San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

SEP 15 2015

Edwin Steven
Valley Milk, LLC
346 East F Street
Oakdale, CA 95361

Re: Notice of Preliminary Decision - Authority to Construct
Facility Number: N-9149
Project Number: N-1151582

Dear Mr. Steven:

Enclosed for your review and comment is the District's analysis of Valley Milk, LLC's application for an Authority to Construct for the installation of a new milk processing plant, at 4407 West Main Street in Turlock, California.

The notice of preliminary decision for this project will be published approximately three days from the date of this letter. After addressing all comments made during the 30-day public notice period, the District intends to issue the Authority to Construct. Please submit your written comments on this project within the 30-day public comment period, as specified in the enclosed public notice.

Thank you for your cooperation in this matter. If you have any questions regarding this matter, please contact Mr. Wai-Man So of Permit Services at (209) 557-6449.

Sincerely,

Arnaud Marjollet
Director of Permit Services

AM:WMS

Enclosures

cc: Mike Tollstrup, CARB (w/ enclosure) via email

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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www.valleyair.org www.healthyairliving.com

San Joaquin Valley Air Pollution Control District
Authority to Construct

New Dried Milk Powder Plant

Facility Name:	Valley Milk, LLC	Revised Date:	August 19, 2015
Mailing Address:	346 East F Street Oakdale, CA 95361	Engineer:	Wai-Man So
		Lead Engineer:	Nick Peirce
Contact Person:	Edwin Steven (Plant Manager)		Ray Kapahi (Consultant)
Telephone:	(575) 693 – 9238		(916) 687 – 8352
Email:	esteven@valleymilkca.com		Ray.kapahi@gmail.com
Application #(s):	N-9149-1-0, -2-0, -3-0, & -4-0		
Project #:	N-1151582		
Deemed Complete:	May 22, 2015		

I. Proposal

Valley Milk, LLC (hereinafter Valley Milk) is requesting Authorities to Construct (ATC) permit for the construction of a new dairy processing facility that consisting of one milk drying operation, one dried milk packaging operation, and two identical 33.6 MMBtu/hr Hurst model Euro Sect. 800 hp natural gas-fired boilers. The milk drying operation consisting one indirect-fired process heater with a 23.58 MMBtu/hr Eclipse model Minnox natural gas-fired burner and a steam heated fluid bed dryer both served by a 65,000 dscfm GEA Process Engineering, Inc. model Hudson style baghouse. The dried milk packaging operation will be served by a 4,000 dscfm Donaldson model Torit DLMC baghouse.

In addition, the applicant proposes to establish a facility-wide PM10 emissions limit of 29,000 pounds per year under this project.

II. Applicable Rules

District Rule 2201	New and Modified Stationary Source Review Rule (04/21/11)
District Rule 2410	Prevention of Significant Deterioration (effective 11/26/12)
District Rule 2520	Federal Mandated Operating Permits (6/21/01)
District Rule 4001	New Source Performance Standards (4/14/99)
District Rule 4002	National Emission Standards for Hazardous Air Pollutants (5/20/04)
District Rule 4101	Visible Emissions (02/17/05)
District Rule 4102	Nuisance (12/17/92)
District Rule 4201	Particulate Matter Concentration (12/17/92)
District Rule 4304	Equipment Tuning Procedure for Boilers, Steam Generators and Process Heaters (10/19/95)
District Rule 4305	Boilers, Steam Generators, and Process Heaters – Phase 2 (8/21/03)
District Rule 4306	Boilers, Steam Generators, and Process Heaters – Phase 3 (3/17/05)

District Rule 4320	Advanced Emission Reduction Options for Boilers, Steam Generators, and Process Heaters Greater Than 5.0 MMBtu/hr (10/16/09)
District Rule 4801	Sulfur Compounds (12/17/92)
CH&SC 41700	Health Risk Assessment
CH&SC 42301.6	School Notice

Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

The facility will be located at 4407 West Main Street in Turlock, California. The District has verified that the equipment will not be located within 1,000 feet to the outer boundary of any K-12 School. Therefore, the school notification requirement of CH&SC 42301.6 is not required for this project.

IV. Process Description

Valley Milk is a dairy processing, packaging, and distribution facility with production of skim and whole milk powders, and also cream as by-product.

The system will include two side by side drive-through truck bays. Bay one will be dedicated to reception of raw milk from 50,000 pounds single compartment tanker trucks, bay two will be used for cream loadout during skim milk productions and CIP cleaning of incoming and loadout milk tanker trucks. Raw milk will be unloaded from milk tankers and stored in any of the three vertical storage silos.

If skim milk powder is to be produced, milk will be transferred from raw milk storage silos to two cold milk separation machines to produce skim milk and cream. The cream stream will be sent to a dedicated cream High Temperature Short Time (HTST) pasteurization unit where it will be heated to legal pasteurization temperature and then cooled down to storage temperature. Each full day of cream production will be stored in one of the two vertical storage silos. Cream will then be pumped from storage to bay two to be loaded out into 50,000 pounds single compartment tanker trucks.

The skim milk stream will be split into two flow streams, where two-third of the skim milk from the separation process will be cooled to storage temperature and sent to an evaporator surge tank. The other one-third of the skim milk stream will be sent to the mix blending system where the protein content of the skim milk will be standardized by addition of lactose powder. The standardized milk stream is then pumped to the evaporator surge tank where it is reincorporated with the other two-third of the skim milk stream, and then sent to the evaporator.

If whole milk powder is to be produced, raw milk will be pumped from raw milk storage splitting the milk streams, two-third of the milk will be sent to the evaporator surge tank. The one-third of the milk will be sent to the mix blending system where the protein content of the

whole milk will be standardized by addition of lactose powder. The standardized milk stream is then pumped to the evaporator surge tank where it is reincorporated with the other two-third of the milk stream, and then sent to the evaporator.

The evaporator and supporting equipment will utilize dual parallel plate heat exchangers with switch over CIP technology and direct contact heating to mitigate growth of thermopilic bacterial spores. The evaporator has an integrated legal hold tube and pasteurization controls to produce pasteurized products. High solids concentrate will be sent from the evaporator to the first effect Thermo Vapor Compression (TVR) finisher where it is further concentrated and then sent to the second effect TVR finisher. After exiting the second effect TVR finisher, the concentrated milk stream is transferred to the dryer feed system.

Water vapors from the evaporation process will be condensed into a liquid stream which will be processed using a reverse osmosis (RO) water filtration system. After RO processing, a metered dose of chlorine will be added to the water before being sent to either of two vertical chlorinated process water storage silos. The water in these silos will be used throughput the working day to supply water to process use points. Where required, pasteurized equivalent water will be produced using ultra violet light pasteurization technology. Plant wide milk processing is designed to mitigate product losses with water flushes where applicable.

The multi stage dryer feed system receives concentrated milk from the finisher into one of two dryers feed tanks. The feed tanks and stuffing pump provide adequate feed flow to the high pressure pump for pumping the milk to the nozzle atomizing unit where milk is atomized into a fine mist and the water is rapidly evaporated by large volume of hot air. The hot air exits the dryer and is sent to the baghouse as the milk powder falls to the bottom of the dryer and is collected in the static fluid bed where further drying occurs. As the static fluid bed fills up, the volume overflows into the Vibro-Fluidizer (VF) bed where hot and cold air are used to dry, condition and cool the powder to the designed temperature and moisture content. Lecithin can be added into the VF bed to increase the rewet ability of the milk powder. The hot and cold air entering the VF is exhausted to the baghouse where the air and air borne milk particles are separated. The milk particles collected in the baghouse can be sent to the top of the dryer for reincorporation into the atomized concentrated milk, and clean air is exhausted through the roof exhaust stack. Milk exits the VF bed where it gravity drops into either a mill (used for particle size control) then a sifter (used for particle size screening) or optionally the milk powder can drop straight into the sifter.

A system of vacuum conveying lines transport the spray dried milk powder to one of two storage bins. After a sufficient volume is accumulated in the powder storage bins, the packaging machines can be put into operation. There are total five 25 kg bagging machine with supporting equipment and the bulk bagging system operate independent of each other. After packaging bulk bag are placed onto a pallet for fork lift pick up, and 25 kg bags are coded, robotically palletized, shrink wrapped, and conveyed to a fork lift driver pick up point. The vacuum conveying system and the packaging system are served by a common baghouse. See process flow diagram in Appendix II of this document.

Valley Milk proposes the following daily processing rates: 2.5 million pounds of raw milk for production of skim milk powder, 2.0 million pounds of raw milk for production of whole milk powder, and the combined skim and whole dried milk production rate of 125 tons. The operating schedule is 24 hours per day and 365 days per year.

V. Equipment Listing

N-9149-1-0

33.6 MMBTU/HR HURST MODEL EURO SECT. 1-800HP NATURAL GAS-FIRED BOILER (BOILER #1) WITH A POWER FLAME MODEL NOVA ULTRA LOW-NOX BURNER

N-9149-2-0

33.6 MMBTU/HR HURST MODEL EURO SECT. 1-800HP NATURAL GAS-FIRED BOILER (BOILER #2) WITH A POWER FLAME MODEL NOVA ULTRA LOW-NOX BURNER

N-9149-3-0

MILK DRYING OPERATION CONSISTING OF A NATURAL GAS INDIRECT-FIRED PROCESS HEATER EQUIPPED WITH A 23.58 MMBTU/HR ECLIPSE MODEL MINNOX BURNER AND WITH AN INTEGRATED STATIC FLUID BED DRYING CHAMBER, A VIBRO-FLUIDIZER, A MILK POWDER MILL, A MILK POWDER SIFTER, ONE 500 CUBIC FOOT START-UP POWDER SILO, TWO 3,900 CUBIC FOOT (EACH) POWDER STORAGE SILOS ALL SERVED BY A 65,000 SCFM GEA PROCESS ENGINEERING, INC MODEL HUDSON STYLE BAGHOUSE

N-9149-4-0

DRIED MILK PACKAGING OPERATION SERVED BY A 4,000 SCFM DONALDSON MODEL TORIT DLMC 2/2/15 BAGHOUSE

VI. Emission Control Technology Evaluation

Natural gas combustion Units

N-9149-1-0, -2-0 (boilers) and -3-0 (process heater)

There will be NO_X, VOC, CO, SO_X, and PM_{10} emissions from the combustion of natural gas in the boilers and the process heater. Ultra low-NO_X burners reduce NO_X 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-NO_X burners delay the mixing of fuel and air by introducing the fuel (or sometimes the air) in multiple stages. Generally, in the first combustion stage, the air-fuel mixture is fuel rich. In a fuel rich environment, all the oxygen will be consumed in reactions with the fuel, leaving no excess oxygen available to react with nitrogen to produce thermal NO_X. 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. A flue gas recirculation system recycles a portion of the exhaust gas back into the burner. Since the exhaust gas contains little oxygen, it has the effect of reducing the flame temperature, which in turn, reduces the formation of thermal NOx.

Drying, Conveying, Storage, and Packaging Units

N-9149-3-0 (drying, conveying & storage) and -4-0 (packaging)

PM10 emission is expected from the milk drying, conveying, storage, and dried milk packaging operations. All these operations will be served by two common baghouses. Each proposed baghouse is specifically designed for this type of operation and the expected control efficiency of the baghouse for removed of PM (including PM10) is 99%.

