San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

OCT 27 2011

Mr. Chris Miller
Pilkington North America, Inc.
500 E. Louise Ave.
Lathrop, CA 95330

Re: Proposed ATC / Certificate of Conformity (Significant Mod)
District Facility # N-0477
Project # N-1113227

Dear Mr. Miller:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. The applicant is requesting that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. This project is for the installation of two (2) identical 1,214 bhp diesel-fired emergency standby internal combustion (IC) engines powering two (2) electrical generators.

After addressing any comments made during the 45-day EPA comment period and the 30-day public comment period, the Authorities to Construct will be issued to the facility with Certificates of Conformity. Prior to operating with modifications authorized by the Authorities 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: RPG/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)
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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www.valleyair.org www.healthyairliving.com

San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

HEALTHY AIR LIVING™

OCT 27 2011

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-0477
Project # N-1113227

Dear Mr. Tollstrup:

Enclosed for your review is the District's analysis of an application for Authorities to Construct for the facility identified above. The applicant is requesting that Certificates of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. This project is for the installation of two (2) identical 1,214 bhp diesel-fired emergency standby internal combustion (IC) engines powering two (2) electrical generators.

Enclosed is the engineering evaluation of this application with a copy of the current Title V permit and proposed Authorities to Construct # N-0477-58-0 and N-0477-59-0 with Certificates of Conformity. After demonstrating compliance with the Authorities 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

DW: RPG/st

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San Joaquin Valley
AIR POLLUTION CONTROL DISTRICT

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OCT 27 2011

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-0477
Project # N-1113227

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authorities to Construct for Pilkington North America, Inc. 500 E. Louise Ave Lathrop, which has been issued a Title V permit. Pilkington North America, Inc. is requesting that Certificates of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. This project is for the installation of two (2) identical 1,214 bhp diesel-fired emergency standby internal combustion (IC) engines powering two (2) electrical generators.

Enclosed is the engineering evaluation of this application with a copy of the current Title V permit and proposed Authorities to Construct # N-0477-58-0 and N-0477-59-0 with Certificates 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

DW: RPG/st

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Stockton Record

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 Pilkington North America, Inc., for its Float Glass Manufacturing Plant 500 E. Louise Ave, California. This project is for the installation of two (2) identical 1,214 bhp diesel-fired emergency standby internal combustion (IC) engines powering two (2) electrical generators.

The District's analysis of the legal and factual basis for this proposed action, project #N-1113227, 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.

San Joaquin Valley Air Pollution Control District

Authority to Construct Application Review

Diesel-fired emergency standby IC engines (2) powering electrical generators

Facility Name:	Pilkington North America, Inc.	Date:	October 24, 2011
Mailing Address:	500 E. Louise Ave. Lathrop, CA 95330	Engineer:	Robert Gilles
		Lead Engineer:	Nick Peirce
Contact Person:	Xiaosong Wang		
Telephone:	(209) 858-6311		
Fax:	(209) 858-2024		
E-Mail:	xiaosong.wang@nsg.com		
Application #s:	N-477-58-0, '-59-0		
Project #:	N-1113227		
Deemed Complete:	August 29, 2011		

I. Proposal

Pilkington North America, Inc. has requested two Authority to Construct (ATC) permits for the installation of two 1,214 bhp emergency stand-by internal combustion (IC) engines powering electrical generators. The draft ATCs are included in Appendix A.

Pilkington North America, Inc. received their Title V Permit on July 15, 1998. This modification can be classified as a Title V Significant Permit Modification pursuant to Rule 2520, Section 3.29, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. Pilkington North America, Inc. must apply to administratively amend their Title V Permit to include the requirements of the ATC issued with this project.

Additionally, this project triggers Public Notice requirements pursuant to District Rule 2201; therefore, the project will be published in the local newspaper (Stockton Record) for public review and comment. The public comment period will end 30 days from the date of publication. Both COC and the Public notice periods will be run simultaneously.

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 17 CCR, Section 93115 - Airborne Toxic Control Measure (ATCM) for Stationary Compression-Ignition (CI) Engines
California Environmental Quality Act (CEQA)
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

The facility is located at 500 E. Louise Ave in Lathrop, CA. The equipment is not located within 1,000 feet of the outer boundary of a K-12 school. Therefore, the public notification requirement of California Health and Safety Code 42301.6 is not applicable to this project.

IV. Process Description

These emergency standby engines power electrical generators. Other than emergency standby operation, the engines may be operated up to 50 hours per year for maintenance and testing purposes.

V. Equipment Listing

Both engines that will be installed with this project are identical and will have identical permit equipment descriptions.

N-0477-58-0: 1,214 BHP CATERPILLAR MODEL# C27 DIESEL-FIRED TIER II CERTIFIED EMERGENCY STANDBY IC ENGINE TO POWER AN ELECTRICAL GENERATOR.

N-0477-59-0: 1,214 BHP CATERPILLAR MODEL# C27 DIESEL-FIRED TIER II CERTIFIED EMERGENCY STANDBY IC ENGINE TO POWER AN ELECTRICAL GENERATOR.

