enforceable Through Title V Permit
39. During the performance testing, the steam or water to fuel ratio shall be monitored concurrently with each testing run to establish acceptable values and ranges. This performance data may be supplemented with engineering analyses, design specifications, manufacturer's recommendations, and other relevant information to define acceptable parametric ranges more precisely. [40 CFR 60.334(g) and 40 CFR 60.335(b)(3)] Federally Enforceable Through Title V Permit
40. The owner or operator shall be required to conform to the sampling facilities and testing procedures described in District Rule 1081, 3.0, & 6.0 (as amended 12/16/93). [District Rule 1081, 3.0 & 6.0] Federally Enforceable Through Title V Permit
41. The District must be notified 30 days prior to any performance testing and a test plan shall be submitted for District approval 15 days prior to such testing. [District Rule 1081, 7.1] Federally Enforceable Through Title V Permit
42. Performance testing shall be witnessed or authorized District personnel. Test results must be submitted to the District within 60 days of performance testing. [District Rule 1081, 7.2, 7.3] Federally Enforceable Through Title V Permit
43. The owner or operator shall submit a semi-annual excess NOx emissions and monitor down time report to the APCO. Excess emissions shall be reported for all periods of operation, including startup, shutdown and malfunction. The report, post marked by 30th day following the end of every other calendar quarter, shall include the following: Time intervals, average steam or water to fuel ratio, turbine load, nature and the cause of excess emissions (if known), and corrective actions taken and preventive measures adopted. [40 CFR 60.334(j), (j)(5) and District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
44. Excess emissions shall be defined as any operating hour for which steam or water to fuel ratio established during the most recent source test, as measured by continuous monitoring system, falls below established steam or water to fuel ratio. Any operating hour in which no steam or water is injected into turbine shall also be considered an excess emissions. [40 CFR 60.334(J)(1)(i)(A)] 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.

45. Monitor downtime shall be any unit operating hour in which water or steam is injected into the turbine, but essential parametric data needed to determine the steam or water to fuel ratio are unavailable or invalid. [40 CFR 60.334(j)(1)(i)(B)] Federally Enforceable Through Title V Permit
46. HHV and LHV of the fuel shall be determined using ASTM D3588, ASTM 1826, or ASTM 1945. [40 CFR 60.335(b) and District Rule 4703, 6.4.5] Federally Enforceable Through Title V Permit
47. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
48. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: Kern County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
49. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: 40 CFR 60.332 (a)(1), (a)(2), 60.333 (b); 60.334(b), (g), (h)(3), (j), (j)(1)(i)(A), (j)(1)(i)(B), and (j)(5); 60.335(a), (b)(2), (b)(3); and District Rule 4703 (as amended 4/25/02), Sections 5.1.2.1, 5.2, 6.2.2, 6.4, and 6.2.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
50. Compliance with permit conditions in the Title V permit shall be deemed compliance with District Rules 1081 (as amended 12/16/93), Section 3.0, 6.0, 7.1, 7.2, and 7.3 and 4201 (as amended 12/17/92). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
51. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following subsumed requirements: SJVUAPCD Rule 4703, 6.2.2; 40 CFR 60.332 (a) and (b); 60.333(a) and (b); 60.334 (a), (b), and (c)(1); 60.335 (a), (b), (c), and (e). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
52. Compliance with the permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements: SJVUAPCD Rule 4703, sections 5.0, 5.1.1, 6.2.1, 6.2.4, 6.3, 6.4.1, 6.4.3, 6.4.5, 6.4.6. A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
53. Owner or operator shall maintain a stationary gas turbine system operating log that includes, on a daily basis, the actual local start-up and stop time, length and reason for reduced load periods, total hours of operation, type and quantity of fuel used. [District Rule 4703] Federally Enforceable Through Title V Permit
54. The owner or operator of a stationary gas turbine system shall maintain all records of required monitoring data and support information for inspection at any time for a period of five years. [District Rule 2520, 9.4.2 and 4703, 6.2.4] Federally Enforceable Through Title V Permit
55. Permittee shall keep records of the date, time and duration of each primary re-ignition period. [District Rule 4703] Federally Enforceable Through Title V Permit
56. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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

APPENDIX C
Quarterly Net Emissions Change

Quarterly Net Emissions Change (QNEC)

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

QNEC = PE2 - PE1, where:

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

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

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

Using the values in Sections VII.C.2 and VII.C.6 in the evaluation above, quarterly PE2 and quarterly PE1 can be calculated as follows:

$$\begin{aligned} PE2_{\text{quarterly}} &= PE2_{\text{annual}} \div 4 \text{ quarters/year} \\ &= 15,622 \text{ lb/year} \div 4 \text{ qtr/year} \\ &= 3,905.5 \text{ lb PM}_{10}/\text{qtr} \end{aligned}$$

$$\begin{aligned} PE1_{\text{quarterly}} &= PE1_{\text{annual}} \div 4 \text{ quarters/year} \\ &= 15,622 \text{ lb/year} \div 4 \text{ qtr/year} \\ &= 3,905.5 \text{ lb PM}_{10}/\text{qtr} \end{aligned}$$

