San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

FEB 07 2012

Wade Broughton
General Mills Operations, Inc.
2000 West Turner Road
Lodi, CA 95242

Re: Proposed Authority to Construct / Certificate of Conformity (Minor Mod)
District Facility # N-355
Project # N-1113785

Dear Mr. Broughton:

Enclosed for your review is the District's analysis of your application for Authority to Construct for the facility identified above. You have requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. This project is for the installation of a 144 bhp diesel-fired emergency IC engine to power a fire water pump. This engine and pump will replace the existing 170 bhp diesel-fired emergency IC engine and fire water pump (permit N-355-91-3).

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

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

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

DW: RG/st

Enclosures

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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

Central Region (Main Office)
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FEB 07 2012

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

Re: **Proposed Authority to Construct / Certificate of Conformity (Minor Mod)**
District Facility # N-355
Project # N-1113785

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authority to Construct for General Mills Operations, Inc., located at 2000 West Turner Road in Lodi, CA, which has been issued a Title V permit. General Mills Operations, Inc. is requesting that a Certificate of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. This project is for the installation of a 144 bhp diesel-fired emergency IC engine to power a fire water pump. This engine and pump will replace the existing 170 bhp diesel-fired emergency IC engine and fire water pump (permit N-355-91-3).

Enclosed is the engineering evaluation of this application, a copy of the current Title V permit, and proposed Authority to Construct # N-355-99-0 with Certificate of Conformity. After demonstrating compliance with the Authority to Construct, the conditions will be incorporated into the facility's Title V permit through an administrative amendment.

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

Thank you for your cooperation in this matter.

Sincerely,

David Warner
Director of Permit Services

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San Joaquin Valley Air Pollution Control District
Authority to Construct
Application Review
Diesel-Fired Emergency Firewater Pump IC Engine

Facility Name:	General Mills Operations, Inc.	Date:	February 1, 2012
Mailing Address:	2000 West Turner Road Lodi, CA 95242	Engineer:	Robert Gilles
		Lead Engineer:	Nick Peirce
Contact Person:	John Wilson		
Telephone:	(916) 995-3544		
Fax:	(916) 920-2777		
Email Address:	john2wilson@simplexgrinnell.com		
Application #:	N-355-99-0		
Project #:	N-1113785		
Complete:	December 7, 2011		

I. Proposal

General Mills is proposing to install a 144 bhp (intermittent) diesel-fired emergency internal combustion (IC) engine powering a firewater pump.

"General Mills Operations, Inc." has been issued a Title V Permit which was renewed on July 08, 2011. This modification can be classified as a Title V minor permit modification pursuant to Rule 2520, Section 3.20, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day Environmental Protection Agency (EPA) comment period will be satisfied prior to the issuance of the Authority to Construct. "General Mills Operations, Inc." must apply to administratively amend their Title V Operating Permit to include the requirements of the ATC issued with this project.

The applicant stated that this IC engine powering a firewater pump is being installed to replace the existing IC engine powering a firewater pump (PTO N-355-91). Since this equipment will be removed, permit N-355-91-3 will be cancelled upon implementation of this ATC. The following condition will be included on this ATC.

- *Permit to Operate (PTO) N-355-91-3 shall be cancelled prior to, or upon implementation of this ATC. [District Rule 2201]*

The current PTO N-355-91-3 is included in Appendix D. The Draft ATC N-355-99-0 is included in Appendix A.

II. Applicable Rules

Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)
Rule 2520 Federally Mandated Operating Permits (6/21/01)
Rule 4001 New Source Performance Standards (4/14/99)
Rule 4002 National Emission Standards for Hazardous Air Pollutants (5/20/04)
Rule 4101 Visible Emissions (2/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4201 Particulate Matter Concentration (12/17/92)
Rule 4701 Stationary Internal Combustion Engines – Phase 1 (8/21/03)
Rule 4702 Stationary Internal Combustion Engines – Phase 2 (8/18/11)
Rule 4801 Sulfur Compounds (12/17/92)
CH&SC 41700 Health Risk Assessment
CH&SC 42301.6 School Notice
Title 13 California Code of Regulations (CCR), Section 2423 – Exhaust Emission Standards and Test Procedures, Off-Road Compression-Ignition Engines and Equipment
Title 17 CCR, Section 93115 - Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition (CI) Engines
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 project is located at 2000 West Turner Road in Lodi, CA. The District has verified that the equipment is not located within 1,000 feet of the outer boundary of a K-12 school.

IV. Process Description

The emergency engine powers a firewater pump. Other than emergency operation, the engine may be operated up to 100 hours per year for maintenance and testing purposes.

V. Equipment Listing

N-355-99-0: 144 BHP (INTERMITTENT) CLARKE MODEL JU4H-UFADW8 TIER 3 CERTIFIED DIESEL-FIRED EMERGENCY IC ENGINE POWERING A FIREWATER PUMP

VI. Emission Control Technology Evaluation

The engine is equipped with:
[x] Turbocharger
[ ] Intercooler/aftercooler

[ ] Injection timing retard (or equivalent per District Policy SSP-1805, dated 8/14/1996)
[ ] Positive Crankcase Ventilation (PCV) or 90% efficient control device
[ ] This engine is required to be, and is UL certified
[ ] Catalytic particulate filter
[x] Very Low (0.0015%) sulfur diesel

The emission control devices/technologies and their effect on diesel engine emissions detailed below are from *Non-catalytic NO_X Control of Stationary Diesel Engines*, by Don Koeberlein, CARB.

The turbocharger reduces the NO_X emission rate from the engine by approximately 10% by increasing the efficiency and promoting more complete burning of the fuel.

The use of very low-sulfur diesel fuel (0.0015% by weight sulfur maximum) reduces SO_X emissions by over 99% from standard diesel fuel.

VII. General Calculations

A. Assumptions

Emergency operating schedule:	24 hours/day
Non-emergency operating schedule:	up to 100 hours/year
Density of diesel fuel:	7.1 lb/gal
EPA F-factor (adjusted to 60 °F):	9,051 dscf/MMBtu
Fuel heating value:	137,000 Btu/gal
BHP to Btu/hr conversion:	2,542.5 Btu/bhp-hr
Thermal efficiency of engine:	commonly ≈ 35%
PM_{10} fraction of diesel exhaust:	0.96 (CARB, 1988)

B. Emission Factors

Emission Factors		
Pollutant	Emission Factor (g/bhp-hr)	Source
NO_X	2.8	Engine Manufacturer
SO_X	0.0051	Mass Balance Equation Below
PM_{10}	0.09	ARB/EPA Certification
CO	1.00	Engine Manufacturer
VOC	0.10	Engine Manufacturer

$$\frac{0.000015\ lb-S}{lb-fuel} \times \frac{7.1\ lb-fuel}{gallon} \times \frac{2\ lb-SO_2}{1\ lb-S} \times \frac{1\ gal}{137{,}000\ Btu} \times \frac{1\ bhp\ input}{0.35\ bhp\ out} \times \frac{2{,}542.5\ Btu}{bhp-hr} \times \frac{453.6\ g}{lb} = 0.0051\ \frac{g-SO_x}{bhp-hr}$$

C. Calculations

1. Pre Project PE (PE1)

Since this is a new emissions unit, PE1 = 0.