VI. Emission Control Technology Evaluation

The applicant has proposed to install two Tier 2 certified diesel-fired IC engines that are fired on very low-sulfur diesel fuel (0.0015% by weight sulfur maximum).

The proposed engines meet the latest Tier Certification requirements; therefore, the engines meet the latest ARB/EPA emissions standards for diesel particulate matter, hydrocarbons, nitrogen oxides, and carbon monoxide.

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:	50 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

For the new diesel-fired IC engines, the emissions factors for NO_X, CO, VOC, and PM_{10} are provided by the applicant and are guaranteed by the engine manufacturer. The SO_X emission factor is calculated using the sulfur content in the diesel fuel (0.0015% sulfur).

Diesel-fired IC Engine Emission Factors
(N-477-58-0 and '-59-0_

	g/bhp-hr	Source
NO_X	5.18	Engine Manufacturer
*SOx	0.0051	Mass Balance Equation Below
PM_{10}	0.02	Engine Manufacturer
CO	0.23	Engine Manufacturer
VOC	0.03	Engine Manufacturer

$$*0.0015\% \times \frac{7.1\,lb \cdot fuel}{gallon} \times \frac{2\,lb \cdot SO_2}{1\,lb \cdot S} \times \frac{1\,gal}{137{,}000\,Btu} \times \frac{1\,hp\,input}{0.35\,hp\,out} \times \frac{2{,}542.5\,Btu}{hp \cdot hr} \times \frac{453.6\,g}{lb} = 0.0051\,\frac{g\,SOx}{hp \cdot hr}$$

C. Calculations

1. Pre-Project Potential to Emit (PE1)

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

2. Post Project Potential to Emit (PE2)

The daily and annual PE values are calculated as follows for each engine:

PE2 Calculation (N-477-58-0 and '-59-0)						
			Hours of Operation			
Pollutant	Emission Factor (g/bhp-hr)	Rating (bhp)	Daily (hrs/day)	Annual (hrs/year)	Daily PE2 (lb/day)	Annual PE2 (lb/year)
NOx	5.18	1,214	24	50	332.6	693
SOx	0.0051	1,214	24	50	0.2	1
PM_{10}	0.02	1,214	24	50	1.2	3
CO	0.23	1,214	24	50	14.9	31
VOC	0.03	1,214	24	50	1.9	4

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 Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

The Pre-Project Stationary Source Potential to Emit (SSPE1) is summarized below. The values were gathered from Project N-1082005.

Pre-Project Stationary Source Potential to Emit [SSPE1] (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
SSPE1	1,591,801	772,982	376,986	232,907	17,530
ERC N-410-2	594	0	0	0	0
ERC N-410-3	0	0	0	2,624	0
SSPE1 (w/ERCs)	1,592,395	772,982	376,986	235,531	17,530

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 Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

For this project the change in emissions for the facility is due to the installation of the two new emergency standby IC engines, permit units N-477-58-0 and N-477-59-0. Thus:

Post Project Stationary Source Potential to Emit [SSPE2] (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
SSPE1 (w/o ERCs)	1,591,801	772,982	376,986	232,907	17,530
N-477-58-0	693	1	3	31	4
N-477-59-0	693	1	3	31	4
ERC N-410-2	594	0	0	0	0
ERC N-410-3	0	0	0	2,624	0
SSPE2 (w/o ERCs)	1,593,187	772,984	376,992	232,969	17,538
SSPE2 (w/ ERCs)	1,593,781	772,984	376,992	235,593	17,538

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 that, 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 (lb/year)					
	NO_X	SO_X	PM_{10}	CO	VOC
SSPE1 (w/o ERCs)	1,591,801	772,982	376,986	232,907	17,530
SSPE2 (w/o ERCs)	1,593,187	772,984	376,992	232,969	17,538
Major Source Threshold	20,000	140,000	140,000	200,000	20,000
Major Source?	Yes	Yes	Yes	Yes	No

As seen in the table above, the pre-project facility is a Major Source for NOx, SOx, PM_{10}, and CO emissions and the post-project facility will remain a Major Source for NOx, SOx, PM_{10}, and CO emissions. The facility was not a Major Source for VOC emissions and will not become a Major Source for VOC emissions as a result of this project.

6. Baseline Emissions (BE)

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

Pursuant to Section 3.7 of District Rule 2201, 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 3.22 of District Rule 2201.

Since these are new emissions units, BE = 0 for all criteria pollutants.

7. SB 288 Major Modification

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

Since this facility is a major source for NOx, SOx, PM_{10}, and CO, the project's PE2 is compared to the SB 288 Major Modification Thresholds in the following table in order to determine if the SB 288 Major Modification calculation is required.

SB 288 Major Modification Thresholds			
Pollutant	Project PE2 (lb/year)	Threshold (lb/year)	SB 288 Major Modification Calculation Required?
NOx	1,386	50,000	No
SO_x	2	80,000	No
PM_{10}	6	30,000	No
VOC	8	50,000	No

Since none of the SB 288 Major Modification Thresholds are surpassed with this project, this project does not constitute a SB288 Major Modification.

8. Federal Major Modification

District Rule 2201, Section 3.17 states that Federal Major Modifications are the same as "Major Modification" as defined in 40 CFR 51.165 and part D of Title I of the CAA.

