



JUL 20 2012

Mr. Jason Schierling
General Mills Operations
2000 W. Turner Road
Lodi, CA 95242

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # N-355
Project # N-1114105**

Dear Mr. Schierling:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. The applicant is requesting that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The proposal is to lower the NOx emissions from the boiler to 7 ppmvd @ 3% O2 for compliance with District Rule 4320. The lower NOx emissions will be accompanied by an increase in the CO emission limit to provide the tuning flexibility necessary to reliably meet the lower NOx limit.

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

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

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

Enclosures

c: Mark Schonhoff, Permit Services

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

Central Region (Main Office)
1990 E. Gettysburg Avenue
Fresno, CA 93726-0244
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Southern Region
34946 Flyover Court
Bakersfield, CA 93308-9725
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JUL 20 2012

Mike Tollstrup, Chief
Project Assessment Branch
Air Resources Board
P O Box 2815
Sacramento, CA 95812-2815

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # N-355
Project # N-1114105**

Dear Mr. Tollstrup:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. The applicant is requesting that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. The proposal is to lower the NOx emissions from the boiler to 7 ppmvd @ 3% O2 for compliance with District Rule 4320. The lower NOx emissions will be accompanied by an increase in the CO emission limit to provide the tuning flexibility necessary to reliably meet the lower NOx limit.

Enclosed is the engineering evaluation of this application with a copy of the current Title V permit and proposed Authority to Construct # N-355-95-3 with Certificate of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

Please submit your written comments on this project within the 30-day comment period that begins on the date you receive this letter. If you have any questions, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400.

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

Enclosures

c: Mark Schonhoff, Permit Services

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JUL 20 2012

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

**Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # N-355
Project # N-1114105**

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authority to Construct for General Mills Operations at 2000 W. Turner Road in Lodi, which has been issued a Title V permit. General Mills Operations is requesting that a Certificate of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. The proposal is to lower the NOx emissions from the boiler to 7 ppmvd @ 3% O2 for compliance with District Rule 4320. The lower NOx emissions will be accompanied by an increase in the CO emission limit to provide the tuning flexibility necessary to reliably meet the lower NOx limit.

Enclosed is the engineering evaluation of this application with a copy of the current Title V permit and proposed Authority to Construct # N-355-95-3 with Certificate of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

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

Seyed Sadredin

Executive Director/Air Pollution Control Officer

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Mr. Gerardo C. Rios
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Thank you for your cooperation in this matter.

Sincerely,

A handwritten signature in black ink, appearing to read "David Warner", with a long horizontal flourish extending to the right.

David Warner
Director of Permit Services

Enclosures

c: Mark Schonhoff, Permit Services

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

NOTICE IS HEREBY GIVEN that the San Joaquin Valley Air Pollution Control District solicits public comment on the proposed significant modification of General Mills Operations for its cereal manufacturing facility at 2000 W. Turner Road in Lodi, California. The proposal is to lower the NO_x emissions from the boiler to 7 ppmvd @ 3% O₂ for compliance with District Rule 4320. The lower NO_x emissions will be accompanied by an increase in the CO emission limit to provide the tuning flexibility necessary to reliably meet the lower NO_x limit.

The District's analysis of the legal and factual basis for this proposed action, project #N-1114105, is available for public inspection at http://www.valleyair.org/notices/public_notices_idx.htm and the District office at the address below. This will be the public's only opportunity to comment on the specific conditions of the modification. If requested by the public, the District will hold a public hearing regarding issuance of this modification. For additional information, please contact Mr. Rupi Gill, Permit Services Manager, at (209) 557-6400. Written comments on the proposed initial permit must be submitted within 30 days of the publication date of this notice to DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 4800 ENTERPRISE WAY, MODESTO, CA 95356.

Authority to Construct Application Review

Facility Name: General Mills Operations, Inc.
Mailing Address: 2000 W. Turner Road
Lodi, CA 95242

Date: May 25, 2012

Contact Person: Jason Schierling
Telephone: (209) 334-7090

Engineer: Mark Schonhoff
Application #: N-355-95-3
Project #: N-1114105
Deemed Complete: February 27, 2012

I. Proposal

The facility is currently complying with District Rule 4320 by paying fees (as allowed by section 5.1.2). The applicant is now proposing to receive an Authority to Construct permit to limit the NO_x emissions from this boiler to 7 ppmvd @ 3% O₂ for compliance with the Rule 4320 emission limits. To allow the tuning flexibility necessary to reliably meet the NO_x limit, the applicant has also proposed to increase the CO limit from 50 ppmvd @ 3% O₂ to 200 ppmvd @ 3% O₂.

The facility is currently operating under a Title V permit and this permitting action is a Significant Modification to that permit. The applicant has proposed to proceed with a Certificate of Conformity.

II. Applicable Rules

2201 New and Modified Stationary Source Review Rule (4/21/11)
2520 Federally Mandated Operating Permits (6/21/01)
4001 New Source Performance Standards (4/14/99)
4101 Visible Emissions (2/17/05)
4102 Nuisance (12/17/92)
4201 Particulate Matter Concentration (12/17/92)
4304 Equipment Tuning Procedure for Boilers, Steam Generators and process Heaters (10/19/09)
4305 Boilers, Steam Generators and Process Heaters – Phase 2 (12/19/96)
4306 Boilers, Steam Generators and Process Heaters – Phase 3 (10/16/08)
4320 Advanced Emission Reduction Options for Boilers, Steam Generators and Process heaters Greater Than 5.0 MMBtu/hr (10/16/08)
4801 Sulfur Compounds (12/17/92)
CH&SC 41700
CH&SC 42301.6

III. Project Location

2000 W. Turner Road
Lodi, CA

The equipment is not located within 1,000 feet of a K-12 school.

IV. Process Description

The boiler is utilized to heat water for use in various operations at the plant.

V. Equipment Listing

Premodification Equipment Listing:

48.3 MMBTU/HR NEBRASKA NS-C-52-ECON NATURAL GAS/LPG FIRED BOILER
EQUIPPED WITH A NATCOM MODEL P-48-G-24-1318 ULTRA-LOW NOX BURNER

Post modification Equipment Listing:

No Change

VI. Emission Control Technology Evaluation

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.

VII. General Calculations

A. Assumptions

Assumptions will be stated as they are made.

