



# San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT



## HEALTHY AIR LIVING™

MAR 21 2013

Ms. Christine Ryan  
Gallo Glass Company  
600 Yosemite Blvd.  
Modesto, CA 95354

**Re: Notice of Preliminary Decision - ATC / Certificate of Conformity  
Facility # N-1662  
Project # N-1122842**

Dear Ms. Ryan:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Gallo Glass Company at 605 South Santa Cruz Avenue in Modesto, CA. The modifications are to comply with the emission limits of District Rule 4354 (Glass Melting Furnaces).

After addressing all comments made during the 30-day public notice and the 45-day EPA comment periods, 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.

The public notice will be published approximately three days from the date of this letter. Please submit your written comments within the 30-day public comment period which begins on the date of publication of the public notice.

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:MJS/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  
Tel: (559) 230-6000 FAX: (559) 230-6061

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



# San Joaquin Valley

AIR POLLUTION CONTROL DISTRICT



HEALTHY AIR LIVING™

MAR 21 2013

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

**Re: Notice of Preliminary Decision - ATC / Certificate of Conformity  
Facility # N-1662  
Project # N-1122842**

Dear Mr. Rios:

Enclosed for your review is the District's engineering evaluation of an application for Authorities to Construct for Gallo Glass Company at 605 South Santa Cruz Avenue in Modesto, CA, which has been issued a Title V permit. Gallo Glass Company is requesting that Certificates of Conformity, with the procedural requirements of 40 CFR Part 70, be issued with this project. The modifications are to comply with the emission limits of District Rule 4354 (Glass Melting Furnaces).

Enclosed is the engineering evaluation of this application, along with the current Title V permit, and proposed Authorities to Construct # N-1662-1-15, N-1662-2-16, N-1662-3-16 and N-1662-4-17 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:MJS/st

Enclosures

Seyed Sadredin  
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**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT



**HEALTHY AIR LIVING™**

MAR 21 2013

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

Re: **Notice of Preliminary Decision - ATC / Certificate of Conformity**  
**Facility # N-1662**  
**Project # N-1122842**

Dear Mr. Tollstrup:

Enclosed for your review and comment is the District's analysis of an application for Authorities to Construct for Gallo Glass Company at 605 South Santa Cruz Avenue in Modesto, CA. The modifications are to comply with the emission limits of District Rule 4354 (Glass Melting Furnaces).

The public notice will be published approximately three days from the date of this letter. Please submit your written comments within the 30-day public comment period which begins on the date of publication of the public notice.

Thank you for your cooperation in this matter. 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:MJS/st

Enclosures

**Seyed Sadredin**  
Executive Director/Air Pollution Control Officer

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Modesto Bee

**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 Gallo Glass Company at 605 South Santa Cruz Avenue in Modesto, CA, California. The modifications are to comply with the emission limits of District Rule 4354 (Glass Melting Furnaces).

The District's analysis of the legal and factual basis for this proposed action, project #N-1122842, is available for public inspection at [http://www.valleyair.org/notices/public\\_notices\\_idx.htm](http://www.valleyair.org/notices/public_notices_idx.htm) and at any District office. There are no emission increases associated with this proposed action. This will be the public's only opportunity to comment on the specific conditions of the modification. If requested, the District will hold a public hearing regarding issuance of this modification. For additional information, please contact the District at (209) 557-6400. Written comments on the proposed initial permit must be submitted by April 25, 2013 to **DAVID WARNER, DIRECTOR OF PERMIT SERVICES, SAN JOAQUIN VALLEY AIR POLLUTION CONTROL DISTRICT, 4800 ENTERPRISE WAY, MODESTO, CA 95356-0244.**

# Authority to Construct Application Review

Facility Name: Gallo Glass Company  
Mailing Address: 600 Yosemite Boulevard  
Modesto, CA 95354

Date: March 11, 2013

Contact Person: Christine Ryan  
Telephone: (209) 341-8591

Engineer: Mark Schonhoff

Application #: N-1662-1-15  
N-1662-2-16  
N-1662-3-16  
N-1662-4-17

Project #: N-1122842  
Deemed Complete: November 7, 2012

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## I. Proposal

Gallo Glass Company is proposing to receive Authorities-to-Construct (ATCs) to lower the NOx, CO, VOC and PM10 limits for compliance with District Rule 4354 (Glass Melting Furnaces).