Per District Policy SSP 1005, the visible emissions from processes served by a baghouse/ dust collector or fabric filter shall not equal or exceed 5% opacity for a period or periods aggregating more than three (3) minutes in any one (1) hour. If the equipment is properly maintained this condition should not be exceeded. Therefore, the following condition will be listed on the permit to ensure compliance:

N-9149-3-0

- *Visible emissions from the exhaust of the baghouse serving the powder milk drying, conveying, and storage operations shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201]*

N-9149-4-0

- *Visible emissions from the exhaust of the baghouse serving the dried milk packaging operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201]*

VII. Calculations

A. Assumptions

- All units are fired solely on PUC-quality natural gas.
- The natural gas heating value is 1,000 Btu/scf (per District Practice).
- F-Factor for Natural Gas: 8,578 dscf/MMBtu corrected to 60°F (40 CFR 60, Appendix B).
- PM is the only pollutant emitted from the milk drying, conveying, storage, and dried milk packaging operations.
- Other assumptions will be stated as each is made.

B. Emission Factors

Pre-Project Emission Factors (EF1)

N-9149-1-0 thru -4-0

These are new emissions units. EF1 is equal to zero for all pollutants.

Post-Project Emission Factors (EF2)

N-9149-1-0 thru -3-0

All these units will be fired solely on PUC quality natural gas, therefore, SO_X emissions factor of 0.00285 lb/MMBtu will be used per District Policy APR-1720, and PM10 emissions factor of 0.003 lb/MMBtu will be used per District FYI-328.

N-9149-1-0 and -2-0

These are identical units. NO_X, CO, and VOC emissions factors are proposed by the applicant as 5 ppmvd NOX @ 3% O_2, 45 ppmvd CO @ 3% O_2 and 13 ppmvd VOC @ 3% respectively.

For calculation convenience, the emissions factors will be converted to an equivalent lb/MMBtu numbers as follow:

EF (lb/MMBtu) = {(ppmvd) x F-factor (dscf/MMBtu) x MW (lb/lb-mol) x [20.95/(20.95 – O_2%)]} / [Molar Specific Volume of Gas (dscf/lb-mol) x 10^6]

Where,
F-factor is 8,578 (dscf/MMBtu) at 60°F;
Molar Specific Volume of Gas is 379.5 (dscf/lb-mol) at 60°F;
Molecular Weight of NO_X, CO, and VOC are 46 (lb-NO_X/lb-mol), 28 (lb-CO/lb-mol), and 16 (lb-VOC/lb-mol) respectively.

EF NO_X = {(5 ppmvd) x (8,578 dscf/MMBtu) x (46 lb-NO_X/lb-mol) x [20.95/(20.95 – 3)]} / [379.5 dscf/lb-mol x 10^6]
EF NO_X = 0.0062 lb/MMBtu

EF CO = {(45 ppmvd) x (8,578 dscf/MMBtu) x (28 lb-CO/lb-mol) x [20.95/(20.95 – 3)]} / [379.5 dscf/lb-mol x 10^6]
EF CO = 0.033 lb/MMBtu

EF VOC = {(13 ppmvd) x (8,578 dscf/MMBtu) x (16 lb-VOC/lb-mol) x [20.95/(20.95 – 3)]} / [379.5 dscf/lb-mol x 10^6]
EF VOC = 0.0055 lb/MMBtu

For these units, the post-project emission factors (EF2) are listed in the table below:

Pollutant	Post-Project Emission Factors (EF2)		Source
NO_X	0.0062 lb-NO_X/MMBtu	5 ppmvd NO_X (@ 3%O_2)	Applicant proposal
SO_X	0.00285 lb-SO_X/MMBtu	--	APR 1720
PM10	0.003 lb-PM10/MMBtu	--	FYI-328
CO	0.033 lb-CO/MMBtu	45 ppmvd CO (@ 3%O_2)	Applicant proposal
VOC	0.0055 lb-VOC/MMBtu	13 ppmvd VOC (@ 3%O_2)	Applicant proposal

N-9149-3-0

Natural gas combustion

NO_X, CO, and VOC emissions factors are proposed by the applicant as 5 ppmvd NOX @ 3% O_2, 50 ppmvd CO @ 3% O_2 and 13 ppmvd VOC @ 3% respectively.

For calculation convenience, the emissions factors will be converted to an equivalent lb/MMBtu numbers as follow:

EF NO_X = {(5 ppmvd) x (8,578 dscf/MMBtu) x (46 lb-NO_X/lb-mol) x [20.95/(20.95 – 3)]} / [379.5 dscf/lb-mol x 10^6]
EF NO_X = 0.0062 lb/MMBtu

EF CO = {(50 ppmvd) x (8,578 dscf/MMBtu) x (28 lb-CO/lb-mol) x [20.95/(20.95 – 3)]} / [379.5 dscf/lb-mol x 10^6]
EF CO = 0.037 lb/MMBtu

EF VOC = {(13 ppmvd) x (8,578 dscf/MMBtu) x (16 lb-VOC/lb-mol) x [20.95/(20.95 – 3)]} / [379.5 dscf/lb-mol x 10^6]
EF VOC = 0.0055 lb/MMBtu

For the combustion unit, the post-project emission factors (EF2) are listed in the table below:

Pollutant	Post-Project Emission Factors (EF2)		Source
NO_X	0.0062 lb-NO_X/MMBtu	5 ppmvd NO_X (@ 3%O_2)	Applicant proposal
SO_X	0.00285 lb-SO_X/MMBtu	--	APR 1720
PM10	0.003 lb-PM10/MMBtu	--	FYI-328
CO	0.037 lb-CO/MMBtu	50 ppmvd CO (@ 3%O_2)	Applicant proposal
VOC	0.0055 lb-VOC/MMBtu	13 ppmvd VOC (@ 3%O_2)	Applicant proposal

Drying, conveying, and storage processes

The applicant proposes an overall emissions factor of 0.00675 gr/dscfm for these processes.

N-9149-4-0

The applicant proposes an emissions factor of 0.006 gr/dscfm for the packaging operation.

C. Potential to Emit (PE)

1. Daily and Annual PE

Pre-Project Potential to Emit (PE1)

N-9149-1-0 thru -4-0

These are new emissions units. PE1 is equal to zero for each criteria pollutant.

Post-Project Potential to Emit (PE2)

The applicant proposes a facility-wide PM10 emissions limit of 29,000 pounds per year.

N-9149-1-0 and -2-0

These are identical units, so a single calculation will be performed. The post-project potential emissions are calculated as follows:

Daily PE (lb/day) = EF (lb/MMBtu) x Heat Input (MMBtu/hr) × Op. Schedule (hr/day)
Annual PE (lb/yr) = Daily PE (lb/day) x 365 (day/yr)

The daily and annual potential emissions for each of these units are listed as follow:

Pollutant	Project potential to Emit (PE2)					
	EF (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day) / (day/yr)		Daily PE2 (lb/day)	Annual PE2 (lb/yr)
NO_X	0.0062	33.6	24	365	5.0	1,825
SO_X	0.00285	33.6	24	365	2.3	840
PM_{10}	0.003	33.6	24	365	2.4	876
CO	0.033	33.6	24	365	26.6	9,709
VOC	0.0055	33.6	24	365	4.4	1,606

N-9149-3-0

Natural Gas Combustion

The post-project potential emissions are calculated as follows:

Daily PE (lb/day) = EF (lb/MMBtu) x Heat Input (MMBtu/hr) x Op. Schedule (hr/day)
Annual PE (lb/yr) = Daily PE (lb/day) x 365 (day/yr)

The daily and annual potential emissions for each of these units are listed as follow:

Pollutant	Project potential to Emit (PE2)					
	EF (lb/MMBtu)	Heat Input (MMBtu/hr)	Operating Schedule (hr/day) / (day/yr)		Daily PE2 (lb/day)	Annual PE2 (lb/yr)
NO_X	0.0062	23.58	24	365	3.5	1,278
SO_X	0.00285	23.58	24	365	1.6	584
PM_{10}	0.003	23.58	24	365	1.7	621
CO	0.037	23.58	24	365	20.9	7,629
VOC	0.0055	23.58	24	365	3.1	1,132

Drying, conveying, and storage processes

The applicant proposes an overall emissions factors of 0.00675 gr/dscfm, and the airflow rate of the baghouse is 65,000 dscfm. The post-project potential emissions are calculated as follow:

Daily PE (lb/day) = 0.00675 gr/dscfm x 65,000 dscfm x 1,440 min/day x 1 lb/7,000 gr
= 90.3 lb-PM10/day

The applicant proposes a facility-wide PM10 emissions limit of 29,000 pounds per year.

N-9149-4-0

The applicant proposes an overall emissions factors of 0.006 gr/dscfm, and the airflow rate of the baghouse is 4,000 dscfm. The post-project potential emissions are calculated as follow:

Daily PE (lb/day) = 0.006 gr/dscfm x 4,000 dscfm x 1,440 min/day x 1 lb/7,000 gr
= 4.9 lb-PM10/day

Annual PE (lb/yr) = 4.9 lb-PM10/day x 365 day/year
= 1,789 lb-PM10/year

2. Quarterly Emissions Changes

The Quarterly Emissions Changes (QEC) is calculated for each pollutant, for each unit, as the difference between the quarterly PE2 and the quarterly baseline emissions (BE). The annual emissions are evenly distributed throughout each quarter using the following equation:

QEC (lb/quarter) = [Annual PE2 – Annual PE1] (lb/year) / 4 (quarter/year)

N-9149-1-0 and -2-0

These are identical units, so a single calculation will be performed.

Pollutant	Quarterly Emission Changes (QEC)			
	1st Quarter (lb/quarter)	2nd Quarter (lb/quarter)	3rd Quarter (lb/quarter)	4th Quarter (lb/quarter)
NO_X	456	456	456	457
SO_X	210	210	210	210
PM_{10}	219	219	219	219
CO	2,427	2,427	2,427	2,428
VOC	401	401	402	402

N-9149-3-0

The applicant proposes a facility-wide PM10 emissions of 29,000 lb/year, the QEC PM10 emissions from the drying, conveying, and storage processes are calculated as follow:

$$\text{QEC (lb/qtr)} = [29{,}000 - PE_{(N\text{-}9149\text{-}1\text{-}0)} - PE_{(N\text{-}9149\text{-}2\text{-}0)} - PE_{(N\text{-}9149\text{-}4\text{-}0)}] \div 4$$
$$= [29{,}000 - 876 - 876 - 1{,}789] \div 4$$
$$= 6{,}365 \text{ lb-PM10/quarter}$$

Pollutant	Quarterly Emission Changes (QEC)			
	1st Quarter (lb/quarter)	2nd Quarter (lb/quarter)	3rd Quarter (lb/quarter)	4th Quarter (lb/quarter)
NO_X	319	319	320	320
SO_X	146	146	146	146
PM_{10}	6,364	6,365	6,365	6,365
CO	1,907	1,907	1,907	1,908
VOC	283	283	283	283

N-9149-4-0

Pollutant	Quarterly Emission Changes (QEC)			
	1st Quarter (lb/quarter)	2nd Quarter (lb/quarter)	3rd Quarter (lb/quarter)	4th Quarter (lb/quarter)
NO_X	0	0	0	0
SO_X	0	0	0	0
PM_{10}	447	447	447	448
CO	0	0	0	0
VOC	0	0	0	0

3. Adjusted Increase in Permitted Emissions (AIPE)

AIPE is used to determine if Best Available Control Technology (BACT) is required for emission units that are being modified.

These are new emissions units. Therefore, AIPE calculations are not required.

D. Facility Emissions

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

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

Since this is a new facility, there are no valid ATCs, PTOs, or ERCs at the Stationary Source; therefore, the SSPE1 is equal to zero.