2. Post Project PE (PE2)

The daily and annual PE2 values are calculated as follows:

Daily Post Project Potential to Emit (PE2)					
Pollutant	Emissions Factor (g/bhp-hr)	Rating (bhp)	Daily Hours of Operation (hrs/day)	Conversion (g/lb)	PE2 Total (lb/day)
NO_X	2.8	144	24	453.6	21.3
SO_X	0.0051	144	24	453.6	0.0
PM_{10}	0.09	144	24	453.6	0.7
CO	1.00	144	24	453.6	7.6
VOC	0.10	144	24	453.6	0.8

Annual Post Project Potential to Emit (PE2)					
Pollutant	Emissions Factor (g/bhp-hr)	Rating (bhp)	Annual Hours of Operation (hrs/yr)	Conversion (g/lb)	PE2 Total (lb/yr)
NO_X	2.8	144	100	453.6	89
SO_X	0.0051	144	100	453.6	0
PM_{10}	0.09	144	100	453.6	3
CO	1.00	144	100	453.6	32
VOC	0.10	144	100	453.6	3

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

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid ATCs or PTOs at the Stationary Source and the quantity of Emission Reduction Credits (ERCs) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

Since this is an existing facility, SSPE1 is equal to the $PE1_{Total\ Pre\text{-}Project}$ from all units for all criteria pollutants. The table below summarizes the total SSPE1 values as calculated in Appendix E.

SSPE1 (lb/year)					
Permit Unit	NO_X	SO_X	PM_{10}	CO	VOC
SSPE1 w/out ERCs	86,354	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
SSPE1 w/ ERCs	**86,354**	**10,255**	**48,862**	**293,425**	**6,348**

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

Pursuant to Section 4.10 of District Rule 2201, the Post Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid ATCs or PTOs, except for emissions units proposed to be shut down as part of the Stationary Project, at the Stationary Source and the quantity of Emission Reduction Credits (ERCs) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

Since this is a modification to an existing facility, SSPE2 is equal to the $PE2_{Total\ Post\ Project}$ from all units for all criteria pollutants. For this project, the change in emissions for the facility is due to the installation of the new emergency IC engine, permit unit '-99-0, and the cancellation of permit unit '-91-3. Thus:

SSPE2 (lb/year)					
Permit Unit	NO_X	SO_X	PM_{10}	CO	VOC
SSPE1 w/out ERCs	86,354	10,247	48,001	292,494	6,287
New Unit N-355-99-0	89	0	3	32	3
Cancel N-355-91-3	-1,054	-70	-75	-227	-84
SSPE2 w/out ERCs	**85,389**	**10,177**	**47,929**	**292,299**	**6,206**
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/ ERCs	**85,389**	**10,185**	**48,790**	**293,230**	**6,267**

5. Major Source Determination

Pursuant to Section 3.24 of District Rule 2201, a Major Source is a stationary source with post project emissions or a Post Project Stationary Source Potential to Emit (SSPE2), equal to or exceeding one or more of the following threshold values. However, Section 3.24.2 states, "for the purposes of determining major source status, the SSPE2 shall not include the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site."

Major Source Determination					
Pollutant	SSPE1 (without ERCs)	SSPE2 (without ERCs)	Major Source Threshold (lb/yr)	Existing Major Source?	Becoming a Major Source?
NOx	86,354	85,389	20,000	Yes	Yes
SO_X	10,247	10,177	140,000	No	No
PM_{10}	48,001	47,929	140,000	No	No
CO	292,494	292,299	200,000	Yes	Yes
VOC	6,287	6,206	20,000	No	No

As seen in the table above, the facility is an existing Major Source and will remain a Major Source for NOx and CO.

6. Baseline Emissions (BE)

BE = Pre-project Potential to Emit for:

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

otherwise,

BE = Historic Actual Emissions (HAE), calculated pursuant to Section 3.23

Since this is a new emissions unit, BE = PE1 = 0 for all criteria pollutants.

7. SB288 Major Modification

SB288 Major Modification is defined in 40 CFR Part 51.165 as "*any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act.*"

Since this facility is a major source for NOx and CO, the project's PE2 is compared to the SB288 Major Modification Thresholds in the following table in order to determine if the SB288 Major Modification calculation is required.

SB288 Major Modification Thresholds			
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
NOx	89	50,000	No
SO_x	0	80,000	No
PM_{10}	3	30,000	No
VOC	3	50,000	No

Since none of the SB288 Major Modification Thresholds are surpassed with this project, this project does not constitute a SB288 Major Modification.

8. Federal Major Modification

As shown in section VII.C.5, the facility is a Major Source for NOx and CO; therefore, a Federal Major Modification determination is necessary for NOx emissions.

Pursuant to the District's draft policy titled *Implementation of Rule 2201 (as amended on 12/18/08 and effective on 6/10/10) for SB288 and Federal Major Modifications*, a permitting action is a Federal Major Modification if it will result in an increase in emission in excess of the thresholds specified in section 3.18 of Rule 2201 (as seen in the table below). Additionally, the draft policy states that if the emission increases are less than to or equal to 0.5 lb/day then they are to be rounded to zero (consistent with District Policy APR-1130).

Federal Major Modification Thresholds	
Pollutant	Threshold (lb/yr)
NOx	0
SOx	80,000
PM_{10}	30,000
$PM_{2.5}$	20,000 of direct $PM_{2.5}$ emissions, or
	80,000 of sulfur dioxide emissions, or
	80,000 of nitrogen dioxide emissions
VOC	0

Using the post-project annual Potential to Emit (PE2) value calculated in section VII.C.2 of this document, the average daily increased potential to emit for NOx is calculated as follows:

$PE2_{NOx}$: 89 lb/yr

$IPE2_{NOx}$: (89 lb/yr) / (365 days/yr) = **0.24 lb/day**

As demonstrated above, the Increase in Permitted Emissions (IPE) for NOx is less than 0.5 lb/day. Pursuant to the District Draft Policy mentioned above, the NOx emissions increase will be rounded to 0 lb/day and will not exceed the Federal Major Modification Significance Threshold. Therefore, this project is not a Federal Major Modification.

9. Quarterly Net Emissions Change (QNEC)

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

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. Best Available Control Technology (BACT)

1. BACT Applicability

BACT requirements are triggered on a pollutant-by-pollutant basis and on an emissions unit-by-emissions unit basis for the following*:

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

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

a. New emissions units – PE > 2.0 lb/day

Since this engine is a new emissions unit, the daily emissions are compared to the BACT thresholds in the following table:

New Emissions Unit BACT Applicability				
Pollutant	Daily Emissions for unit -99-0 (lb/day)	BACT Threshold (lb/day)	SSPE2 (lb/yr)	BACT Triggered?
NO_X	21.3	> 2.0	n/a	Yes
SO_X	0.0	> 2.0	n/a	No
PM_{10}	0.7	> 2.0	n/a	No
CO	7.6	> 2.0 and SSPE2 ≥ 200,000 lb/yr	293,230	Yes
VOC	0.8	> 2.0	n/a	No

Thus BACT will be triggered for NOx and CO emissions from the engine for this project.

b. Relocation of emissions units – PE > 2.0 lb/day

As discussed previously in Section I, this engine is not being relocated from one stationary source to another as a result of this project. Therefore, BACT is not triggered for the relocation of emissions units with a PE > 2.0 lb/day.

c. Modification of emissions units – Adjusted Increase in Permitted Emissions (AIPE) > 2.0 lb/day

As discussed previously in Section I, this engine is not being modified as a result of this project. Therefore, BACT is not triggered for the modification of emissions units with an AIPE > 2.0 lb/day.

d. Major Modification

As discussed previously in Sections VII.C.7 and VII.C.8, this project constitutes neither a SB288 Major Modification nor a Federal Major Modification. Therefore, BACT is not triggered for Major Modification purposes.