Since these modifications are being made solely for compliance with Rule 4354, the BACT and Offset exemptions specified in sections 4.2.3 and 4.6.8 of Rule 2201 apply.

This permitting action is an SB-288 Major Modification and is therefore a Significant Modification to the Title V permit. The applicant has proposed to receive the ATCs with Certificates of Conformity. Therefore, the required 45-day EPA notice will be conducted prior to the issuance of the ATCs.

The facility has recently received ATC's for the installation of a dust collector and for the re-brick of furnace 4, and although construction has commenced, it has not yet been completed. Therefore, the ATC's cannot be converted to Permits to Operate (PTOs) at this time. The previously issued ATCs include conditions specifying the order in which they must be implemented and in order to ensure that the correct Rule 4354 emission limits are on the permits by the compliance date, the ATCs issued under this project must be implemented after those ATCs. To ensure the correct implementation order, these ATCs will include the following conditions:

*This Authority-to-Construct (ATC) shall not be converted to a Permit-to-Operate prior of the conversion of ATC's N-1662-1-14, N-1662-2-15, N-1662-3-15, N-1662-4-15 or N-1662-4-16 to Permits-to-Operate.*

*In the event that Authorities to Construct N-1662-1-14, N-1662-2-15, N-1662-3-15 and N-1662-4-16 are not previously implemented, the equipment description of this Authority to Construct Permit shall be modified to remove reference to the ceramic filter dust collector and all conditions related to the ceramic dust collector shall be modified or removed as appropriate.*

Copies of these Authorities to Construct are in Appendix C of this document.

## **II. Applicable Rules**

2201 New and Modified Stationary Source Review Rule (4/21/11)  
2410 Prevention of Significant Deterioration (11/26/12)  
2520 Federally Mandated Operating Permits (6/21/01)  
4001 New Source Performance Standards (4/14/99)  
40 CFR Part 60.290 - Standards of Performance for Glass Manufacturing Plants  
4002 National Emission Standards for Hazardous Air Pollutants (5/20/04)  
40 CFR Part 63 Subpart SSSSSS – National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources  
4101 Visible Emissions (2/17/05)  
4102 Nuisance (12/17/92)  
4201 Particulate Matter Concentration (12/17/92)  
4354 Glass Melting Furnaces (5/19/11)  
4801 Sulfur Compounds (12/17/92)  
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  
40 CFR Part 64 - Compliance Assurance Monitoring  
CH&SC 41700  
CH&SC 42301.6

## **III. Project Location**

605 S. Santa Cruz Avenue  
Modesto, CA

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

## **IV. Process Description**

The furnaces burn natural gas or LPG to melt cullet (crushed, recycled glass), sand, soda ash, limestone, and other raw materials. To assist in maintaining the melt, subsurface electrical heating elements are utilized. Once molten, the glass is pulled from the furnaces and used to form bottles. The emissions from the furnaces are controlled by the means described in section VI of this document.

## V. Equipment Listing

### Premodification Equipment Descriptions:

#### **N-1662-1-14:**

FURNACE #1 WITH 10 MAXON GAS/OXYGEN BURNERS AND ASSOCIATED EQUIPMENT (75 MMBTU/HR MAX HEAT CAPACITY). THIS FURNACE IS DUCTED THROUGH A STACK COMMON TO PERMIT UNITS N-1662-1, N-1662-2, N-1662-3 AND N-1662-4. THE FURNACES ARE SERVED BY A SHARED SOX SCRUBBER AND AN ELECTROSTATIC PRECIPITATOR AND/OR A TRI-MER UTF460 CERAMIC FILTER TYPE DUST COLLECTOR.

#### **N-1662-2-15:**

GLASS FURNACE #2 WITH 10 MAXON GAS/OXYGEN BURNERS AND ASSOCIATED FORMING EQUIPMENT (75 MMBTU/HR MAX HEAT CAPACITY). THIS FURNACE IS DUCTED THROUGH A STACK COMMON TO PERMIT UNITS N-1662-1, N-1662-2, N-1662-3 AND N-1662-4. THE FURNACES ARE SERVED BY A SHARED SOX SCRUBBER AND AN ELECTROSTATIC PRECIPITATOR AND/OR A TRI-MER UTF460 CERAMIC FILTER TYPE DUST COLLECTOR.