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

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

Permit Number	Pollutants (lb/yr)				
	NO_X	SO_X	PM_{10}	CO	VOC
ATC N-9149-1-0	1,825	840	29,000	9,709	1,606
ATC N-9149-2-0	1,825	840		9,709	1,606
ATC N-9149-3-0	1,278	584		7,629	1,132
ATC N-9149-4-0	0	0		0	0
ERC	0	0	0	0	0
SSPE2	4,928	2,264	29,000	27,047	4,344

3. Stationary Source Increase in Permitted Emissions (SSIPE)

SSIPE calculations are used to determine if the project triggers public notice pursuant to District Rule 2201, §5.4.5. If SSIPE results greater than 20,000 lb/yr for any one pollutant then project requires public notification. At this time, it is District Practice to define the SSIPE as the difference of SSPE2 and SSPE1, and calculated by the following equation:

SSIPE (lb/yr) = SSPE2 (lb/yr) – SSPE1 (lb/yr)

	Pollutants (lb/yr)				
	NO_X	SO_X	PM_{10}	CO	VOC
SSPE2	4,928	2,264	29,000	27,047	4,344
SSPE1	0	0	0	0	0
SSIPE	4,928	2,264	29,000	27,047	4,344

As shown above, SSIPE is each greater than 20,000 lb/year for PM10 and CO. Therefore, public notification and publication requirement are required for this purpose.

4. 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 this facility for less than 12 months)
- Fugitive emissions, except for the specific source categories specified in 40 CFR 51.165

There are no ERCs listed for this facility.

Rule 2201 Major Source Determination (lb/year)						
	NO_X	SO_X	PM10	PM2.5	CO	VOC
SSPE1	0	0	0	0	0	0
SSPE2	4,928	2,264	29,000	29,000	27,047	4,344
Major Source Threshold	20,000	140,000	140,000	200,000	200,000	20,000
Major Source	No	No	No	No	No	No

Note: PM2.5 assumed to be equal to PM10

As shown above, this is a new facility, and the facility is not becoming a Major Source as a result of this project.

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)(iii). Therefore the PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination (tons/year)						
	NO2	VOC	SO2	CO	PM	PM10
Estimated Facility PE before Project Increase	0	0	0	0	0	0
PSD Major Source Thresholds	250	250	250	250	250	250
Existing PSD Major Source ? (Y/N)	N	N	N	N	N	N

This is a new facility. Therefore, the facility is not an existing PSD major source for any regulated NSR pollutant expected to be emitted at this facility.

5. Baseline Emissions (BE)

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

Pursuant to District Rule 2201, BE = PE1 for:

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

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

This is a new facility, and as shown in Section VII.C.5 above, the facility is not a Major Source for any pollutant. Therefore, BE = PE1 = 0 for all pollutants.

6. SB 288 Major Modification

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

Since this facility is not a major source for any of the pollutants addressed in this project, this project does not constitute an SB 288 major modification.

7. 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 facility is not a Major Source for any pollutants, this project does not constitute a Federal Major Modification. Additionally, since the facility is not a major source for PM_{10} (140,000 lb/year), it is not a major source for PM2.5 (200,000 lb/year).

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

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

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

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)(iii). The PSD Major Source threshold is 250 tpy for any regulated NSR pollutant.

PSD Major Source Determination: Potential to Emit (tons/year)						
	NO2	VOC	SO2	CO	PM	PM10
Total PE from the new units	2.5	2.2	1.1	13.5	14.5	14.5
PSD Major Source Thresholds	250	250	250	250	250	250
New PSD Major Source ? (Y/N)	N	N	N	N	N	N

As shown in the table above, the project potential to emit for the project, by itself, does not exceed any PSD Major Source thresholds. Therefore Rule 2410 is not applicable and no further discussion is required.

VIII. COMPLIANCE

District Rule 2201 New and Modified Stationary Source Review Rule

1. Best Available Control Technology (BACT)

A. 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.

As discussed in Section I of this document, the facility is proposing to install three natural gas-fired units including two boilers and one process heater, a milk drying, conveying, & storage operation served by a baghouse, and a dried milk packaging operation served by another baghouse Additionally, as determined in Sections VII.D.6 and VII.D.7 of this document, this project does not result in an SB 288 Major Modification or Federal Major Modification. Therefore, BACT can only be triggered if the daily emissions exceed 2.0 lb/day for any pollutant for the new units.

The daily emissions from the new units are compared to the BACT threshold levels in the following tables:

N-9149-1-0 and -2-0 (Boilers)

New Emissions Unit BACT Applicability				
Pollutant	Daily Emissions (lb/day)	BACT Threshold (lb/day)	SSPE2 (lb/yr)	BACT Triggered?
NO_X	5.0	> 2.0	n/a	Yes
SO_X	2.3	> 2.0	n/a	Yes
PM_{10}	2.4	> 2.0	n/a	Yes
CO	26.6	> 2.0 and SSPE2 ≥ 200,000 lb/yr	27,047	No
VOC	4.4	> 2.0	n/a	Yes

As shown above, BACT will be triggered for NO_X, SO_X, PM10, and VOC emissions for each of these units.

N-9149-3-0

NG combustion (Process heater)

New Emissions Unit BACT Applicability				
Pollutant	Daily Emissions (lb/day)	BACT Threshold (lb/day)	SSPE2 (lb/yr)	BACT Triggered?
NO_X	3.5	> 2.0	n/a	Yes
SO_X	1.6	> 2.0	n/a	No
PM_{10}	1.7	> 2.0	n/a	No
CO	20.9	> 2.0 and SSPE2 ≥ 200,000 lb/yr	27,047	No
VOC	3.1	> 2.0	n/a	Yes

As shown above, BACT will be triggered and required for NO_X and VOC emissions.

Drying, conveying, and storage processes

New Emissions Unit BACT Applicability				
Pollutant	Daily Emissions (lb/day)	BACT Threshold (lb/day)	SSPE2 (lb/yr)	BACT Triggered?
NO_X	0.0	> 2.0	n/a	No
SO_X	0.0	> 2.0	n/a	No
PM_{10}	90.3	> 2.0	n/a	Yes
CO	0.0	> 2.0 and SSPE2 ≥ 200,000 lb/yr	27,047	No
VOC	0.0	> 2.0	n/a	No

As shown above, BACT will be triggered and required for PM10 emissions.

N-9149-4-0

New Emissions Unit BACT Applicability				
Pollutant	Daily Emissions (lb/day)	BACT Threshold (lb/day)	SSPE2 (lb/yr)	BACT Triggered?
NO_X	0.0	> 2.0	n/a	No
SO_X	0.0	> 2.0	n/a	No
PM_{10}	4.9	> 2.0	n/a	Yes
CO	0.0	> 2.0 and SSPE2 ≥ 200,000 lb/yr	27,047	No
VOC	0.0	> 2.0	n/a	No

As shown above, BACT will be triggered and required for PM10 emissions.

B. BACT Guideline

N-9149-1-0 & -2-0 (Boilers), and -3-0 (process heater)

The District conducts project-specific analyses for boilers and process heater similar to the unit proposed in this project. Therefore, a project specific BACT analysis will be performed for this project.

N-9149-3-0 (Milk powder drying, conveying, and storage processes), and -4-0 (packaging)

BACT Guideline 8.4.3 covers dry material handling, which applies to these dried milk conveying, storage, and packaging processes.

C. Top Down BACT Analysis

Per District Policy APR 1305, Section IX, "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 for source categories or classes covered in the BACT Clearinghouse, relevant information under each of the following steps may be simply cited from the Clearinghouse without further analysis."

N-9149-1-0 & -2-0 (Boilers), and -3-0 (Process heater)

The "Top-Down BACT Analysis" for NOx, SO_X, PM10 and VOC emission is performed in Appendix III of this document. According to this analysis, BACT is:

NOx: Use a burner system with 5 ppmvd @ 3% O2
PM10: Use of PUC-quality natural gas fuel
SOx: Use of PUC-quality natural gas fuel
VOC: Use of PUC-quality natural gas fuel

The proposed boilers and process heater meet the above requirements. Therefore, BACT is satisfied for NOx, SO_X, PM10, and VOC emissions.

N-9149-3-0 (Milk powder drying, conveying, and storage processes), and -4-0 (packaging)

The "Top-Down BACT Analysis" for PM10 emission is performed in Appendix III of this document. According to this analysis, BACT is:

PM10: all processing unit vented to a fabric filter baghouse, or equivalent (99% or greater control efficiency)

The proposed units meet the above requirements. Therefore, BACT is satisfied for PM10 emissions.

2. Offsets

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	4,928	2,264	29,000	27,047	4,344
Offset Threshold	20,000	54,750	29,200	200,000	20,000
Offset Triggered?	No	No	No	No	No

As seen above, the SSPE2 is not greater than the offset thresholds for all the pollutants; therefore offset calculations are not necessary and offsets will not be required for this project.

3. Public Notification

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

a. New Major Source, Federal Major Modification, and SB 288 Major Modification

This facility is not becoming a new major source, and the proposed project will trigger neither Federal Major Modification nor SB 288 Major Modification. Therefore, public noticing for these purposes is not required.

b. New emission unit with PE > 100 lb/day for any one pollutant

The potential emission from each of the new unit is not greater than 100 lb/day for any pollutant. Therefore, public noticing for this purpose is not required.

c. Modifications with SSPE1 below an Offset threshold and SSPE2 above an Offset threshold on a pollutant-by-pollutant basis

The proposed project does not result in SSPE from below offset threshold level to above offset threshold level for any one pollutant. Therefore, public noticing for this purpose is not required.

d. New stationary sources with SSPE2 exceeding Offset thresholds

There is no new stationary source with SSPE2 exceeding offset thresholds as a result of this project. Therefore, public noticing for this purpose is not required.

e. Any permitting action with an SSIPE exceeding 20,000 lb/yr for any one pollutant

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 (lb/year)	Public Notice Required?
NO_X	4,928	0	4,928	20,000	No
SO_X	2,264	0	2,264	20,000	No
PM_{10}	29,000	0	29,000	20,000	Yes
CO	27,047	0	27,047	20,000	Yes
VOC	4,344	0	4,344	20,000	No

As demonstrated above, the SSIPE for PM10 and CO is each greater than 20,000 lb/year; therefore public noticing for SSIPE purposes is required.

As discussed above, public noticing is required for this project for PM10 and CO emissions in each excess of the SSIPE public notice threshold of 20,000 lb/day. Therefore, public notice

documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC for this equipment.

4. Daily Emission Limits (DELs)

DELs and other enforceable conditions are required by Rule 2201 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. The DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT:

N-9149-1-0 and -2-0 (Boilers)

- *Emissions from this unit shall not exceed any of the following limits: 5 ppmvd NOx @ 3% O2 or 0.0062 lb-NO_X/MMBtu (referenced as NO2), 0.00285 lb-SOx/MMBtu, 0.003 lb-PM10/MMBtu, 45 ppmvd CO @ 3% O2 or 0.033 lb-CO/MMBtu, 13 ppmvd VOC @ 3% O2 or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]*

- *{4355} The unit shall only be fired on PUC-quality natural gas. [District Rules 2201 and 4320]*

N-9149-3-0 (Milk Drying Operation)

- *Emissions from combustion of natural gas in the process heater shall not exceed any of the following limits: 5 ppmvd NO_X @ 3% O2 or 0.0062 lb-NO_X/MMBtu (referenced as NO2), 0.00285 lb-SO_X/MMBtu, 0.003 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu, 13 ppmvd VOC @ 3% O2 or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]*

- *The process heater shall only be fired on PUC-quality natural gas. [District Rules 2201 and 4320]*

- *The quantity of dried milk produced shall not exceed 125 tons in any given day. [District Rule 2201]*

- *PM10 emissions from the milk drying operation shall not exceed 0.7224 pounds per ton of dried milk produced[1]. [District Rule 2201]*

N-9149-4-0 (Dried Milk Packaging Operation)

- *The quantity of dried milk packaged shall not exceed 125 tons in any given day. [District Rule 2201]*

[1] EF of 0.7224 lb-PM10/ton of dried milk produced is calculated as follows: [90.3 lb-PM10/day ÷ 125 ton dried milk produced/day].