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

For new emissions units, the increase in emissions is equal to the PE2 for each new unit included in this project.

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

Federal Major Modification Thresholds for Emission Increases			
Pollutant	Total Emissions Increases (lb/yr)	Thresholds (lb/yr)	Federal Major Modification?
NOx	1,386	0	Yes
VOC	8	0	Yes
PM_{10}	6	30,000	No
$PM_{2.5}$	6	20,000	No
SOx	2	80,000	No

Since there is an increase in NO_x and VOC emissions, this project constitutes a Federal Major Modification, and no further analysis is required.

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. Unless exempted pursuant to Section 4.2, BACT shall be required for the following actions:*:

a. Any new emissions unit with a potential to emit exceeding two pounds per day,
b. The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day,
c. Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day, and/or
d. Any new or modified emissions unit, in a stationary source project, which results in an SB288 Major Modification or a Federal Major Modification, as defined by the rule.

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

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

As seen in Section VII.C.2 of this evaluation, the applicant is proposing to install two new diesel-fired IC engines with a PE greater than 2 lb/day for NOx and CO. Additionally, SSPE2 is greater than 200,000 lb/year for CO emissions; therefore, BACT is triggered for both NOx and CO for the two proposed engines.

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

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

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

As discussed in Section I above, there are no modified emissions units associated with this project; therefore BACT is not triggered.

d. SB 288/Federal Major Modification

As discussed in Section VII.C.7 above, this project constitutes a Federal Major Modification; therefore BACT is triggered for NOx and VOC for these purposes.

2. BACT Guideline

BACT Guideline 3.1.1 applies to the diesel-fired emergency IC engines. See Appendix B for BACT guideline 3.1.1.

3. Top-Down BACT Analysis

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

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

NO_X: Latest EPA Tier Certification level for applicable horsepower range;
CO: Latest EPA Tier Certification level for applicable horsepower range
VOC: Latest EPA Tier Certification level for applicable horsepower range

The applicant has proposed to install two Tier 2 certified diesel-fired IC engines that are fired on very low-sulfur diesel fuel (0.0015% by weight sulfur maximum).

The proposed engines meet the latest Tier Certification requirements for the applicable horsepower range; therefore, the engines meet the latest ARB/EPA emissions standards for diesel particulate matter, hydrocarbons, nitrogen oxides, and carbon monoxide.

B. Offsets

1. Offset Applicability

Pursuant to Section 4.5.3, offset requirements shall be triggered on a pollutant by pollutant basis and shall be required if the Post Project Stationary Source Potential to Emit (SSPE2) equals to or exceeds the offset threshold levels in Table 4-1 of Rule 2201.

Pursuant to Section 4.6.2 of District Rule 2201, offsets are not required for emergency IC engines; therefore, offset calculations are not required for these proposed new engines.

C. Public Notification

1. Applicability

Public noticing is required for:

a. New Major Sources, Federal Major Modifications, and SB288 Major Modifications,
b. Any new emissions unit with a Potential to Emit greater than 100 pounds during any one day for any one pollutant,
c. Any project which results in the offset thresholds being surpassed, and/or
d. Any project with an SSIPE of greater than 20,000 lb/year for any pollutant.

a. New Major Sources, Federal Major Modifications, and SB288 Major Modifications

This facility is not a new facility and the project is not a SB288 Major Modification; however, this project is a Federal Major Modification for NOx and VOC. Therefore, public noticing is required for Federal Major Modification purposes.

b. PE > 100 lb/day

The PE2 for this new unit is compared to the daily PE Public Notice thresholds in the following table:

PE > 100 lb/day Public Notice Thresholds			
Pollutant	PE2 (lb/day)	Public Notice Threshold	Public Notice Triggered?
NO_X	332.6	100 lb/day	Yes
SO_X	0.2	100 lb/day	No
PM_{10}	1.2	100 lb/day	No
CO	14.9	100 lb/day	No
VOC	1.9	100 lb/day	No

Since PE2 > 100 lb/day for NOx emissions, public noticing for PE > 100 lb/day purposes is required.

c. Offset Threshold

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

Offset Threshold				
Pollutant	SSPE1 (lb/year)	SSPE2 (lb/year)	Offset Threshold	Public Notice Required?
NO_X	1,592,395	1,593,781	20,000 lb/year	No
SOx	772,982	772,984	54,750 lb/year	No
PM_{10}	376,986	376,992	29,200 lb/year	No
CO	235,531	235,593	200,000 lb/year	No
VOC	17,530	17,538	20,000 lb/year	No

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

d. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a 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:

Stationary Source Increase in Permitted Emissions [SSIPE] – Public Notice					
Pollutant	SSPE2 (lb/year)	SSPE1 (lb/year)	SSIPE (lb/year)	SSIPE Public Notice Threshold	Public Notice Required?
NO_x	1,593,781	1,592,395	1,386	20,000 lb/year	No
SO_x	772,984	772,982	2	20,000 lb/year	No
PM_{10}	376,992	376,986	6	20,000 lb/year	No
CO	235,593	235,531	62	20,000 lb/year	No
VOC	17,538	17,530	8	20,000 lb/year	No

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

2. Public Notice Action

As discussed above, the project is a Federal Major Modification for NOx and VOC, and the project NOx emissions are greater than 100 lb/day; therefore, public notice requirements are triggered. Public notice documents will be submitted to the California Air Resources Board (CARB) and a public notice will be published in a local newspaper of general circulation prior to the issuance of the ATC for this equipment.