2. BACT Guideline

BACT Guideline 3.1.4, 2nd quarter 2001, which appears in Appendix B of this report, covers diesel-fired emergency IC engines powering a firewater pump.

3. 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

New Emissions Unit BACT Applicability				
Pollutant	Daily Emissions for unit -99-0 (lb/day)	BACT Threshold (lb/day)	SSPE2 (lb/yr)	BACT Triggered?
NO_X	21.3	> 2.0	n/a	Yes
SO_X	0.0	> 2.0	n/a	No
PM_{10}	0.7	> 2.0	n/a	No
CO	7.6	> 2.0 and SSPE2 ≥ 200,000 lb/yr	230,719	Yes
VOC	0.8	> 2.0	n/a	No

Thus BACT will be triggered for NOx and CO emissions from the engine for this project.

b. Relocation of emissions units – PE > 2.0 lb/day

As discussed previously in Section I, this engine is not being relocated from one stationary source to another as a result of this project. Therefore, BACT is not triggered for the relocation of emissions units with a PE > 2.0 lb/day.

c. Modification of emissions units – Adjusted Increase in Permitted Emissions (AIPE) > 2.0 lb/day

As discussed previously in Section I, this engine is not being modified as a result of this project. Therefore, BACT is not triggered for the modification of emissions units with an AIPE > 2.0 lb/day.

d. Major Modification

As discussed previously in Sections VII.C.7 and VII.C.8, this project constitutes neither a SB288 Major Modification nor a Federal Major Modification. Therefore, BACT is not triggered for Major Modification purposes.

2. BACT Guideline

BACT Guideline 3.1.4, 2nd quarter 2001, which appears in Appendix B of this report, covers diesel-fired emergency IC engines powering a firewater pump.

3. 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."

Pursuant to the attached Top-Down BACT Analysis, which appears in Appendix B of this report, BACT is satisfied with:

NO_X: Certified NO_X emissions of 6.9 g/bhp-hr or less
CO: No CO control equipment listed

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

- *{edited 3485} Emissions from this IC engine shall not exceed any of the following limits: 2.8 g-NOx/bhp-hr, 1.0 g-CO/bhp-hr, or 0.1 g-VOC/bhp-hr. [District Rule 2201 and 13 CCR 2423 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]*

B. Offsets

Since emergency IC engines are exempt from the offset requirements of Rule 2201, per Section 4.6.2, offsets are not required for this engine, and no offset calculations are required.

C. Public Notification

1. Applicability

Public noticing is required for:
a. New Major Sources, which is a new facility that is also a Major Source,
b. Major Modifications,
c. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
d. Any project which results in the offset thresholds being surpassed, and/or
e. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

a. New Major Source

A New Major Source is a new facility, which is also a major source. Since this is not a new facility, public noticing is not required for this project for New Major Source purposes.

b. Major Modification

As demonstrated previously in Sections VII.C.7 and VII.C.8, this project constitutes neither a SB288 Major Modification nor a Federal Major

Modification; therefore, public noticing for Major Modification purposes is not required.

c. PE > 100 lb/day

The Daily PE for this new emissions unit is compared to the daily PE Public Notice Thresholds in the following table:

PE > 100 lb/day Public Notice Thresholds			
Pollutant	Daily PE for unit -99-0 (lb/day)	Public Notice Threshold (lb/day)	Public Notice Triggered?
NO_X	21.3	100	No
SO_X	0.0	100	No
PM_{10}	0.7	100	No
CO	7.6	100	No
VOC	0.8	100	No

As detailed in the preceding table, the 100 lb/day threshold was not surpassed for any pollutant with this project. Therefore, public noticing is not required for daily emissions greater than 100 lb/day for a new emissions unit.

d. Offset Threshold

The following table compares the SSPE1 with the SSPE2 to the offset thresholds in order to determine if any offset thresholds have been surpassed with this project.

Offset Threshold – Public Notification				
Pollutant	SSPE1 (lb/yr)	SSPE2 (lb/yr)	Offset Threshold (lb/yr)	Public Notice Required?
NO_X	86,354	85,389	20,000	No
SO_X	10,255	10,185	54,750	No
PM_{10}	48,862	48,790	29,200	No
CO	293,425	293,230	200,000	No
VOC	6,348	6,267	20,000	No

As detailed in the preceding table, there were no offset thresholds surpassed with this project. Therefore, public noticing is not required for this project for surpassing the SSPE2 offset thresholds.

e. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a Stationary Source Increase in Permitted Emissions (SSIPE) of more than 20,000 lb/year of any affected pollutant. According to District policy, the SSIPE is calculated as the Post Project Stationary Source Potential to Emit (SSPE2) minus the Pre-Project Stationary Source Potential to Emit (SSPE1), i.e. SSIPE = SSPE2 – SSPE1. The values for SSPE2 and SSPE1 are calculated according to Rule 2201, Sections 4.9 and 4.10, respectively. The SSIPE is compared to the SSIPE Public Notice thresholds in the following table:

SSIPE Public Notice Threshold					
Pollutant	SSPE2 (lb/yr)	SSPE1 (lb/yr)	SSIPE (lb/yr)	SSIPE Threshold (lb/yr)	Public Notice Required?
NO_X	85,389	86,354	-965	20,000	No
SO_X	10,185	10,255	-70	20,000	No
PM_{10}	48,790	48,862	-72	20,000	No
CO	293,230	293,425	-195	20,000	No
VOC	6,267	6,348	-81	20,000	No

As detailed in the preceding table, there were no SSIPE thresholds surpassed with this project. Therefore, public noticing is not required for exceeding the SSIPE thresholds.

2. Public Notice Action

As discussed above, this project will not result in emissions, for any criteria pollutant, which would subject the project to any of the noticing requirements listed above. Therefore, public notice will not be required for this project.

In addition, this facility is a Title V facility and has requested that the ATC issued as a result of this project be issued with a COC (as discussed previously in Section I). Therefore, COC notice documents will be submitted to the Environmental Protection Agency (EPA) prior to the issuance of the ATC for this equipment.

D. Daily Emissions Limits

Daily Emissions Limitations (DELs) and other enforceable conditions are required by Section 3.16 to restrict a unit's maximum daily emissions, to a level at or below the emissions associated with the maximum design capacity. Per Sections 3.16.1 and 3.16.2, the DEL must be contained in the latest ATC and contained in or enforced by the latest PTO and enforceable, in a practicable manner, on a daily basis. DELs are also required to enforce the applicability of BACT. For this emergency IC

engine, the DELs are stated in the form of emission factors, the maximum engine horsepower rating, and the maximum operational time of 24 hours per day. Therefore, the following conditions (previously proposed in this engineering evaluation) will be listed on the ATC to ensure compliance:

- *{edited 3485} Emissions from this IC engine shall not exceed any of the following limits: 2.8 g-NOx/bhp-hr, 1.0 g-CO/bhp-hr, or 0.1 g-VOC/bhp-hr. [District Rule 2201 and 13 CCR 2423 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]*

- *{edited 3486} Emissions from this IC engine shall not exceed 0.09 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 13 CCR 2423 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]*

In addition, the DEL for SO_X is established by the sulfur content of the fuel being combusted in the engine. Therefore, the following condition will be listed on the ATC to ensure compliance:

- *{3395} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]*

E. Compliance Assurance

1. Source Testing

Pursuant to District Policy APR 1705, source testing is not required for emergency IC engines to demonstrate compliance with Rule 2201.

2. Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

Recordkeeping is required to demonstrate compliance with the offset, public notification, and daily emission limit requirements of Rule 2201. As required by District Rule 4702, *Stationary Internal Combustion Engines - Phase 2*, this IC engine is subject to recordkeeping requirements. Recordkeeping requirements, in accordance with District Rule 4702, will be discussed in Section VIII, *District Rule 4702*, of this evaluation.

4. Reporting

No reporting is required to ensure compliance with Rule 2201.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modification is a Minor Modification to the Title V Permit pursuant to Section 3.20 of this rule. As discussed previously in section I, the facility has applied for a Certificate of Conformity (COC). Therefore, the following conditions will be listed on the ATC:

- *{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]*

- *{1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4]*

In addition, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected.

Rule 4001 New Source Performance Standards (NSPS)

40 CFR Part 60 Subpart IIII – Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Pursuant to paragraph (a)(1)(ii) of §60.4200, the proposed engine is subject to the requirements of Subpart IIII. The following table demonstrates how the proposed engine will comply with the requirements of 40 CFR Part 60 Subpart IIII.

40 CFR Part 60 Subpart IIII Requirements for New Emergency IC Engines Powering Generators (2007 and Later Model Year)	**Proposed Method of Compliance with 40 CFR Part 60 Subpart IIII Requirements**
Engines must meet the appropriate Subpart IIII emission standards for new engines, based on the model year, size, and number of liters per cylinder.	The applicant has proposed the use of an engine that is certified to the latest EPA Tier Certification level for the applicable horsepower range, guaranteeing compliance with the emission standards of Subpart IIII.
As of October 1, 2010, engines must be fired on 15 ppm sulfur content fuel or less, and fuel with a minimum centane index of 40 or a maximum aromatic content of 35 percent by volume.	The applicant has proposed the use of CARB certified diesel fuel, which meets all of the fuel requirements listed in Subpart IIII. A permit condition enforcing the use of CARB certified diesel fuel was included earlier in this evaluation.

The operator/owner of an emergency stationary CI internal combustion engine that does not meet the standards applicable to non-emergency engines must install a non-resettable hour meter prior to startup of the engine.	The proposed engine meets the standards applicable to non-emergency engines per paragraph 60.4201(a). Therefore, a non-resettable hour meter is not required by this subpart for the proposed engine.
Emergency engines may be operated for the purpose of maintenance and testing up to 100 hours per year. There is no limit on emergency use.	The following condition will be included on the ATC and PTO to ensure compliance with this requirement. • *{3816} This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. For testing purposes, the engine shall only be operated the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems", 1998 edition. Total hours of operation for all maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]*
The owner/operator must operate and maintain the engine and any installed control devices according to the manufacturers written instructions.	The following condition will be included on the permit to ensure compliance with this requirement: • *This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]*

As demonstrated in the preceding table, the proposed engine will meet the requirements of 40 CFR Part 60 Subpart IIII. Therefore, compliance with this rule is expected and no further discussion is required.

Rule 4002 National Emission Standards for Hazardous Air Pollutants

40 CFR Part 63 Subpart ZZZZ – National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Emissions (RICE)

Emergency engines are subject to this subpart if they are operated at a major or area source of Hazardous Air Pollutant (HAP) emissions. 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 HAPs is a facility is not a major source of HAPs.

The proposed engine is a new stationary RICE located at a source of HAP emissions. A HAP source evaluation was not performed for this facility for this project; therefore, it is not known whether the facility is a major or an area source of HAP emissions. Since the proposed engine will be located at a source of HAP emissions, the engine is subject to this subpart.

Pursuant to paragraphs (c)(1) and (c)(6) of §63.6590 of Subpart ZZZZ, the following engines can comply with the requirements of this subpart by complying with 40 CFR Part 60 Subpart IIII:

1. New emergency engines located at area sources of HAPs; and
2. Emergency engines rated less than or equal to 500 bhp and located at major sources of HAPs.

Since the proposed engine is rated at less than 500 bhp, the requirements of Subpart ZZZZ can be met for this engine by complying with Subpart IIII whether the engine is located at a major or an area source of HAP emissions.

As shown previously, compliance with 40 CFR Part 60 Subpart IIII is expected for the proposed engine. Therefore, compliance with the requirements of 40 CFR Part 63 Subpart ZZZZ is expected. No further discussion is required.

Rule 4101 Visible Emissions

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

Rule 4102 Nuisance

Rule 4102 states that no air contaminant shall be released into the atmosphere which causes a public nuisance. Public nuisance conditions are not expected as a result of these operations, provided the equipment is well maintained. Therefore, the following condition will be listed on the ATC 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 (Health Risk Assessment)

District Policy APR 1905 - Risk Management Policy for Permitting New and Modified Sources (dated 3/2/01) 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.

Therefore pursuant to the policy, a risk management review has been performed for this project to analyze the impact of toxic emissions. For projects where the increase in cancer risk is greater than one per million, Toxic Best Available Control Technology (T-BACT) is required.

The HRA results for this project are shown below (see the HRA Summary in Appendix C):

HRA Results

Unit	Acute Hazard Index	Chronic Hazard Index	Cancer Risk	T-BACT Required?
N-355-99-0	N/A	N/A	0.17 in a million	No

As demonstrated previously, T-BACT is not required for this project because the HRA indicates that the risk is not above the District's thresholds for triggering T-BACT requirements; therefore, compliance with the District's Risk Management Policy is expected.

District policy APR 1905 also specifies that the increase in emissions associated with a proposed new source or modification not have acute or chronic indices, or a cancer risk greater than the District's significance levels (i.e. acute and/or chronic indices greater than 1 and a cancer risk greater than 10 in a million). As outlined by the HRA Summary in Appendix C of this report, the emissions increases for this project was determined to be less than significant.

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

- *{edited 1898} 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]*

- *{edited 3486} Emissions from this IC engine shall not exceed 0.09 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 13 CCR 2423 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]*

- *{3816} This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. For*

testing purposes, the engine shall only be operated the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems", 1998 edition. Total hours of operation for all maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

Rule 4201 Particulate Matter Concentration

Particulate matter emissions from the engine will be less than or equal to the rule limit of 0.1 grain per cubic foot of gas at dry standard conditions as shown by the following:

$$0.09 \quad \frac{g-PM_{10}}{bhp-hr} \times \frac{1g-PM}{0.96g-PM_{10}} \times \frac{1\,bhp-hr}{2{,}542.5\,Btu} \times \frac{10^6\,Btu}{9{,}051\,dscf} \times \frac{0.35\,Btu_{out}}{1\,Btu_{in}} \times \frac{15.43\,grain}{g} = \quad 0.022 \quad \frac{grain-PM}{dscf}$$

Since 0.022 grain-PM/dscf is ≤ to 0.1 grain per dscf, compliance with Rule 4201 is expected.

Therefore, the following condition will be listed on the ATC to ensure compliance:

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

Rule 4701 Internal Combustion Engines – Phase 1

Pursuant to Section 7.5.2.3 of District Rule 4702, as of June 1, 2006 District Rule 4701 is no longer applicable to diesel-fired emergency standby or emergency IC engines. Therefore, this diesel-fired emergency IC engine will comply with the requirements of District Rule 4702 and no further discussion is required.

Rule 4702 Internal Combustion Engines – Phase 2

The purpose of this rule is to limit the emissions of nitrogen oxides (NO_X), carbon monoxide (CO), and volatile organic compounds (VOC) from internal combustion engines.

This rule applies to any internal combustion engine rated at 25 brake horsepower or greater.