#### **N-1662-3-15:**

GLASS FURNACE #3 WITH 10 MAXON GAS/OXYGEN BURNERS AND ASSOCIATED FORMING EQUIPMENT (75 MMBTU/HR MAX HEAT CAPACITY). THIS FURNACE IS DUCTED THROUGH A STACK COMMON TO PERMIT UNITS N-1662-1, N-1662-2, N-1662-3 AND N-1662-4. THE FURNACES ARE SERVED BY A SHARED SOX SCRUBBER AND AN ELECTROSTATIC PRECIPITATOR AND/OR A TRI-MER UTF460 CERAMIC FILTER TYPE DUST COLLECTOR.

#### **N-1662-4-15:**

GLASS FURNACE #4 WITH 12 MAXON GAS/OXYGEN BURNERS AND ASSOCIATED FORMING EQUIPMENT (90 MMBTU/HR MAX HEAT CAPACITY). THIS FURNACE IS DUCTED THROUGH A STACK COMMON TO PERMIT UNITS N-1662-1, N-1662-2, N-1662-3 AND N-1662-4. THE FURNACES ARE SERVED BY A SHARED SOX SCRUBBER AND AN ELECTROSTATIC PRECIPITATOR AND/OR A TRI-MER UTF460 CERAMIC FILTER TYPE DUST COLLECTOR.

### Postmodification Equipment Descriptions:

No Change.

## VI. Emission Control Technology Evaluation

The furnaces are equipped with emission control technology for NO<sub>x</sub>, SO<sub>x</sub> and PM<sub>10</sub>. NO<sub>x</sub> is controlled utilizing oxy-fuel firing, SO<sub>x</sub> is controlled utilizing a scrubber and

PM10 is controlled utilizing an electrostatic precipitator (ESP) and/or a ceramic filter type dust collector.

### **Oxy-Fuel Firing:**

Oxy-fuel firing is utilized to control NO<sub>x</sub> emissions. In oxy-fuel firing, oxygen is generated and replaces air in the combustion process. The absence of nitrogen containing combustion air prevents the formation of thermal NO<sub>x</sub>.

### **SO<sub>x</sub> Scrubber:**

Gallo Glass utilizes a scrubber for SO<sub>x</sub> control followed by an Electrostatic Precipitator (ESP) for SO<sub>x</sub>/particulate matter control.

From the furnace, the SO<sub>x</sub> contaminated airstream travels through a scrubber. Inside of the scrubber, SO<sub>x</sub> is absorbed by a reagent (lime, trona, etc.), which exits the scrubber in the form of particulate matter. The contaminated airstream (sulfur contaminated scrubber reagent and the particulate matter generated in the furnace) then enters the ESP. The ESP causes the influent particulate matter to be charged and captured on oppositely charged plates.

### **Electrostatic Precipitator:**

An electrostatic precipitator (ESP) is utilized to control the particulate matter emissions generated in the glass melting process and from the SO<sub>x</sub> scrubber. The contaminated air stream is passed through positively or negatively charged electrodes that place a charge on the particulate matter. The contaminated air stream, including the charged particles, is then passed through oppositely charged electrodes that attract and collect the particulate matter.

### **Ceramic Filter Type Dust Collector:**

The dust collector operates like a traditional fabric filter type baghouse but utilizes ceramic filters that will provide a reliably high filtering efficiency at high temperatures. The unit utilizes reverse pulse air type cartridge cleaning.

## **VII. General Calculations**

### **A. Assumptions**

Assumptions will be stated as they are made.



**B. Emission Factors**

**Premodification Emission Factors:**

The premodification emission factors are from the current Permits to Operate.

Permit Number	Emission Factors (lb/ton of glass produced)						
	NOx	CO	VOC	SOx		PM10	
				≥ 25% mixed color cullet	< 25% mixed color cullet	Normal Mode	ESP By-pass Mode
N-1662-1-14	1.5	0.04	0.25	0.99	0.81	0.49	0.71
N-1662-2-15	2.77	1.0	0.25	0.99	0.81	0.49	0.71
N-1662-3-15	2.48	0.01	0.25	0.99	0.81	0.49	0.71
N-1662-4-15	1.3	0.20	0.23 <sup>1</sup>	0.99	0.81	0.45	0.71

**Postmodification Emission Factors:**

**NOx:**

Per section 5.1 of Rule 4354, the Tier 3 NOx limit for these units is 1.5 lb/ton of glass pulled. However, the furnaces are part of a furnace battery. Per sections 5.1.3 and 9.7.1 of this rule, a furnace battery is subject to a 10% air quality benefit adjustment. Therefore, the applicable emission factor is:

$$EF_{NOx} = (1.5 \text{ lb/ton})(1 - 0.10) = 1.4 \text{ lb/ton of glass pulled}$$

As can be seen, the NOx emission limit for units N-1662-1, N-1662-2 and N-1662-3 must be reduced to 1.4 lb/ton. The emission limit for unit N-1662-4 is 1.3 lb/ton and does not require adjustment.