In addition, this facility is a Title V facility and has requested that the project ATCs be issued with a COC (as discussed previously in Section I). Therefore, COC notice

documents will be submitted to the United States Environmental Protection Agency (EPA) prior to the issuance of the ATCs for these engines.

D. Daily Emission Limits (DELs)

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

For these IC engines, the DELs are stated in the form of emission factors (g/bhp-hr), the maximum engine horsepower rating, and the maximum operational time of 24 hours per day and 50 hours per year.

Proposed Rule 2201 (DEL) Conditions:

- *Emissions from this IC engine shall not exceed any of the following limits: 5.18 g-NOx/bhp-hr, 0.23 g-CO/bhp-hr, or 0.03 g-VOC/bhp-hr. [District Rule 2201 and 17 CCR 93115]*
- *The PM10 emissions rate shall not exceed 0.02 g/bhp-hr based on US EPA certification using ISO 8178 test procedure. [District Rule 2201 and 17 CCR 93115]*
- *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]*

E. Compliance Assurance

1. Source Testing

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

2. Monitoring

No monitoring is required to demonstrate compliance with Rule 2201.

3. Recordkeeping

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 demonstrate compliance with Rule 2201.

F. Ambient Air Quality Analysis

Section 4.14.1 of this Rule requires that an ambient air quality analysis (AAQA) be conducted for the purpose of determining whether a new or modified Stationary Source will cause or make worse a violation of an air quality standard. The Technical Services Division of the SJVAPCD conducted the required analysis. Refer to Appendix C of this document for the AAQA summary sheet.

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

The proposed location is in a non-attainment area for $PM_{2.5}$ and PM_{10}. The increases in the ambient $PM_{2.5}$ and PM_{10} concentrations due to the proposed equipment are shown on the table titled Calculated Contribution. The levels of significance, from 40 CFR Part 51.165 (b)(2), are shown on the table titled Significance Levels.

Calculated Contribution

Pollutant	Calculated Contributions ($\mu g/m^3$)				
	Annual Avg.	24 hr Avg.	8 hr Avg.	3 hr Avg.	1 hr Avg.
$PM_{2.5}$	0.000285	0.00	N/A	N/A	N/A
PM_{10}	0.000285	0.00	N/A	N/A	N/A

Significance Levels

Pollutant	Significance Levels ($\mu g/m^3$) - 40 CFR Part 51.165 (b)(2)				
	Annual Avg.	24 hr Avg.	8 hr Avg.	3 hr Avg.	1 hr Avg.
$PM_{2.5}$	1.0	5	N/A	N/A	N/A
PM_{10}	1.0	5	N/A	N/A	N/A

As shown, the calculated contributions of $PM_{2.5}$ and PM_{10} will not exceed the EPA significance levels. This project is not expected to cause or make worse a violation of an air quality standard.

Permit conditions will be included on the ATC to ensure compliance with the AAQA.

Rule 2520 Federally Mandated Operating Permits

Pilkington North America, Inc. is subject to this Rule, and has received their Title V Operating Permit. The proposed modification is a Significant Modification to the Title V Permit pursuant to Section 3.29 of this rule:

In accordance with Rule 2520, 3.29, Significant Permit Modifications are permit amendments that do not qualify as minor permit modifications or as administrative amendments.

As discussed above, the facility has applied for a Certificate of Conformity (COC); therefore, the facility must apply to modify their Title V permit with an administrative amendment prior to operating with the proposed modifications. Continued compliance with this rule is expected.

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 §60.4200(a)(2)(i), the proposed engines are subject to the requirements of this part. The following table demonstrates how the proposed engines 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**
Engine(s) 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 engines that are certified to the latest EPA Tier Certification level for the applicable horsepower range, guaranteeing compliance with the emission standards of Subpart IIII.
Engine(s) must be fired on 500 ppm sulfur content fuel or less, and fuel with a minimum cetane index of 40 or a maximum aromatic content of 35 percent by volume. Starting in October 1, 2010, the maximum allowable sulfur fuel content will be lowered to 15 ppm.	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 this requirement was included earlier in this evaluation.
The operator/owner must install a non-resettable hour meter prior to startup of the engine(s).	The applicant has proposed to install a non-resettable hour meter. The following condition will be included on the permit: • *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 Part 60 Subpart IIII]*
Emergency engine(s) may be operated for the purpose of maintenance and testing up to 100 hours per year. There is no limit on emergency use.	The Air Toxic Control Measure for Stationary Compression Ignition Engines (Stationary ATCM) limits this engine maintenance and testing to 50 hours/year. Thus, compliance is expected.
The owner/operator must operate and maintain the engine(s) and any installed control devices according to the manufacturers written instructions/	The following condition will be included on the permit: • *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 Part 60 Subpart IIII]*

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)

Pursuant to §63.6585 of this part, the engines proposed by this project are subject to the requirements of this part. Pursuant to §63.6590(c)(1), a new or reconstructed stationary RICE located at an area source that is subject to regulations under 40 CFR Part 60, shall meet the requirements of 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR Part 60 Subpart IIII for compression ignition engines.