B. Emission Factors

Premodification

Pollutant	Postmodification (from current Permit to Operate)	
	Natural Gas	LPG
NOx	9 ppmvd @ 3% O ₂ or 0.011 lb/MMBtu	9 ppmvd @ 3% O ₂ or 0.011 lb/MMBtu
CO	50 ppmvd @ 3% O ₂ or 0.037 lb/MMBtu	50 ppmvd @ 3% O ₂ or 0.037 lb/MMBtu
VOC	0.0055 lb/MMBtu	0.5 lb/10 ³ gal
SOx	0.00285 lb/MMBtu	0.00285 lb/MMBtu
PM10	0.0076 lb/MMBtu	0.6 lb/10 ³ gal

Postmodification

Pollutant	Postmodification (from current Permit to Operate)	
	Natural Gas	LPG
NOx	7 ppmvd @ 3% O ₂ or 0.011 lb/MMBtu	7 ppmvd @ 3% O ₂ or 0.011 lb/MMBtu
CO	200 ppmvd @ 3% O ₂ or 0.15 lb/MMBtu	200 ppmvd @ 3% O ₂ or 0.15 lb/MMBtu
VOC	0.0055 lb/MMBtu	0.5 lb/10 ³ gal
SOx	0.00285 lb/MMBtu	0.00285 lb/MMBtu
PM10	0.0076 lb/MMBtu	0.6 lb/10 ³ gal

C. Potential to Emit (PE)

1. Potential to Emit

Premodification:

The following are from the Application Review document for project N-1070576.

Pollutant	Potential to Emit	
	lb/day	lb/yr
NOx	12.6	4,612
CO	42.9	15,655
VOC	6.4	2,338
SOx	3.3	1,206
PM10	8.8	3,216

Postmodification:

Except for NOx and CO, the potentials to emit will not change. The postmodification NOx and CO emissions will be calculated utilizing the following equation:

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

Where: ppm is the emission concentration

MW is the molecular wt. of the pollutant

NOx = 46

CO = 28

2.63×10^{-9} is a constant (at 60 degrees F)

ff is the f-factor of natural gas and LPG – 8,710 dscf/MMBtu – EPA Method 19 (8,578 dscf/MMBtu at 60 degrees F)

C is the capacity of the equipment (in MMBtu/hr)

% O₂ is the oxygen content to which the stack exhaust is corrected (3%)

Postmodification PE:

Rating: 48.3 MMBtu/hr

Op. Schedule: 24 hr/day and 8,760 hr/yr

$$PE_{\text{NOx}} = [(7)(46)(2.63 \times 10^{-9})(8,578)(48.3)(20.95/(20.95-3))\text{lb/hr} \\ \times (24 \text{ hr/day})] = 9.8 \text{ lb/day}$$

$$PE_{\text{NOx}} = [(7)(46)(2.63 \times 10^{-9})(8,578)(48.3)(20.95/(20.95-3))\text{lb/hr} \\ \times (8,760 \text{ hr/yr})] = 3,587 \text{ lb/yr}$$

$$PE_{CO} = [(200)(28)(2.63 \times 10^{-9})(8,578)(48.3)(20.95/(20.95-3))\text{lb/hr} \\ \times (24 \text{ hr/day})] = 170.9 \text{ lb/day}$$

$$PE_{CO} = [(200)(28)(2.63 \times 10^{-9})(8,578)(48.3)(20.95/(20.95-3))\text{lb/hr} \\ \times (8,760 \text{ hr/yr})] = 62,388 \text{ lb/yr}$$

Pollutant	Potential to Emit	
	lb/day	lb/yr
VOC	6.4	2,338
SOx	3.3	1,206
PM10	8.8	3,216

D. Increase in Permitted Emissions (IPE)

1. Quarterly IPE

$$IPE_{NOx} = 3,587 \text{ lb/yr} - 4,612 \text{ lb/yr} = -1,025 \text{ lb/yr} (-256.25 \text{ lb/qtr})$$

$$IPE_{CO} = 62,388 \text{ lb/yr} - 15,655 \text{ lb/yr} = 46,733 \text{ lb/yr} (11,683.25 \text{ lb/qtr})$$

$$IPE_{VOC} = 2,338 \text{ lb/yr} - 2,338 \text{ lb/yr} = 0 \text{ lb/yr} (0.0 \text{ lb/qtr})$$

$$IPE_{SOx} = 1,206 \text{ lb/yr} - 1,206 \text{ lb/yr} = 0 \text{ lb/yr} (0.0 \text{ lb/qtr})$$

$$IPE_{PM10} = 3,216 \text{ lb/yr} - 3,216 \text{ lb/yr} = 0 \text{ lb/yr} (0.0 \text{ lb/qtr})$$

The emission profile for this ATC will include the following:

	NOx (lb)	SOx (lb)	PM10 (lb)	CO (lb)	VOC (lb)
Annual PE	3,587	1,206	3,216	62,388	2,338
Daily PE	9.8	3.3	8.8	170.9	6.4
Δ PE (Qtr 1)	-256	0	0	11,683	0
Δ PE (Qtr 2)	-256	0	0	11,683	0
Δ PE (Qtr 3)	-256	0	0	11,683	0
Δ PE (Qtr 4)	-257	0	0	11,684	0

2. Adjusted Increase in Permitted Emissions (AIPE)

AIPE is used to determine whether or not Best Available Control Technology (BACT) is required for modified units.

$$\text{AIPE} = \text{PE2} - \text{HAPE}$$

Where: PE2 is the post project PE, in lb/day
HAPE is the Historically Adjusted Potential to Emit, in lb/day.

$$\text{Where: HAPE} = \text{PE1}(\text{EF2}/\text{EF1})$$

Where: PE1 is the pre-project PE, in lb/day
EF1 is the pre-project emission factor
EF2 is the post-project emission factor

Note: If EF2 is greater than EF1, then EF2/EF1 is set to 1

	PE2 (lb/day)	PE1 (lb/day)	EF2/EF1	AIPE (lb/day)
NOx	9.8	12.6	7/9	0.0
CO	170.9	42.9	1	128.0
VOC	6.4	6.4	1	0.0
SOx	3.3	3.3	1	0.0
PM10	8.8	8.8	1	0.0

Note: The postmodification emission factor for CO is higher than the premodification emission factor. Therefore, the emission factor ratio was set to 1.

E. Facility Emissions

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

The following SSPE1 contributions are from the Application Review document for project N-1113039.