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<sup>1</sup> The permitted VOC emission limit for unit N-1662-4 is 0.2 lb/ton, which as can be seen includes only one significant figure. Therefore, using standard rounding rules, an emission level of 0.24 lb/ton, rounded to one significant figure (tenths place), would round to 0.2 lb/ton and compliance with the 0.2 lb/ton limit would be shown. However, utilizing standard significant figure determination methods, rule limit of 0.23 lb/ton includes two significant figures and the above referenced 0.24 lb/ton would indicate non-compliance. Therefore, the VOC limit for unit N-1662-4 will be changed to 0.23 lb/ton in accordance with District Policy APR-1110 (Using Revised Emission Factors).

**CO:**

Per section 5.2 of Rule 4354, the CO limit for these units is 1.0 lb/ton of glass pulled. However, the furnaces are part of a furnace battery. Per sections 5.2.2 and 9.7.1 of this rule, a furnace battery is subject to a 10% air quality benefit adjustment. Therefore, the applicable emission factor is:

$$EF_{CO} = (1.0 \text{ lb/ton})(1 - 0.10) = 0.90 \text{ lb/ton of glass pulled}$$

As can be seen, the emission limit for unit N-1662-2 must be reduced to 0.90 lb/ton. The emission limits for units N-1662-1, N-1662-3 and N-1662-4 do not require adjustment.

**VOC:**

Per section 5.2 of Rule 4354, the VOC limit for these units is 0.25 lb/ton of glass pulled. However, the furnaces are part of a furnace battery. Per sections 5.2.2 and 9.7.1 of this rule, a furnace battery is subject to a 10% air quality benefit adjustment. Therefore, the applicable emission factor is:

$$EF_{CO} = (0.25 \text{ lb/ton})(1 - 0.10) = 0.23 \text{ lb/ton of glass pulled}$$

As can be seen, the VOC emission limit for units N-1662-1, N-1662-2 and N-1662-3 require adjustment. The emission limit for unit N-1662-4 is 0.23 lb/ton and does not require adjustment.

**SOx:**

Per section 5.3 of Rule 4354, the SOx limit for these units while operating with a mixed color cullet content of equal to or greater than 25.0% is 1.1 lb/ton and the SOx emission limit while operating with a mixed color cullet content of less than 25% is 0.90 lb/ton of glass pulled. However, the furnaces are part of a furnace battery. Per sections 5.3.5 and 9.7.1 of this rule, a furnace battery is subject to a 10% air quality benefit adjustment. Therefore, the applicable emission factor is:

$$\begin{aligned} EF_{SOx} (>= 25\% \text{ mixed color cullet}) \\ &= (1.1 \text{ lb/ton})(1 - 0.10) = 0.99 \text{ lb/ton of glass pulled} \end{aligned}$$

$$\begin{aligned} EF_{SOx} (< 25\% \text{ mixed color cullet}) \\ &= (0.90 \text{ lb/ton})(1 - 0.10) = 0.81 \text{ lb/ton of glass pulled} \end{aligned}$$

As can be seen, none of the SOx emission limits require adjustment.

**PM10:**

Per section 5.4 of Rule 4354, the PM10 limit for these units is 0.50 lb/ton of glass pulled. However, the furnaces are part of a furnace battery. Per sections 5.4.2

and 9.7.1 of this rule, a furnace battery is subject to a 10% air quality benefit adjustment. Therefore, the applicable emission factor is:

$$EF_{NO_x} = (0.50 \text{ lb/ton})(1 - 0.10) = 0.45 \text{ lb/ton of glass pulled}$$

As can be seen, the emission limit for units N-1662-1, N-1662-2 and N-1662-3 must be reduced to 0.45 lb/ton. The emission limit for unit N-1662-4 is 0.45 lb/ton and does not require adjustment.

Per section 5.10, the furnaces are not subject to these limits during routine maintenance and repair provided that it does not exceed 144 hours per year. Therefore, the PM10 emission limit of 0.71 lb/ton that applies during control device by-pass episodes does not require adjustment.