Quarterly NEC [QNEC]			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO _x	3,905.5	3,905.5	0
SO _x	490.0	490.0	0
PM ₁₀	4,715.5	4,715.5	0
CO	31,536.0	31,536.0	0
VOC	3,000.0	3,000.0	0

APPENDIX D
Emissions Profile

Permit #: S-2076-9-15	Last Updated
Facility: FRITO-LAY, INC.	03/20/2015 YOSHIMUJ

Equipment Pre-Baselined: NO

	<u>NOX</u>	<u>SOX</u>	<u>PM10</u>	<u>CO</u>	<u>VOC</u>
Potential to Emit (lb/Yr):	15622.0	1960.0	18862.0	126144.0	12000.0
Daily Emis. Limit (lb/Day)	42.8	5.4	29.8	345.6	32.9
Quarterly Net Emissions Change (lb/Qtr)					
Q1:	0.0	0.0	0.0	0.0	0.0
Q2:	0.0	0.0	0.0	0.0	0.0
Q3:	0.0	0.0	0.0	0.0	0.0
Q4:	0.0	0.0	0.0	0.0	0.0
Check if offsets are triggered but exemption applies	N	N	N	N	N
Offset Ratio					
Quarterly Offset Amounts (lb/Qtr)					
Q1:					
Q2:					
Q3:					
Q4:					

APPENDIX E
AAQA Summary

San Joaquin Valley Air Pollution Control District Ambient Air Quality Assessment

To: John Yoshimura – Permit Services
 From: Trevor Joy – AQS
 Date: March 17, 2015
 Facility Name: Frito-Lay
 Location: Section 20, T29S, R25 E
 Application #(s): S-2076-9-15
 Project #: 1144554

A. AAQA SUMMARY

Criteria Pollutant Modeling Results*

Values are in ug/m³

	1 Hour	3 Hours	8 Hours.	24 Hours	Annua l
CO	Pass	X	Pass	X	X

*Results were taken from the attached PSD spreadsheet.

Proposed Permit Conditions

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

Unit 9-15

1. All exhaust stacks shall vent vertically upward. The vertical exhaust flows shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction.
[District Rule 2201]
2. CO emissions are limited to 14.4 pounds per hour.

B. Ambient Air Quality Analysis

I. Project Description

Technical Services received a request on March 11, 2015, to perform an Ambient Air Quality Analysis (AAQA) for CO for the proposed modification to a cogeneration system. No RMR is required since this modification only results in an increase in the CO emissions.

II. Analysis

For the AAQA, AERMOD was used with point source parameters outlined below and concatenated meteorological data from Porterville 2006 to 2009 to determine maximum dispersion factors at the facility boundaries and fence line grid.

The following parameters were used for the review:

Analysis Parameters (9-15)			
Stack Diameter (m)	1.6	Stack Gas Temp (K)	488
Stack Height (m)	15.2	Stack Gas Velocity (m/sec)	6.6

Technical Services performed AAQA modeling for the criteria pollutant CO. The total hourly and used for criteria pollutant modeling were provided by the project engineer.

III. Conclusions

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

The permit conditions listed on Page 2 of this report must be included for these proposed units.

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.