Pursuant to Section 4.3, except for the requirements of Section 6.2.3, the requirements of this rule shall not apply to an internal combustion engine that meets the following conditions:

1) The engine is operated exclusively to preserve or protect property, human life, or public health during a disaster or state of emergency, such as a fire or flood, and

2) Except for operations associated with Section 4.3.1.1, the engine is limited to operate no more than 100 hours per calendar year as determined by an operational nonresettable elapsed operating time meter, for periodic maintenance, periodic readiness testing, and readiness testing during and after repair work of the engine, and
3) The engine is operated with a nonresettable elapsed operating time meter. In lieu of installing a nonresettable time meter, the owner of an engine may use an alternative device, method, or technique, in determining operating time provided that the alternative is approved by the APCO. The owner of the engine shall properly maintain and operate the time meter or alternative device in accordance with the manufacturer's instructions.

Since the proposed engine meets each of the three criteria listed above, the emergency IC engine proposed with this project will only have to meet the requirements of Section 6.2.3 of this Rule.

Section 6.2.3 requires that an owner claiming an exemption under Section 4.2 or Section 4.3 shall maintain annual operating records. This information shall be retained for at least five years, shall be readily available, and submitted to the APCO upon request and at the end of each calendar year in a manner and form approved by the APCO. Therefore, the following conditions will be listed on the ATC to ensure compliance:

- *{3816} This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. For testing purposes, the engine shall only be operated the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems", 1998 edition. Total hours of operation for all maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]*

- *{3489} The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, and the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.). For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702 and 17 CCR 93115]*

- *{3475} 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 Rule 4702 and 17 CCR 93115]*

In addition, the following conditions will be listed on the ATC to ensure compliance:

- *{3404} This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702]*

- *{3807} An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702]*

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) = $\frac{10.73 \text{ psi} \cdot \text{ft}^3}{\text{lb} \cdot \text{mol} \cdot {}^\circ\text{R}}$

$$\frac{0.000015\ lb-S}{lb-fuel} \times \frac{7.1\ \text{lb}}{\text{gal}} \times \frac{64\ \text{lb}-SO_2}{32\ \text{lb}-\text{S}} \times \frac{1\ \text{MMBtu}}{9{,}051\ \text{scf}} \times \frac{1\ \text{gal}}{0.137\ \text{MMBtu}} \times \frac{\text{lb}-\text{mol}}{64\ \text{lb}-SO_2} \times \frac{10.73\ \text{psi}-\text{ft}^3}{\text{lb}-\text{mol}-{}^\circ\text{R}} \times \frac{520{}^\circ\text{R}}{14.7\ \text{psi}} \times 1{,}000{,}000 = 1.0\ \text{ppmv}$$

Since 1.0 ppmv is ≤ 2,000 ppmv, this engine is expected to comply with Rule 4801. Therefore, the following condition (previously proposed in this engineering evaluation) will be listed on the ATC to ensure compliance:

- *{3395} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]*

California Health & Safety Code 42301.6 (School Notice)

The District has verified that this proposed engine location is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, pursuant to California Health and Safety Code 42301.6, a school notice is not required.

Title 13 California Code of Regulations (CCR), Section 2423 – Exhaust Emission Standards and Test Procedures, Off-Road Compression-Ignition Engines and Equipment (Required by Title 17 CCR, Section 93115 for New Emergency Diesel IC Engines)

Particulate Matter and VOC + NO_X, and CO Exhaust Emissions Standards:

This regulation stipulates that off-road compression-ignition engines shall not exceed the following applicable emissions standards.

Title 13 CCR, Section 2423 lists a diesel particulate emission standard of 0.22 g/bhp-hr (with 1.341 bhp/kW, equivalent to 0.30 g/kW-hr) for 2003 - 2006 model year engines with maximum power ratings of 100.6 - 174.2 bhp (equivalent to 75 - 130 kW). The PM standards given in Title 13 CCR, Section 2423 are less stringent than the PM standards given in Title 17 CCR, Section 93115 (ATCM), thus the ATCM standards are the required standards and will be discussed in the following section.

Title 17 CCR, Section 93115, (e)(2)(A)(3)(b) stipulates that new stationary emergency diesel-fueled CI engines (> 50 bhp) must meet the VOC + NO_X, and CO standards for off-road engines of the same model year and maximum rated power as specified in the Off-Road Compression-Ignition Engine Standards (Title 13 CCR, Section 2423) or the Tier 1 standards for an off-road engine if no standards have been established for an off-road engine of the same model year and maximum rated power.

In addition, Title 17 CCR, Section 93115, (e)(2)(A)(4)(a)(II) allows new direct-drive emergency fire pump engines to meet the Off-Road Compression Ignition Engine Standards for off-road engines with the same maximum rated power (title 13 CCR, section 2423) three years after the date the standards are applicable for off-road engines with the same maximum rated power.

The engine involved with this project is a certified 2011 model engine. The following table compares the requirements of Title 13 CCR, Section 2423 to the emissions factors for the 144 bhp Clarke model #JU4H-UFADW8 diesel-fired emergency IC engine as given by the manufacturer.

Requirements of Title 13 CCR, Section 2423							
Source	Maximum Rated Power	Model Year	NO_X	VOC	NO_X + VOC	CO	PM
Title 13 CCR, §2423	100.6 – 174.2 bhp (75 - 130 kW)	2000-2002 (Tier 1)	6.9 g/bhp-hr (9.2 g/kW-hr)	--	--	--	--
Title 13 CCR, §2423	100.6 – 174.2 bhp (75 - 130 kW)	2003-2006 (Tier 2)	--	--	4.9 g/bhp-hr (6.6 g/kW-hr)	3.7 g/bhp-hr (5.0 g/kW-hr)	0.22 g/bhp-hr (0.30 g/kW-hr)
Title 13 CCR, §2423	100.6 – 174.2 bhp (75 - 130 kW)	2007 and later (Tier 3)	--	--	3.0 g/bhp-hr (4.0 g/kW-hr)	3.7 g/bhp-hr (5.0 g/kW-hr)	0.22 g/bhp-hr (0.30 g/kW-hr)
Clarke, Model # JU4H-UFADW8	144 bhp	2011	2.8 g/bhp-hr (3.7 g/kW-hr)	0.1 g/bhp-hr (0.1 g/kW-hr)	2.8 g/bhp-hr (3.8 g/kW-hr)	1.0 g/bhp-hr (1.3 g/kW-hr)	0.09 g/bhp-hr (0.12 g/kW-hr)
Meets Standard?			Yes	Yes	Yes	Yes	Yes

As presented in the table above, the proposed engine will satisfy the requirements of this section and compliance is expected.

The engine manufacturer's data for this engine lists a NO_X emissions factor of 2.8 g/bhp-hr, a VOC emissions factor of 0.1 g/bhp-hr, a NO_X + VOC emission factor of 2.8 g/bhp-hr, a CO emission factor of 1.0 g/bhp-hr, and a PM_{10} emissions factor of 0.09 g/bhp-hr, all of which satisfy the requirements of 13 CCR, Section 2423. Therefore, the following conditions (previously proposed in this engineering evaluation) will be listed on the ATC to ensure compliance:

- *{edited 3485} Emissions from this IC engine shall not exceed any of the following limits: 2.8 g-NOx/bhp-hr, 1.0 g-CO/bhp-hr, or 0.1 g-VOC/bhp-hr. [District Rule 2201 and 13 CCR 2423 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]*

- *{edited 3486} Emissions from this IC engine shall not exceed 0.09 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 13 CCR 2423 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]*

Right of the District to Establish More Stringent Standards:

This regulation also stipulates that the District:

1. May establish more stringent diesel PM, NO_X + VOC, VOC, NO_X, and CO emission rate standards; and
2. May establish more stringent limits on hours of maintenance and testing on a site-specific basis; and
3. Shall determine an appropriate limit on the number of hours of operation for demonstrating compliance with other District rules and initial start-up testing

The District has not established more stringent standards at this time. Therefore, the standards previously established in this Section will be utilized.