**Summary of Postmodification Emission Factors:**

Permit Number	Emission Factors (lb/ton of glass produced)						
	NOx	CO	VOC	SOx		PM10	
				≥ 25% mixed color cullet	< 25% mixed color cullet	Normal Mode	ESP By-pass Mode
N-1662-1-15	1.4	0.04	0.23	0.99	0.81	0.45	0.71
N-1662-2-16	1.4	0.9	0.23	0.99	0.81	0.45	0.71
N-1662-3-16	1.4	0.01	0.23	0.99	0.81	0.45	0.71
N-1662-4-17	1.3	0.20	0.23	0.99	0.81	0.45	0.71

**C. Potential to Emit (PE)**

**1. Daily Potential to Emit**

**Premodification:**

**N-1662-1-14:**

Rated Throughput: 520.1 tons/day – Current PTO

$$NO_x = (1.5 \text{ lb/ton})(520.1 \text{ tons/day}) = 780.2 \text{ lb/day}$$

$$CO = (0.04 \text{ lb/ton})(520.1 \text{ tons/day}) = 20.8 \text{ lb/day}$$

$$VOC = (0.25 \text{ lb/ton})(520.1 \text{ tons/day}) = 130.0 \text{ lb/day}$$

$$SO_x = (0.99 \text{ lb/ton})(520.1 \text{ tons/day}) = 514.9 \text{ lb/day}$$

The maximum permitted amount of emission control system by-pass time is 144 hr/yr (6 days/yr). Therefore, the maximum daily emissions would occur if the unit operated for an entire day in emission control system by-pass mode.

$$PM_{10} = (0.71 \text{ lb/ton})(520.1 \text{ tons/day}) = 369.3 \text{ lb/day}$$

**N-1662-2-15:**

Rated Throughput: 352.1 tons/day – Current PTO

$$\text{NO}_x = (2.77 \text{ lb/ton})(352.1 \text{ tons/day}) = 975.3 \text{ lb/day}$$

$$\text{CO} = (1.0 \text{ lb/ton})(352.1 \text{ tons/day}) = 352.1 \text{ lb/day}$$

$$\text{VOC} = (0.25 \text{ lb/ton})(352.1 \text{ tons/day}) = 88.0 \text{ lb/day}$$

$$\text{SO}_x = (0.99 \text{ lb/ton})(352.1 \text{ tons/day}) = 348.6 \text{ lb/day}$$

The maximum permitted amount of emission control system by-pass time is 144 hr/yr (6 days/yr). Therefore, the maximum daily emissions would occur if the unit operated for an entire day in emission control system by-pass mode.

$$\text{PM}_{10} = (0.71 \text{ lb/ton})(352.1 \text{ tons/day}) = 250.0 \text{ lb/day}$$

**N-1662-3-15:**

Rated Throughput: 352.1 tons/day – Current PTO

$$\text{NO}_x = (2.48 \text{ lb/ton})(352.1 \text{ tons/day}) = 873.2 \text{ lb/day}$$

$$\text{CO} = (0.01 \text{ lb/ton})(352.1 \text{ tons/day}) = 3.5 \text{ lb/day}$$

$$\text{VOC} = (0.25 \text{ lb/ton})(352.1 \text{ tons/day}) = 88.0 \text{ lb/day}$$

$$\text{SO}_x = (0.99 \text{ lb/ton})(352.1 \text{ tons/day}) = 348.6 \text{ lb/day}$$

The maximum permitted amount of emission control system by-pass time is 144 hr/yr (6 days/yr). Therefore, the maximum daily emissions would occur if the unit operated for an entire day in emission control system by-pass mode.

$$\text{PM}_{10} = (0.71 \text{ lb/ton})(352.1 \text{ tons/day}) = 250.0 \text{ lb/day}$$

**N-1662-4-15:**

Rated Throughput: 637.9 tons/day – Current PTO

$$\text{NO}_x = (1.3 \text{ lb/ton})(637.9 \text{ tons/day}) = 829.3 \text{ lb/day}$$

$$\text{CO} = (0.20 \text{ lb/ton})(637.9 \text{ tons/day}) = 127.6 \text{ lb/day}$$

$$\text{VOC} = (0.23 \text{ lb/ton})(637.9 \text{ tons/day}) = 146.7 \text{ lb/day}$$

$$\text{SO}_x = (0.99 \text{ lb/ton})(637.9 \text{ tons/day}) = 631.5 \text{ lb/day}$$

