San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

MAY 22 2013

Mr. Michael Kummer
Hilmar Cheese Company
P O Box 910
Hilmar, CA 95324

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # N-1275
Project # N-1131080

Dear Mr. Kummer:

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. This Authority to Constuct project is to increase the NOx emission factor from 1.6 PPMVD @ 19% O2 to 3.3 PPMVD @ 19% O2 and the CO emission factor from 10.9 PPMVD @ 19% O2 to 42 PPMVD @ 19 % O2 for the spray dryer, permit unit N-1275-12.

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, the District intends to issue the Authority to Construct with a Certificate of Conformity. Please submit your comments within the 30-day public comment period, as specified in the enclosed public notice. Prior to operating with modifications authorized by the 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.

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

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

www.valleyair.org www.healthyairliving.com

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

Enclosures

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

Newspaper notice for publication in Modesto Bee and for posting on valleyair.org

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

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed significant modification of Hilmar Cheese Company at 9001 N Lander Ave in Hilmar, California. This Authority to Construct project is to increase the NOx emission factor from 1.6 PPMVD @ 19% O2 to 3.3 PPMVD @ 19% O2 and the CO emission factor from 10.9 PPMVD @ 19% O2 to 42 PPMVD @ 19 % O2 for the spray dryer, permit unit N-1275-12.

The District's analysis of the legal and factual basis for this proposed action, project #N-1131080, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and at any District office. There are no emission increases associated with this proposed action. This will be the public's only opportunity to comment on the specific conditions of the modification. If requested, the District will hold a public hearing regarding issuance of this modification. For additional information, please contact the District at (559) 230-6000. Written comments on the proposed initial permit must be submitted by June 24, 2013 to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 1990 EAST GETTYSBURG AVENUE, FRESNO, CA 93726.**

San Joaquin Valley Air Pollution Control District
Authority to Construct
Application Review
Milk Processing Facility

Facility Name:	Hilmar Cheese Company	Date:	May 16, 2013
Mailing Address:	PO Box 910	Engineer:	Thom Maslowski
	Hilmar, CA 95324	Lead Engineer:	Joven Refuerzo
Contact Person:	Michael Kummer		
Telephone:	(209) 656-1171		
Application #(s):	N-1275-12-5		
Project #:	N-1131080		
Deemed Complete:	April 15, 2013		

I. Proposal

Hilmar Cheese Company is applying for Authority to Construct (ATC) permit to increase the NOx emission factor from 1.6 ppmvd @ 19% O2 to 3.3 ppmvd @ 19% O2 and the CO emission factor from 10.9 ppmvd @ 19% O2 to 42 ppmvd @ 19 % O2 for their currently permitted spray dryer (Appendix C). The spray dryer is subject to NOx and CO emission limits (NOx at 3.5 ppmvd @ 19% O2 and CO at 42 ppmvd @ 19 % O2) of District Rule 4309 Dryers, Dehydrators, and Ovens. The unit is included in a facility-wide Specific Limiting Condition (SLC) for NOx emissions which will be maintained with this project.

The current NOx and CO emission limits on the spray dryer were incorporated as proposed on the supplemental form in the original permitting action in ATC project N-950307. The applicant stated that the proposed limits were ~~vindictive~~ indicative of a boiler burner for that period of time. The initial permit did not incorporate any source testing or monitoring requirements so the original proposed emission factors were not verified. When the facility received their initial Title V permit on January 31, 2013, source testing and monitoring requirements pursuant to Rule 4309 were added to the permit. Monitoring of the unit demonstrated that the unit was not operating in compliance with the current permit limits with measurements of 2.6 ppmvd @ 19% O2 for NOx and 20 ppmvd @ 19% O2 for CO (Appendix I). Per the burner manufacturer, these burners are incapable of meeting the current NOx or CO emission factors, but will be capable of meeting the proposed NOx and CO emission factors with margin of compliance (Appendix H), and in compliance with the requirements of Rule 4309.

Hilmar Cheese Company received their Title V Permit January 31, 2013. This modification can be classified as a Title V significant 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. Hilmar Cheese Company 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 (06/21/01)
Rule 4001 New Source Performance Standards (04/14/99)
Rule 4101 Visible Emissions (02/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4201 Particulate Matter Concentration (12/17/92)
Rule 4202 Particulate Matter Emission Rate (12/17/92)
Rule 4301 Fuel Burning Equipment (12/17/92)
Rule 4309 Dryers, Dehydrators, and Ovens (12/15/05)
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

Hilmar Cheese Co. produces cheese from the onsite dairy and from milk trucked in from other dairies. The cheese produced is mostly for industrial and commercial sale.

V. Equipment Listing

Pre-Project Equipment Description:

N-1275-12-4: ONE SINGLE STAGE MARRIOT-WALKER SPRAY DRIER WITH A 20.7 MMBTU/HR MAXON BURNER SERVED BY A WALKER STAINLESS EQUIPMENT BAGHOUSE AND A FISHER-KLOSTERMAN SCRUBBER

Proposed Modification:

N-1275-12-5: MODIFICATION OF ONE SINGLE STAGE MARRIOT-WALKER SPRAY DRIER WITH A 20.7 MMBTU/HR MAXON BURNER SERVED BY A WALKER STAINLESS EQUIPMENT BAGHOUSE AND A FISHER-KLOSTERMAN SCRUBBER: INCREASE THE NOX EMISSION FACTOR FROM 1.6 PPMVD @ 19% O2 TO 3.3 PPMVD @ 19% O2 AND THE CO EMISSION FACTOR FROM 10.9 PPMVD @ 19% O2 TO 42 PPMVD @ 19 % O2

Post Project Equipment Description:

N-1275-12-4: ONE SINGLE STAGE MARRIOT-WALKER SPRAY DRIER WITH A 20.7 MMBTU/HR MAXON BURNER SERVED BY A WALKER STAINLESS EQUIPMENT BAGHOUSE AND A FISHER-KLOSTERMAN SCRUBBER

VI. Emission Control Technology Evaluation

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

Particulate matter less than 10 microns in aerodynamic (PM10) from the milk dryer will be controlled by a baghouse. The baghouse is expected to have a control efficiency of 99% if properly designed.
Design check calculations:

Air Flow Calculations for the baghouse:

The total cloth area for the baghouse is 12,535 ft^2. This baghouse also utilizes a pulse jet to clean the bags at regular intervals.

Airflow = 46,450 ft^3/min (per Applicant)

Air/Cloth Ratio = Air Flow Rate ÷ Cloth Area
= 46,450 cfm ÷ 12,535 ft^2
= 3.71 ft/min

The pulse jet cleaning mechanism uses a high pressure jet of air to remove the dust from the bags. The dust cake is removed from the bag by a blast of compressed air injected into the top of the bag tube. The air blast causes the bag to flex or expand as the shock wave travels down the bag tube. As the bag tube flexes, the dust cake fractures and deposited particulates are discharged from the bag. Pulse jet baghouses are generally designed with air-to-cloth ratio (filtering velocity) between 5 and 15 ft/min. The calculated air-to-cloth ratio for the proposed pulse jet baghouse is 3.71 ft/min, which is below the typical range. However, the manufacturer guarantees a PM10 control efficiency of 99% for this dust collector.

VII. General Calculations

A. Assumptions

- Operating based upon current SLC
- Natural gas EPA F-factor = 8,578 dscf/MMBtu
- Natural Gas heating value = 1,000 Btu/scf
- 37.4 tons of finished product per day (current PTO)

B. Emission Factors

Pre modification:

NOx: 1.6 ppmvd @ 19% O_2 equivalent to 0.018 lb/MMBtu(current PTO)
CO: 10.9 ppmvd @ 15% O_2 equivalent to 0.075 lb/MMBtu(Current PTO)
VOC: 0.004 lb/MMBtu (Current PTO)
PM10: 0.227 lb/ton of finished product (Current PTO)
SOx: 0.00285 lb/MMBtu (Current PTO)

Post modification:

NOx: 3.3 ppmvd @ 19% O_2 equivalent to 0.0377 lb/MMBtu (proposed by the applicant)
CO: 42 ppmvd @ 19% O_2 equivalent to 0.2924 lb/MMBtu (proposed by the applicant)
VOC: 0.004 lb/MMBtu (proposed by the applicant)
PM10: 0.227 lb/ton of finished product (no change proposed)
SOx: 0.00285 lb/MMBtu (no change proposed)

C. Potential to Emit (PE)

1. Potential to Emit

The NOx and CO emissions will be in the terms of ppmvd @ 19% O2, therefore, the following equation will be used to determine the potential to emit of NOx and CO:

$$PE = (ppm)(MW)(2.63 \times 10^{-9})(ff)(C)(20.95/(20.95 - \%O_2)) \text{ lb/hr}$$

Where: ppm is the emission concentration
MW is the molecular wt. of the pollutant
NOx = 46
CO = 28
2.63×10^{-9} is a constant (at 60 degrees F)
ff is the f-factor of natural gas (8,578 dscf/MMBtu at 60 degrees F)
C is the capacity of the equipment (20.7 MMBtu/hr)

% O_2 is the oxygen content to which the stack exhaust is corrected (19%)

PE1:

Op. Schedule: 24 hr/day and 8,760 hr/yr
Throughput Limit: 37.4 tons/day

PE_{NOx} = [(1.6)(46)(2.63 X 10^{-9})(8,578)(20.7)(20.95/(20.95-19))lb/hr X (24 hr/day)] = 8.9 lb/day

PE_{NOx} = [(1.6)(46)(2.63 X 10^{-9})(8,578)(20.7)(20.95/(20.95-3))lb/hr X (8,760 hr/yr)] = 3,235 lb/yr

PE_{CO} = [(10.9)(28)(2.63 X 10^{-9})(8,578)(20.7)(20.95/(20.95-19))lb/hr X (24 hr/day)] = 36.7 lb/day

PE_{CO} = [(10.9)(28)(2.63 X 10^{-9})(8,578)(20.7)(20.95/(20.95-3))lb/hr X (8,760 hr/yr)] = 13,413 lb/yr

PE_{VOC} = (20.7 MMBtu/hr)(0.004 lb/MMBtu)(24 hr/day) = 1.9 lb/day
PE_{VOC} = (20.7 MMBtu/hr)(0.004 lb/MMBtu)(8,760 hr/yr) = 725 lb/day

PE_{SOx} = (20.7 MMBtu/hr)(0.00285 lb/MMBtu)(24 hr/day) = 1.4 lb/day
PE_{SOx} = (20.7 MMBtu/hr)(0.00285 lb/MMBtu)(8,760 hr/yr) = 517 lb/day

PE_{PM10} = (0.227 lb/ton)(37.4 tons/day) = 8.5 lb/day
PE_{PM10} = (0.227 lb/ton)(37.4 tons/day)(365 days/yr) = 3,099 lb/day

PE2:

PE_{NOx} = [(3.3)(46)(2.63 X 10^{-9})(8,578)(20.7)(20.95/(20.95-19))lb/hr X (24 hr/day)] = 18.3 lb/day

PE_{NOx} = [(3.3)(46)(2.63 X 10^{-9})(8,578)(20.7)(20.95/(20.95-3))lb/hr X (8,760 hr/yr)] = 6,672 lb/yr

PE_{CO} = [(42)(28)(2.63 X 10^{-9})(8,578)(20.7)(20.95/(20.95-19))lb/hr X (24 hr/day)] = 141.6 lb/day

PE_{CO} = [(42)(28)(2.63 X 10^{-9})(8,578)(20.7)(20.95/(20.95-3))lb/hr X (8,760 hr/yr)] = 51,686 lb/yr

PE_{VOC} = 1.9 lb/day – no change
PE_{VOC} = 725 lb/day – no change

PE_{SOx} = 1.4 lb/day – no change

PE_{SOx} = 517 lb/day – no change

PE_{PM10} = 8.5 lb/day – no change
PE_{PM10} = 3,099 lb/day – no change

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 ATCs or PTOs at the Stationary Source and the quantity of Emission Reduction Credits (ERCs) 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.

SSPE1 (lb/yr)					
Permit #	NOx	CO	VOC	SOx	PM10
N-1275-2-8	34,996	8,140	2,628	621	29,200
N-1275-4-9		8,140	913	621	
N-1275-5-6		0	0	0	
N-1275-6-3		0	0	0	
N-1275-7-4		0	0	0	
N-1275-9-7		8,140	2,639	627	
N-1275-12-4		13,413	725	517	
N-1275-14-2		0	0	0	
N-1275-15-2		0	0	0	
N-1275-16-3		0	0	0	
N-1275-17-3		13,701	819	424	
N-1275-18-4		10,877	1,168	840	
N-1275-22-3		17,666	2,190	1,278	
N-1275-23-6		19,973	263	721	
N-1275-24-1		0	0	0	
N-1275-25-2		0	0	0	
N-1275-26-1		0	0	0	
N-1275-28-1		17,608	323	167	
N-1275-30-1		16,513	1,887	2,463	
N-1275-35-2		0	0	0	
N-1275-36-0		122	10	0	
ERC	0	0	0	0	0
Total	34,996	134,293	13,565	8,279	29,200

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 ATCs or PTOs, except for emissions units proposed to be shut down as part of the Stationary Project, at the Stationary Source and the quantity of Emission Reduction Credits

(ERCs) 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.

SSPE2 (lb/yr)					
Permit #	NOx	CO	VOC	SOx	PM10
N-1275-2-8		8,140	2,628	621	
N-1275-4-9		8,140	913	621	
N-1275-5-6		0	0	0	
N-1275-6-3		0	0	0	
N-1275-7-4		0	0	0	
N-1275-9-7		8,140	2,639	627	
N-1275-12-5 (ATC)		51,686	725	517	
N-1275-14-2		0	0	0	
N-1275-15-2		0	0	0	
N-1275-16-3		0	0	0	
N-1275-17-3	34,996	13,701	819	424	29,200
N-1275-18-4		10,877	1,168	840	
N-1275-22-3		17,666	2,190	1,278	
N-1275-23-6		19,973	263	721	
N-1275-24-1		0	0	0	
N-1275-25-2		0	0	0	
N-1275-26-1		0	0	0	
N-1275-28-1		17,608	323	167	
N-1275-30-1		16,513	1,887	2,463	
N-1275-35-2		0	0	0	
N-1275-36-0		122	10	0	
ERC	0	0	0	0	0
Total	34,996	172,566	13,565	8,279	29,200

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

Pollutant	Threshold (lb/yr)	Facility PE (lb/yr)	Major Source
NOx	20,000	34,996	Yes
CO	200,000	172,566	No
VOC	20,000	13,565	No
SOx	140,000	8,279	No
PM10	140,000	29,200	No

As shown above the facility is an existing Major Source for NOx emissions.

Rule 2410 Major Source Determination:

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(i). Therefore the following PSD Major Source thresholds are applicable.

PSD Major Source Determination (tons/year)							
	NO2	VOC	SO2	CO	PM	PM10	CO2e
Estimated Facility PE before Project Increase	17	7	4	86	15	15	137,776*
PSD Major Source Thresholds	250	250	250	250	250	250	100,000
PSD Major Source ? (Y/N)	N	N	N	N	N	N	Y

*See Appendix E for calculations

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

6. Baseline Emissions (BE)

The baseline emission (BE) calculations are performed pollutant by pollutant to determine the amount of offsets required, where necessary, when the SSPE1 is greater than the offset threshold.

BE = Pre-project Potential to Emit 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 Section 3.23.

The BE calculation (in lbs/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.

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.

Clean Emissions Unit Determination				
Permit Unit	BACT Guideline	Achieved in Practice	Permit Limit	Clean Emissions Unit?
N-1275-2 N-1275-4 N-1275-9 N-1275-18 N-1275-22 N-1275-30	District Rule 4320	0.008 lb/MMBtu	0.008 lb/MMBtu	Yes
N-1275-12 N-1275-17 N-1275-28	1.6.11	Low NOx burner	Low NOx burner	Yes
N-1275-23	1.4.4	0.06 lb/MMBtu	0.06 lb/MMBtu	Yes

All emissions units under the SLC meet the requirements for achieved-in-practice BACT for NOx. Therefore, BE=PE1.

BE = PE1 = 34,996 lb NO_X/year

b. BE SO_X

Unit Located at a Non-Major Source
As shown in Section VII.C.5 above, the facility is not a major source for SO_X emissions.

Therefore Baseline Emissions BE=PE1.

BE = PE1 = 517 lb SO_X/year

c. BE PM_{10}

Unit Located at a Non-Major Source
As shown in Section VII.C.5 above, the facility is not a major source for PM_{10} emissions.

Therefore BE=PE1.

BE = PE1 =29,200 lb PM_{10}/year

d. BE CO

Unit Located at a Non-Major Source
As shown in Section VII.C.5 above, the facility is not a major source for CO emissions.

Therefore BE=PE1.

BE = PE1 = 51,686 lb CO/year

e. BE VOC

Unit Located at a Non-Major Source
As shown in Section VII.C.5 above, the facility is not a major source for VOC emissions.

Therefore BE=PE1.

BE = PE1 = 725 lb VOC/year

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 source is not included in the 28 specific source categories specified in 40 CFR 51.165, the, increases in fugitive emissions are not included in the SB 288 Major Modification calculation.

Since this facility is a major source for NOx, 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	34,996	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.

Since this source is not included in the 28 specific source categories specified in 40 CFR 51.165, the increases in fugitive emissions are not included in the Federal Major Modification determination.

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

As shown in section VII.F of this document, this facility is a Major Source for only NOx. Therefore, a Federal Major Modification determination is required for only NOx.