Pursuant to the HAP source determination made for District Project N-1082005, this facility is an area source of HAP emissions since the facility potential to emit any single HAP does not exceed 10 tons per year and the facility potential to emit any combination of HAPs does not exceed 25 tons per year. Additionally, the engines proposed by this project are compression ignition engines that meet the definition of new stationary RICE pursuant to §63.6590(2)(iii) of this part.

Since the engines proposed by this project are new RICE located at an area source of HAPs, and the engines are subject to the requirements of 40 CFR Part 60 Subpart IIII as previously discussed, then the requirements of this part will be satisfied by the requirements of 40 CFR Part 60 Subpart IIII. No further requirements apply for these engines under this part.

Compliance with this part is expected.

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 each permit to ensure compliance:

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

Rule 4102 Nuisance

Section 4.0 prohibits discharge of air contaminants which could cause injury, detriment, nuisance or annoyance to the public. Public nuisance conditions are not expected as a result of these operations provided the equipment is well maintained. Therefore, compliance with this rule is expected. The following condition will be listed on each permit to ensure compliance with the requirements of this section:

- *{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 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.

An HRA is not required for a project with a total facility prioritization score of less than one. According to the Technical Services Memo for this project (Appendix C), the total facility prioritization score including this project was greater than one. Therefore, a health risk

assessment was required to determine the short-term acute and long-term chronic exposure from this project.

The cancer risk for this project is shown below:

HRA Summary		
Unit	Cancer Risk	T-BACT Required
N-477-58-0	0.0606 per million	No
N-477-59-0	0.0606 per million	No

Discussion of T-BACT

BACT for toxic emission control (T-BACT) is required if the cancer risk exceeds one in one million. As demonstrated above, 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.

The following conditions will be listed on each ATC to ensure compliance with the RMR:

- *{Modified 1901} The PM10 emissions rate shall not exceed 0.02 g/bhp-hr based on US EPA certification using ISO 8178 test procedure. [District Rules 2201 and 4102, 17 CCR 93115]*
- *{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] N*
- *{Modified 1344} The engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 50 hours per year. [District Rules 2201, and 4702] N*

Rule 4201 Particulate Matter Concentration

Section 3.1 prohibits discharge of dust, fumes, or total particulate matter into the atmosphere from any single source operation in excess of 0.1 grain per dry standard cubic foot, which, as calculated below, is equivalent to a PM_{10} emission factor of 0.4 g-PM_{10}/bhp-hr.

$$0.1\ \frac{grain-PM}{dscf} \times \frac{g}{15.43\,grain} \times \frac{1\,Btu_{in}}{0.35\,Btu_{out}} \times \frac{9{,}051\,dscf}{10^6\,Btu} \times \frac{2{,}542.5\,Btu}{1\,bhp-hr} \times \frac{0.96g-PM_{10}}{1g-PM} = 0.4\,\frac{g-PM_{10}}{bhp-hr}$$

Since the new engines have a PM_{10} emission factor less than 0.4 g/bhp-hr, compliance is expected. The following condition will be listed on each ATC to ensure continued compliance with this Rule:

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

Rule 4701 Stationary 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, the proposed emergency internal combustion engine will comply with the requirements of District Rule 4702 and no further discussion is required.

Rule 4702 Stationary Internal Combustion Engines – Phase 2

The following table demonstrates how the proposed engines will comply with the requirements of District Rule 4702.

District Rule 4702 Requirements Emergency Standby IC Engines	**Proposed Method of Compliance with District Rule 4702 Requirements**
Operation of emergency standby engines is limited to 100 hours or less per calendar year for non-emergency purposes, verified through the use of a non-resettable elapsed operating time meter.	The Air Toxic Control Measure for Stationary Compression Ignition Engines (Stationary ATCM) limits this engine maintenance and testing to 50 hours/year. Thus, compliance is expected. The following condition will be included on each permit: • *This engine shall be operated only for maintenance, testing, and required regulatory purposes, and during emergency situations. Operation of the engine for maintenance, testing, and required regulatory purposes shall not exceed 50 hours per year. [District Rules 2201 and 4702 and 17 CCR 93115] N*
Emergency standby engines cannot be used to reduce the demand for electrical power when normal electrical power line service has not failed, or to produce power for the electrical distribution system, or in conjunction with a voluntary utility demand reduction program or interruptible power contract.	The following conditions will be included on each permit: • *{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]* • *{3808} 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]*
The owner/operator must operate and maintain the engine(s) and any installed control devices according to the manufacturers written instructions.	A permit condition enforcing this requirement was included earlier in this evaluation.
The owner/operator must monitor the operational characteristics of each engine as recommended by the engine manufacturer or emission control system supplier.	The following condition will be included on each permit: • *{3478} 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]
Records of the total hours of operation of the emergency standby engine, type of fuel used, purpose for operating the engine, all hours of non-emergency and emergency operation, and support documentation must be maintained. All records shall be retained for a period of at least five years, shall be readily available, and be made available to the APCO upon request.	The following conditions will be included on each permit: • *{3496} 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 and 17 CCR 93115]* • *{4263} The permittee shall maintain monthly records of the type of fuel purchased. [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]*

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

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

Since 1.0 ppmv is ≤ 2,000 ppmv, these engines are expected to comply with Rule 4801. Therefore, the following condition will be listed on each ATC to ensure compliance:

- *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].*

California Health & Safety Code 42301.6 (School Notice)

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

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

The following table demonstrates how the proposed engines will comply with the requirements of Title 17 CCR Section 93115.