IV. Attachments

- A. RMR request from the project engineer
- B. AAQA Summary

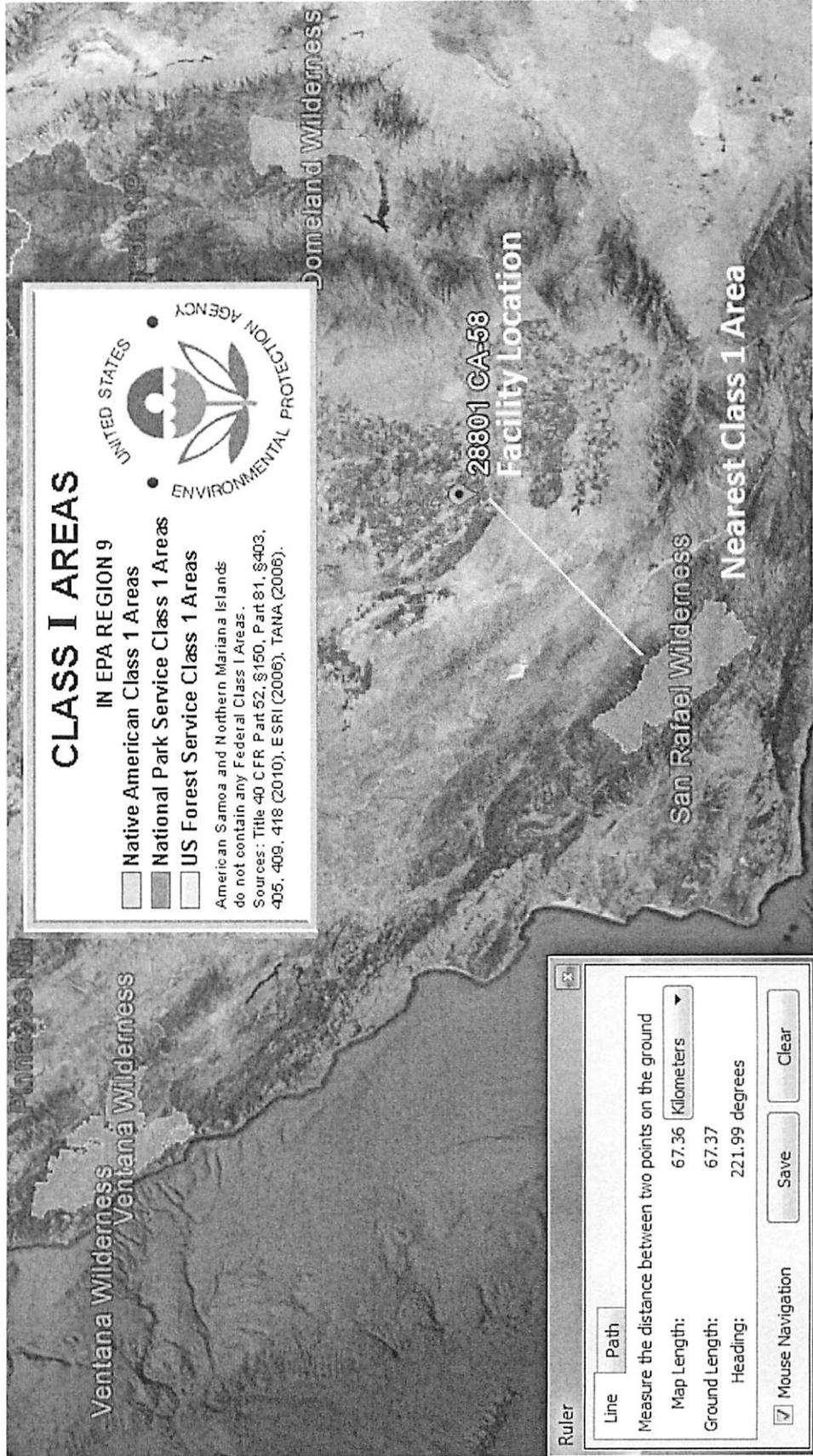
APPENDIX F
Major HAP Source Determination

Fuel Burning Permit Units	MMBtu/hr	BHP-hr
S-2076-1-14	72	-
S-2076-2-8	-	236
S-2076-3-8	-	9
S-2076-4-8	6.83	-
S-2076-5-8	6.83	-
S-2076-6-8	-	-
S-2076-7-5	-	252
S-2076-8-10	-	9
S-2076-9-13	93	-
S-2076-10-5	-	49
S-2076-11-6	-	240
S-2076-12-6	-	240
S-2076-13-3	10.4	-
S-2076-14-3	10.4	-
S-2076-15-5	-	-
S-2076-16-4	-	-
S-2076-14-7	19.76	-
S-2076-18-5	26	-
S-2076-19-14	9.8	-
S-2076-20-10	7.3	-
S-2076-21-15	9.56	-
S-2076-22-0	72	-
Btu-hr to MMBtu/hr conversion*	343.9	2.6
Total Facility MMBtu/hr	347	

* 1 BHP-hr = 0.002544 MMBtu/hr

HAP Pollutant	Pollutant Emission Factor (lb/MMBtu)	Total Facility Heat Input (MMBtu/hr)	Annual Operations (hours/year)	Ton- HAP/year
1,3-Butadiene	4.30E-07	347	8,760	0.00
Acetaldehyde	4.00E-05	347	8,760	0.06
Acrolein	6.40E-06	347	8,760	0.01
Benzene	1.20E-06	347	8,760	0.00
Ethylbenzene	1.12E-04	347	8,760	0.17
Formaldehyde	3.20E-05	347	8,760	0.05
Naphthalene	7.10E-04	347	8,760	1.08
PAH	1.30E-06	347	8,760	0.00
Propylene Oxide	2.90E-05	347	8,760	0.04
Toluene	1.30E-04	347	8,760	0.20
Xylenes	6.40E-05	347	8,760	0.10
Facility Total				1.71

APPENDIX G
PSD Class 1 Area Map



CLASS I AREAS

IN EPA REGION 9

- Native American Class 1 Areas
- National Park Service Class 1 Areas
- US Forest Service Class 1 Areas

American Samoa and Northern Mariana Islands do not contain any Federal Class I Areas.
 Sources: Title 40 CFR, Part 52, §150, Part 81, §403, 406, 409, 418 (2010); ESRI (2006), TANA (2006).



Ruler

Line Path

Measure the distance between two points on the ground

Map Length:	67.36	Kilometers
Ground Length:	67.37	
Heading:	221.99	degrees

Mouse Navigation Save Clear

Ventana Wilderness
Ventana Wilderness

Domeland Wilderness

28801 CA-58
Facility Location

San Rafael Wilderness

Nearest Class 1 Area