The District draft policy "Implementation of Rule 2201 (as amended on 12/18/08 and approved by EPA on 6/10/10) for SB 288 Major Modifications and Federal Major Modifications (9/28/10)" is referenced to determine the emissions increase. Case 2 in the draft policy states "If the proposed modification 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, then the unused baseline capacity emissions (UBC) can also be excluded from the emission increase (EI). Therefore, the EI calculation is:

$EI_{NOx} = PAE_{NOx} - BAE_{NOx} - UBC_{NOx}$

PAE = post-project projected actual emissions
BAE = pre-project baseline actual emissions

Neither the rating or the utilization rate will increase, however., the potential to emit will increase. Therefore, the UBC may not be excluded from the EI and the applicable equation is:

$EI_{NOx} = PAE_{NOx} - BAE_{NOx}$

PAE (NOx):

The PAE of NOx will be assumed to be the Potential to Emit. As shown in section VII.C.1 of this document, the PAE of NOx is:

PAE_{NOx} = 6,672 lb/yr

BAE (NOx):

In compliance with the determining Baseline Actual Emissions (BAE), the applicant has provided the annual fuel usage for this unit for 2009 and 2010 (i.e. two years prior to the application)..

Calendar Year	Baseline Emissions (lb/yr)
	NOx
2009	1,458
2010	1,235
Average (lb)	1,347

Federal Major Modification Determination:

EI_{NOx} = 6,672 lb/yr – 1,347 lb/yr = 5,325 lb/yr

The EI of NOx is in excess of the Federal Major Modification threshold of 0 lb/yr. Therefore, this permitting action is a Federal Major Modification.

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

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

- NO2 (as a primary pollutant)
- SO2 (as a primary pollutant)
- CO
- PM
- PM10
- Greenhouse gases (GHG): CO2, N2O, CH4, HFCs, PFCs, and SF6

The first step of this PSD evaluation consists of determining whether the facility is an existing PSD Major Source or not (See Section VII.C.5 of this document).

In the case the facility is an existing PSD Major Source, the second step of the PSD evaluation is to determine if the project results in a PSD significant increase.

In the case the facility is NOT an existing PSD Major Source but is an existing source, the second step of the PSD evaluation is to determine if the project, by itself, would be a PSD major source.

In the case the facility is new source, the second step of the PSD evaluation is to determine if this new facility will become a new PSD major Source as a result of the project and if so, to determine which pollutant will result in a PSD significant increase.

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 major source for PSD. Because the project is not located within 10 km of a Class 1 area – modeling of the emission increase is not required to determine if the project is subject to the requirements of Rule 2410.

II. Significance of Project Emission Increase Determination

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

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

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)						
	NO2	SO2	CO	PM	PM10	CO2e
Total PE from New and Modified Units	2.6	0.15	22.8	0.83	0.83	10,662*
PSD Significant Emission Increase Thresholds	40	40	100	25	15	75,000
PSD Significant Emission Increase?	N	N	N	N	N	N

*See Appendix E

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

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 A.

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 for the following*:

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 a Major Modification.

*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 > 2.0 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 x (EF2/EF1)

Where,
PE1 = The emissions unit's Potential to Emit 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

NOx:

PE1: 8.9 lb/day
PE2: 18.3 lb/day

EF1: 1.6 ppmvd @ 19% O_2
EF2: 3.3 ppmvd @ 19% O_2

EF2 is greater than EF1, therefore, EF2/EF1 was set to zero.

$AIPE_{NOx}$ = 18.3 lb/day – 8.9 lb/day(1) = 9.4 lb/day

CO:

PE1: 36.7 lb/day
PE2: 141.6 lb/day

EF1: 10.9 ppmvd @ 19% O_2
EF2: 42 ppmvd @ 19% O_2

EF2 is greater than EF1, therefore, EF2/EF1 was set to zero.

$AIPE_{CO}$ = 141.6 lb/day – 36.7 lb/day(1) = 104.9 lb/day

However the SSPE < 200,000 for CO emissions therefore BACT is not triggered.

VOC, SOx and PM10:

No change to the potentials to emit or emission factors will occur, therefore, AIPE is zero for each of these pollutants.

d. SB 288/Federal Major Modification

As discussed in Section VII.C.8 above, this project does constitute a Federal Major Modification for NO_X emissions. Therefore BACT is triggered for NO_X for all emissions units in the project for which there is an emission increase.

2. BACT Guideline

BACT Guideline 1.6.11, applies to the milk spray dryers with heat inputs greater than or equal to 20 MMBtu/hr. [Dryer – Milk Spray, ≥ 20 MMBtu/hr] (See Attachment B)

3. Top-Down BACT Analysis

Per Permit Services Policies and Procedures for BACT, a Top-Down BACT analysis shall be performed as a part of the application review for each application subject to the BACT requirements pursuant to the District's NSR Rule.

Pursuant to the attached Top-Down BACT Analysis (see Attachment B), BACT has been satisfied with the following:

NO_X: Low NOx burner fired on natural gas with LPG as backup fuel

The original proposed limits for the dryer burner made in 1995 were vindictive of standard boiler burner for a similar size. Per the manufacturer, it is not technologically feasible for this type of dryer burner to meet the current permit limits (Appendix H). BACT Guideline 1.6.11 lists an Achieved in Practice BACT requirement of low NOx burner fired on natural gas with LPG as backup fuel. This BACT Guideline was established in 1995 and the NOx emission factor for the milk spray dryer that created the BACT Guideline was 5.7 ppmv @ 19% O2 (0.065 lb/MMBtu). This project is to increase the NOx emission factor from 1.6 ppmv @ 19% O2 (0.0180 lb/MMBtu) to 3.3 ppmv @ 19% O2 (0.0372 lb/MMBtu). As such, the proposed NOx limit of 3.3 ppmv @ 19% O2 (0.0372 lb/MMBtu) meets the NOx emission factor of 5.7 ppmv @ 19% O2 (0.065 lb/MMBtu) originally established for BACT Guideline 1.6.11; therefore BACT is satisfied for NOx.

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	34,996	8,279	29,200	172,566	13,565
Offset Thresholds	20,000	54,750	29,200	200,000	20,000
Offsets triggered?	Yes	No	No	No	No

2. Quantity of Offsets Required

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

The quantity of offsets in pounds per year for NO_X 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) = (Σ[PE2 – BE] + ICCE) x 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

As calculated in Section VII.C.6 above, the BE from this unit are equal to the PE1 since the unit is a Clean Emissions Unit.

Also, there is only one emissions unit associated with this project and there are no increases in cargo carrier emissions. Therefore offsets can be determined as follows:

Offsets Required (lb/year) = ([PE2 – BE] + ICCE) x DOR

PE2 (NO_X) = 34,996 lb/year
BE (NO_X) = 34,996 lb/year
ICCE = 0 lb/year

Offsets Required (lb/year) = ([34,996 – 34,996] + 0) x DOR
= 0 lb NO_X/year

As demonstrated in the calculation above, the amount of offsets is zero. Therefore, offsets will not be required for this project.

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.

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 Section VII.C.8, this project is a Federal Major Modification. Therefore, public noticing for Federal Major Modification purposes is 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	34,996	34,996	20,000 lb/year	No
SO_X	8,279	8,279	54,750 lb/year	No
PM_{10}	29,200	29,200	29,200 lb/year	No
CO	134,293	172,566	200,000 lb/year	No
VOC	13,565	13,565	20,000 lb/year	No

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

d. SSIPE > 20,000 lb/year

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

SSIPE Public Notice Thresholds					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO_x	34,996	34,996	0	20,000 lb/year	No
SO_x	8,279	8,279	0	20,000 lb/year	No
PM_{10}	29,200	29,200	0	20,000 lb/year	No
CO	172,566	134,293	38,273	20,000 lb/year	Yes
VOC	13,565	13,565	0	20,000 lb/year	No

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

2. Public Notice Action

As discussed above, public noticing is required for this project for NO_X emissions in triggering a federal major modification and for CO emissions with a SSIPE greater than 20,000 lb/year. Therefore, public notice documents will be submitted to the California Air Resources Board (CARB) and EPA 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)

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.15 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.15.1 and 3.15.2, the DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT.

Proposed Rule 2201 (DEL) Conditions:

- The spray drier shall only be fired on PUC-quality natural gas. [District Rule 2201] Y

- The facility-wide NOx emissions shall not exceed 34,996 pounds during any rolling 12-month period. [District Rule 2201] Y

- The facility-wide PM10 emissions shall not exceed 29,200 pounds during any rolling 12-month period. [District Rule 2201] Y

- NOx emissions shall be calculated as follows: 0.0377 lb/MMBtu x (fuel usage) MMscf x 1,000 MMBtu/MMscf. [District Rule 2201] Y

- PM10 emissions shall be calculated as follows: 0.227 lb/ton-finished-product-processed x (throughput) ton-finished-product-processed. [District Rule 2201] Y

- The NOx emissions shall not exceed 0.0377 lb/MMBtu (equivalent to 3.3 ppmvd @ 19% O2). [District Rules 2201 and 4309] Y

- The CO emissions shall not exceed 0.2924 lb/MMBtu (equivalent to 42 ppmvd @ 19% O2). [District Rules 2201 and 4309] Y

- The VOC emissions shall not exceed 0.004 lb/MMBtu. [District Rule 2201] Y

- The SOx emissions shall not exceed 0.00285 lb/MMBtu. [District Rule 2201] Y

- The finished product throughput shall not exceed 37.4 tons during any one day. [District Rule 2201] Y

- The PM10 emissions shall not exceed 0.227 lb PM10 per ton of finished product throughput. [District Rule 2201] Y

E. Compliance Assurance

1. Source Testing

This unit is subject to District Rule 4309, *Dryer, Dehydrators, and Ovens*. Source testing requirements, in accordance with District Rule 4309, will be discussed in Section VIII, *District Rule 4309*, of this evaluation.