Title 17 California Code of Regulations (CCR), Section 93115 - Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition (CI) Engines

Emergency Operating Requirements:

This regulation stipulates that no owner or operator shall operate any new or in-use stationary diesel-fueled compression ignition (CI) emergency standby engine, in response to the notification of an impending rotating outage, unless specific criteria are met.

This section applies to emergency standby IC engines that are permitted to operate during non-emergency conditions for the purpose of providing electrical power. However, District Rule 4702 states that emergency standby IC engines may only be operated during non-emergency conditions for the purposes of maintenance and testing. Therefore, this section does not apply and no further discussion is required.

Fuel and Fuel Additive Requirements:

This regulation also stipulates that as of January 1, 2006 an owner or operator of a new or in-use stationary diesel-fueled CI emergency standby engine shall fuel the engine with CARB Diesel Fuel.

Since the engine involved with this project is a new or in-use stationary diesel-fueled CI emergency standby engine, these fuel requirements are applicable. Therefore, the following condition (previously proposed in this engineering evaluation) will be included on the ATC to ensure compliance:

- *{3395} Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]*

At-School and Near-School Provisions:

This regulation stipulates that no owner or operator shall operate a new stationary emergency diesel-fueled CI engine, with a PM_{10} emissions factor > than 0.01 g/bhp-hr, for non-emergency use, including maintenance and testing, during the following periods:

1. Whenever there is a school sponsored activity, if the engine is located on school grounds, and
2. Between 7:30 a.m. and 3:30 p.m. on days when school is in session, if the engine is located within 500 feet of school grounds.

The District has verified that the engine is not located within 500 feet of a K-12 school. Therefore, conditions prohibiting non-emergency usage of the engine during school hours will not be placed on the permit.

Recordkeeping Requirements:

This regulation stipulates that as of January 1, 2005, each owner or operator of an emergency diesel-fueled CI engine shall keep a monthly log of usage that shall list and document the nature of use for each of the following:

a. Emergency use hours of operation;
b. Maintenance and testing hours of operation;
c. Hours of operation for emission testing;
d. Initial start-up hours; and
e. If applicable, hours of operation to comply with the testing requirements of National Fire Protection Association (NFPA) 25 — "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems," 1998 edition;
f. Hours of operation for all uses other than those specified in sections 'a' through 'd' above; and
g. For in-use emergency diesel-fueled engines, the fuel used. The owner or operator shall document fuel use through the retention of fuel purchase records that account for all fuel used in the engine and all fuel purchased for use in the engine, and, at a minimum, contain the following information for each individual fuel purchase transaction:

    I. Identification of the fuel purchased as either CARB Diesel, or an alternative diesel fuel that meets the requirements of the Verification Procedure, or an alternative fuel, or CARB Diesel fuel used with additives that meet the requirements of the Verification Procedure, or any combination of the above;
    II. Amount of fuel purchased;
    III. Date when the fuel was purchased;
    IV. Signature of owner or operator or representative of owner or operator who received the fuel; and
    V. Signature of fuel provider indicating fuel was delivered.

The proposed new emergency diesel IC engine powering a firewater pump is exempt from the operating hours limitation provided the engine is only operated the amount of hours necessary to satisfy National Fire Protection Association (NFPA) regulations. Therefore, the following conditions (previously proposed in this engineering evaluation) will be listed on the ATC to ensure compliance:

- *{3489} The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, and the purpose of the operation (for example: load testing, weekly*

testing, rolling blackout, general area power outage, etc.). For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702 and 17 CCR 93115]

- *{3475} 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 Rule 4702 and 17 CCR 93115]*

PM Emissions and Hours of Operation Requirements for New Diesel Engines:

This regulation stipulates that as of January 1, 2005, no person shall operate any new stationary emergency diesel-fueled CI engine that has a rated brake horsepower greater than 50, unless it meets all of the following applicable emission standards and operating requirements.

1. Emits diesel PM at a rate greater than 0.01 g/bhp-hr or less than or equal to 0.15 g/bhp-hr; or
2. Meets the current model year diesel PM standard specified in the Off-Road Compression Ignition Engine Standards for off-road engines with the same maximum rated power (Title 13 CCR, Section 2423), whichever is more stringent; and
3. Does not operate more than 50 hours per year for maintenance and testing purposes. Engine operation is not limited during emergency use and during emissions source testing to show compliance with the ATCM.

The proposed emergency diesel IC engine powering a firewater pump is exempt from the PM emissions rate limitation because the engine is rated at 49.6 to 174.2 bhp (as discussed previously in the Title 13 CCR, Section 2423 compliance section) and is also exempt from the operating hours limitation provided the engine is only operated the amount of hours necessary to satisfy National Fire Protection Association (NFPA) regulations. Therefore, the following conditions (previously proposed in this engineering evaluation) will be listed on the ATC to ensure compliance:

- *{edited 3486} Emissions from this IC engine shall not exceed 0.09 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 13 CCR 2423 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]*

- *{3816} This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. For testing purposes, the engine shall only be operated the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems", 1998 edition. Total hours of operation*

for all maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII]

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.

Consistent with California Environmental Quality Act (CEQA) and CEQA Guidelines requirements, the San Joaquin Valley Air Pollution Control District (District) has adopted procedures and guidelines for implementing CEQA. The District's Environmental Review Guidelines (ERG) establishes procedures for avoiding unnecessary delay during the District's permitting process while ensuring that significant environmental impacts are thoroughly and consistently addressed. The ERG includes policies and procedures to be followed when processing permits for projects that are exempt under CEQA.

The State Legislature granted a number of exemptions from CEQA, including projects that require only ministerial approval. Based upon analysis of its own laws and consideration of CEQA provisions, the District has identified a limited number of District permitting activities considered to be ministerial approvals. As set forth in §4.2.1 of the ERG, projects permitted consistent with the District's *Guidelines for Expedited Application Review* (GEAR) are standard application reviews in which little or no discretion is used in issuing Authority to Construct (ATC) documents.

For the proposed project, the District performed an Engineering Evaluation (this document) and determined that the project qualifies for processing under the procedures set forth in the District's Permit Services Procedures Manual in the Guidelines for Expedited Application Review (GEAR). Thus, as discussed above, this

issuance of such ATC(s) is a ministerial approval for the District and is not subject to CEQA provisions.

IX. Recommendation

Pending a successful EPA 45-day COC comment period, issue Authority to Construct N-355-99-0 subject to the permit conditions on the attached draft Authority to Construct in Appendix A.