Permit Number	NOx	SOx	PM10	CO	VOC
ATC N-355-1-9	0	0	9,746	0	0
ATC N-355-2-9	0	0	11,133	0	0
N-355-5-5	0	0	110	0	0
N-355-6-5	0	0	438	0	0
N-355-7-4	0	0	803	0	0
N-355-9-3	0	0	267	0	0
N-355-10-3	0	0	267	0	0
N-355-11-3	0	0	267	0	0
N-355-12-3	0	0	267	0	0
N-355-13-3	0	0	368	0	0
N-355-14-3	0	0	368	0	0
N-355-16-7	0	0	1,061	0	0
N-355-17-4	0	0	804	0	0
N-355-18-3	0	0	368	0	0
N-355-20-9	4,638	7,193	3,316	25,698	2,373
N-355-21-6	11,053	1,578	3,655	246,998	1,163
N-355-23-3	0	0	2,081	0	0
N-355-25-3	0	0	0	0	0
N-355-35-6	0	0	1,314	0	0
N-355-38-4	4,380	127	783	3,679	241
N-355-40-4	0	0	60	0	0
N-355-42-3	0	0	365	0	0
N-355-44-3	0	0	37	0	0
N-355-45-5	0	0	73	0	0
N-355-46-3	0	0	475	0	0
N-355-47-3	0	0	1,606	0	0
N-355-56-3	0	0	1,606	0	0
N-355-78-4	0	0	2,081	0	0
N-355-83-3	783	73	78	237	88
N-355-90-3	0	0	584	0	0
N-355-91-3	1,054	70	75	227	84
N-355-92-3	0	0	146	0	0
N-355-94-3	0	0	183	0	0
N-355-95-2	4,612	1,206	3,216	15,655	2,338
SSPE2 W/O ERC	26,520	10,247	48,001	292,494	6,287
ERC N-139-1	0	0	0	0	61
ERC N-139-3	0	0	0	931	0
ERC N-139-5	0	8	0	0	0
ERC N-608-4	0	0	861	0	0
SSPE2 W/ERC	26,520	10,255	48,862	293,425	6,348

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

Permit Number	NOx	SOx	PM10	CO	VOC
ATC N-355-1-9	0	0	9,746	0	0
ATC N-355-2-9	0	0	11,133	0	0
N-355-5-5	0	0	110	0	0
N-355-6-5	0	0	438	0	0
N-355-7-4	0	0	803	0	0
N-355-9-3	0	0	267	0	0
N-355-10-3	0	0	267	0	0
N-355-11-3	0	0	267	0	0
N-355-12-3	0	0	267	0	0
N-355-13-3	0	0	368	0	0
N-355-14-3	0	0	368	0	0
N-355-16-7	0	0	1,061	0	0
N-355-17-4	0	0	804	0	0
N-355-18-3	0	0	368	0	0
N-355-20-9	4,638	7,193	3,316	25,698	2,373
N-355-21-6	11,053	1,578	3,655	246,998	1,163
N-355-23-3	0	0	2,081	0	0
N-355-25-3	0	0	0	0	0
N-355-35-6	0	0	1,314	0	0
N-355-38-4	4,380	127	783	3,679	241
N-355-40-4	0	0	60	0	0
N-355-42-3	0	0	365	0	0
N-355-44-3	0	0	37	0	0
N-355-45-5	0	0	73	0	0
N-355-46-3	0	0	475	0	0
N-355-47-3	0	0	1,606	0	0
N-355-56-3	0	0	1,606	0	0
N-355-78-4	0	0	2,081	0	0
N-355-83-3	783	73	78	237	88
N-355-90-3	0	0	584	0	0
N-355-91-3	1,054	70	75	227	84
N-355-92-3	0	0	146	0	0
N-355-94-3	0	0	183	0	0
N-355-95-2	3,587	1,206	3,216	62,388	2,338
SSPE2 W/O ERC	25,495	10,247	48,001	339,227	6,287
ERC N-139-1	0	0	0	0	61
ERC N-139-3	0	0	0	931	0
ERC N-139-5	0	8	0	0	0
ERC N-608-4	0	0	861	0	0
SSPE2 W/ERC	25,495	10,255	48,862	340,158	6,348

3. Stationary Source Increase in Permitted Emissions (SSIPE)

$$\text{SSIPE} = \text{SSPE2} - \text{SSPE1}$$

The SSPE1 and SSPE2 balances are from sections VII.E.1 and VII.E.2 of this document.

	SSPE2 (lb/yr)	SSPE1 (lb/yr)	SSIPE (lb/yr)
NOx	25,495	26,520	0
CO	340,158	293,425	46,733
VOC	6,348	6,348	0
SOx	10,255	10,255	0
PM10	48,862	48,862	0

4. Baseline Emissions

The purpose of determining Baseline Emissions is to calculate the quantity of offsets required. As shown in section VIII (Rule 2201 Compliance) offsets will be triggered for NOx, CO and PM10. As shown in the CO offset analysis that is in section VIII (Rule 2201 Compliance – Offsets) of this document, this permitting action is exempt from CO offsets. Therefore, a Baseline Emission determination is necessary only for NOx and PM10.

Within the past five years, the Achieved-in-Practice BACT level for NOx and PM10 (as specified in guideline 1.1.2) was:

NOx: 9 ppmvd @ 3% O₂

PM10: Natural gas, LPG or propane fuel

Since the unit met the Achieved-in-Practice BACT level for NOx and PM10 within the past 5 years, it is a Clean Emission Unit as defined in section 3.13 of Rule 2201 and the Baseline Emissions are equal to the pre-project potential to emit (section 3.8.1 of Rule 2201).

BE_{NOx}: 4,612 lb/yr

BE_{PM10}: 3,216 lb/yr

F. Major Source Determination

The Major Source thresholds, the facility potentials to emit and whether or not the facility is a Major Source are presented on the following table. The Major Source thresholds are from Section 3.23.1 and the facility-wide potential to emit is from section VII.E.2 of this document (SSPE2 excluding ERC's).

Pollutant	Threshold (lb/yr)	Facility PE (lb/yr)	Major Source
NOx	20,000	25,495	Yes
CO	200,000	339,227	Yes
VOC	20,000	6,287	No
SOx	140,000	10,247	No
PM10	140,000	48,001	No

G. Major Modification Determination

SB-288 Major Modification:

The purpose of District Major Modification calculations is to determine the following:

If Best Available Control Technology (BACT) is triggered for a new or modified emission unit that results in a Major Modification (District Rule 2201, §4.1.3); and

If a public notification is triggered (District Rule 2201, §5.4.1).

An SB-288 Major Modification is triggered if the emission increases as calculated in accordance with the procedures specified in 40 CFR Part 51.165 (December 19,2001 version) exceed the thresholds presented on the following table. As can be seen, the potentials to emit are less than the SB-288 Major Modification thresholds, therefore, an SB-288 Major Modification cannot be triggered.

Pollutant	SB-288 Major Modification Threshold (lb/yr)	Potential to Emit (lb/yr)	SB-288 Major Modification
NOx	50,000	3,587	No
VOC	50,000	2,338	No
SOx	80,000	1,206	No
PM10	30,000	3,216	No

Federal Major Modification:

As shown in section VII.F of this document, the facility is a Major Source for NOx and CO. Therefore, the proposed permitting action may be a Federal Major Modification. There is not a Federal Major Modification threshold for CO, therefore, a determination is required for only NOx. The Federal Major Modification threshold for NOx is:

Pollutant	Threshold (lb/yr)
NOx	0

The District draft policy “Implementation of Rule 2201 (as amended on 12/18/08 and approved by EPA on 6/10/10) for SB 288 Major Modifications and Federal Major Modifications (9/28/10)” is referenced to determine the emissions increase. Case 2 in the draft policy states “If the proposed modification does not result in an increase in design capacity or potential to emit, and it does not impact the ability of the emission unit to operate at a higher utilization rate, then the unused baseline capacity emissions can also be excluded from the emission increase (EI).