- Source testing to measure NOx and CO emissions from the drier shall be conducted at least once every 24 months. [District Rule 4309]

- 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 1081 and 4309]

- CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 1081 and 4309]

2. Monitoring

This unit is subject to District Rule 4309, *Dryer, Dehydrators, and Ovens*. Monitoring requirements, in accordance with District Rule 4309, will be discussed in Section VIII, *District Rule 4309*, of this evaluation.

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification and daily emission limit requirements of Rule 2201.

- Permittee shall maintain records, which demonstrates the dryer is fired exclusively on PUC quality natural gas. [District Rule 4309]
- Permittee shall maintain daily records of the amount of material processed. [District Rule 1070]
- 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 and 4309]

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

Therefore, continued compliance with the requirements of this rule is expected.

F. Ambient Air Quality Analysis

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

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

The proposed location is in a non-attainment area for the state's PM_{10} as well as federal and state $PM_{2.5}$ thresholds. As shown by the AAQA summary sheet the proposed equipment will not cause a violation of an air quality standard for PM_{10} and $PM_{2.5}$.

The results from Criteria Pollutant Modeling are as follows:

N-1275-12-5	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO_x	Pass[1]	X	X	X	Pass
SO_x	N/A[2]	N/A[2]	X	N/A[2]	N/A[2]
PM_{10}	X	X	X	N/A[2]	N/A[2]
$PM_{2.5}$	X	X	X	N/A[2]	N/A[2]

*Results were taken from the PSD spreadsheets submitted with the AAQA request.
[1]The project was compared to the 1-hour NO2 National Ambient Air Quality Standard that became effective on April 12, 2012 using the District's approved procedures.
[2]These criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

As shown, the calculated contribution of criteria pollutants will not exceed the EPA significance level. This project is not expected to cause or make worse a violation of an air quality standard.

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

- The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 2201] N

G. Compliance Certification

Section 4.15.2 of this Rule requires the owner of a new Major Source or a source undergoing a Title I Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance or are on a schedule for compliance with all applicable emission limitations and standards. As discussed in Section VIII above, this facility is a new major source and this project does constitute a Title I modification, therefore this requirement is applicable. Hilmar Cheese Company's compliance certification is included in Appendix G.

H. Alternate Siting Analysis

The current project occurs at an existing facility. The applicant proposes to increase the NOx and CO emission factors for a spray dryer.

Since the project will provide an increase to the NOx and CO emission factors to be used at the same location, the existing site will result in the least possible impact from the project. Alternative sites would involve the relocation and/or construction of various support structures on a much greater scale, and would therefore result in a much greater impact.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. A significant permit modification is defined as a "permit amendment that does not qualify as a minor permit modification or administrative amendment."

A minor permit modification is a permit modification that does not meet the definition of modification as given in Section 111 or Section 112 of the Federal Clean Air Act. As shown in section VII above this project is considered a Federal Major Modification. As a result, the proposed project constitutes a Significant Modification to the Title V Permit.

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 shall not implement the changes requested until the final permit is issued.

Rule 4001 New Source Performance Standarads

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. However, no subparts of 40 CFR Part 60 apply to milk spray dryers.

Rule 4101 Visible Emissions

Rule 4101 states that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity.

Since the milk dryer is controlled by a baghouse, the visible emissions from the baghouse will be limited to 5% opacity. The following condition will be added to the permit to ensure compliance with this visible emission limit.

- Visible emissions from the baghouses serving the milk dryer shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. [District Rule 4101]

Therefore, continued compliance with the requirements of this rule 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 in the AAQA (Attachment D), there are no increases in toxic 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.

Drying Operation:

F-Factor for NG:	8,578 dscf/MMBtu at 60 °F
PM10 Emission Factor:	0.0076 lb-PM10/MMBtu
Percentage of PM as PM10 in Exhaust:	100%
Exhaust Oxygen (O_2) Concentration:	3%

Excess Air Correction to F Factor = $\frac{20.9}{(20.9 - 3)} = 1.17$

$$GL = \left(\frac{0.0076\ lb - PM}{MMBtu} \times \frac{7{,}000\ grain}{lb - PM} \right) / \left(\frac{8{,}578\ ft^3}{MMBtu} \times\ 1.17 \right)$$

$$GL = 0.0053\ grain/dscf < 0.1\ grain/dscf$$

Collection Operation (Baghouses):

PM Conc. (gr/scf) = $\frac{\text{(PM emission rate) x (7,000 gr/lb)}}{\text{(Air flow rate) x (60 min/hr) x (24 hr/day)}}$

PM_{10} emission rate = 8.5 lb/day. Assuming 100% of PM is PM_{10}
Exhaust Gas Flow = 10,000 scfm

PM Conc. (gr/scf) = [(8.5 lb/day) * (7,000 gr/lb)] ÷ [(10,000 ft^3/min) * (60 min/hr) * (24 hr/day)]
PM Conc. = 0.0003 gr/scf

Therefore, continued compliance with the requirements of this rule is expected.

Rule 4202 Particulate Matter Emission Rate

This rule limits the hourly particulate matter emissions from each Source Operation to the result of the equation that is applicable.

$E_{max} = 3.59\ P^{0.62}$, where $\leq P < 30$ tons/hr Equation 1
$E_{max} = 17.31\ P^{0.16}$, where $P > 30$ tons/hr Equation 2

E_{max} = Maximum allowable emissions in lb/hr
P = Process weight in tons/hr

Throughput: 37.4 tons/day (1.5 tons/hr)

$E_{max} = 3.59(1.5)^{0.62} = 4.6$ lb/hr

The PM10 emissions are shown in section VII.C.2 of this document to be much less than applicable total particulate matter limit calculated above. Compliance with total particulate matter limit is expected.

Rule 4301 Fuel Burning Equipment

This rule specifies maximum emission rates in lb/hr for SO_2, NO_2, and combustion contaminants (defined as total PM in Rule 1020). This rule also limits combustion contaminants to $\leq$ 0.1 gr/scf. According to AP 42 (Table 1.4-2, footnote c), all PM emissions from natural gas combustion are less than 1 μm in diameter.

District Rule 4301 Limits			
Pollutant	**NO_2**	**Total PM**	**SO_2**
ATC #N-1275-12-5	0.76	0.35	0.1
Rule Limit (lb/hr)	140	10	200

The above table indicates compliance with the maximum lb/hr emissions in this rule; therefore, continued compliance is expected.

Rule 4309 Dryers, Dehydrators, and Ovens

The purpose of this rule is to limit emissions of oxides of nitrogen (NOx) and carbon monoxide (CO) from dryers, dehydrators, and ovens. This rule applies to any dryer, dehydrator, or oven that is fired on gaseous fuel, liquid fuel, or is fired on gaseous and liquid fuel sequentially, and the total rated heat input for the unit is 5.0 million British thermal units per hour (5.0 MMBtu/hr) or greater. Since the dryer being modified in this project has a heat input rating greater than 5.0 MMBtu, this dryer is subject to the requirements of this rule.

Section 5.0, Requirements

Section 5.0 states that all ppmv limits specified in this section are referenced at dry stack gas conditions and adjusted using an oxygen correction factor of 19% by volume.

Section 5.2 requires that except for dehydrators, NO_X and CO emissions shall not exceed the limits specified in the table below on and after the full compliance schedules specified in Sections 7.1 and 7.3, as appropriate. All ppmv emission limits specified in this section are referenced at dry stack gas conditions and 19 percent by volume stack gas oxygen. Emission concentrations shall be corrected to 19 percent oxygen in accordance with Section 5.0.

NO_X and CO Limits				
Process Description	NO_X Limit (in ppmv)		CO Limit (in ppmv)	
	Gaseous Fuel Fired	Liquid Fuel Fired	Gaseous Fuel Fired	Liquid Fuel Fired
Milk, Cheese, and Dairy Processing > 20 MMBtu/hr	5.3	5.3	42	42

The units being installed in this project are milk dryers with a maximum heat input greater than 20 MMBtu/hr; therefore it is subject to the requirements of the Milk, Cheese, and Dairy Processing > 20 MMBtu/hr category listed in the table above.

For the units:

- the proposed NO_x emission factor is 3.3 ppmvd @ 19% O_2 (0.0377 lb/MMBtu), and the proposed CO emission factor is 42 ppmvd @ 19% O2 (0.2924 lb/MMBtu).

Therefore, compliance with this section is expected.

A permit condition listing the emissions limits will be listed on permit as shown in the DEL section above.

Section 5.3 states that the applicable emission limits in Section 5.2 shall not apply during start-up or shutdown provided an operator complies with the requirements specified below.

The facility has not requested relaxed emission limit requirements for their unit during startup or shutdown, therefore this section does not apply to the unit in this project.

Section 5.4, Monitoring Requirements

Section 5.4.1 states that except for dehydrators, the operator of any unit subject to the applicable emission limits in Sections 4.3.2, or 5.2 shall monitor emissions using one of the techniques specified in Sections 5.4.1.1 or 5.4.1.2.