The maximum permitted amount of emission control system by-pass time is 144 hr/yr (6 days/yr). Therefore, the maximum daily emissions would occur if the unit operated for an entire day in emission control system by-pass mode.

$$\text{PM}_{10} = (0.71 \text{ lb/ton})(637.9 \text{ tons/day}) = 452.9 \text{ lb/day}$$

**Postmodification:**

**N-1662-1-15:**

Rated Throughput: 520.1 tons/day – Current PTO

$$\text{NO}_x = (1.4 \text{ lb/ton})(520.1 \text{ tons/day}) = 728.1 \text{ lb/day}$$

$$\text{CO} = (0.04 \text{ lb/ton})(520.1 \text{ tons/day}) = 20.8 \text{ lb/day}$$

$$\text{VOC} = (0.23 \text{ lb/ton})(520.1 \text{ tons/day}) = 119.6 \text{ lb/day}$$

$$\text{SO}_x = (0.99 \text{ lb/ton})(520.1 \text{ tons/day}) = 514.9 \text{ lb/day}$$

The maximum permitted amount of emission control system by-pass time is 144 hr/yr (6 days/yr). Therefore, the maximum daily emissions would occur if the unit operated for an entire day in emission control system by-pass mode.

$$\text{PM}_{10} = (0.71 \text{ lb/ton})(520.1 \text{ tons/day}) = 369.3 \text{ lb/day}$$

**N-1662-2-16:**

Rated Throughput: 352.1 tons/day – Current PTO

$$\text{NO}_x = (1.4 \text{ lb/ton})(352.1 \text{ tons/day}) = 492.9 \text{ lb/day}$$

$$\text{CO} = (0.9 \text{ lb/ton})(352.1 \text{ tons/day}) = 316.9 \text{ lb/day}$$

$$\text{VOC} = (0.23 \text{ lb/ton})(352.1 \text{ tons/day}) = 81.0 \text{ lb/day}$$

$$\text{SO}_x = (0.99 \text{ lb/ton})(352.1 \text{ tons/day}) = 348.6 \text{ lb/day}$$

The maximum permitted amount of emission control system by-pass time is 144 hr/yr (6 days/yr). Therefore, the maximum daily emissions would occur if the unit operated for an entire day in emission control system by-pass mode.

$$\text{PM}_{10} = (0.71 \text{ lb/ton})(352.1 \text{ tons/day}) = 250.0 \text{ lb/day}$$

**N-1662-3-16:**

Rated Throughput: 352.1 tons/day – Current PTO

$$\text{NO}_x = (1.4 \text{ lb/ton})(352.1 \text{ tons/day}) = 492.9 \text{ lb/day}$$

$$\text{CO} = (0.01 \text{ lb/ton})(352.1 \text{ tons/day}) = 3.5 \text{ lb/day}$$

$$\text{VOC} = (0.23 \text{ lb/ton})(352.1 \text{ tons/day}) = 81.0 \text{ lb/day}$$

$$\text{SO}_x = (0.99 \text{ lb/ton})(352.1 \text{ tons/day}) = 348.6 \text{ lb/day}$$

The maximum permitted amount of emission control system by-pass time is 144 hr/yr (6 days/yr). Therefore, the maximum daily emissions would occur if the unit operated for an entire day in emission control system by-pass mode.

$$\text{PM}_{10} = (0.71 \text{ lb/ton})(352.1 \text{ tons/day}) = 250.0 \text{ lb/day}$$

**N-1662-4-17:**

Rated Throughput: 637.9 tons/day – Current PTO

$$\begin{aligned} \text{NO}_x &= (1.3 \text{ lb/ton})(637.9 \text{ tons/day}) = 829.3 \text{ lb/day} \\ \text{CO} &= (0.20 \text{ lb/ton})(637.9 \text{ tons/day}) = 127.6 \text{ lb/day} \\ \text{VOC} &= (0.23 \text{ lb/ton})(637.9 \text{ tons/day}) = 146.7 \text{ lb/day} \\ \text{SO}_x &= (0.99 \text{ lb/ton})(637.9 \text{ tons/day}) = 631.5 \text{ lb/day} \end{aligned}$$

The maximum permitted amount of emission control system by-pass time is 144 hr/yr (6 days/yr). Therefore, the maximum daily emissions would occur if the unit operated for an entire day in emission control system by-pass mode.