Neither the rating or the utilization rate of the boiler will increase, therefore, the above referenced draft policy allows the unused baseline capacity to be included in the EI calculation. EI is as follows:

$$EI = PAE - BAE - \text{unused baseline capacity, where}$$

- PAE = post-project projected actual emissions
- BAE = pre-project baseline actual emissions
- unused baseline capacity = PE1 – BAE

The proposed modification will not increase the permitted utilization rate of the boiler, therefore:

$$\begin{aligned} EI &= PE2 - BAE - (PE1 - BAE) \\ &= PE2 - BAE - PE1 + BAE \\ &= PE2 - PE1 \end{aligned}$$

$$\begin{aligned} PE1_{NOx} &= 4,612 \text{ lb/yr} \\ PE2_{NOx} &= 3,587 \text{ lb/yr} \end{aligned}$$

$$EI_{NOx} = 3,587 \text{ lb/yr} - 4,612 \text{ lb/yr} = 0 \text{ lb/yr}$$

As shown above, the EI of NOx will not exceed its Federal Major Modification threshold. Therefore, this permitting action is not a Federal Major Modification.

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. BACT

Although the modifications to the permit are for Rule 4320 compliance, no physical additions or changes to the unit will be made. Therefore, the Rule 2201, section 4.2.3 BACT exemption does not apply.

To qualify for the BACT exemption specified in section 5.6.4 of Rule 4320, a unit must also qualify for the Rule 2201 (section 4.2.3) BACT exemption. As explained above, the unit does not qualify for that exemption, therefore, it does not qualify for this one either.

1. BACT Applicability

New or Relocated Units:

Except for CO, BACT is required for each pollutant with a PE of greater than 2.0 pounds per day. For CO, BACT is required if the PE of CO is greater than 2.0 pounds per day and the SSPE2 of CO is 200,000 pounds per year or greater.

Modified Units:

Except for CO, BACT is required for each pollutant with an AIPE of greater than 2.0 pounds per day. For CO, BACT is required if the AIPE of CO is greater than 2.0 pounds per day and the SSPE2 of CO is 200,000 pounds or greater.

Major Modifications:

BACT is required for the pollutants for which an SB-288 or a Federal Major Modification is triggered.

Applicability:

The proposed unit is Modified, therefore, whether or not BACT is required is dependent on the AIPE and/or whether it is a Major Modification. The table below shows the AIPE value, the SSPE2 for CO and whether or not BACT is required.

	SSPE2 (lb/yr)	AIPE (lb/day)	BACT Required
NOx	N/A	0.0	No
CO	340,158	128.0	Yes
VOC	N/A	0.0	No
SOx	N/A	0.0	No
PM10	N/A	0.0	No

2. BACT Analysis

As shown above BACT is required for CO and as shown in the Top-Down BACT analysis that is in appendix D of this document, BACT will be the use of natural gas fuel, LPG or propane fuel. The boiler will fire on natural gas or LPG fuel therefore, BACT will be met.

B. OFFSETS

Although the modifications to the permit are for Rule 4320 compliance, no physical additions or changes to the unit will be made. Therefore, the Rule 2201, section 4.6.8 BACT exemption does not apply.

To qualify for the Offset exemption specified in section 5.6.4 of Rule 4320, a unit must also qualify for the Rule 2201 (section 4.6.8) Offset exemption. As explained above, the unit does not qualify for that exemption, therefore, it does not qualify for this one either.

1. Offset Applicability

Per Rule 2201, section 4.5.3, offsets are examined on a pollutant by pollutant basis and are triggered for any pollutant with a SSPE2 equal to or greater than the value on the following table:

Pollutant	SSPE2 (lb/yr)
NOx	20,000
CO (in CO attainment areas)	200,000
VOC	20,000
SOx	54,750
PM10	29,200

As shown in section VII.E.2 of this document, the SSPE2 of each pollutant is:

Pollutant	SSPE2 (lb/yr)	Offsets Triggered
NOx	25,495	Yes
CO	340,158	Yes
VOC	6,348	No
SOx	10,255	No
PM10	48,862	Yes

2. Quantity of Offsets Required

NOx and PM10:

For pollutants with a pre-project SSPE (SSPE1) greater than the offset threshold levels of Rule 2201, section 4.5.3, offsets must be provided for all increases in Stationary Source emissions, calculated as the sum of differences between the

post-project Potential to Emit and the Baseline Emissions of all new and modified emission units.

PE_{NOx}: 3,587 lb/yr
BE_{NOx}: 4,612 lb/yr

Offset_{NOx} = 3,587 lb/yr – 4,612 lb/yr = 0 lb/yr

PE_{PM10}: 3,216 lb/yr
BE_{PM10}: 3,216 lb/yr

Offset_{PM10} = 3,216 lb/yr – 3,216 lb/yr = 0 lb/yr

CO:

As shown in the Ambient Air Quality Analysis that is in appendix C of this document, the increase in CO emissions will not cause or contribute to the violation of an Ambient Air Quality Standard for CO. Therefore, the increase in CO emissions is exempt from offsets per section 4.6.1 of District Rule 2201.

C. PUBLIC NOTIFICATION

1. Applicability

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

- a. New Major Sources
- b. Major Modifications
- c. New emission units with a PE > 100 lb/day of any one pollutant (IPE Notifications)
- d. Modifications with SSPE1 below an offset threshold and SSPE 2 above an offset threshold on a pollutant by pollutant basis (Existing Facility Offset Threshold Exceedence Notification)
- e. New stationary sources with SSPE2 exceeding offset thresholds (New Facility Offset Threshold Exceedence Notification)
- f. Any permitting action with a SSIPE exceeding 20,000 lb/yr for any one pollutant. (SSIPE Notice)

a. New Major Source Notice Determination:

The facility is not new, therefore, a New Major Source Determination notice is not required.

b. Major Modification Notice:

As shown in section VII.G of this document, this permitting action will not be a Major Modification. Therefore, a Major Modification notice is not required.

c. PE Notification:

A notification is required for each new emission unit with the potential to emit more than 100 pounds per day of any one affected pollutant. This project does not include any new emission units. Therefore, a notice is not required.

d. Existing Facility Offset Threshold Exceedence Notification

The SSPE of no pollutant will go from below to above an offset threshold. Therefore, a public notification is not required.

e. New Facility Offset Threshold Exceedence Notification

This is an existing facility. This section does not require a public notification.

f. SSIPE Notification:

A notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/yr of any affected pollutant. As shown in section VII.E.3 of this document, the SSIPE of CO will exceed 20,000 pounds per year. Therefore, an SSIPE notification is required.