Section 5.4.1.1 states the first technique as the installation and maintenance of an APCO approved CEMS for NO_X, and oxygen that meets the following requirements.

- 40 CFR Part 51, and
- 40 CFR Parts 60.7 and 60.13 (except subsection h), and
- 40 CFR Part 60 Appendix B (Performance Specifications), and
- 40 CFR Part 60 Appendix F (Quality Assurance Procedures), and
- The applicable provisions of District Rule 1080 (Stack Monitoring).
- The APCO shall only approve CEMS that meets the requirements of Sections 5.4.1.1.1 through 5.4.1.1.5 of this rule.

Section 5.4.1.2 states the second technique as the installation and maintenance of an alternate emissions monitoring method that meets the requirements of Sections 5.4.1.2.1 through 5.4.1.2.3 of this rule.

Section 5.4.1.2.1 states that the APCO shall not approve an alternative monitoring system unless it is documented that continued operation within ranges of specified emissions-related performance indicators or operational characteristics provides a reasonable assurance of compliance with applicable emission limits.

Section 5.4.1.2.2 states that the approved alternate emission monitoring system shall monitor operational characteristics necessary to ensure compliance with the emission limit. Operational characteristics shall be one or more of the following:

- Periodic NOx exhaust emission concentrations,
- Periodic exhaust oxygen concentration,
- Flow rate of reducing agent added to exhaust,
- Catalyst inlet and exhaust temperature,
- Catalyst inlet and exhaust oxygen concentration,
- Periodic flue gas recirculation rate,
- Other surrogate operating parameter(s) that demonstrate compliance with the emission limit.

In order to satisfy the requirements of District Rule 4309, the applicant has proposed to use pre-approved alternate monitoring scheme A (pursuant to District Policy SSP-3005), which requires that monitoring of NO_X, CO, and O_2 exhaust concentrations shall be conducted at least once per month (in which a source test is not performed) using a portable analyzer. The following conditions will be incorporated into the permit in order to ensure compliance with the requirements of the proposed alternate monitoring plan:

- The permittee shall monitor and record the stack concentration of NO_X, CO, and O_2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4309]
- If either the NO_X or CO concentrations corrected to 19% O_2, as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee

shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of the performing the notification and testing required by this condition. [District Rule 4309]

- All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4309]
- The permittee shall maintain records of: (1) the date and time of NO_X, CO, and O_2 measurements, (2) the O_2 concentration in percent and the measured NO_X and CO concentrations corrected to 19% O_2, (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4309]

Section 5.4.1.2.3 states that the operator shall source test over the proposed range of surrogate operating parameter(s) to demonstrate compliance with the applicable emission limits. The unit will be source tested upon initial operation as is required by Section 6.3.2 of this Rule; therefore compliance with this section is ensured.

Section 5.5, Compliance Determination

Section 5.5.1 states that all emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the PTO.

Section 5.5.2 states that except for as provided in Section 5.5.3, no determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0.

The following condition will be added to the permit to ensure compliance with Sections 5.5.1 and 5.5.2.

- All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4309. [District Rule 4309]

Section 5.5.3 states that notwithstanding the requirements of Section 5.5.2, the APCO, ARB, and US EPA may approve a longer or shorter period before compliance determination, if an operator submits an application for a PTO condition which provides a justification for the requested duration.

Section 5.5.4 states that all CEMS emissions measurements shall be averaged over a period of 15 consecutive minutes to demonstrate compliance with the applicable emission limits of this rule. Any 15-consecutive-minute block average CEMS measurement exceeding the applicable emission limits of this rule shall constitute a violation of this rule.

The facility has not proposed to utilize a CEMS; therefore the requirements of this section are not applicable to the dryer in this project.

Section 5.5.5 states that for emissions monitoring pursuant to Section 5.4.1.2.2.1, emission readings shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15-consecutive-minute sample reading or by taking at least five (5) readings evenly spaced out over the 15-consecutive minute period.

The following condition will be added to the permit to ensure compliance with this section.

- All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the permit-to-operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4309]

Section 5.5.6 states that for emissions source testing performed pursuant to Section 6.3.1 to determine compliance with an applicable emission limit of this rule, the arithmetic average of three (3) 30-consecutive-minute test runs shall apply. If two of the three runs individually demonstrate emissions above the applicable limit, the test cannot be used to demonstrate compliance for the unit, even if the averaged emissions of all three test runs is less than the applicable limit. The following condition will be added to the permit to ensure compliance with this section.

- 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 Rule 4309]

Section 6.1, Recordkeeping

Section 6.1.1 states the recordkeeping requirements of a unit that uses CEMS to monitor emissions. Since the applicant has not proposed a CEMS to monitor emissions, the requirements of this section do not apply to the unit in this project.

Section 6.1.2 states that operators using an alternate emissions monitoring system shall maintain the following records on a periodic basis:

- Total hours of operation.
- Type and quantity of fuel used during operations.
- Measurement for each surrogate parameter.
- Range of allowed values for each surrogate parameter.
- The period for recordkeeping shall be specified in the PTO conditions.

Section 6.1.3 only applies to dehydrators; therefore this section is not applicable to the unit in this project.

Section 6.1.4 states that the operator of a unit subject to Section 5.2 and performing start-up or shutdown of that unit shall keep records of the duration of each start-up and each shutdown. The facility has not proposed startup or shutdown emissions for the dryer in this operation; therefore the requirements of this section do not apply to the dryer in this project.

Section 6.1.5 states the recordkeeping requirements of an operator of any unit operated under the exemption of Section 4.3.

Since the applicant has not applied for the exemption in Section 4.3, the requirements in this section do not apply to the dryer in this project.

Section 6.1.6 states the records and manufacturer's specifications required by Sections 6.1.1 through 6.1.5 shall meet all of the following requirements.

- The records shall be maintained for five (5) calendar years,
- The records shall be made available on-site during normal business hours, and
- The records shall be submitted to the APCO upon request.

The following condition will be added to the permit to ensure compliance with this section.

- 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 and 4309]

Section 6.2, Test Methods

Section 6.2 lists the test methods required by the rule. In lieu of the test methods listed below the facility can utilize alternative APCO and US EPA approved test methods.

Pollutant	Units	Test Method Required
Fuel hhv	Fuel hhv shall be certified by third party fuel supplier or:	
	Liquid fuels	ASTM D 240-87 or D 2382-88
	Gaseous fuels	ASTM D 1826-88 or D 1945-81 in conjunction with ASTM D 3588-89
NO_X	ppmv	EPA Method 7E or ARB Method 100
CO	ppmv	EPA Method 10 or ARB Method 100
Stack Gas O_2	%	EPA Method 3 or 3A, or ARB Method 100
Stack Gas Velocities	ft/min	EPA Method 2
Stack Gas Moisture Content	%	EPA Method 4

The following permit conditions will be listed on the permit as follows:

- NO_X emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rule 4309]
- CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rule 4309]
- Stack gas oxygen (O_2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rule 4309]

Section 6.3.2 states that each unit subject to the requirements in Sections 4.3, or 5.2 shall be initially source tested to determine compliance with the applicable emission limits not later than the applicable full compliance schedule specified in Section 7.0. Thereafter, each unit subject to Section 5.2 emission limits shall be source tested at least once every 24 months. Units subject to Section 5.2 and operating less than 50 days per calendar year shall follow the source test frequency prescribed in Section 6.3.3. The following condition will be added to the permit to ensure compliance with this section.

- Source testing to measure NOx and CO emissions from this unit when fired on natural gas shall be conducted within 60 days of initial start-up and at least once every 24 months thereafter. [District Rules 2201 and 4309]

Section 6.3.5 states that the APCO shall be notified according to the provisions of Rule 1081 (Source Sampling). The following conditions will be added to the permit to ensure compliance with this section.

- {109} Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081]
- The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

Section 6.3.6 states that emissions source testing shall be conducted with the unit operating either at conditions representative of normal operations or conditions specified in the PTO. The requirements of this section will be satisfied by the condition listed in Sections 5.5.1 and 5.5.2 of this rule evaluation.

Section 6.3.7 states that all test results for NOx and CO shall be reported in ppmv, corrected to dry stack conditions and adjusted using the oxygen correction factor. The following condition will be added to the permit to ensure compliance with this section.

- All test results for NOx and CO shall be reported in ppmv @ 19% O_2, corrected to dry stack conditions. [District Rule 4309]

Section 6.3.8 states that for the purpose of determining compliance with an applicable emission limit, the arithmetic average of three (3) 30-consecutive-minute test runs shall apply.

Section 6.3.9 states that if two of the three runs specified by Section 6.3.8 individually demonstrate emissions above the applicable limit, the test cannot be used to demonstrate compliance for the unit, even if the averaged emissions of all three runs is less than the applicable limit.

The requirements of Sections 6.3.8 and 6.3.9 will be satisfied by the condition listed in Section 5.5.6 of this rule evaluation.

Section 6.4 lists the source testing requirements for asphalt/concrete plants. Since this facility is not an asphalt or concrete plant, the requirements of this section do not apply to the dryer in this project.

Therefore, compliance with the requirements of this rule is expected.