- *PM10 emissions from the dried milk packaging operation shall not exceed 0.0392 pounds per ton of dried milk packaged[2]. [District Rule 2201]*

5. Compliance Assurance

Source Testing, Monitoring, Recordkeeping, and Reporting

N-9149-1-0 and -2-0 (boilers) and N-9149-3-0 (process heater)

Source testing, monitoring, recordkeeping and reporting requirements for the boilers and process heater are discussed in Section VIII, *District Rule 4320* of this document.

N-9149-3-0 (milk drying, conveying, and storage processes)

Source Testing

Pursuant to District Policy APR 1705, Source Testing Frequency (10/9/97), Section II, Source testing frequency, Step 4, source testing will be required for non-combustion equipment served by a baghouse with expected PM10 emissions of 30 lb/day or greater must be tested upon initial start-up. Units with PM10 emissions in excess of 70 lb/day should be tested on annual basis.

As shown in Section VII.C.1 of this document, the potential emissions from the baghouse serving the milk drying operation is calculated to 90.3 lb-PM10/day; therefore, initial and annual source testing will be required and the following conditions will be listed on the permit to ensure compliance.

- *Source testing to measure PM10 emissions from the exhaust of the baghouse serving the milk drying operation shall be conducted within 60 days of initial start-up, and annually thereafter. [District Rule 2201]*

- *Source testing to measure PM10 emissions from the exhaust of the baghouse serving the milk drying operation shall be conducted using EPA Methods 201A and 202. Alternatively, the results of a total particulate matter test using CARB Method 5 may be used to demonstrate compliance with the PM10 emission limit provided the results include both the filterable (front half) and condensable (back half) particulates, and that all particulate matter is assumed to be PM10. Should the permittee decide to use different test methodology, the methodology shall first be approved by the District prior to its use. [District Rule 2201]*

[2] EF of 0.0392 lb-PM10/ton of dried milk packaged is calculated as follows: [4.9 lb-PM10/day ÷ 125 ton dried milk packaged/day].

Monitoring

The baghouse serving milk drying operation will be equipped with a pressure differential gauge, and the following conditions will be listed on the permit to ensure compliance:

- *When in operation, the differential pressure of the baghouse shall not be less than 1 inches water column nor greater than 10 inches water column. [District Rule 2201]*

- *Differential operating pressure of the baghouse shall be monitored and recorded on each day that it operates. [District Rule 2201]*

Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification, and daily emission limit requirements of Rule 2201. The following conditions will be listed on the permit to ensure compliance:

- *Permittee shall maintain daily records of the dried milk produced, in tons. [District Rule 2201]*

- *All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 2201]*

Reporting

No reporting is required to demonstrate compliance with Rule 2201.

N-9149-4-0 (dried milk packaging)

Source Testing

As shown in Section VII.C.1 of this document, the potential emissions from the baghouse serving the packaging operation is calculated to 4.9 lb-PM10/day which is less than 30 lb/day limit, and therefore, source testing for PM10 emissions will not be required for this operation.

Monitoring

The baghouse serving dried milk packaging operation will be equipped with a pressure differential gauge, and the following conditions will be listed on the permit to ensure compliance:

- *When in operation, the differential pressure of the baghouse shall not be less than 2 inches water column nor greater than 6 inches water column. [District Rule 2201]*

- *Differential operating pressure of the baghouse shall be monitored and recorded on each day that it operates. [District Rule 2201]*

Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification, and daily emission limit requirements of Rule 2201. The following conditions will be listed on the permit to ensure compliance:

- *Permittee shall maintain daily records of the dried milk packaged, in tons. [District Rule 2201]*

- *All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 1070 and 2201]*

Reporting

No reporting is required to demonstrate compliance with Rule 2201.

6. Ambient Air Quality Analysis (AAQA)

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

The emissions from the proposed equipment will not cause or contribute significantly to a violation of the State and National AAQS. See Appendix IV of this document for the detail AAQA summary sheet.

Compliance with the requirements of this rule is expected.

District Rule 2410 Prevention of Significant Deterioration

The provisions of this rule shall apply to any source and the owner or operator of any source subject to any requirements under Title 40 Code of Federal Regulations (40 CFR) Part 52.21 as incorporated into this rule.

As demonstrated in Section VII.D.8 of this document, the proposed project is not subject to the requirements of Rule 2410; therefore no further discussion is required.

District Rule 2520 Federally Mandated Operating Permits

Since this facility's potential to emit does not exceed any major source thresholds of Rule 2201, and this facility is not a major source. Therefore, Rule 2520 does not apply.

District Rule 4001 New Source Performance Standards - *40 CFR Part 60, Subpart Dc – Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*

N-9149-1-0 and -2-0 (boilers) and N-9149-3-0 (process heater)

This subpart applies to steam generating units which are constructed, modified, or reconstructed after June 9, 1989, and have a maximum design heat input capacity of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr.

The maximum heat input capacity of the proposed units is each greater than 10 MMBtu/hr. Therefore, the proposed boilers and process heater are subject to the requirements of this regulation.

Sections 60.42c and 60.43c list the standard for sulfur dioxide and particulate matter. These units are fired only on PUC-regulated natural gas, and not fired on coal, nor do they combust mixtures of coal with other fuels, combust wood, combust mixtures of wood with other fuels, oil, or a mixture of these fuels with any other fuels. Therefore, these units are not subject to the requirements of these sections.

Sections 60.44c and 60.45c list the compliance and performance test methods and procedures for sulfur dioxide and particulate matter. These units are not subject to the sulfur dioxide and particulate matter requirements of this subpart. Therefore, the compliance and testing requirements are not applicable to these units.

Sections 60.46c and 60.47c list the emissions monitoring for sulfur dioxide and particulate matter. These units are not subject to the sulfur dioxide and particulate matter requirements of this subpart. Therefore, the monitoring requirements are not applicable to these units.

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

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

The design heat input capacity and type of fuel combusted will be listed on the equipment description section of the permit. No additional conditions are required to show compliance with this requirement.

(2) If applicable, a copy of any Federally enforceable requirement that limits the annual capacity factor for any fuel mixture of fuels under section 60.42c or section 40.43c.

This requirement is not applicable since these units will not be subject to section 60.42c or section 60.43c as discussed above.

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

This requirement is not applicable since the facility has not proposed any annual capacity factor.

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

This requirement is not applicable since these units will not be equipped with an emerging technology used to control sulfur dioxide emissions.

Section 60.48c(g) requires that the owner or operator of each affected facility record and maintain records of the daily amount of each fuel combusted unless an applicable alternative provided in 60.48c(g)(2) or 60.48c(g)(3).

Section 60.48c(g)(2), which allows the affected facility that combusts a single fuel to record and maintain records of the total amount of fuel combusted during each calendar month. The proposed units will be fired solely on natural gas, therefore, monthly natural gas fuel usage records will be required, and the following conditions will be listed on the permit to ensure compliance with this section.

- *A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [40 CFR 60.48c(g)(2)]*

- *Permittee shall maintain monthly records of the natural gas combusted by this unit. [40 CFR 60.48c(g)(2)]*

Section 60.48c(i) states that all records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record.

District Rules 4306 and 4320 require that all records shall be kept for at least five years. Therefore, compliance with the requirement of this section is expected.

Compliance with the requirements of this Rule is expected.

District Rule 4002 National Emission Standards for Hazardous Air Pollutants - *40 CFR Part 63, Subpart DDDDD – National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters*

N-9149-1-0 and -2-0 (boilers) and N-9149-3-0 (process heater)

This subpart applies to industrial, commercial, and institutional boilers and process heaters as defined in §63.7575 that is located at major sources of HAP. A major source of HAP emissions is a facility that has the potential to emit any single HAP at a rate of 10 tons/year or greater or any combinations of HAPs at a rate of 25 tons/year or greater. An area source of HAP emissions is a facility is not a major source of HAP emissions.

This facility is not a major HAP source (see HAP/Toxic emission calculations in Appendix V of this document), therefore, the proposed units are not subject to the requirements of this regulation, and no further discussion is required.

District Rule 4101 Visible Emissions

District Rule 4101, Section 5.0, indicates that no air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour, which is dark or darker than Ringlemann 1 or equivalent to 20% opacity. The following condition will be listed on the permit to ensure compliance:

- *{15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]*

District Rule 4102 Nuisance

Section 4.0 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. The following condition will be listed on the permit to ensure compliance:

- *{98} No air contaminant shall be released into the atmosphere, which causes a public nuisance. [District Rule 4102]*

California Health & Safety Code 41700 (Risk Management Review)

District Policy APR 1905-1 (March 2, 2001) - 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.

The risk management review results are as follows:

RMR Summary			
Categories	Two NG Boilers & One NG Heater (Units 1-0 thru 3-0)	Project Totals	Facility Totals
Prioritization Score	0.02[3]	0.02	>1
Acute Hazard Index	N/A	N/A	N/A
Chronic Hazard Index	N/A	N/A	N/A
Maximum Individual Cancer Risk	N/A	N/A	N/A
T-BACT Required?	No		
Special Permit Conditions?	Yes		

The prioritization score for the project is not above 1.0. In accordance with the District's Risk Management Policy, the project is approved **without** Toxic Best Available Control Technology (T-BACT). The detail analysis of this assessment is performed in Appendix IV of this document.

To ensure that human health risks will not exceed District allowable levels; the following conditions will be listed on the permit.

N-9149-1-0 & -2-0 (boilers)

- *The height of the exhaust stack from the ground shall be at least 45 feet.* Upon implementation of this Authority to Construct, this condition could be removed. *[District Rule 4102]*

N-9149-3-0 (process heater)

- *The height of the process heater exhaust stack from the ground shall be at least 118 feet.* Upon implementation of this Authority to Construct, this condition could be removed. *[District Rule 4102]*

N-9149-1-0 & -2-0 (boilers) and -3-0 (process heater)

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

Compliance with the requirements of this rule is expected.

District Rule 4201 Particulate Matter Concentration

The purpose of this rule is to protect the ambient air quality by establishing a particulate matter emission standard. This rule applies to any source operation, which emits or may

[3] The project passed on prioritization with a score of less than 1; therefore, no further analysis was required.

emit dust, fumes, or total suspended particulate matter. This rule states that a person shall not release or discharge into the atmosphere from any single source operation, dust, fumes, or total suspended particulate matter emissions in excess of 0.1 grain/dscf, as determined by the test methods in section 4.0.

N-9149-1-0 & -2-0 (boilers) and -3-0 (process heater)

The following analysis applies to each unit:

F-Factor for Natural Gas:	8,578 dscf/MMBtu at 60 °F
Maximum PM_{10} Emission Factor:	0.003 lb-PM_{10}/MMBtu
Percentage of PM as PM_{10} in Exhaust:	100%

$$\left(\frac{0.003\ lb - PM_{10}}{MMBtu}\right) x \left(\frac{7{,}000\ grain}{lb - PM}\right) \Big/ \left(\frac{8{,}578\ ft3}{MMBtu}\right)$$

GL = 0.00245 grain/dscf < 0.1 grain/dscf

N-914-3-0 (milk drying processes)

The milk drying, conveying, and storage processes will be served by the GEA Process Engineering baghouse. The applicant proposes an overall emission factor of 0.00675 gr/dscfm for the baghouse. Initial and annual source testing will be required to demonstrate compliance.