2. Public Notice

As shown above, a public notification is required because the SSIPE of CO is in excess of 20,000 lb/yr, and as explained in section VIII (Rule 2520 Compliance) a public notice is required because this permitting action is a Significant Modification to the Title V permit.

D. DAILY EMISSION LIMITS

The NO_x emissions shall not exceed 7 ppmvd @ 3% O₂ or 0.008 lb/MMBtu.

The CO emissions shall not exceed 200 ppmvd @ 3% O₂.

While firing on natural gas, the VOC emissions shall not exceed 0.0055 lb/MMBtu.

While firing on LPG, the VOC emissions shall not exceed 0.5 lb/1,000 gallons.

The SO_x emissions shall not exceed 0.00285 lb/MMBtu.

While firing on natural gas, the PM₁₀ emissions shall not exceed 0.0076 lb/MMBtu.

While firing on LPG, the PM₁₀ emissions shall not exceed 0.6 lb/1,000 gallons.

E. Compliance Assurance

1. Source Testing

An initial source test to show compliance with the revised NO_x and CO emission limits of this permit as well as the follow-up testing specified by Rule 4320 will be required.

2. Monitoring

The periodic emission monitoring required by District Rules 4305, 4306 and 4320 will be required.

3. Record Keeping

The unit is subject to the periodic emission monitoring requirements of Rule 4320 and as required by that rule, records of the periodic monitoring activities will be required.

It is also subject to 40 CFR Part 60 Subpart Dc, which requires monthly fuel usage records. These records will be required also.

4. Reporting

As they apply to the equipment currently under consideration, no District rule or policy requires reporting.

Rule 2520 Federally Mandated Operating Permits

The facility is proposing to receive an Authority to Construct to lower the NOx emissions limit of the boiler for compliance with District Rule 4320. Since no startup and shutdown emission allowances have been requested or allowed, the District will remove the following Title V permit conditions:

8. Maximum number of start-ups and shutdowns shall not exceed 32 times per year. [District Rule 2201] Y
9. Duration of start-up or shutdown shall not exceed one hour each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 2201, 4305, 5.5.6 and 4306, 5.3] Y
10. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Y
11. Maximum emissions from the boiler, including start-up and shutdown, shall not exceed any of the following limits: 12.6 lb-NOx/day, 3.3 lb-SOx/day, 8.8 lb-PM10/day, 42.9 lb-CO/day, or 6.4 lb-VOC/day. [District Rule 2201] Y

18. The permittee shall maintain records of dates of startup and duration that the unit is fired on LPG. [District Rule 1081] Y

Since records of the number of start-ups and shutdowns will no longer be required, this is a relaxation of record keeping requirements and this permitting action is a Significant Modification to the Title V permit.

The applicant has proposed to receive the Authorities to Construct with Certificates of Conformity. Prior to operating under these ATC's, the facility will be required to submit an application for an Administrative Amendment to the Title V permit. The Authority to Construct will include the following conditions:

{1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District NSR Rule] Y

The permittee may construct or modify the equipment as authorized by this Authority to Construct at this time. Prior to operating with the modifications the permittee shall submit an application for an Administrative Permit Amendment to the District. [District Rule 2520, 5.3.4] Y

Per section 11.3 of this rule, a 30 day public notice is required. This notice will run concurrently with the Rule 2201 public notice discussed in section VIII (Rule 2201 compliance) of this document.

Rule 4001 New Source Performance Standards

40 CFR Part 60 Subpart Dc:

This subpart applies to units rated at more than 10 MMBtu/hr and less than 100 MMBtu/hr or less. The unit currently under consideration 48.3 MMBtu/hr boiler that burns natural gas or LPG. LPG meets the section 60.41c definition of natural gas therefore, only the natural gas standards apply.

Emission Standards:

SOx Emission Standard:

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

Particulate Matter Emission Standard:

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

Compliance Testing:

SOx Compliance Testing:

This subpart does not include an applicable SOx standard, therefore, SOx testing is not required.

Particulate Matter Testing:

This subpart does not include an applicable particulate matter standard, therefore, particulate matter testing is not required.

Emission Monitoring:

These units are not subject to the section 60.42(c) SOx limit or the 60.43(c) PM10 limit of this subpart. Therefore, monitoring is not required.

Reporting and Record Keeping:

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

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

The design heat input capacity and type of fuel combusted at the facility will be listed on the unit's equipment description. No conditions are required to 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 §60.42c or §40.43c.

This requirement is not applicable since the units are not subject to §60.42c or §40.43c.

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

The facility has not proposed an annual capacity factor; therefore one will not be required.

- (4) Notification if an emerging technology will be used for controlling SO₂ emissions. The Administrator will examine the description of the control device and will determine whether the technology qualifies as an emerging technology. In making this determination, the Administrator may require the

owner or operator of the affected facility to submit additional information concerning the control device. The affected facility is subject to the provisions of §60.42c(a) or (b)(1), unless and until this determination is made by the Administrator.

This requirement is not applicable since the units will not be equipped with an emerging technology used to control SO₂ emissions.

Section 60.48c(g) requires that the owner or operator of each affected facility record and maintain records of the amount daily amount of fuel combusted unless an applicable alternative is provided 60.48(g)(2) or 60.48(g)(3). Section 60.48(g)(2), which allows monthly records, applies because only natural gas (LPG meets the definition of natural gas) will be burned. Therefore, monthly fuel usage records will be required.

Section 60.48c(i) states that all records required under this section shall be maintained by the owner or operator of the affected facility for a period of two years following the date of such record. District Rule 4320 requires that records be kept for five years.

Rule 4101 Visible Emissions

As long as the equipment is properly maintained and operated, the visible emissions are not expected to exceed 20% opacity for a period or periods aggregating more than 3 minutes in any one hour. Compliance with the provisions of this rule is expected.

Rule 4102 Nuisance

A. California Health & Safety Code 41700 (Health Risk Analysis)

This permitting action will not result in an increase in fuel usage, therefore no increase in the emissions of Hazardous Air Pollutants will occur. Since there will not be an increase in HAP emissions, a Risk Management Review (RMR) is not required.

B. Toxics BACT (T-BACT)

As stated above, there will not be an increase in HAP emissions. Therefore, Toxics BACT is not required.

Rule 4201 Particulate Matter Concentration

This rule limits the particulate matter emission concentration to a maximum of 0.1 gr/dscf of exhaust flow. Based on experience with boilers that burn natural gas and/or LPG, the unit is expected to continue to comply with the requirements of this rule.