Rule 4801 Sulfur Compounds

A person shall not discharge into the atmosphere sulfur compounds, which would exist as a liquid or gas at standard conditions, exceeding in concentration at the point of discharge: 0.2 % by volume calculated as SO_2, on a dry basis averaged over 15 consecutive minutes.

SO_X = (0.00285 lb-SOx/MMBtu) x (1 mol SOx/64 lb SOx) x (379.3 dscf SOx/1 mol SOx) x ($1x10^6$ Btu/8710 dscf SOx) x ($1x10^6$/MM)
= **1.9 ppmv << 2000 ppmv**

Since 1.9 ppmv is ≤ 2,000 ppmv, continued compliance with the requirements of this rule is expected.

California Environmental Quality Act (CEQA)

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

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

Greenhouse Gas (GHG) Significance Determination

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

The District's engineering evaluation (this document) demonstrates that the project would not result in an increase in project specific greenhouse gas emissions, since this project does not result in an increase in fuel usage. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

District CEQA Findings

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

California Health & Safety Code 42301.6 (School Notice)

This site is not located within 1,000 feet of a K-12 school.

Therefore, pursuant to California Health & Safety Code 42301.6, a school notice is not required.

IX. Recommendation

Compliance with all applicable rules and regulations is expected, issue Authority to Construct (ATC) N-1275-12-5 subject to the permit conditions listed on the attached draft Authorities to Construct in Attachment E.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
N-1275-12-5	3020-02-H	20.7 MMBtu/hr dryer	$1,030.00

Attachments

A QNEC
B BACT Guideline 1.6.11 and Top Down BACT Analysis
C Current Permit
D AAQA
E GHG Calculations
F Draft Authorities to Construct
G Compliance Certification
H Manufacture Guarantee
I Monitoring Results

ATTACHMENT A

QNEC

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:

$PE2_{quarterly}$ = $PE2_{annual}$ ÷ 4 quarters/year
= 3249 lb/year ÷ 4 qtr/year
= 812 lb PM_{10}/qtr

$PE1_{quarterly}$ = $PE1_{annual}$ ÷ 4 quarters/year
= 3249 lb/year ÷ 4 qtr/year
= 812 lb PM_{10}/qtr

Quarterly NEC [QNEC]			
	PE2 (lb/qtr)	PE1 (lb/qtr)	QNEC (lb/qtr)
NO_X	812	812	0
SO_X	129	129	0
PM_{10}	775	775	0
CO	12922	3354	9568
VOC	181	181	0

ATTACHMENT B

BACT Guideline 1.6.11 and Top Down BACT Analysis

Per » B A C T » Bact Guideline.asp?category Level1=1&category Level2=6&category Level3=11&last Update=7 » 27 :

Back

Best Available Control Technology (BACT) Guideline 1.6.11
Last Update: 7/27/1995

Dryer - Milk Spray, > or = 20 MMBtu/hr

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
CO	Natural gas with LPG as backup fuel		
NOx	Low NOx burner fired on natural gas with LPG as backup fuel		
PM10	Baghouse and natural gas with LPG as backup fuel		
SOx	Natural gas with LPG as backup fuel		
VOC	Natural gas with LPG as backup fuel		

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in s a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is requried for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

This is a Summary Page for this Class of Source. For background information, see Permit Specific BACT Determinations on Details Page.

TOP DOWN BACT ANALYSIS

I. BACT Analysis for N-1275-12-5:

BACT is required for NOx

a. Step 1 - Identify All Possible Control Technologies

BACT guideline 1.6.11 identifies the following control technologies:

Pollutant	Achieved in Practice or contained in SIP	Technologically Feasible	Alternate Basic Equipment
NOx	Low NOx burner fired on natural gas with LPG as backup fuel		

b. Step 2 - Eliminate Technologically Infeasible Options

There are no technologically infeasible options.

c. Step 3 - Rank Remaining Control Technologies by Control Effectiveness

There are no remaining control technologies for NOx.

d. Step 4 - Cost Effectiveness Analysis

The applicant is proposing the most effective control technology applicable for NOx; therefore, a cost effectiveness analysis is not required.

e. Step 5 - Select BACT

NOx: Low NO_X burner fired on natural gas with LPG as backup fuel is selected as BACT.

The proposed dryer is fired on natural gas with no proposed backup fuel. Therefore, BACT is satisfied for NOx.

ATTACHMENT C

Previous Permits

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-1275-12-4 **EXPIRATION DATE:** 09/30/2017

EQUIPMENT DESCRIPTION:
ONE SINGLE STAGE MARRIOT-WALKER SPRAY DRIER WITH A 20.7 MMBTU/HR MAXON BURNER SERVED BY A WALKER STAINLESS EQUIPMENT BAGHOUSE AND A FISHER-KLOSTERMAN SCRUBBER

PERMIT UNIT REQUIREMENTS

1. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] 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. The spray drier shall only be fired on PUC-quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
5. The facility-wide NOx emissions shall not exceed 34,996 pounds during any rolling 12-month period. [District Rule 2201] Federally Enforceable Through Title V Permit
6. The facility-wide PM10 emissions shall not exceed 29,200 pounds during any rolling 12-month period. [District Rule 2201] Federally Enforceable Through Title V Permit
7. NOx emissions shall be calculated as follows: 0.018 lb/MMBtu x (fuel usage) MMscf x 1,000 MMBtu/MMscf. [District Rule 2201] Federally Enforceable Through Title V Permit
8. PM10 emissions shall be calculated as follows: 0.227 lb/ton-finished-product-processed x (throughput) ton-finished-product-processed. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The NOx emissions shall not exceed 0.018 lb/MMBtu (equivalent to 1.6 ppmvd @ 19% O2). [District Rules 2201 and 4309] Federally Enforceable Through Title V Permit
10. The CO emissions shall not exceed 0.075 lb/MMBtu (equivalent to 10.9 ppmvd @ 19% O2). [District Rules 2201 and 4309] Federally Enforceable Through Title V Permit
11. The VOC emissions shall not exceed 0.004 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The SOx emissions shall not exceed 0.00285 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
13. The finished product throughput shall not exceed 37.4 tons during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The PM10 emissions shall not exceed 0.227 lb PM10 per ton of finished product throughput. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Merced County Rule 407 and District Rule 4801] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

16. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation E=3.59P^0.62 (P< 30 tph) or E=17.31P^0.16 (P> 30 tph). [District Rule 4202] Federally Enforceable Through Title V Permit
17. Source testing to measure NOx and CO emissions from the drier shall be conducted at least once every 24 months. [District Rule 4309] Federally Enforceable Through Title V Permit
18. 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
19. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit
20. 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
21. All emissions measurements shall be made with the unit(s) 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 Rule 4309. [District Rules 1081 and 4309] Federally Enforceable Through Title V Permit
22. All source test results shall be reported in ppmvd @ 19% O2 or no correction if the stack O2 content is greater than 19%. [District Rule 4309] Federally Enforceable Through Title V Permit
23. 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 1081 and 4309] Federally Enforceable Through Title V Permit
24. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 1081 and 4309] Federally Enforceable Through Title V Permit
25. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 1081 and 4309] Federally Enforceable Through Title V Permit
26. Stack gas velocities shall be determined utilizing EPA Method 2. [District Rules 1081 and 4309] Federally Enforceable Through Title V Permit
27. Stack Moisture Content shall be determined utilizing EPA Method 4 [District Rules 1081 and 4309] Federally Enforceable Through Title V Permit
28. 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 1081 and 4309] Federally Enforceable Through Title V Permit
29. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4309] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

30. If either the NOx or CO concentrations corrected to 19% O2 (or no correction if measured above 19% O2), as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4309] Federally Enforceable Through Title V Permit

31. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4309] Federally Enforceable Through Title V Permit

32. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 19% O2 (or no correction if measured above 19% O2), (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4309] Federally Enforceable Through Title V Permit

33. The scrubber and the scrubber fluid shall be maintained such that the scrubber provides at least 90% control of the PM10 emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

34. Monthly records of the total hours of operation and of the type and quantity of fuel used shall be kept. [District Rule 4309] Federally Enforceable Through Title V Permit

35. A daily record shall be maintained and shall include the date, amount of fuel used and the tons of finished product processed. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

36. Records of the facility-wide NOx and PM10 emissions, on a rolling 12-month basis shall be kept. The records shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit

37. All records shall be retained for a minimum of 5 years and made available for District inspection upon request. [District Rules 1070, 2201 and 4309] Federally Enforceable Through Title V Permit

ATTACHMENT D

AAQA

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	Thom Maslowski – Permit Services
From:	Leland Villalvazo – Technical Services
Date:	May 4, 2013
Facility Name:	Hilmar Cheese Co.
Location:	9001 N. Lander Ave
Application #(s):	N-1275-12-5
Project #:	N-1131080

A. RMR SUMMARY

RMR Summary				
Categories	**Spray Drier (Unit 12-5)**		**Project Totals**	**Facility Totals**
Prioritization Score	NA		NA	NA
Acute Hazard Index	NA		NA	NA
Chronic Hazard Index	NA		NA	NA
Maximum Individual Cancer Risk (10^{-6})	NA		NA	NA
T-BACT Required?	**No**			
Special Permit Conditions?	**Yes**			

Proposed Permit Conditions

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

Unit # 12-5

1. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper ok), roof overhang, or any other obstruction. [District Rule 2201] N

B. RMR REPORT

I. Project Description

Technical Services received a request to perform an Ambient Air Quality Analysis for an increase in NO_2 and Co emissions for a 20 MMBTU Spray Drier.