N-914-4-0 (dried milk packaging)

The dried milk packaging operation will be served by the Donaldson baghouse that specifically designed for this type of operation, and the applicant provided a manufacturer guarantee emission factor of 0.006 gr/dscf.

As shown above, each of these emissions units is compliant with the Rule limit. Therefore, compliance with District Rule 4201 requirements is expected and a permit condition will be listed on the permit as follow:

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

District Rule 4301 Fuel Burning Equipment

N-9149-1-0 & -2-0 (boilers) and -3-0 (process heater)

These units will be fired exclusively on PUC-quality natural gas. Therefore, compliance with the requirements of this rule is expected, and no further discussion is required.

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

N-9149-1-0 & -2-0 (boilers) and -3-0 (process heater)

Pursuant to District Rules 4305, 4306, and 4320, Section 6.3.1, these boilers are not required to tune since it follow a District approved Alternate Monitoring scheme "A" (District Policy SSP 1105 VI-A) where the applicable emission limits are periodically monitored. Therefore, the proposed boilers and process heater are not subject to the requirements of this rule.

District Rule 4305 Boilers, Steam Generators and Process Heaters – Phase 2
District Rule 4306 Boilers, Steam Generators and Process Heaters – Phase 3

N-9149-1-0 & -2-0 (boilers) and -3-0 (process heater)

Each unit is natural gas-fired with a maximum heat input greater than 20.0 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4305, and Section 2.0 of District Rule 4306, these units is each subject to both, District Rule 4305, *Boilers, Steam Generators and Process Heaters – Phase 2,* and District Rule 4306, *Boilers, Steam Generators and Process Heaters – Phase 3.*

In addition, these units are also subject to District Rule 4320, *Advance Emissions Reduction Options For Boilers, Steam Generators, and Process Heaters greater than 5.0 MMBtu/hr.*

Since emissions limits of District Rule 4320 and all other requirements are equivalent or more stringent than District Rules 4305 and 4306 requirements, compliance with District Rule 4320 requirements will satisfy requirements of District Rules 4305 and 4306.

Therefore, compliance with District Rules 4305 and 4306 requirements is expected and no further discussion is required.

District Rule 4309 Dryers, Dehydrators, and Ovens

N-9149-3-0 (process heater)

This rule applies to any dryer, dehydrator, and oven that the total rated heat input for the unit is rated 5 MMBtu/hr or greater.

The proposed milk drying operation is served by a natural gas indirect-fired process heater. Therefore, the proposed milk drying equipment is not subject to the requirements of this Rule, and no further discussion is required.

District Rule 4320 Advanced Emissions Reduction Options for Boilers, Steam Generators and Process Heaters Greater Than 5.0 MMBtu/hr

N-9149-1-0 & -2-0 (boilers) and -3-0 (process heater)

Each unit is natural gas-fired with a maximum heat input greater than 20.0 MMBtu/hr. Pursuant to Section 2.0 of District Rule 4320, these units are subject to this Rule.

Section 5.2, NO_X and CO Emissions Limits

Section 5.2.1 to 5.2.3 requires that on and after the indicated Compliance Deadline, units shall not be operated in a manner which exceeds the applicable NO_X emissions limit specified in Table 1. In addition, units shall not be operated in a manner to which exceeds a carbon monoxide (CO) emissions limit of 400 ppmv. No unit fired on liquid fuel shall be operated in a manner to exceed emissions of 40 ppmv NO_X and 400 ppmv CO. All ppmv emission limits specified in this section are referenced at dry stack gas conditions and 3.00 percent by volume stack gas oxygen. Emission concentrations shall be corrected to 3.00 percent oxygen in accordance with § 8.1.

Each proposed unit has a maximum heat input capacity of greater than 20.0 MMBtu/hr, the applicable emission limit category is listed in § 5.2.1, Table 1, Category B from District Rule 4320.

Category	Limit
B. Units, with a total rated heat input > 20.0 MMBtu/hr, except for Categories C through G units	NO_X Limit is 7 ppmv or 0.008 lb/MMBtu

N-9149-1-0 & -2-0 (boilers):

- the proposed NO_X emission factor is 5 ppmvd @ 3% O_2 (0.0062 lb-NO_X/MMBtu), and
- the proposed CO emission factor is 45 ppmvd @ 3% O_2 (0.033 lb-CO/MMBtu).

N-9149-3-0 (process heater):

- the proposed NO_X emission factor is 5 ppmvd @ 3% O_2 (0.0062 lb-NO_X/MMBtu), and
- the proposed CO emission factor is 50 ppmvd @ 3% O_2 (0.037 lb-CO/MMBtu).

The proposed units will comply with the NO_X and CO limits of Rule 4320. Therefore, compliance with Section 5.2 of District Rule 4320 is expected. Permit conditions listing the emissions limits will be listed on the permit.

Section 5.4, Particulate Matter Control Requirements

Section 5.4.1 requires that an operator shall comply with one of the following requirements: 1) fire units exclusively on PUC-quality natural gas, commercial propane, butane, or liquefied petroleum gas, or a combination of such gases; 2) limit fuel sulfur content to no

more than five (5) grains of total sulfur per one hundred (100) standard cubic feet; or 3) install and properly operate an emission control system that reduces SO_2 emissions by at least 95% by weight; or limit exhaust SO_2 to less than or equal to 9 ppmv corrected to 3.0% O_2.

These units will be fired solely on PUC-quality natural gas. Therefore, compliance with section 5.4 of District Rule 4320 is expected.

Section 5.7, Monitoring Provisions

Section 5.7.1 requires that permit units subject to District Rule 4320, Section 5.2 emissions limits shall either install and maintain an APCO approved Continuous Emission Monitoring (CEM) equipment for NO_X, CO and O_2, or implement an APCO-approved alternate monitoring system.

In order to satisfy the requirements of District Rule 4320, the applicant has proposed to use pre-approved alternate monitoring scheme A (pursuant to District Policy SSP 1105-VI-A), 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. Therefore, the following conditions will be listed on the permit to ensure compliance:

- *{4315} 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 Rules 4305, 4306, and 4320] N*

- *{4316} If either the NOx or CO concentrations corrected to 3% 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 4305, 4306, and 4320] N*

- *{4317} 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 Rules 4305, 4306 and 4320] N

- *{4318} 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 3% 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 Rules 4305, 4306 and 4320] N*

Section 5.7.6 requires that, operators complying with Section 5.4.1.1 or 5.4.1.2 shall provide an annual fuel analysis to the District unless a more frequent sampling and reporting period is included in the Permit to Operate.

These units will be fired on PUC-quality natural gas. Therefore, the following condition will be listed on the permit to ensure compliance:

- *{4356} Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320]*

Section 5.8, Compliance Determination

Section 5.8.1 requires that the operator of any unit shall have the option of complying with either the applicable heat input, in lb/MMBtu, emission limits or the concentration, in ppmv, emission limits specified in Section 5.2. The emission limits selected to demonstrate compliance shall be specified in the source test proposal pursuant to Rule 1081 (Source Sampling). Therefore, the following condition will be listed on the permit to ensure compliance:

- *{4350} The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306, and 4320]*

Section 5.8.2 requires that all emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. Unless otherwise 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. Therefore, the following condition will be listed on the permit to ensure compliance:

- *{4351} All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a*

continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4306. [District Rules 4305, 4306, and 4320]

Section 5.8.4 requires that for emissions monitoring pursuant to Sections 5.7.1 and 6.3.1 using a portable NO_X analyzer as part of an APCO approved Alternate Emissions Monitoring System, emission readings shall be averaged over a 15 consecutive-minute period by either taking a cumulative 15-consecutive-minute sample reading or by taking at least five (5) readings evenly spaced out over the 15-consecutive-minute period. Therefore, the following condition will be listed on the permit to ensure compliance:

- *{4317} 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 Rules 4305, 4306, and 4320]*

Section 5.8.5 requires that for emissions source testing performed pursuant to Section 6.3.1 for the purpose of determining compliance with an applicable standard or numerical limitation of this rule, the arithmetic average of three (3) 30-consecutive-minute test runs shall apply. If two (2) of three (3) runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. Therefore, the following condition will be listed on the permit to ensure compliance:

- *{4352} For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306, and 4320]*

Section 6.1, Recordkeeping

Section 6.1 requires that the records required by Sections 6.1.1 through 6.1.5 shall be maintained for five calendar years and shall be made available to the APCO and EPA upon request. Failure to maintain records or information contained in the records that demonstrate noncompliance with the applicable requirements of this rule shall constitute a violation of this rule. Therefore, the following condition will be listed on the permit to ensure compliance:

- *{4318} 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 3% 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 Rules 4305, 4306 and 4320]

Section 6.2, Test Methods

Section 6.2 identifies the following test methods as District-approved source testing methods for the pollutants listed:

Pollutant	Units	Test Method Required
NO_X	ppmv	EPA Method 7E or ARB Method 100
NO_X	lb/MMBtu	EPA Method 19
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 conditions will be listed on the permit to ensure compliance:

- *{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]*

- *{4346} NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320]*

- *{4347} CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320]*

- *{4348} Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320]*

Section 6.3, Compliance Testing

Section 6.3.1 requires that this unit be tested to determine compliance with the applicable requirements of section 5.2 at least once every 12 months (no more than 30 days before or after the required annual source test date). Upon demonstrating compliance on two consecutive compliance source tests, the following source test may be deferred for up to thirty-six months. During the 36-month source testing interval, the operator shall tune the unit in accordance with the provisions of Section 5.5.1, and shall monitor, on a monthly basis, the unit's operational characteristics recommended by the manufacturer to ensure compliance with the applicable emission limits specified in Section 5.2.

Therefore, the following conditions will be listed on the permit to ensure compliance:

- *{4344} Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306 and 4320]*

- *{4345} Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320]*

- *(110) The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]*

In addition, since the applicant has proposed to use pre-approved Alternate Monitoring Scheme "A" using a portable analyzer, the tune-up requirements listed in Section 5.5.1 and 6.3.1 are not applicable to these units. Section 6.3.1 also requires that, during the 36-month source testing interval, the owner/operator shall monthly monitor the operational characteristics recommended by the unit manufacturer.
Since the pre-approved Alternate Monitoring Scheme "A" using a portable analyzer require monthly monitoring of NO_X, CO, and O_2 exhaust emissions concentrations, operational characteristics monitoring requirement is satisfied, therefore, no further discussion is required.

Section 6.4, Emission Control Plan (ECP)

Section 6.4.1 requires the operator of any unit shall submit to the APCO for approval an Emissions Control Plan according to the compliance schedule in Section 7.0 of District Rule 4320.

These are new emissions units and the proposed emissions limits will compliance with the emissions limits listed in Section 5.2 of this rule and with follow the periodic monitoring and source testing requirements of this rule. Therefore, this current application for the proposed units satisfies the requirements of the Emission Control Plan, as listed in Section 6.4 of District Rule 4320. No further discussion is required.

In conclusion, conditions will be incorporated into the permit in order to ensure compliance with each section of this rule, see attached draft permits. Therefore, compliance with District Rule 4320 requirements is expected.