Title 17 CCR Section 93115 Requirements for New Emergency IC Engines Powering Electrical Generators	Proposed Method of Compliance with Title 17 CCR Section 93115 Requirements
Emergency engine must be fired on CARB diesel fuel, or an approved alternative diesel fuel.	The applicant has proposed the use of CARB certified diesel fuel. The proposed permit condition, requiring the use of CARB certified diesel fuel, was included earlier in this evaluation.
The engine must emit diesel PM at a rate less than or equal to 0.15 g/bhp-hr or must meet the diesel PM standard, as specified in the Off-road compression ignition standards for off-road engines with the same maximum rated power (Title 13 CCR, Section 2423).	The applicant has proposed the use of two Tier 2 certified engines, which meets the latest EPA Tier Certification level for the applicable horsepower range, guaranteeing compliance with the emission standards of this section. Additionally, the proposed diesel PM emissions rate is less than or equal to 0.15 g/bhp-hr for each engine.
The engine may not be operated more than 50 hours per year for maintenance and testing purposes.	The proposed permit condition enforcing this requirement was included earlier in this evaluation.
New stationary emergency standby diesel-fueled IC engines (> 50 bhp) must meet the 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).	The applicant has proposed the use of engines that are Tier 2 certified, which meets the latest EPA Tier Certification level for the applicable horsepower range.
An owner or operator shall maintain monthly records of the following: emergency use hours of operation; maintenance and testing hours of operation; hours of operation for emission testing; initial start-up testing hours; hours of operation for all other uses; and the type of fuel used. All records shall be retained for a minimum of 36 months.	The proposed permit conditions enforcing these requirements were included earlier in this evaluation.

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; and
- Disclose to the public the reasons why a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Greenhouse Gas (GHG) Significance Determination

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

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

District CEQA Findings

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

IX. Recommendation

Compliance with all applicable rules and regulations is expected. Pending successful EPA Noticing and NSR Public Noticing periods, issue Authority to Construct permits N-477-58-0 and N-477-59-0 subject to the permit conditions on the attached draft Authority to Construct permits in Appendix A.

X. Billing Information

Annual Permit Fees			
Permit Number	Fee Schedule	Fee Description	Annual Fee
N-477-58-0	3020-10-F	1,214 bhp IC engine	$749.00
N-477-59-0	3020-10-F	1,214 bhp IC engine	$749.00

Appendices

A: Draft ATCs
B: BACT Guideline and BACT Analysis
C: HRA/RMR/AAQA Summary
D: Title V Form 009 – Compliance Certification Form
E: Greenhouse Gas Evaluation

APPENDIX A
Draft ATCs

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-477-58-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: PILKINGTON NORTH AMERICA, INC
MAILING ADDRESS: 500 E LOUISE AVE
LATHROP, CA 95330

LOCATION: 500 E LOUISE AVE
LATHROP, CA 95330

EQUIPMENT DESCRIPTION:
1,214 BHP CATERPILLAR MODEL# C27 TIER II CERTIFIED DIESEL-FIRED EMERGENCY STAND-BY IC ENGINE POWERING AN ELECTRICAL GENERATOR

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. {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]
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
6. {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]
7. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rules 4001 and 4702, 17 CCR 93115, 40 CFR 60 Subpart IIII]
8. {4258} 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]

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-477-58-0 Oct 24 2011 2:11PM – GILLESR : Joint Inspection NOT Required

9. Emissions from this IC engine shall not exceed any of the following limits: 5.18 g-NOx/bhp-hr, 0.23 g-CO/bhp-hr, or 0.03 g-VOC/bhp-hr. [District Rules 2201 and 4001, 17 CCR 93115, 40 CFR Part 60 Subpart IIII]
10. Emissions from this IC engine shall not exceed 0.02 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201, 4001 and 4102, 17 CCR 93115, 40 CFR Part 60 Subpart IIII]
11. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rules 4001 and 4702, 40 CFR 60 Subpart IIII]
12. {3478} 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]
13. {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]
14. {3808} 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]
15. {3496} 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 and 17 CCR 93115]
16. 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 50 hours per calendar year. [District Rules 4001 and 4702, 17 CCR 93115, 40 CFR Part 60 Subpart IIII]
17. {4263} The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115]
18. {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]