II. Analysis

Technical Services performed modeling for the criteria pollutant NO_2 and CO using AERMOD. The emission rate used was 0.39 lb/hr and 4.4 lb/hr respectively. The engineer supplied the maximum rate for the Spray Drier used during the analysis.

The following parameters were used for the review:

Analysis Parameters Unit 12-5			
Source Type	Point	**Location Type**	Urban
Stack Height (m)	30.48	**Closest Receptor (m)**	NA
Stack Diameter. (m)	1.067	**Type of Receptor**	Ambient Air
Stack Exit Velocity (m/s)	25.34	**Max Hours per Year**	8760
Stack Exit Temp. (°K)	355.37	**Fuel Type**	NG
Burner Rating (MMBtu/hr)	20.0		

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

Diesel ICE	1 Hour	3 Hours	8 Hours.	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO_x	Pass[1]	X	X	X	Pass
SO_x	NA	NA	X	NA	NA
PM_{10}	X	X	X	NA	NA
$PM_{2.5}$	X	X	X	NA	NA

*Results were taken from the attached PSD spreadsheet.
[1]The project was compared to the 1-hour NO2 National Ambient Air Quality Standard that became effective on April 12, 2010 using the District's approved procedures.
[2]The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

III. Conclusion

The emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS. Additionally, since there was no increase in toxic emissions no RMR was performed

IV. Attachments

A. RMR request from the project engineer
B. Additional information from the applicant/project engineer

Time	NOx		Model	NOx	Background	Total	AAQS	Status
	lbs/ time	g/sec	Conc	Conc / Time		Impact	Standard	
1-Hour	0.39	0.05	43.85	2.15	61.00	63.15	189	Pass
Annual	3416.4	0.05	2.73	0.13	61.00	61.13	100	Pass*

*EPA site does not report an Annual value. Therefore the 1 max Hourly was used.

Time	CO		Model	CO	Background	Total	AAQS	Status
	lbs/ time	g/sec	Conc	Conc / Time		Impact	Standard	
1-Hour	4.4	0.55	43.85	24.31	2.60	26.91	23,000	Pass
8-Hour	35.2	0.55	18.54	10.28	2.10	12.38	10,000	Pass

ATTACHMENT E

GHG Calculations

Green House Gas Emission Rate Evaluation

For whole Facility:

Basis and Assumptions

- The units fired with natural gas at a rate of 268.8 MMBtu/hour (HHV) (See attached table)
- The units operates 8,760 hours per year and is in commercial/institutional service
- Emission factors and global warming potentials (GWP) are taken from 40 CFR Part 98:

    CO2 53.06 kg/MMBtu (HHV) natural gas (116.7 lb/MMBtu)
    CH4 0.005 kg/MMBtu (HHV) natural gas (0.011 lb/MMBtu)
    N2O 0.0001 kg/MMBtu (HHV) natural gas (0.00022 lb/MMBtu)

    GWP for CH4 = 21 lb-CO2(eq) per lb-CH4
    GWP for N2O = 310 lb-CO2(eq) per lb-N2O

Calculations

Hourly Emissions

CO2 Emissions = 268.8 Btu/hr x 116.7 lb/Btu = 31369.0 lb-CO2(eq)/hour
CH4 Emissions = 268.8 Btu/hr x 0.011 lb/Btu x 21 lb-CO2(eq) per lb-CH4 = 62.1 lb-CO2(eq)/hour
N2O Emissions = 268.8 Btu/hr x 0.00022 lb/Btu x 310 lb-CO2(eq) per lb-N2O = 18.3 lb-CO2(eq)/hour

Total = 31369.0 + 62.1 + 18.3 = 31,449.4 lb-CO2(eq)/hour

Annual Emissions

31,449.4 lb-CO2(eq)/hour x 8,760 hr/year ÷ 2,000 lb/ton = **137,775 tons-CO2(eq)/year**

For N-1275-12-5:

Basis and Assumptions

- The units fired with natural gas at a rate of 20.7 MMBtu/hour (HHV)
- The units operates 8,760 hours per year and is in commercial/institutional service

- Emission factors and global warming potentials (GWP) are taken from the California Climate Change Action Registry (CCAR), Version 3.1, January, 2009 (Appendix C, Tables C.7 and C.8):

  CO2 53.06 kg/MMBtu (HHV) natural gas (116.7 lb/MMBtu)
  CH4 0.005 kg/MMBtu (HHV) natural gas (0.011 lb/MMBtu)
  N2O 0.0001 kg/MMBtu (HHV) natural gas (0.00022 lb/MMBtu)

  GWP for CH4 = 23 lb-CO2(eq) per lb-CH4
  GWP for N2O = 296 lb-CO2(eq) per lb-N2O

Calculations

Hourly Emissions

CO2 Emissions = 20.7 Btu/hr x 116.7 lb/Btu = 2415.7 lb-CO2(eq)/hour
CH4 Emissions = 20.7 Btu/hr x 0.011 lb/Btu x 21 lb-CO2(eq) per lb-CH4 = 5.2 lb-CO2(eq)/hour
N2O Emissions = 20.7 Btu/hr x 0.00022 lb/Btu x 310 lb-CO2(eq) per lb-N2O = 13.5 lb-CO2(eq)/hour

Total = 2415.7+ 5.2 + 13.5 = 2434.4 lb-CO2(eq)/hour

Annual Emissions

2434.4 lb-CO2(eq)/hour x 8,760 hr/year ÷ 2,000 lb/ton = **10,662 tons-CO2(eq)/year**

Unit	Nox Limit	Rating	nox/hr*	nox/year*	*Assuming 24/7/365 Operation
2	0.008	25.1	0.2008	1759.008	
4	0.008	25.1	0.2008	1759.008	
5	0	0	0	0	
6	0	0	0	0	
7	0	0	0	0	
9	0.008	25.1	0.2008	1759.008	
12	0.018	20.7	0.3726	3263.976	
14	0	0	0	0	
15	0	0	0	0	
16	0	0	0	0	
17	0.011	17	0.187	1638.12	
18	0.008	33.6	0.2688	2354.688	
22	0.008	50.4	0.4032	3532.032	
23	0.06	14.78	0.8868	7768.368	
24	0	0	0	0	
25	0	0	0	0	
26	0	0	0	0	
28	0.011	6.7	0.0737	645.612	
30	0.0061	50.2	0.30622	2682.487	
35	0	0	0	0	
		268.68		27162.31	<29200 (Current SLC)

ATTACHMENT F

Draft Authorities to Construct

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

PERMIT NO: N-1275-12-5 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: HILMAR CHEESE COMPANY
MAILING ADDRESS: ATTN EHS COORDINATOR
P O BOX 910
HILMAR, CA 95324

LOCATION: 9001 N LANDER AVE
HILMAR, CA 95324

EQUIPMENT DESCRIPTION:
MODIFICATION OF ONE SINGLE STAGE MARRIOT-WALKER SPRAY DRIER WITH A 20.7 MMBTU/HR MAXON BURNER SERVED BY A WALKER STAINLESS EQUIPMENT BAGHOUSE AND A FISHER-KLOSTERMAN SCRUBBER: INCREASE THE NOX EMISSION FACTOR FROM 1.6 PPMVD @ 19% O2 TO 3.3 PPMVD @ 19% O2 AND THE CO EMISSION FACTOR FROM 10.9 PPMVD @ 19% O2 TO 42 PPMVD @ 19 % O2

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. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
5. Visible emissions from the baghouses serving the milk dryer shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in one hour. [District Rule 4101]
6. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit

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-1275-12-5 . May 5 2013 4:02PM – MASLOWST . Joint Inspection NOT Required