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

This rule applies to boilers, steam generators, and process heaters at NO_X Major Sources that are not located west of Interstate 5 in Fresno, Kings, or Kern counties. If applicable, the emission limits, monitoring provisions, and testing requirements of this rule are satisfied

when the unit is operated in compliance with Rule 4320. The proposed stationary source is not a Major Source for any pollutant. Therefore, this Rule does not apply.

District Rule 4801 Sulfur Compounds

Rule 4801 requires that sulfur compound emissions (as SO_2) shall not exceed 0.2% by volume. Using the ideal gas equation, the sulfur compound emissions are calculated as follows:

Volume SO_2 = (n x R x T) ÷ P

n = moles SO_2
T (standard temperature) = 60 °F or 520 °R
R (universal gas constant) = (10.73 psi.ft^3)/(lb.mol.°R)
EPA F-Factor for Natural Gas: 8,710 dscf/MMBtu at 68 °F, equivalent to

N-9149-1-0 & -2-0 (boilers) and -3-0 (process heater)

The following analysis applies to each unit:

$$Corrected\ F-factor = \left(\frac{8{,}710 dscf}{MMBtu}\right) \times \left(\frac{60^{o}F + 459.6}{68^{o}F + 459.6}\right) = 8{,}578 \frac{dscf}{MMBtu}\ \ at\ 60^{o}F$$

$$\frac{0.00285\,lb - SOx}{MMBtu} \times \frac{MMBtu}{8{,}578\,dscf} \times \frac{1\,lb \cdot mol}{64\,lb} \times \frac{10.73\,psi \cdot ft^3}{lb \cdot mol \cdot {}^{\circ}R} \times \frac{520^{\circ}R}{14.7\,psi} \times \frac{1{,}000{,}000 \cdot parts}{million} = 1.97 \frac{parts}{million}$$

Sulfur Concentration = 1.97 ppmv < 2,000 ppmv (or 0.2%)

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

California Health & Safety Code 42301.6 (School Notice)

As discussed in Section III of this document. The public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

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

District is a Responsible Agency

It is determined that City of Turlock has prepared an environmental review document for the project. The District is a Responsible Agency for the project because of its discretionary approval power over the project via its Permits Rule (Rule 2010) and New Source Review Rule (Rule 2201), (CEQA Guidelines §15381). As a Responsible Agency, the District is limited to mitigating or avoiding impacts for which it has statutory authority. The District does not have statutory authority for regulating greenhouse gas emissions. The District has determined that the applicant is responsible for implementing greenhouse gas mitigation measures, if any, imposed by the Lead Agency.

District CEQA Findings

The City of Turlock is the public agency having principal responsibility for approving the project. As such, the City of Turlock served as the Lead Agency (CCR §15367). In approving the project, the Lead Agency prepared and adopted a Mitigated Negative Declaration. The Lead agency filed a Notice of Determination, stating that the environmental document was adopted pursuant to the provisions of CEQA and concluding that the project would not have a significant effect on the environment.

The District is a Responsible Agency for the project because of its discretionary approval power over the project via its Permits Rule (Rule 2010) and New Source Review Rule (Rule 2201), (CCR §15381). As a Responsible Agency the District complies with CEQA by considering the environmental document prepared by the Lead Agency, and by reaching its own conclusion on whether and how to approve the project (CCR §15096).

The District has considered the Lead Agency's environmental document. Furthermore, the District has conducted an engineering evaluation of the project, this document, which demonstrates that Stationary Source emissions from the project would be below the District's thresholds of significance for criteria pollutants. Thus, the District finds that through a combination of project design elements, compliance with applicable District rules and regulations, and compliance with District air permit conditions, project specific stationary source emissions will have a less than significant impact on air quality. The District does not have authority over any of the other project impacts and has, therefore, determined that no additional findings are required (CEQA Guidelines §15096(h)).

IX. RECOMMENDATION

Compliance with all applicable rules and regulations is expected. Pending a successful NSR Public Noticing period, issue Authorities to Construct (ATC) permits N-9149-1-0 through N-9149-4-0 subject to the permits conditions listed on the attached draft ATCs in Appendix I.

X. BILLING INFORMATION

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
N-9149-1-0	3020-02-H (15.0 MMBtu/hr or Greater)	33.6 MMBtu/hr	$ 1,080
N-9149-2-0		33.6 MMBtu/hr	$ 1,080
N-9149-3-0		23.58 MMBtu/hr	$ 1,080
N-9149-4-0	3020-01 (100 or Greater but Less Than 200 hp)	148 hp	$ 330

APPENDICES

Appendix I: Draft Authorities to Construct (ATC)
Appendix II: Facility Floor Plan
Appendix III: BACT Guidelines and Top-Down BACT Analyses
Appendix IV: Risk Management Review and AAQA
Appendix V: HAP/Toxic Emissions Calculations

APPENDIX I

Draft Authorities to Construct (ATC)

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-9149-1-0

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: VALLEY MILK LLC
MAILING ADDRESS: 346 E F ST
OAKDALE, CA 95361

LOCATION: 4407 W MAIN ST
TURLOCK, CA

EQUIPMENT DESCRIPTION:
33.6 MMBTU/HR HURST MODEL EURO SECT. 1-800HP NATURAL GAS-FIRED BOILER (BOILER #1) WITH A POWER FLAME MODEL NOVA ULTRA LOW-NOX BURNER

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. {4355} The unit shall only be fired on PUC-quality natural gas. [District Rules 2201 and 4320]
5. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [40 CFR 60.48c(g)(2)]
6. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper okay), roof overhang, or any other obstruction. [District Rule 4102]
7. The height of the exhaust stack from the ground shall be at least 45 feet. Upon implementation of this Authority to Construct, this condition could be removed [District Rule 4102]
8. Emissions from this unit shall not exceed any of the following limits: 5 ppmvd NOx @ 3% O2 or 0.0062 lb-NOx/MMBtu (referenced as NO2), 0.00285 lb-SOx/MMBtu, 0.003 lb-PM10/MMBtu, 45 ppmvd CO @ 3% O2 or 0.033 lb-CO/MMBtu, 13 ppmvd VOC @ 3% O2 or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]

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

DRAFT

Arnaud Marjollet, Director of Permit Services

N-9149-1-0 : Aug 19 2015 10:58AM – SOW : Joint Inspection NOT Required

9. Total annual PM10 emissions from this facility, calculated on a rolling 12-month total basis, shall not exceed 29,000 pounds. [District Rule 2201]

10. {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]

11. {4344} Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306 and 4320]

12. {4345} Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320]

13. {4346} NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320]

14. {4347} CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320]

15. {4348} Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320]

16. {4349} Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320]

17. {4350} The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]

18. {4351} All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306 and 4320]

19. {4352} For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320]

20. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

21. {4315} 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 Rules 4305, 4306 and 4320]

22. {4316} If either the NOx or CO concentrations corrected to 3% 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 Rules 4305, 4306 and 4320]

CONDITIONS CONTINUE ON NEXT PAGE

23. {4317} 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 Rules 4305, 4306, and 4320]

24. {4318} 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 3% 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 Rules 4305, 4306 and 4320]

25. {4356} Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320]

26. Permittee shall maintain monthly records of the natural gas combusted by this unit. [40 CFR 60.48c(g)(2)]

27. Permittee shall maintain records of the 12-month rolling total of PM10 emissions from this facility, in pounds, and the records shall be updated at least monthly. [District Rule 2201]

28. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-9149-2-0

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: VALLEY MILK LLC
MAILING ADDRESS: 346 E F ST
OAKDALE, CA 95361

LOCATION: 4407 W MAIN ST
TURLOCK, CA

EQUIPMENT DESCRIPTION:
33.6 MMBTU/HR HURST MODEL EURO SECT. 1-800HP NATURAL GAS-FIRED BOILER (BOILER #2) WITH A POWER FLAME MODEL NOVA ULTRA LOW-NOX BURNER

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. {4355} The unit shall only be fired on PUC-quality natural gas. [District Rules 2201 and 4320]
5. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [40 CFR 60.48c(g)(2)]
6. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper okay), roof overhang, or any other obstruction. [District Rule 4102]
7. The height of the exhaust stack from the ground shall be at least 45 feet. Upon implementation of this Authority to Construct, this condition could be removed [District Rule 4102]
8. Emissions from this unit shall not exceed any of the following limits: 5 ppmvd NOx @ 3% O2 or 0.0062 lb-NOx/MMBtu (referenced as NO2), 0.00285 lb-SOx/MMBtu, 0.003 lb-PM10/MMBtu, 45 ppmvd CO @ 3% O2 or 0.033 lb-CO/MMBtu, 13 ppmvd VOC @ 3% O2 or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]

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

DRAFT

Arnaud Marjollet, Director of Permit Services

N-9149-2-0 Aug 19 2015 10:55AM - SOW Joint Inspection NOT Required

9. Total annual PM10 emissions from this facility, calculated on a rolling 12-month total basis, shall not exceed 29,000 pounds. [District Rule 2201]

10. {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]

11. {4344} Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306 and 4320]

12. {4345} Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320]

13. {4346} NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320]

14. {4347} CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320]

15. {4348} Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320]

16. {4349} Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320]

17. {4350} The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]

18. {4351} All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306 and 4320]

19. {4352} For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320]

20. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

21. {4315} 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 Rules 4305, 4306 and 4320]

22. {4316} If either the NOx or CO concentrations corrected to 3% 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 Rules 4305, 4306 and 4320]

CONDITIONS CONTINUE ON NEXT PAGE

23. {4317} 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 Rules 4305, 4306, and 4320]

24. {4318} 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 3% 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 Rules 4305, 4306 and 4320]

25. {4356} Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320]

26. Permittee shall maintain monthly records of the natural gas combusted by this unit. [40 CFR 60.48c(g)(2)]

27. Permittee shall maintain records of the 12-month rolling total of PM10 emissions from this facility, in pounds, and the records shall be updated at least monthly. [District Rule 2201]

28. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-9149-3-0

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: VALLEY MILK LLC
MAILING ADDRESS: 346 E F ST
OAKDALE, CA 95361

LOCATION: 4407 W MAIN ST
TURLOCK, CA

EQUIPMENT DESCRIPTION:
MILK DRYING OPERATION CONSISTING OF A NATURAL GAS INDIRECT-FIRED PROCESS HEATER EQUIPPED WITH A 23.58 MMBTU/HR ECLIPSE MODEL MINNOX BURNER AND WITH AN INTEGRATED STATIC FLUID BED DRYING CHAMBER, A VIBRO-FLUIDIZER, A MILK POWDER MILL, A MILK POWDER SIFTER, ONE 500 CUBIC FOOT START-UP POWDER SILO, TWO 3,900 CUBIC FOOT (EACH) POWDER STORAGE SILOS ALL SERVED BY A 65,000 SCFM GEA PROCESS ENGINEERING, INC MODEL HUDSON STYLE BAGHOUSE

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. Visible emissions from the exhaust of the baghouse serving the powder milk drying, conveying, and storage operations shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201]
5. The process heater shall only be fired on PUC-quality natural gas. [District Rules 2201 and 4320]
6. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas combusted in the unit shall be installed, utilized and maintained. [40 CFR 60.48c(g)(2)]
7. The exhaust stack shall vent vertically upward. The vertical exhaust flow shall not be impeded by a rain cap (flapper okay), roof overhang, or any other obstruction. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

DRAFT

Arnaud Marjollet, Director of Permit Services

Northern Regional Office • 4800 Enterprise Way • Modesto, CA 95356-8718 • (209) 557-6400 • Fax (209) 557-6475