$$\text{PM}_{10} = (0.71 \text{ lb/ton})(637.9 \text{ tons/day}) = 452.9 \text{ lb/day}$$

**2. Annual Potential to Emit**

**Premodification:**

The combined NO<sub>x</sub> emissions from all four furnaces are limited to 3.6 lb/ton of glass pulled. To determine the contribution of each unit, the combined PE will be calculated then it will be ratioed by the daily emission limit. As shown above, the potential to emit of NO<sub>x</sub> for each unit is:

N-1662-1:	780.2 lb/day
N-1662-2:	975.3 lb/day
N-1662-3:	873.2 lb/day
<u>N-1662-4:</u>	<u>829.3 lb/day</u>
Total	3,458 lb/day

**N-1662-1-14:**

Rated Throughput: 520.1 tons/day – Current PTO

$$\begin{aligned} \text{NO}_x &= (3.6 \text{ lb/ton})(520.1 + 352.1 + 352.1 + 637.9) \text{ tons/day} \\ &\quad \times (365 \text{ days/yr})(780.2 / 3,458) = 552,081 \text{ lb/yr} \\ \text{CO} &= (0.04 \text{ lb/ton})(520.1 \text{ tons/day})(365 \text{ days/yr}) = 7,593 \text{ lb/yr} \\ \text{VOC} &= (0.25 \text{ lb/ton})(520.1 \text{ tons/day})(365 \text{ days/yr}) = 47,459 \text{ lb/yr} \\ \text{SO}_x &= (0.99 \text{ lb/ton})(520.1 \text{ tons/day})(365 \text{ days/yr}) = 187,938 \text{ lb/yr} \end{aligned}$$

The maximum permitted amount of emission control system by-pass time is 144 hr/yr (6 days/yr). Therefore, the maximum annual emissions would occur if the unit operated 6 days in emission control system by-pass mode and 359 days in normal mode.

$$\begin{aligned} \text{PM}_{10} &= (0.49 \text{ lb/ton})(520.1 \text{ tons/day})(359 \text{ days/yr}) \\ &\quad + (0.71 \text{ lb/ton})(520.1 \text{ tons/day})(6 \text{ days/yr}) = 93,706 \text{ lb/yr} \end{aligned}$$

**N-1662-2-15:**

Rated Throughput: 352.1 tons/day – Current PTO

$$\begin{aligned} \text{NO}_x &= (3.6 \text{ lb/ton})(520.1 + 352.1 + 352.1 + 637.9) \text{ tons/day} \\ &\quad \times (365 \text{ days/yr})(975.3 / 3,458) = 690,136 \text{ lb/yr} \\ \text{CO} &= (1.0 \text{ lb/ton})(352.1 \text{ tons/day})(365 \text{ days/yr}) = 128,517 \text{ lb/yr} \\ \text{VOC} &= (0.25 \text{ lb/ton})(352.1 \text{ tons/day})(365 \text{ days/yr}) = 32,129 \text{ lb/yr} \\ \text{SO}_x &= (0.99 \text{ lb/ton})(352.1 \text{ tons/day})(365 \text{ days/yr}) = 127,231 \text{ lb/yr} \end{aligned}$$

The maximum permitted amount of emission control system by-pass time is 144 hr/yr (6 days/yr). Therefore, the maximum annual emissions would occur if the unit operated 6 days in emission control system by-pass mode and 359 days in normal mode.

$$\begin{aligned} \text{PM}_{10} &= (0.49 \text{ lb/ton})(352.1 \text{ tons/day})(359 \text{ days/yr}) \\ &\quad + (0.71 \text{ lb/ton})(352.1 \text{ tons/day})(6 \text{ days/yr}) = 63,438 \text{ lb/yr} \end{aligned}$$

**N-1662-3-15:**

Rated Throughput: 352.1 tons/day – Current PTO

$$\begin{aligned} \text{NO}_x &= (3.6 \text{ lb/ton})(520.1 + 352.1 + 352.1 + 637.9) \text{ tons/day} \\ &\quad \times (365 \text{ days/yr})(873.2 / 3,458) = 617,889 \text{ lb/yr} \\ \text{CO} &= (0.01 \text{ lb/ton})(352.1 \text{ tons/hr})(365 \text{ days/yr}) = 1,285 \text{ lb/yr} \\ \text{VOC} &= (0.25 \text{ lb/ton})(352.1 \text{ tons/hr})(365 \text{ days/yr}) = 32,129 \text{ lb/yr} \\ \text{SO}_x &= (0.99 \text{ lb/ton})(352.1 \text{ tons/hr})(365 \text{ days/yr}) = 127,231 \text{ lb/yr} \end{aligned}$$