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

DRAFT

PERMIT NO: N-477-59-0 **ISSUANCE DATE:** DRAFT

LEGAL OWNER OR OPERATOR: PILKINGTON NORTH AMERICA, INC
MAILING ADDRESS: 500 E LOUISE AVE
LATHROP, CA 95330

LOCATION: 500 E LOUISE AVE
LATHROP, CA 95330

EQUIPMENT DESCRIPTION:
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3. {14} Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201]
4. {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]
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
6. {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]
7. This engine shall be equipped with an operational non-resettable elapsed time meter or other APCO approved alternative. [District Rules 4001 and 4702, 17 CCR 93115, 40 CFR 60 Subpart IIII]
8. {4258} 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]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director / APCO

DRAFT

DAVID WARNER, Director of Permit Services
N-477-59-0 : Oct 24 2011 2:11PM -- GILLEGR : Joint Inspection NOT Required

9. Emissions from this IC engine shall not exceed any of the following limits: 5.18 g-NOx/bhp-hr, 0.23 g-CO/bhp-hr, or 0.03 g-VOC/bhp-hr. [District Rules 2201 and 4001, 17 CCR 93115, 40 CFR Part 60 Subpart IIII]
10. Emissions from this IC engine shall not exceed 0.02 g-PM10/bhp-hr based on USEPA certification using ISO 8178 test procedure. [District Rules 2201, 4001 and 4102, 17 CCR 93115, 40 CFR Part 60 Subpart IIII]
11. This engine shall be operated and maintained in proper operating condition as recommended by the engine manufacturer or emissions control system supplier. [District Rules 4001 and 4702, 40 CFR 60 Subpart IIII]
12. {3478} 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]
13. {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]
14. {3808} 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]
15. {3496} 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 and 17 CCR 93115]
16. 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 50 hours per calendar year. [District Rules 4001 and 4702, 17 CCR 93115, 40 CFR Part 60 Subpart IIII]
17. {4263} The permittee shall maintain monthly records of the type of fuel purchased. [District Rule 4702 and 17 CCR 93115]
18. {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]

APPENDIX B

BACT Guideline and BACT Analysis

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 3.1.1
Last Update: 7/10/2009
Emergency Diesel IC Engine

Pollutant	Achieved in Practice or in the SIP	Technologically Feasible	Alternate Basic Equipment
CO	Latest EPA Tier Certification level for applicable horsepower range		
NOX	Latest EPA Tier Certification level for applicable horsepower range		
PM10	0.15 g/hp-hr or the Latest EPA Tier Certification level for applicable horsepower range, whichever is more stringent. (ATCM)		
SOX	Very low sulfur diesel fuel (15 ppmw sulfur or less)		
VOC	Latest EPA Tier Certification level for applicable horsepower range		

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.

Top Down BACT Analysis for the Emergency IC Engine

1. BACT Analysis for NOx, CO, and VOC Emissions:

a. Step 1 - Identify all control technologies

The SJVUAPCD BACT Clearinghouse guideline 3.1.1 identifies achieved in practice BACT for emissions from emergency diesel IC engines as follows:

Pollutant	Achieved In Practice
NOx, CO, and VOC	Latest EPA Tier Certification level for applicable horsepower range

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 only one control option is listed in Step 1.

d. Step 4 - Cost Effectiveness Analysis

The applicant has proposed the only control option listed for each pollutant. Therefore, a cost effectiveness analysis is not required.

e. Step 5 - Select BACT

BACT for NOx, CO, and VOC emissions from these diesel-fired emergency standby IC engines is the latest EPA Tier Certification level for the applicable horsepower range. The applicant has proposed to install two Tier 2 certified 1,214 bhp emergency standby diesel IC engines, which meet the latest Tier Certification for engines this size as shown in the attached Tier Certification table at the end of this Appendix.

Title 13 CCR 2423

(December 2005)

Tier Certification & Exhaust Emission Standards

(grams per brake horsepower-hour)

Power Rating (hp)	Tier	Model Year	NO_x	HC	NMHC +NO_x	CO	PM
50 ≤ hp < 75	1	1998 – 2003	6.9	-	-	-	-
	2	2004 - 2007	-		5.6	3.7	0.3
	3	2008 - 2011			3.5		
	4*	2008 – 2012 (Interim)			3.5	3.7	0.22
75 ≤ hp < 100	1	1998 – 2003	6.9	-	-	-	-
	2	2004 – 2007	-		5.6	3.7	0.3
	3	2008 – 2011			3.5		
100 ≤ hp < 175	1	1997 – 2002	6.9	-	-	-	-
	2	2003 – 2006	-		4.9	3.7	0.22
	3	2007 – 2011			3.0		
175 ≤ hp < 300	1	1996 – 2002	6.9	1.0	-	8.5	0.4
	2	2003 – 2005	-	-	4.9	2.6	0.15
	3	2006 - 2010			3.0		
300 ≤ hp < 600	1	1996 – 2000	6.9	1.0	-	8.5	0.4
	2	2001 – 2005	-	-	4.8	2.6	0.15
	3	2006 – 2010			3.0		
600 ≤ hp ≤ 750	1	1996 – 2001	6.9	1.0	-	8.5	0.4
	2	2002 – 2005	-	-	4.8	2.6	0.15
	3	2006 – 2010			3.0		
> 750	1	2000 – 2005	6.9	1.0	-	8.5	0.4
	2	2006 – 2010	-	-	4.8	2.6	0.15

* Manufacturers may optionally certify engine families to the interim Tier 4 for this power category through 2012.