8. The height of the process heater exhaust stack from the ground shall be at least 118 feet. Upon implementation of this Authority to Construct, this condition could be removed [District Rule 4102]
9. 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]
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]
11. Material removed from the baghouse shall be disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201]
12. {3458} Replacement bags numbering at least 10% of the total number of bags in the baghouse shall be maintained on the premises. [District Rule 2201]
13. The cleaning frequency and duration of the baghouse shall be adjusted to optimize the control efficiency. [District Rule 2201]
14. The quantity of dried milk produced shall not exceed 125 tons in any given day. [District Rule 2201]
15. PM10 emissions from the milk drying operation shall not exceed 0.7224 pounds per ton of dried milk produced. [District Rule 2201]
16. Emissions from combustion of natural gas in the process heater shall not exceed any of the following limits: 5 ppmvd NOX @ 3% O2 or 0.0062 lb-NOX/MMBtu (referenced as NO2), 0.00285 lb-SOX/MMBtu, 0.003 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu, 13 ppmvd VOC @ 3% O2 or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306, and 4320]
17. Total annual PM10 emissions from this facility, calculated on a rolling 12-month total basis, shall not exceed 29,000 pounds. [District Rule 2201]
18. {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]
19. Source testing to measure PM10 emissions from the exhaust of the baghouse serving the milk drying operation shall be conducted within 60 days of initial start-up, and annually thereafter. [District Rule 2201]
20. Source testing to measure PM10 emissions from the exhaust of the baghouse serving the milk drying operation shall be conducted using EPA Methods 201A and 202. Alternatively, the results of a total particulate matter test using CARB Method 5 may be used to demonstrate compliance with the PM10 emission limit provided the results include both the filterable (front half) and condensable (back half) particulates, and that all particulate matter is assumed to be PM10. Should the permittee decide to use different test methodology, the methodology shall first be approved by the District prior to its use. [District Rule 2201]
21. {4344} Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted within 60 days of initial start-up. [District Rules 2201, 4305, 4306 and 4320]
22. {4345} Source testing to measure NOx and CO emissions from this unit while fired on natural gas shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320]
23. {4346} NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis, or EPA Method 19 on a heat input basis. [District Rules 4305, 4306 and 4320]
24. {4347} CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320]
25. {4348} Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320]

CONDITIONS CONTINUE ON NEXT PAGE

26. {4349} Fuel sulfur content shall be determined using EPA Method 11 or Method 15. [District Rule 4320]

27. {4350} The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320]

28. {4351} All emissions measurements shall be made with the unit operating either at conditions representative of normal operations or conditions specified in the Permit to Operate. No determination of compliance shall be established within two hours after a continuous period in which fuel flow to the unit is shut off for 30 minutes or longer, or within 30 minutes after a re-ignition as defined in Section 3.0 of District Rule 4320. [District Rules 4305, 4306 and 4320]

29. {4352} For emissions source testing, the arithmetic average of three 30-consecutive-minute test runs shall apply. If two of three runs are above an applicable limit the test cannot be used to demonstrate compliance with an applicable limit. [District Rules 4305, 4306 and 4320]

30. {110} The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081]

31. When in operation, the differential pressure of the baghouse shall not be less than 1 inches water column nor greater than 10 inches water column. [District Rule 2201]

32. Differential operating pressure of the baghouse shall be monitored and recorded on each day that it operates. [District Rule 2201]

33. {4315} 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 Rules 4305, 4306 and 4320]

34. {4316} If either the NOx or CO concentrations corrected to 3% 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 Rules 4305, 4306 and 4320]

35. {4317} 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 Rules 4305, 4306, and 4320]

36. {4318} 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 3% 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 Rules 4305, 4306 and 4320]

37. {4356} Permittee shall determine sulfur content of combusted gas annually or shall demonstrate that the combusted gas is provided from a PUC or FERC regulated source. [District Rules 1081 and 4320]

38. Permittee shall maintain daily records of the dried milk produced, in tons. [District Rule 2201]

39. Permittee shall maintain monthly records of the natural gas combusted by this unit. [40 CFR 60.48c(g)(2)]

40. Permittee shall maintain records of the 12-month rolling total of PM10 emissions from this facility, in pounds, and the records shall be updated at least monthly. [District Rule 2201]

41. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-9149-4-0

ISSUANCE DATE: DRAFT

LEGAL OWNER OR OPERATOR: VALLEY MILK LLC
MAILING ADDRESS: 346 E F ST
OAKDALE, CA 95361

LOCATION: 4407 W MAIN ST
TURLOCK, CA

EQUIPMENT DESCRIPTION:
DRIED MILK PACKAGING OPERATION SERVED BY A 4,000 SCFM DONALDSON MODEL TORIT DLMC 2/2/15 BAGHOUSE

CONDITIONS

1. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
2. {15} No air contaminant shall be discharged into the atmosphere for a period or periods aggregating more than three minutes in any one hour which is as dark as, or darker than, Ringelmann 1 or 20% opacity. [District Rule 4101]
3. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. Visible emissions from the exhaust of the baghouse serving the dried milk packaging operation shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201]
5. 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]
6. 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]
7. Material removed from the baghouse shall be disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201]
8. {3458} Replacement bags numbering at least 10% of the total number of bags in the baghouse shall be maintained on the premises. [District Rule 2201]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

DRAFT

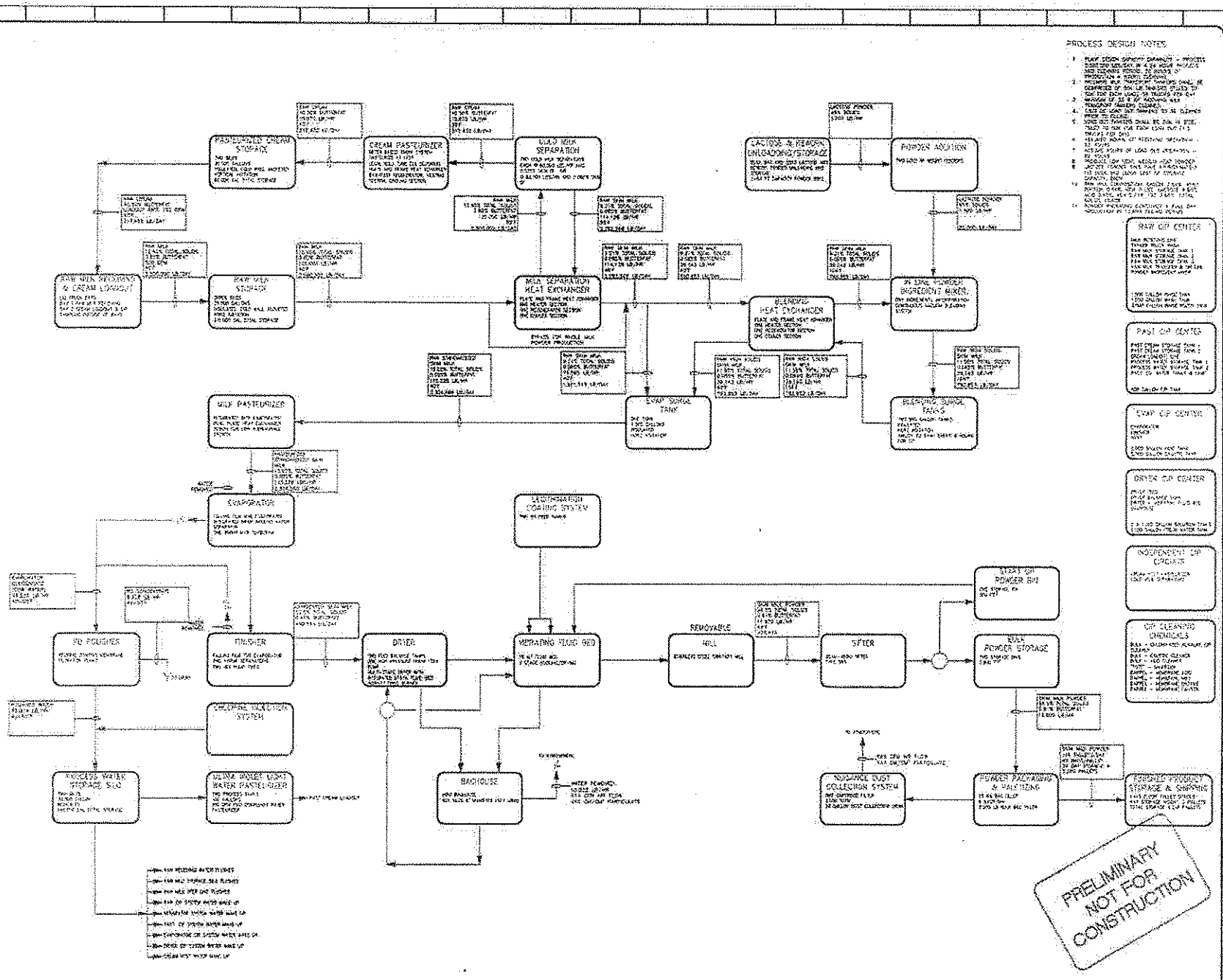
Arnaud Marjollet, Director of Permit Services

N-9149-4-0 : Aug 19 2015 10:59AM -- SCW : Joint Inspection NOT Required

9. The cleaning frequency and duration of the baghouse shall be adjusted to optimize the control efficiency. [District Rule 2201]
10. The quantity of dried milk packaged shall not exceed 125 tons in any given day. [District Rule 2201]
11. PM10 emissions from the dried milk packaging operation shall not exceed 0.0392 pounds per ton of dried milk processed. [District Rule 2201]
12. Total annual PM10 emissions from this facility, calculated on a rolling 12-month total basis, shall not exceed 29,000 pounds. [District Rule 2201]
13. When in operation, the differential pressure of the baghouse shall not be less than 2 inches water column nor greater than 6 inches water column. [District Rule 2201]
14. Differential operating pressure of the baghouse shall be monitored and recorded on each day that it operates. [District Rule 2201]
15. Permittee shall maintain daily records of the dried milk packaged, in tons. [District Rule 2201]
16. Permittee shall maintain records of the 12-month rolling total of PM10 emissions from this facility, in pounds, and the records shall be updated at least monthly. [District Rule 2201]
17. All records shall be maintained and retained on-site for a minimum of five years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, 4306, and 4320]

APPENDIX II

Process Flow Diagram


PROCESS DESIGN NOTES
RAW MILK RECEIVING & CREAM LOADOUT
RAW MILK STORAGE
CREAM PASTEURIZER
SKIM MILK SEPARATION
PROTEIN-FORTIFIED CREAM STORAGE
LACTOSE & PERMEATE UNLOADING/STORAGE
POWDER ADDITION
MILK SEPARATION HEAT EXCHANGER
BLENDING HEAT EXCHANGER
25 TON FLUIDIZED INGREDIENT MIXER
RAW CIP CENTER
PAST CIP CENTER
EVAP CIP CENTER
DRYER CIP CENTER
INDEPENDENT CIP CIRCUITS
CIP CLEANING CHEMICALS
EVAP SURGE TANK
BLENDING SURGE TANKS
MILK PASTEURIZER
EVAPORATOR
LECITHINATION COATING SYSTEM
PD POLISHERS
FINISHER
DRYER
VIBRATING FLUID BED
REMOVABLE MILL
SIFTER
STORE OF POWDER BIN
MILK POWDER STORAGE
CHLORINE INJECTION SYSTEM
PROCESS WATER STORAGE SILO
ULTRA HIGH HEAT WATER PASTEURIZER
BAGHOUSE
NUISANCE DUST COLLECTION SYSTEM
POWDER PACKAGING & PALLETIZING
FINISHED PRODUCT STORAGE & SHIPPING
PRELIMINARY NOT FOR CONSTRUCTION
TURLOCK, CALIFORNIA
P-291

APPENDIX III

BACT Guideline and Top-Down BACT Analyses

N-9149-1-0 & -2-0 (Boilers), and -3-0 (process heater)

Top-Down BACT Analysis for NOx emissions

The District considers the following NOX emission limits to conduct a BACT analysis for any new projects.