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

Direct measurements of NO_x, CO and O₂ are conducted utilizing a District approved portable analyzer, therefore, per section 6.3.1.2 of District Rule 4320, tune-ups are not required and this rule does not apply.

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

The boiler heat input rating is greater than 5.0 MMBtu/hr and it is therefore subject to this rule. However, it is also subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators and Process Heaters Greater Than 5.0 MMBtu/hr). Since the Rule 4320 requirements are equivalent to, or more stringent than District Rule 4305 requirements, compliance with Rule 4320 will result in compliance with District Rule 4305 also. Compliance with District Rule 4305 is expected.

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

The boiler heat input rating is greater than 5.0 MMBtu/hr and it is therefore subject to this rule. However, it is also subject to District Rule 4320 (Advanced Emission Reduction Options for Boilers, Steam Generators and Process Heaters Greater Than 5.0 MMBtu/hr). Since the Rule 4320 requirements are equivalent to, or more stringent than District Rule 4306 requirements, compliance with Rule 4320 will result in compliance with District Rule 4306 also. Compliance with District Rule 4306 is expected.

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

Applicability:

The rule applies to any gaseous fuel or liquid fuel fired boiler, steam generator or process heater with a heat input rating of greater than 5 MMBtu/hr. The unit under consideration is therefore subject to this rule.

Emission Limits:

NO_x Limit:

The unit is rated at over 20 MMBtu/hr, therefore, it is subject to the Section 5.1 NO_x limit (Table 1, Category B) of 7 ppmvd @ 3% O₂ or 0.008 lb/MMBtu. The unit will be tuned to meet this limit and source testing to demonstrate compliance will be required. Therefore, compliance with the NO_x emission limit of this rule is expected.

CO Limit:

Per section 5.2.1, the CO emission limit is 400 ppmvd @ 3% O₂. The applicant is proposing a CO limit of 200 ppmvd @ 3% O₂ and will demonstrate compliance with a source test. Therefore, compliance with the CO emission limit of this rule is expected.

Control Requirements:

Particulate Matter Control:

Natural Gas and LPG:

Section 5.4.1 requires that particulate matter be controlled by one of the methods specified in sections 5.4.1.1 through 5.4.1.4.

Section 5.4.1.1 states that compliance may be met by operating the unit solely on PUC-quality natural gas, commercial propane, butane, liquefied petroleum gas, or a combination of such gasses. The applicant is proposing to fire the units solely on LPG or PUC-quality natural gas, therefore compliance with the particulate matter control requirement of this section is expected.

Monitoring:

NO_x, CO and O₂ Monitoring:

Section 5.7.1 requires the operator of a unit subject to section 5.2 of this rule to install and maintain Continuous Emission Monitoring (CEM) equipment for NO_x, CO and O₂, or to conduct alternate District approved monitoring.

To satisfy the applicable monitoring requirements, the applicant is proposing to continue with the monthly monitoring of NO_x, CO and O₂. The monitoring will be conducted utilizing a District approved portable analyzer (monitoring scheme A of District Policy SSP-1105).

SO_x Emission Monitoring:

Facilities complying with sections 5.4.1.1 or 5.4.1.2 of this rule are required by section 5.7.6.1 to provide a fuel analysis to the District on at least an annual basis

Per District Policy APR 1720, the District assumes that natural gas has a sulfur content not exceeding 1.0 grains/100 scf. Therefore, the District will accept analyses or other equivalent certification documents from the fuel supplier for demonstrating compliance with the SO_x emission monitoring requirement.

Monitoring Requirement:

To satisfy the applicable requirements, the following condition will be placed on the ATC and the PTO.

{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]

Record Keeping:

Section 6.1.3 requires the operator to maintain the records necessary to verify that the required tune-ups have been conducted and that the operational characteristics of the units have been monitored as required.

The NO_x, CO and O₂ will be measured with a portable analyzer in accordance with Scheme A of District Policy SSP-1105, therefore, per section 6.3.1.2 of this rule, tune-ups are not required.

Section 6.1.3 requires the operator to monitor relevant operational characteristics to ensure that the emission limits of section 5.2 are met during 36-month source testing intervals. Monitoring of operational characteristics will be required.

Section 6.1.4 requires that records of the duration of each start-up and shut-down period be kept. The applicant has not requested startup or shutdown period emission limit allowances, therefore, these records are not necessary.

Section 6.1 requires that all records be maintained for a period of at least 5 years and that they be made available to the District and to the EPA upon request. Such a requirement will be placed on the Authorities to Construct and the Permits to Operate.

Source Testing:

Section 6.3.1 of this rule requires that subject units be source tested to determine compliance with the applicable emission limits of this rule at least once every 12 months. Once compliance is shown on two consecutive 12-month tests, the testing frequency may decrease to once every 36 months. This section further states that if compliance is not shown during a 36 month test, the testing frequency shall revert to once every 12 months. The ATC's and the PTO's will require that testing be conducted at this frequency.

Section 6.2 of this rule specifies the source test methods that may be utilized. The ATC's and the PTO's will include conditions specifying the test methods to be used.

Tune-ups:

Section 6.3.1.2 states that if the equipment is equipped with a CEMS or if the NO_x and CO emissions are periodically monitored, then tune-ups are not required. Since the

NOx and CO emissions will be periodically monitored in accordance with Scheme A of District Policy SSP-1105, tune-ups are not required

California Environmental Quality Act (CEQA)

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

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

The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will occur at an existing facility and the project involves negligible expansion of the existing use. Furthermore, the District determined that the activity will not have a significant effect on the environment. The District finds that the activity is categorically exempt from the provisions of CEQA pursuant to CEQA Guideline § 15031 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

Greenhouse Gas Emissions:

There will be no increases in the permitted fuel usages, therefore, there will be no increases in greenhouse gas emissions.

California Health & Safety Code 42301.6 (School Notice)

The equipment will not be located within 1,000 feet of a K-12 school, therefore, a school notice is not required.

IX. Recommendation

Issue an Authority-to-Construct permit with the conditions on the attached draft Authority-to-Construct permit.

X. Billing Information

Premodification:

Permit #	Description	Fee Schedule
N-355-95-2	48.3 MMBtu/hr	3020-2-H

Post modification:

No Change.