APPENDIX C

HRA / RMR / AAQA Summary

San Joaquin Valley Air Pollution Control District
Risk Management Review

To:	Robert Gilles - Permit Services
From:	Cheryl Lawler - Permit Services
Date:	September 15, 2011
Facility Name:	Pilkington North America, Inc.
Location:	500 E. Louise Avenue, Lathrop
Application #(s):	N-477-58-0 & 59-0
Project #:	N-1113227

A. RMR SUMMARY

RMR Summary				
Categories	**Diesel ICE (Unit 58-0)**	**Diesel ICE (Unit 59-0)**	**Project Totals**	**Facility Totals**
Prioritization Score	N/A[1]	N/A[1]	N/A[1]	N/A[1]
Acute Hazard Index	N/A[2]	N/A[2]	N/A[2]	0.00
Chronic Hazard Index	N/A[2]	N/A[2]	N/A[2]	0.03
Maximum Individual Cancer Risk	**6.06E-08**	**6.06E-08**	1.21E-07	1.01E-06
T-BACT Required?	**No**	**No**		
Special Permit Conditions?	**Yes**	**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:

Units 58-0 & 59-0

1. The PM10 emissions rate shall not exceed **0.02** 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 **50** hours per calendar year. [District Rule 4702 and 17 CCR 93115]

B. RMR REPORT

I. Project Description

Technical Services received a request on August 29, 2011, to perform an Ambient Air Quality Analysis and a Risk Management Review for two identical 1214 bhp emergency diesel-fired internal combustion engines powering two standby electrical generators.

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 Units 58-0 & 59-0			
Source Type	Point	**Location Type**	Urban
BHP	1214	**PM_{10} g/hp-hr**	0.02
Closest Receptor (m)	282	**Quad**	2
Max Hours per Year	50	**Type of Receptor**	Business

Technical Services performed modeling for criteria pollutants CO, NOx, Sox, PM_{10}, and $PM_{2.5}$; as well as a RMR. The emission rates used for criteria pollutant modeling were 31 lb/yr CO, 693 lb/yr NOx, 1 lb/yr SOx, 3 lb/yr PM_{10}, and 3 lb/yr $PM_{2.5}$. The engineer supplied the maximum fuel rate for the IC engine used during the analysis.

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	NA[1]	X	NA[1]	X	X
NO_x	NA[1]	X	X	X	Pass
SO_x	NA[1]	NA[1]	X	NA[1]	Pass
PM_{10}	X	X	X	NA[1]	Pass[2]
$PM_{2.5}$	X	X	X	NA[1]	Pass[2]

*Results were taken from the attached PSD spreadsheet.
[1]The project is an intermittent source as defined in APR-1920. In accordance with APR-1920, compliance with short-term (i.e., 1-hour, 3-hour, 8-hour, and 24-hour) standards is not required.
[2]The criteria pollutants are below EPA's level of significance as found in 40 CFR Part 51.165 (b)(2).

III. Conclusion

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

The cancer risks associated with the operation of the proposed diesel IC engines are 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 both proposed units.

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

APPENDIX D

Title V Form 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)

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

COMPANY NAME: **Pilkington North America**	FACILITY ID: **N-477**
1. Type of Organization:[X] Corporation [ ] Sole Ownership [ ] Government [ ] Partnership [ ] Utility	
2. Owner's Name: **Pilkington North America**	
3. Agent to the Owner:	

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

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

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

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

(CM) 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:

Chris Miller — Signature of Responsible Official

8/24/11 — Date

Chris Miller

Name of Responsible Official (please print)

Plant Manager

Title of Responsible Official (please print)

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APPENDIX E
GHG Evaluation

Green House Gas (GHG) Evaluation

N-477-58-0 and N-477-59-0

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 (2 engines)

Diesel Fuel Combustion	= (57.2 gallons/hr per engine) x (2 engines) = 114.4 gallons/hr
Max. Annual Operation	= 50 hours/year
Total Annual Fuel Usage	= (114.4 gal/hr) x (50 hrs/year) = 5,720 gallons/year
Convert to MMBtu/yr	= (5,720 gal/yr) x (137,000 Btu/gal) x (MMBtu/10^6Btu) = **784 MMBtu/yr**

CO_2 Emissions = (784 MMBtu/year) x (161.2 lb/MMBtu) × (1 ton/2,000 lb)

= *63.2 ton-CO_2e/year*

CH_4 Emission = (784 MMBtu/year) x (0.0066 lb/MMBtu) × (23 lb-CO_2e/lb-CH_4) x (1 ton/2,000 lb)

= *0.06 ton-CO_2e/year*

N_2O Emissions = (784 MMBtu/year) x (0.0013 lb/MMBtu) × (296 lb-CO_2e/lb-CH_4) x (1 ton/2,000 lb)

= *0.15 ton-CO_2e/year*

Total Annual GHG Emissions = (63.2 + 0.06 + 0.15)ton-CO_2e/year
= **63.4 short ton-CO_2e/year**

Metric Conversion:

Annual Emissions = (63.4 short ton-CO_2e/year) x 0.9072 metric tons/short ton
= **58 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.