Step 1 - Identify all control technologies

Achieved-In-Practice:
7 ppmvd @ 3% O2 or 0.008 lb-NOx/MMBtu

Technologically Feasible:
5 ppmvd @ 3% O2 or 0.0062 lb-NOx/MMBtu

Alternate Basic Equipment:
None

Step 2 - Eliminate technologically infeasible options

All control options listed in step 1 are technologically feasible.

Step 3 - Rank remaining options by control effectiveness

1. 5 ppmvd @ 3% O2 or 0.0062 lb-NOx/MMBtu – Technologically Feasible Option
2. 7 ppmvd @ 3% O2 or 0.008 lb-NOx/MMBtu – Achieved-In-Practice Option

Step 4 - Cost Effectiveness Analysis

Pursuant to District BACT Policy APR 1305 IX.D.3 (11/99), a cost-effective analysis is not required since the applicant has proposed utilize the most stringent control technology option listed in Step 3. Therefore, the cost effectiveness analysis is not required.

Step 5 - Select BACT

The applicant has proposed to use a burner system with 5 ppmv @ 3% O2, which is the most stringent control technology. Therefore, BACT for NO_X emissions is satisfied.

N-9149-1-0 & -2-0 (Boilers), and -3-0 (process heater)

Top-Down BACT Analysis for SOx, PM10, & VOC emissions

The District considers the following techniques that could reduce SOx, PM10, and VOC emissions.

Step 1 - Identify all control technologies

Achieved-In-Practice:
Use of PUC-quality natural gas

Technologically Feasible:
None

Alternate Basic Equipment:
None

Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options that can be eliminated from step 1.

Step 3 - Rank remaining options by control effectiveness

Ranking of the control technologies is not required since the applicant has proposed utilize the only control technology, achieved in practice control technology listed on this guideline.

Step 4 - Cost Effectiveness Analysis

Pursuant to District BACT Policy APR 1305 IX.D.3 (11/99), a cost-effective analysis is not required since the applicant has proposed utilize the most stringent control technology option listed in Step 3. Therefore, the cost effectiveness analysis is not required.

Step 5 - Select BACT

The applicant has proposed to use PUC-quality natural gas fuel. Therefore, BACT for SO_X, PM10, and VOC emissions is satisfied.

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 8.4.3*

Last Update 4/2/2012

Dry Material Handling Operation - Mixing, Blending, Milling, or Storage

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
PM10	Mixer, augers, elevators, conveyors all enclosed and vented to a fabric filter baghouse, or equivalent (99% or greater control efficiency)		

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 required 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**

N-9149-3-0 (Milk powder drying, conveying, and storage processes), and -4-0 (packaging)

Top-Down BACT Analysis for PM10 emissions

BACT Guideline 8.4.3 covers dry material handling process.

Step 1 - Identify all control technologies

Achieved-In-Practice:
Mixer, augers, elevators, conveyors all enclosed and vented to a fabric filter baghouse, or equivalent (99% or greater control efficiency)

Technologically Feasible:
None

Alternate Basic Equipment:
None

Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options that can be eliminated from step 1.

Step 3 - Rank remaining options by control effectiveness

Ranking of the control technologies is not required since the applicant has proposed utilize the only control technology, achieved in practice control technology listed on this guideline.

Step 4 - Cost Effectiveness Analysis

Pursuant to District BACT Policy APR 1305 IX.D.3 (11/99), a cost-effective analysis is not required since the applicant has proposed utilize the most stringent control technology option listed in Step 3. Therefore, the cost effectiveness analysis is not required.

Step 5 - Select BACT

The applicant has proposed to vent processing units to a baghouse with manufacturer guarantee PM10 control efficiency of at least 99%. Therefore, BACT for PM10 emissions is satisfied.

APPENDIX IV

Risk Management Review & AAQA

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	Wai-Man So – Permit Services
From:	Cheryl Lawler – Technical Services
Date:	June 17, 2015
Facility Name:	Valley Milk, LLC
Location:	4407 West Main Street, Turlock
Application #(s):	N-9149-1-0, 2-0, 3-0, 4-0
Project #:	N-1151582

A. RMR SUMMARY

RMR Summary			
Categories	**Two NG Boilers & One NG Heater (Units 1-0, 2-0, 3-0)**	**Project Totals**	**Facility Totals**
Prioritization Score	**0.02***	0.02	>1
Acute Hazard Index	N/A	N/A	N/A
Chronic Hazard Index	N/A	N/A	N/A
Maximum Individual Cancer Risk	N/A	N/A	N/A
T-BACT Required?	**No**		
Special Permit Conditions?	**Yes**		

*The project passed on prioritization with a score of less than 1; therefore, no further analysis was required.

Proposed Permit Conditions

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

Units 1-0 & 2-0

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 4102] N
2. The stack height shall be at least 45 feet.

Unit 3-0

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 4102] N
2. The stack height shall be at least 118 feet.

I. Project Description

Technical Services received a request on May 22, 2015, to perform an Ambient Air Quality Analysis (AAQA) and Risk Management Review (RMR) for the construction of a milk drying operation, a dried milk packaging operation, two identical 33.6 MMBtu/hr natural gas boilers, and one 23.58 MMBtu/hr natural gas heater. In addition, since this is a milk powder production facility, the PM generated from production of the dried milk powder will not be analyzed as part of this RMR because it's considered a food grade material for human consumption.

II. Analysis

Toxic emissions from the project were calculated using 2001 Ventura County Air Pollution Control District emission factors for natural gas fired external combustion. In accordance with the District's *Risk Management Policy for Permitting New and Modified Sources* (APR 1905-1, March 2, 2001), risks from the project were prioritized using the procedures in the 1990 CAPCOA Facility Prioritization Guidelines and incorporated in the District's HEART's database. The prioritization score for the project was less than 1.0 (see RMR Summary Table). Therefore, no further analysis was necessary for the RMR.

The following parameters were used for the review:

Analysis Parameters			
Source Type	Point	**Closest Receptor (m)**	300.23
Stack Heights (m)	13.72 & 35.97	**Type of Receptor**	Residence
Stack Diameter (m)	1.14	**Location Type**	Rural
Stack Gas Temperature (K)	450		
Stack Gas Velocity (m/sec)	5.28 & 23.79		

Technical Services also performed modeling for criteria pollutants NOx, SOx, CO, and PM_{10}; as well as the RMR for the natural gas boilers and heater. The emission rates used for criteria pollutant modeling were provided by the processing engineer.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

NG Boilers & Heater	1 Hour	3 Hours	8 Hours	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO_x	Pass	X	X	X	Pass
SO_x	Pass	Pass	X	Pass	Pass
PM_{10}	X	X	X	Pass[1]	Pass[1]

*Results were taken from the attached PSD spreadsheet.
[1]The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

III. Conclusions

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

The prioritization score for the project is not above 1.0. In accordance with the District's Risk Management Policy, the project is approved **without** Toxic Best Available Control Technology (T-BACT).

To ensure that human health risks will not exceed District allowable levels; the permit conditions listed on Page 1 of this report must be included for the proposed units.

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

Attachments

RMR Request Form & Attachments
Project Emails
Prioritization
AAQA Results
Facility Summary
AERMOD Non-Regulatory Option Checklist

APPENDIX V

HAP/Toxic Emissions Calculations

N-9149-1 and -2 [33.6 MMBtu/hr (each) natural gas-fired boilers]

HAP	Emission Factor (lb/MMBtu)[1]	Maximum Hourly Emissions (lb/hr) [2]	Maximum Annual Emissions (lb/yr) [3]	Maximum Annual Emissions (tpy)	Total Maximum Annual Emissions for total of two 33.6 MMBtu/hr boilers (tpy) [4]
Acetaldehyde	3.10E-06	1.04E-04	0.91244	0.00046	0.00091
Acrolein	2.70E-06	9.07E-05	0.79471	0.00040	0.00079
Benzene	5.80E-06	1.95E-04	1.70715	0.00085	0.00171
1,3-Butadiene	n/a	--	--	--	--
Ethyl benzene	6.90E-06	2.32E-04	2.03092	0.00102	0.00203
Formaldehyde	1.23E-05	4.13E-04	3.62033	0.00181	0.00362
Hexane	4.60E-06	1.55E-04	1.35395	0.00068	0.00135
Naphthalene	3.00E-07	1.01E-05	0.08830	0.00004	0.00009
PAHs	1.00E-07	3.36E-06	0.02943	0.00001	0.00003
Propylene	0.00053	1.78E-02	155.99808	0.07800	0.15600
Toluene	2.65E-05	8.90E-04	7.79990	0.00390	0.00780
Xylene	1.97E-05	6.62E-04	5.79842	0.00290	0.00580
Total			**180.13363**	0.09007	0.18013

Notes:

1. These emission factors are obtained from Ventura County APCD, "AB2588 Combustion Emission Factors (5/17/01)" natural gas fired external combustion equipment less than 10 MMBtu/hr, available at http://www.vcapcd.org/pubs/Engineering/AirToxics/combem.pdf
2. Hourly emissions = EF (lb/MMBtu) x 33.6 (MMBtu/hr)
3. Annual emissions = EF (lb/MMBtu) x 33.6 (MMBtu/hr) x 8,760 (hr/yr)
4. Total Annual emissions of two 33.6 MMBtu/hr boilers = Annual emissions (lb/yr) x 2

N-9149-3 (23.58 MMBtu/hr natural gas-fired boiler)

HAP	Emission Factor (lb/MMBtu)[1]	Maximum Hourly Emissions (lb/hr) [2]	Maximum Annual Emissions (lb/yr) [3]	Maximum Annual Emissions (tpy)
Acetaldehyde	3.10E-06	7.31E-05	0.64034	0.00032
Acrolein	2.70E-06	6.37E-05	0.55771	0.00028
Benzene	5.80E-06	1.37E-04	1.19805	0.00060
1,3-Butadiene	n/a	--	--	--
Ethyl benzene	6.90E-06	1.63E-04	1.42527	0.00071
Formaldehyde	1.23E-05	2.90E-04	2.54070	0.00127
Hexane	4.60E-06	1.08E-04	0.95018	0.00048
Naphthalene	3.00E-07	7.07E-06	0.06197	0.00003
PAHs	1.00E-07	2.36E-06	0.02066	0.00001
Propylene	0.00053	1.25E-02	109.47722	0.05474
Toluene	2.65E-05	6.25E-04	5.47386	0.00274
Xylene	1.97E-05	4.65E-04	4.06925	0.00203
Total			**126.41521**	0.06321
Notes:				
1. These emission factors are obtained from Ventura County APCD, "AB2588 Combustion Emission Factors (5/17/01)" natural gas fired external combustion equipment less than 10 MMBtu/hr, available at http://www.vcapcd.org/pubs/Engineering/AirToxics/combem.pdf				
2. Hourly emissions = EF (lb/MMBtu) x 23.58 (MMBtu/hr)				
3. Annual emissions = EF (lb/MMBtu) x 23.58 (MMBtu/hr) x 8,760 (hr/yr)				