X. Billing Information

Billing Schedule			
Permit Number	Fee Schedule	Fee Description	Fee Amount
N-355-99-0	3020-10-B	144 bhp IC engine	$117.00

Appendixes

A. Draft ATC
B. BACT Guideline and BACT Analysis
C. HRA Summary
D. Current PTO (N-355-91-0)
E. SSPE1 Calculations
F. Title V Form 009 – Compliance Certification Form
G. Greenhouse Gas Evaluation

Attachments

I: QNEC Calculations

APPENDIX A

DRAFT ATC

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-355-99-0 **ISSUANCE DATE:** DRAFT

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 95240

EQUIPMENT DESCRIPTION:
144 BHP (INTERMITTENT) CLARKE MODEL JU4H-UFADW8 TIER 3 CERTIFIED DIESEL-FIRED EMERGENCY IC ENGINE POWERING A FIREWATER PUMP

CONDITIONS

1. Permit to Operate (PTO) N-355-91-3 shall be cancelled prior to, or concurrently with the implementation of this Authority to Construct. [District Rule 2201]
2. {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
3. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
4. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
5. 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] Federally Enforceable Through Title V Permit
6. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] 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

DRAFT

DAVID WARNER, Director of Permit Services

N-355-99-0 : Jan 5 2012 8:58AM – GILLESR : Joint Inspection NOT Required

7. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702] Federally Enforceable Through Title V Permit

8. 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]

9. Emissions from this IC engine shall not exceed any of the following limits: 2.8 g-NOx/bhp-hr, 1.0 g-CO/bhp-hr, or 0.1 g-VOC/bhp-hr. [District Rule 2201 and 13 CCR 2423 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit

10. Emissions from this IC engine shall not exceed 0.09 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102 and 13 CCR 2423 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit

11. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit

12. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. For testing purposes, the engine shall only be operated the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems", 1998 edition. Total hours of operation for all maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702 and 17 CCR 93115 and 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit

13. An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702] Federally Enforceable Through Title V Permit

14. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, and the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.). For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

15. 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 Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

APPENDIX B

BACT GUIDELINE AND BACT ANALYSIS

Top Down BACT Analysis for the proposed Emergency IC Engine

N-355-99-0

Oxides of nitrogen (NO_X) are generated from the high temperature combustion of the diesel fuel. A majority of the NO_X emissions are formed from the high temperature reaction of nitrogen and oxygen in the inlet air. The rest of the NO_X emissions are formed from the reaction of fuel-bound nitrogen with oxygen in the inlet air.

1. BACT Analysis for NO_X Emissions:

a. Step 1 - Identify all control technologies

The SJVUAPCD BACT Clearinghouse guideline 3.1.4, 2nd quarter 2001, identifies achieved in practice BACT for NO_X emissions from emergency diesel IC engines powering a firewater pump as follows:

1) Certified emissions of 6.9 g-NO_X/bhp-hr or less

No technologically feasible alternatives or control alternatives identified as alternate basic equipment for this class and category of source are listed.

b. Step 2 - Eliminate technologically infeasible options

There are no technologically infeasible options to eliminate from step 1.

c. Step 3 - Rank remaining options by control effectiveness

No ranking needs to be done because the applicant has proposed the achieved in practice option.

d. Step 4 - Cost Effectiveness Analysis

The applicant has proposed the only control achieved in practice in the ranking list from Step 3. Therefore, per SJVUAPCD BACT policy, the cost effectiveness analysis is not required.

e. Step 5 - Select BACT

BACT for NO_X emissions from this emergency diesel IC engine powering a firewater pump is having certified emissions of 6.9 g-NO_X/bhp-hr or less. The applicant has proposed to install a 144 bhp emergency diesel-fired IC engine powering a firewater pump with certified emissions of 6.9 g-NO_X/bhp-hr or less; therefore BACT for NO_X emissions is satisfied.

2. BACT Analysis for CO Emissions:

Carbon monoxide (CO) emissions are generated from the incomplete oxidation of carbon.

a. Step 1 - Identify all control technologies

The SJVUAPCD BACT Clearinghouse guideline 3.1.4, 2nd quarter 2001, identifies no control technology as achieved in practice BACT for CO emissions from emergency diesel IC engines powering a firewater pump.

In addition, the SJVUAPCD BACT Clearinghouse guideline 3.1.4, 2nd quarter 2001, identifies technologically feasible BACT for CO emissions from emergency diesel IC engines powering a firewater pump as follows:

1) An oxidation catalyst

No control alternatives identified as alternate basic equipment for this class and category of source are listed.

b. Step 2 - Eliminate technologically infeasible options

The use of an oxidation catalyst is not considered practical for this type of operation since the engine will be operated for only short periods of time. Since the engine will only operate for a short period of time, it is not expected that the catalyst will reach the optimum operating temperature before the engine is shut down. This would mean that the catalyst would not reach the destruction efficiency hat would be expected if the engine were subject to continuous operation. Since the catalyst is not expected to operate at its destruction temperature during normal operation of this emergency IC engine, an oxidation catalyst is not practical for this situation and will not be considered.

c. Step 3 - Rank remaining options by control effectiveness

There are no remaining control options.

d. Step 4 - Cost Effectiveness Analysis

A cost effective analysis is not necessary and will not be performed since there are no control technologies remaining.

e. Step 5 - Select BACT

There is no control technology that is cost effective for BACT for CO emissions from this emergency diesel IC engine powering a firewater pump. The applicant has proposed to install a 144 bhp emergency diesel IC engine powering a firewater pump with no control technology for CO emissions; therefore BACT for CO emissions is satisfied.

APPENDIX C
HRA SUMMARY

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	Robert Gilles, AQE - Permit Services
From:	John Gallup, AQS - Technical Services
Date:	12/28/2011
Facility Name:	General Mills Operations, Inc.
Location:	Lodi, CA 95242
Application #(s):	N-355-99-0
Project #:	N-1113785

A. RMR SUMMARY

RMR Summary			
Categories	**Diesel-Fired IC Engine (Unit 99-0)**	**Project Totals**	**Facility Totals**
Prioritization Score	N/A[1]	N/A[1]	N/A[1]
Acute Hazard Index	N/A[2]	N/A[2]	N/A[2]
Chronic Hazard Index	N/A[2]	N/A[2]	N/A[2]
Maximum Individual Cancer Risk (10^{-6})	0.17	0.17	0.17
T-BACT Required?	**No**		
Special Permit Conditions?	**Yes**		

1 Prioritization for this unit was not conducted since it has been determined that all diesel-fired IC engines will result in a prioritization score greater than 1.0.

2 Acute and Chronic Hazard Indices were not calculated since there is no risk factor, or the risk factor is so low that the risk has been determined to be insignificant for this type of unit.

Proposed Permit Conditions

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

Unit # 99-0

1. The PM10 emissions rate shall not exceed 0.09 g/bhp-hr based on US EPA certification using ISO 8178 test procedure. [District Rules 2201]
2. 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]
3. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702 and 17 CCR 93115]

B. RMR REPORT

I. Project Description

Technical Services received a request on December 7, 2011 to perform a Risk Management Review for a proposed installation of a 144 bhp diesel-fired emergency IC engine powering a firewater pump.

II. Analysis

Technical Services performed a screening level health risk assessment using the District developed DICE database.

The following parameters were used for the review:

Analysis Parameters Unit 1-0			
Source Type	Point	**Location Type**	Urban
BHP	144	**PM_{10} g/hp-hr**	0.09
Closest Receptor (m)	152.4	**Quad**	3
Max Hours per Year	100	**Type of Receptor**	Residential

III. Conclusion

The cancer risk associated with the operation of the proposed diesel IC engine is less than 1.0 in a million. In accordance with the District's Risk Management Policy, the project is approved without Toxic Best Available Control Technology (T-BACT) for PM10.

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 this proposed unit .