Appendices

Appendix A: Draft ATC

Appendix B: Current PTO

Appendix C: Ambient Air Quality Analysis Summary

Appendix D: Top-Down BACT Analysis

Appendix A

Draft ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: N-355-95-3

LEGAL OWNER OR OPERATOR: GENERAL MILLS OPERATIONS, INC
MAILING ADDRESS: ATTN: ACCOUNTS PAYABLE
PO BOX 1263
MINNEAPOLIS, MN 55440

LOCATION: WADE BROUGHTON
2000 W TURNER ROAD
LODI, CA 95242

EQUIPMENT DESCRIPTION:
48.3 MMBTU/HR NEBRASKA NS-C-52-ECON NATURAL GAS/LPG FIRED BOILER EQUIPPED WITH A NATCOM MODEL P-48-G-24-1318 ULTRA-LOW NOX BURNER. MODIFICATION TO THE EMISSION LIMITS FOR 4320 COMPLIANCE.

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. The permittee may construct or modify the equipment as authorized by this Authority to Construct at this time. Prior to operating with the modifications, the permittee shall submit an application for an Administrative Permit Amendment to the District. [District Rule 2520] Federally Enforceable Through Title V Permit
3. {4383} No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
4. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director, APCO

DAVID WARNER, Director of Permit Services

N-355-95-3 : May 22 2012 9:59AM - SCHOINHDM : Joint Inspection NOT Required

6. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
7. The unit shall only be fired on PUC-quality natural gas or LPG. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
8. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas/LPG combusted in the unit shall be installed, utilized and maintained. [District Rule 2201 and 40 CFR Part 60 Subpart 60.48c (g)] Federally Enforceable Through Title V Permit
9. While firing on natural gas, the emissions shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.008 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.0076 lb-PM₁₀/MMBtu, 200 ppmvd CO @ 3% O₂, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
10. While firing on LPG, the emissions shall not exceed any of the following limits: 7 ppmvd NO_x @ 3% O₂ or 0.008 lb-NO_x/MMBtu, 0.00285 lb-SO_x/MMBtu, 0.6 lb-PM₁₀/1000 gal, 200 ppmvd CO @ 3% O₂, or 0.5 lb-VOC/1000 gal. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
11. Source testing to measure the NO_x and CO emissions from this unit, while firing on natural gas, shall be conducted within 60 days after initial start-up. [District Rules 2201 and 4320] Federally Enforceable Through Title V Permit
12. Source testing to measure natural gas-combustion NO_x and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
13. If the unit is fired on both natural gas and LPG during any calendar year, additional source testing for NO_x and CO emissions shall be performed for any fuel that is fired for more than 100 hours during that calendar year and has not been previously tested as a part of the facility's annual source testing requirement. [District Rules 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
14. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
15. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
16. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
17. 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] Federally Enforceable Through Title V Permit
18. 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] Federally Enforceable Through Title V Permit
19. NO_x emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
20. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
21. Stack gas oxygen (O₂) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

22. The permittee shall monitor and record the stack concentration of NO_x, 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] Federally Enforceable Through Title V Permit
23. If either the NO_x 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 the performing the notification and testing required by this condition. [District Rules 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
24. 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] Federally Enforceable Through Title V Permit
25. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x 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] Federally Enforceable Through Title V Permit
26. 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] Federally Enforceable Through Title V Permit
27. A record of the amount of fuel burned, on a monthly basis, shall be kept. [40 CFR Part 60 Subpart 60.48c(g)] Federally Enforceable Through Title V Permit
28. The permittee shall maintain records that include the date and the number of hours that the unit fires on LPG. [District Rule 2201, 4305, 4306 and 4320] Federally Enforceable Through Title V Permit
29. 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] Federally Enforceable Through Title V Permit

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Appendix B

Current Permit to Operate

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-355-95-2

EXPIRATION DATE: 04/30/2016

EQUIPMENT DESCRIPTION:

48.3 MMBTU/HR NEBRASKA NS-C-52-ECON NATURAL GAS/LPG FIRED BOILER EQUIPPED WITH A NATCOM MODEL P-48-G-24-1318 ULTRA-LOW NOX BURNER

PERMIT UNIT REQUIREMENTS

1. Pursuant to Rule 4320, beginning in 2010 the operator shall pay an annual emission fee to the District for NOx emissions from this unit for the previous calendar year. Payments are due by July 1 of each year. Payments shall continue annually until either the unit is permanently removed from service in the District or the operator demonstrates compliance with the applicable NOx emission limit listed in Rule 4320. [District Rule 4320]
2. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
3. All equipment shall be maintained in good operating condition and shall be operated in a manner to minimize emissions of air contaminants into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
4. The unit shall only be fired on PUC-regulated natural gas or LPG. [District Rule 2201] Federally Enforceable Through Title V Permit
5. A non-resettable, totalizing mass or volumetric fuel flow meter to measure the amount of natural gas/LPG combusted in the unit shall be installed, utilized and maintained. [District Rule 2201, 4305, 4306, and 40 CFR 60 Subpart Dc Section 60.48c (g)] Federally Enforceable Through Title V Permit
6. Emissions from the natural gas-fired unit shall not exceed any of the following limits: 9 ppmvd NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.0076 lb-PM10/MMBtu, 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu, or 0.0055 lb-VOC/MMBtu. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
7. Emissions from the LPG-fired unit shall not exceed any of the following limits: 9 ppmvd NOx @ 3% O2 or 0.011 lb-NOx/MMBtu, 0.00285 lb-SOx/MMBtu, 0.6 lb-PM10/1000 gal, 50 ppmvd CO @ 3% O2 or 0.037 lb-CO/MMBtu, or 0.5 lb-VOC/1000 gal. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
8. Maximum number of start-ups and shutdowns shall not exceed 32 times per year. [District Rule 2201] Federally Enforceable Through Title V Permit
9. Duration of start-up or shutdown shall not exceed one hour each per occurrence. During start-up or shutdown, the emissions control system shall be in operation, and emissions shall be minimized insofar as technologically possible. The operator shall maintain daily records of the duration of start-up and shutdown periods. [District Rules 2201, 4305, 5.5.6 and 4306, 5.3] Federally Enforceable Through Title V Permit
10. Start-up is defined as the period of time during which a unit is brought from a shutdown status to its operating temperature and pressure, including the time required by the unit's emission control system to reach full operation. Shutdown is defined as the period of time during which a unit is taken from an operational to a non-operational status by allowing it to cool down from its operating temperature to ambient temperature as the fuel supply to the unit is completely turned off. [District Rule 4306, 3.25 and 3.22] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. Maximum emissions from the boiler, including start-up and shutdown, shall not exceed any of the following limits: 12.6 lb-NOx/day, 3.3 lb-SOx/day, 8.8 lb-PM10/day, 42.9 lb-CO/day, or 6.4 lb-VOC/day. [District Rule 2201] Federally Enforceable Through Title V Permit
12. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified at least 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to testing. [District Rule 1081] Federally Enforceable Through Title V Permit
13. Source testing to measure natural gas-combustion NOx and CO emissions from this unit shall be conducted at least once every twelve (12) months. After demonstrating compliance on two (2) consecutive annual source tests, the unit shall be tested not less than once every thirty-six (36) months. If the result of the 36-month source test demonstrates that the unit does not meet the applicable emission limits, the source testing frequency shall revert to at least once every twelve (12) months. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
14. 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 and 4306] Federally Enforceable Through Title V Permit
15. 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 and 4306] Federally Enforceable Through Title V Permit
16. The results of each source test shall be submitted to the District within 60 days thereafter. [District Rule 1081] Federally Enforceable Through Title V Permit
17. If the unit is fired on both natural gas and LPG during any calendar year, additional source testing for NOx and CO emissions shall be performed for any fuel that is fired for more than 100 hours during that calendar year and has not been previously tested as a part of the facility's annual source testing requirement. [District Rules 2201, 4305, and 4306] Federally Enforceable Through Title V Permit
18. The permittee shall maintain records of dates of startup and duration that the unit is fired on LPG. [District Rule 1081] Federally Enforceable Through Title V Permit
19. The source test plan shall identify which basis (ppmv or lb/MMBtu) will be used to demonstrate compliance. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
20. NOx emissions for source test purposes shall be determined using EPA Method 7E or ARB Method 100 on a ppmv basis. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
21. CO emissions for source test purposes shall be determined using EPA Method 10 or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
22. Stack gas oxygen (O2) shall be determined using EPA Method 3 or 3A or ARB Method 100. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
23. 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 and 4306] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