7. {10} The baghouse shall be equipped with a pressure differential gauge to indicate the pressure drop across the bags. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District Rule 2201]
8. The differential pressure gauge reading range shall be established per manufacturer's recommendation at time of start up inspection. [District Rule 2201]
9. {3463} Differential operating pressure shall be monitored and recorded on each day that the baghouse operates. [District Rule 2201]
10. {3457} The baghouse shall be maintained and operated according to manufacturer's specifications. [District Rule 2201]
11. {120} The baghouse cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District Rule 2201]
12. {73} Material removed from the dust collector(s) shall be disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201]
13. {3464} Records of all maintenance of the baghouse, including all change outs of filter media, shall be maintained. [District Rule 2201]
14. {3465} Records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rule 2201]
15. The spray drier shall only be fired on PUC-quality natural gas. [District Rule 2201] Federally Enforceable Through Title V Permit
16. The facility-wide NOx emissions shall not exceed 34,996 pounds during any rolling 12-month period. [District Rule 2201] Federally Enforceable Through Title V Permit
17. The facility-wide PM10 emissions shall not exceed 29,200 pounds during any rolling 12-month period. [District Rule 2201] Federally Enforceable Through Title V Permit
18. NOx emissions shall be calculated as follows: 0.0377 lb/MMBtu x (fuel usage) MMscf x 1,000 MMBtu/MMscf. [District Rule 2201] Federally Enforceable Through Title V Permit
19. PM10 emissions shall be calculated as follows: 0.227 lb/ton-finished-product-processed x (throughput) ton-finished-product-processed. [District Rule 2201] Federally Enforceable Through Title V Permit
20. The NOx emissions shall not exceed 0.0377 lb/MMBtu (equivalent to 3.3 ppmvd @ 19% O2). [District Rules 2201 and 4309] Federally Enforceable Through Title V Permit
21. The CO emissions shall not exceed 0.2924 lb/MMBtu (equivalent to 42 ppmvd @ 19% O2). [District Rules 2201 and 4309] Federally Enforceable Through Title V Permit
22. The VOC emissions shall not exceed 0.004 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
23. The SOx emissions shall not exceed 0.00285 lb/MMBtu. [District Rule 2201] Federally Enforceable Through Title V Permit
24. The finished product throughput shall not exceed 37.4 tons during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
25. The PM10 emissions shall not exceed 0.227 lb PM10 per ton of finished product throughput. [District Rule 2201] Federally Enforceable Through Title V Permit
26. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Merced County Rule 407 and District Rule 4801] Federally Enforceable Through Title V Permit
27. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation E=3.59P^0.62 (P< 30 tph) or E=17.31P^0.16 (P> 30 tph). [District Rule 4202] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

28. Source testing to measure NOx and CO emissions from the drier shall be conducted within 60 days and at least once every 24 months. [District Rule 4309] Federally Enforceable Through Title V Permit

29. 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

30. Sampling facilities for source testing shall be provided in accordance with the provisions of Rule 1081 (Source Sampling). [District Rule 1081] Federally Enforceable Through Title V Permit

31. 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

32. All emissions measurements shall be made with the unit(s) 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 Rule 4309. [District Rules 1081 and 4309] Federally Enforceable Through Title V Permit

33. All source test results shall be reported in ppmvd @ 19% O2 or no correction if the stack O2 content is greater than 19%. [District Rule 4309] Federally Enforceable Through Title V Permit

34. 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 1081 and 4309] Federally Enforceable Through Title V Permit

35. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 1081 and 4309] Federally Enforceable Through Title V Permit

36. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 1081 and 4309] Federally Enforceable Through Title V Permit

37. Stack gas velocities shall be determined utilizing EPA Method 2. [District Rules 1081 and 4309] Federally Enforceable Through Title V Permit

38. Stack Moisture Content shall be determined utilizing EPA Method 4 [District Rules 1081 and 4309] Federally Enforceable Through Title V Permit

39. 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 1081 and 4309] Federally Enforceable Through Title V Permit

40. The permittee shall monitor and record the stack concentration of NOx, CO, and O2 at least once every month (in which a source test is not performed) using a portable emission monitor that meets District specifications. Monitoring shall not be required if the unit is not in operation, i.e. the unit need not be started solely to perform monitoring. Monitoring shall be performed within 5 days of restarting the unit unless monitoring has been performed within the last month. [District Rule 4309] Federally Enforceable Through Title V Permit

41. If either the NOx or CO concentrations corrected to 19% O2 (or no correction if measured above 19% O2), as measured by the portable analyzer, exceed the allowable emissions concentration, the permittee shall return the emissions to within the acceptable range as soon as possible, but no longer than 1 hour of operation after detection. If the portable analyzer readings continue to exceed the allowable emissions concentration after 1 hour of operation after detection, the permittee shall notify the District within the following 1 hour and conduct a certified source test within 60 days of the first exceedance. In lieu of conducting a source test, the permittee may stipulate a violation has occurred, subject to enforcement action. The permittee must then correct the violation, show compliance has been re-established, and resume monitoring procedures. If the deviations are the result of a qualifying breakdown condition pursuant to Rule 1100, the permittee may fully comply with Rule 1100 in lieu of performing the notification and testing required by this condition. [District Rule 4309] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

42. All alternate monitoring parameter emission readings shall be taken with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. The analyzer shall be calibrated, maintained, and operated in accordance with the manufacturer's specifications and recommendations or a protocol approved by the APCO. Emission readings taken shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15 consecutive-minute sample reading or by taking at least five (5) readings, evenly spaced out over the 15 consecutive-minute period. [District Rule 4309] Federally Enforceable Through Title V Permit

43. The permittee shall maintain records of: (1) the date and time of NOx, CO, and O2 measurements, (2) the O2 concentration in percent and the measured NOx and CO concentrations corrected to 19% O2 (or no correction if measured above 19% O2), (3) make and model of exhaust gas analyzer, (4) exhaust gas analyzer calibration records, and (5) a description of any corrective action taken to maintain the emissions within the acceptable range. [District Rule 4309] Federally Enforceable Through Title V Permit

44. The scrubber and the scrubber fluid shall be maintained such that the scrubber provides at least 90% control of the PM10 emissions. [District Rule 2201] Federally Enforceable Through Title V Permit

45. Monthly records of the total hours of operation and of the type and quantity of fuel used shall be kept. [District Rule 4309] Federally Enforceable Through Title V Permit

46. A daily record shall be maintained and shall include the date, amount of fuel used and the tons of finished product processed. [District Rules 1070 and 2201] Federally Enforceable Through Title V Permit

47. Records of the facility-wide NOx and PM10 emissions, on a rolling 12-month basis shall be kept. The records shall be updated at least monthly. [District Rule 2201] Federally Enforceable Through Title V Permit

48. All records shall be retained for a minimum of 5 years and made available for District inspection upon request. [District Rules 1070, 2201 and 4309] Federally Enforceable Through Title V Permit

ATTACHMENT G

Compliance Certification

San Joaquin Valley
Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

[X] SIGNIFICANT PERMIT MODIFICATION
[ ] MINOR PERMIT MODIFICATION
[ ] ADMINISTRATIVE AMENDMENT

COMPANY NAME: Hilmar Cheese Company, Inc.	FACILITY ID: N – 1275
1. Type of Organization:[X] Corporation [ ] Sole Ownership [ ] Government [ ] Partnership [ ] Utility	
2. Owner's Name: Hilmar Cheese Company, Inc.	
3. Agent to the Owner: Tedd Struckmeyer	

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

(TS) 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).

(TS) 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.

(TS) Corrected information will be provided to the District when I become aware that incorrect or incomplete information has been submitted.

(TS) 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:

[signature]
Signature of Responsible Official

16 APRIL 2013
Date

Tedd Struckmeyer
Name of Responsible Official (please print)

Vice President, Engineering & Business Development
Title of Responsible Official (please print)

ATTACHMENT H

Manufacturer Guarantee

MAXON
A Honeywell Company

WWW.MAXONCORP.COM
PHONE (800) 287-6378
FAX (866) 874-9149

TO: Nate – MBT Inc.

FROM: Stacy Mulrooney

DATE: March 19, 2013

SUBJ: **Maxon LN-4 and CROSSFIRE Emissions**

Nate,

Expected emissions for Maxon LN-4 burners are as follows through the burners operating range:

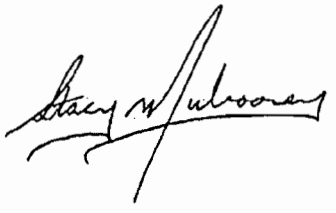
NOx < 30 PPM @ 3% O2 = 2.3 PPM @ 19.5% O2

CO < 400 PPM @ 3% O2 = 30.3 PPM @ 19.5% O2

The latest CROSSFIRE burners would have the same guaranteed values, however in most applications we have seen emissions measured up to 20% lower than stated in our formal guarantee.

Please let me know if you have any further questions.

Best regards,



Stacy Mulrooney
Regional Manager
Maxon LA Western Region Office
800-287-6378
949-648-4788 Mobile
smulroon@maxoncorp.com

ATTACHMENT I

Monitoring Results

Marriot Walker Dryer (N-1275-12)

Date	Reference	Dryer	Nox limit	Nox test	CO limit	CO test	Units	Notes
5/19/1995	Original permit application	M-W	0.018		0.075		lb/MMBtu	
			15		100		ppm @3% O2	
10/26/2012	Pyro preliminary test	M-W	1.6	2.6	10.9	20	ppm @19% O2	
2/26/2013	Pyro Monthly Test	M-W	1.6	2	10.9	36.8	ppm @19% O2	Deviation report submitted 3/7/13
			0.018	0.023	0.076	0.256	lb/MMBtu	NOV 5010471 rec'd 3/21/13
3/6/2013	Pyro Monthly Test	M-W	1.6	1.9	10.9	85.8	ppm @19% O2	Deviation report submitted 3/19/13
			0.018	0.022	0.076	0.596	lb/MMBtu	
4/23/2013	Pyro Monthly Test	M-W	1.6	2.5	10.9	83	ppm @19% O2	Deviation report submitted 5/1/13
			0.018	0.029	0.076	0.577	lb/MMBtu	
	Dryer Rule 4309		5.3		42		ppm @19% O2	
			0.06		0.292		lb/MMBtu	