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. Facility Summary

APPENDIX D

CURRENT PTO

San Joaquin Valley
Air Pollution Control District

PERMIT UNIT: N-355-91-3 **EXPIRATION DATE:** 04/30/2016

EQUIPMENT DESCRIPTION:
170 HP DETROIT DIESEL, DIESEL-FIRED EMERGENCY I.C. ENGINE POWERING A STAND-BY FIRE PUMP

PERMIT UNIT REQUIREMENTS

1. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Rule 404 (Madera), 406 (Fresno) and 407 (6 remaining counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
2. 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, 5.1] Federally Enforceable Through Title V Permit
3. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201, 3.1] Federally Enforceable Through Title V Permit
4. Unit shall be fired only on diesel fuel with a sulfur content of less than 0.05% by weight. [Rule 404 (Madera), 406 (Fresno) and 407 (6 remaining counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
5. The engine shall run for a maximum of 40 minutes per day, one time per week for testing and maintenance purposes, and during periods when the electric fire pump system cannot maintain the fire system. [District NSR Rule] Federally Enforceable Through Title V Permit
6. Compliance with permit conditions in the Title V permit shall be deemed compliance with the following applicable requirements of SJVUAPCD Rule 4201; Rule 404 (Madera), 406 (Fresno), and 407 (Kings, Merced, San Joaquin, Tulare, Kern, and Stanislaus). A permit shield is granted from these requirements. [District Rule 2520, 13.2] Federally Enforceable Through Title V Permit
7. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rule 4702, 17 CCR 93115, and 40 CFR 60 Subpart IIII]
8. Only CARB certified diesel fuel containing not more than 0.0015% sulfur by weight is to be used. [District Rules 2201 and 4801, 17 CCR 93115, 40 CFR Part 60 Subpart IIII] Federally Enforceable Through Title V Permit
9. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rule 4702 and 40 CFR 60 Subpart IIII] Federally Enforceable Through Title V Permit
10. During periods of operation for maintenance, testing, and required regulatory purposes, the permittee shall monitor the operational characteristics of the engine as recommended by the manufacturer or emission control system supplier (for example: check engine fluid levels, battery, cables and connections; change engine oil and filters; replace engine coolant; and/or other operational characteristics as recommended by the manufacturer or supplier). [District Rule 4702] Federally Enforceable Through Title V Permit
11. An emergency situation is an unscheduled electrical power outage caused by sudden and reasonably unforeseen natural disasters or sudden and reasonably unforeseen events beyond the control of the permittee. [District Rule 4702] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

12. This engine shall not be used to produce power for the electrical distribution system, as part of a voluntary utility demand reduction program, or for an interruptible power contract. [District Rule 4702] Federally Enforceable Through Title V Permit

13. This engine shall be operated only for testing and maintenance of the engine, required regulatory purposes, and during emergency situations. For testing purposes, the engine shall only be operated the number of hours necessary to comply with the testing requirements of the National Fire Protection Association (NFPA) 25 - "Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems", 1998 edition. Total hours of operation for all maintenance, testing, and required regulatory purposes shall not exceed 100 hours per calendar year. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

14. The permittee shall maintain monthly records of emergency and non-emergency operation. Records shall include the number of hours of emergency operation, the date and number of hours of all testing and maintenance operations, the purpose of the operation (for example: load testing, weekly testing, rolling blackout, general area power outage, etc.) and records of operational characteristics monitoring. For units with automated testing systems, the operator may, as an alternative to keeping records of actual operation for testing purposes, maintain a readily accessible written record of the automated testing schedule. [District Rule 4702] Federally Enforceable Through Title V Permit

15. The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

16. 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 Rule 4702 and 17 CCR 93115] Federally Enforceable Through Title V Permit

APPENDIX E

SSPE1 CALCULATIONS

The following table represents the SSPE2 values from Project N-1113039, except, since ATC N-355-21-7 has not yet been implemented, the PE values for PTO N-355-21-6 and N-355-22-3 were retained and contribute to the SSPE1 calculation for this project.

SSPE1(lb/year)					
Permit Number	NOx	SOx	PM_{10}	CO	VOC
N-355-1-10	0	0	9,746	0	0
N-355-2-10	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	52,947	1,179	2,730	184,487	869
N-355-22-3	17,940	399	925	62,511	294
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
SSPE1 W/O ERC	**86,354**	**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
SSPE1 W/ERC	**86,354**	**10,255**	**48,862**	**293,425**	**6,348**

APPENDIX F

TVFORM-009 COMPLIANCE CERTIFICATION FORM

San Joaquin Valley
Unified Air Pollution Control District

TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM

I. TYPE OF PERMIT ACTION (Check appropriate box)

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

COMPANY NAME: General Mills Operations, Inc.	FACILITY ID: N - 355
1. Type of Organization: [X] Corporation [ ] Sole Ownership [ ] Government [ ] Partnership [ ] Utility	
2. Owner's Name: General Mills Operations, Inc.	
3. Agent to the Owner:	

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

Based on information and belief formed after reasonable inquiry, the equipment identified in this application will continue to comply with the applicable federal requirement(s).

Based on information and belief formed after reasonable inquiry, the equipment identified in this application will comply with applicable federal requirement(s) that will become effective during the permit term, on a timely basis.

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

Based on information and belief formed after reasonable inquiry, information and statements in the submitted application package, including all accompanying reports, and required certifications are true accurate and complete.

I declare, under penalty of perjury under the laws of the state of California, that the forgoing is correct and true:

Signature of Responsible Official — Date: December 5, 2011

Jason Schierling
Name of Responsible Official (please print)

Plant Manager
Title of Responsible Official (please print)

APPENDIX G

GREENHOUSE GAS (GHG) EVALUATION

Greenhouse Gas (GHG) Evaluation

N-355-99-0

Emission Factors – CA low sulfur diesel fuel

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

- CO_2 73.1 kg/MMBtu (HHV) diesel fuel (161.2 lb/MMBtu)
- CH_4 0.003 kg/MMBtu (HHV) diesel fuel (0.0066 lb/MMBtu)
- N_2O 0.0006 kg/MMBtu (HHV) diesel fuel (0.0013 lb/MMBtu)

GWP for CH_4 = 23 lb-CO_2e per lb-CH4
GWP for N_2O = 296 lb-CO_2e per lb-N2O

Calculations:

Total Maximum Heat Input Increase for this project

Diesel Fuel Combustion	= 10 gallons/hr
Max. Annual Operation	= 100 hours/year
Total Annual Fuel Usage	= (10 gal/hr) x (100 hrs/year)
	= 1,000 gallons/year
Convert to MMBtu/yr	= (1,000 gal/yr) x (137,000 Btu/gal) x (MMBtu/10^6Btu)
	= 137 MMBtu/yr

CO_2 Emissions = (137 MMBtu/year) x (161.2 lb/MMBtu) × (1 ton/2,000 lb)

= *11 ton-CO_2e/year*

CH_4 Emission = (1,000 MMBtu/year) x (0.0066 lb/MMBtu) × (23 lb-CO_2e/lb-CH_4) x (1 ton/2,000 lb)

= *0.076 ton-CO_2e/year*

N_2O Emissions = (1,000 MMBtu/year) x (0.0013 lb/MMBtu) × (296 lb-CO_2e/lb-CH_4) x (1 ton/2,000 lb)

= *0.19 ton-CO_2e/year*

Total Annual GHG Emissions = (11 + 0.076 + 0.19)ton-CO_2e/year
= **11.3 short ton-CO_2e/year**

Metric Conversion:

Annual Emissions = (11.3 short ton-CO_2e/year) x 0.9072 metric tons/short ton
= **10 metric tons-CO_2e/year**

Conclusion:

Per District Policy, project specific greenhouse gas emissions less than or equal to 230 metric tons-CO2e/year are considered to be zero for District permitting purposes and are exempt from further environmental review.

As shown above, the project specific greenhouse gas emissions are less than 230 metric tons-CO_2e/year. The emissions are therefore considered to be zero and no further discussion is required.