24. If either the NO_x 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 the performing the notification and testing required by this condition. [District Rules 4305 and 4306] Federally Enforceable Through Title V Permit
25. 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 and 4306] Federally Enforceable Through Title V Permit
26. The permittee shall maintain records of: (1) the date and time of NO_x, CO, and O₂ measurements, (2) the O₂ concentration in percent and the measured NO_x 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 and 4306] Federally Enforceable Through Title V Permit
27. The permittee shall maintain records that include the date and the number of hours of operation when unit is fired on LPG. [District Rule 4306] Federally Enforceable Through Title V Permit
28. All records shall be maintained and retained on-site for a minimum of five (5) years, and shall be made available for District inspection upon request. [District Rules 1070, 4305, and 4306] Federally Enforceable Through Title V Permit

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

Appendix C

Ambient Air Quality Analysis

San Joaquin Valley Air Pollution Control District Risk Management Review

To: Robert Gilles – Permit Services
 From: Yu Vu – Technical Services
 Date: January 25, 2012
 Facility Name: General Mills Operations, Inc.
 Location: 2000 W. Turner Road, Lodi, CA 95242
 Application #(s): N-355-95-3
 Project #: N-1114105

A. RMR SUMMARY

RMR Summary			
Categories	Boiler (Unit 1-0)	Project Totals	Facility Totals
Prioritization Score	N/A ¹	N/A	>1
Acute Hazard Index	N/A ¹	N/A	0.00
Chronic Hazard Index	N/A ¹	N/A	0.00
Maximum Individual Cancer Risk (10 ⁻⁶)	N/A ¹	N/A	0.17
T-BACT Required?	No		
Special Permit Conditions?	No		

¹This project did not need a risk assessment because it only involved an increase in criteria emissions, whose impacts are addressed as part of the District's NSR Rule.

Proposed Permit Conditions

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

Unit # 95-3

No special conditions are required.

B. RMR REPORT

I. Project Description

Technical Services received a request on January 17, 2012, to perform a Ambient Air Quality Analysis (AAQA) for a proposed modification to a natural gas/LPG-fired boiler (unit N-355-95). The applicant is proposing to increase the CO emission limit for the unit from 50 ppmvd to 200 ppmvd @ 3% O₂. This will result in an increase in CO emissions which are displayed in the next section.

II. Analysis

Technical Services performed modeling for CO. The emission rates used for CO modeling were 5.36 lb/hr and 46,965 lb/yr.

The results from the Criteria Pollutant Modeling are as follows:

Criteria Pollutant Modeling Results*

Diesel ICE	1 Hour	3 Hours	8 Hours.	24 Hours	Annual
CO	Pass	X	Pass	X	X
NO _x	N/A	X	X	X	N/A
SO _x	N/A	N/A	X	N/A	N/A
PM ₁₀	X	X	X	N/A	N/A
PM _{2.5}	X	X	X	N/A	N/A

*Results were taken from the attached PSD spreadsheet.

III. Conclusion

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

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

IV. Attachments

- A. RMR request from the project engineer
- B. Additional information from the applicant/project engineer
- C. Toxic emissions summary
- D. Prioritization score
- E. Facility Summary

Appendix D

Top-Down BACT Analysis

As shown in section VIII (Rule 2201 Compliance), BACT is required for CO. The BACT guideline that applied has been rescinded and will be revised. During this time, the District is performing case-by-case determinations. During the guideline revisions, no changes or additions to the current CO controls are expected. Therefore, the control option from the rescinded guideline will be utilized.

Step 1 - Identify All Possible Control Technologies

1. Natural Gas, LPG or Propane Fuel

Step 2 - Eliminate Technologically Infeasible Options:

The above listed control technology is technologically feasible.

Step 3 - Rank Remaining Control Technologies by Control effectiveness

1. Natural Gas, LPG or Propane Fuel

Step 4 - Cost Effectiveness Analysis

The above listed item is achieved in practice and is required regardless of cost. A cost effectiveness analysis is not required.

Step 5 - Select BACT

BACT for CO will be the use of natural gas, LPG or propane fuel. The applicant is proposing to continue to burn natural gas or LPG, therefore, BACT will be met.

Per » B A C T » Bact Guideline.asp?category_Level1=1&category_Level2=1&category_Level3=2&last Update=3 » 14 :

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**Best Available Control Technology (BACT) Guideline 1.1.2
Last Update: 3/14/2002**

Boiler: > 20.0 MMBtu/hr, Natural gas fired, base-loaded or with small load swings.**

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
CO	Natural gas fuel with LPG backup		
NOx	9.0 ppmvd @ 3% O2 (0.0108 lb/MMBtu/hr) Ultra-Low NOx main burner system and a natural gas or LPG fired igniter system (if the igniter system is used to heat the boiler at low fire).	9.0 ppmvd @ 3% O2 (0.0108 lb/MMBtu/hr) Selective Catalytic Reduction, Low Temperature Oxidizer, or equal and a < 30 ppmv NOx@ 3% O2 igniter system (if the igniter system is used to heat the boiler at low fire).	
PM10	Natural gas fuel with LPG backup		
SO	Natural gas fuel with LPG backup		
VOC	Natural gas fuel with LPG backup		

*** For the purpose of this determination, "small load swings" are defined as normal operational load fluctuations which are within the operational response range of an Ultra-Low NOx burner system(s).*

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 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. For background information, see Permit Specific BACT Determinations on Details Page.