The maximum permitted amount of emission control system by-pass time is 144 hr/yr (6 days/yr). Therefore, the maximum annual emissions would occur if the unit operated 6 days in emission control system by-pass mode and 359 days in normal mode.

$$\begin{aligned} \text{PM}_{10} &= (0.49 \text{ lb/ton})(352.1 \text{ tons/day})(359 \text{ days/yr}) \\ &\quad + (0.71 \text{ lb/ton})(352.1 \text{ tons/day})(6 \text{ days/yr}) = 63,438 \text{ lb/yr} \end{aligned}$$

**N-1662-4-15:**

Rated Throughput: 637.9 tons/hr – Applicant

$$\begin{aligned} \text{NO}_x &= (3.6 \text{ lb/ton})(520.1 + 352.1 + 352.1 + 637.9) \text{ tons/day} \\ &\quad \times (365 \text{ days/yr})(829.3 / 3,458) = 586,825 \text{ lb/yr} \\ \text{CO} &= (0.20 \text{ lb/ton})(637.9 \text{ tons/hr})(365 \text{ days/yr}) = 46,567 \text{ lb/yr} \\ \text{VOC} &= (0.23 \text{ lb/ton})(637.9 \text{ tons/hr})(365 \text{ days/yr}) = 53,552 \text{ lb/yr} \\ \text{SO}_x &= (0.99 \text{ lb/ton})(637.9 \text{ tons/hr})(365 \text{ days/yr}) = 230,505 \text{ lb/yr} \end{aligned}$$

The maximum permitted amount of emission control system by-pass time is 144 hr/yr (6 days/yr). Therefore, the maximum annual emissions would occur if the

unit operated 6 days in emission control system by-pass mode and 359 days in normal mode.

$$\text{PM}_{10} = (0.45 \text{ lb/ton})(637.9 \text{ tons/day})(359 \text{ days/yr}) \\ + (0.71 \text{ lb/ton})(637.9 \text{ tons/day})(6 \text{ days/yr}) = 105,770 \text{ lb/yr}$$

**Postmodification:**

**N-1662-1-15:**

Rated Throughput: 520.1 tons/day – Current PTO (no change)

$$\text{NO}_x = (1.4 \text{ lb/ton})(520.1 \text{ tons/day})(365 \text{ days/yr}) = 265,771 \text{ lb/yr}$$
$$\text{CO} = (0.04 \text{ lb/ton})(520.1 \text{ tons/day})(365 \text{ days/yr}) = 7,593 \text{ lb/yr}$$
$$\text{VOC} = (0.23 \text{ lb/ton})(520.1 \text{ tons/day})(365 \text{ days/yr}) = 43,662 \text{ lb/yr}$$
$$\text{SO}_x = (0.99 \text{ lb/ton})(520.1 \text{ tons/day})(365 \text{ days/yr}) = 187,938 \text{ lb/yr}$$

The maximum permitted amount of emission control system by-pass time is 144 hr/yr (6 days/yr). Therefore, the maximum annual emissions would occur if the unit operated 6 days in emission control system by-pass mode and 359 days in normal mode.

$$\text{PM}_{10} = (0.45 \text{ lb/ton})(520.1 \text{ tons/day})(359 \text{ days/yr}) \\ + (0.71 \text{ lb/ton})(520.1 \text{ tons/day})(6 \text{ days/yr}) = 86,238 \text{ lb/yr}$$

**N-1662-2-16:**

Rated Throughput: 352.1 tons/day – Current PTO (no change)

$$\text{NO}_x = (1.4 \text{ lb/ton})(352.1 \text{ tons/day})(365 \text{ days/yr}) = 179,923 \text{ lb/yr}$$
$$\text{CO} = (0.9 \text{ lb/ton})(352.1 \text{ tons/day})(365 \text{ days/yr}) = 115,665 \text{ lb/yr}$$
$$\text{VOC} = (0.23 \text{ lb/ton})(352.1 \text{ tons/day})(365 \text{ days/yr}) = 29,559 \text{ lb/yr}$$
$$\text{SO}_x = (0.99 \text{ lb/ton})(352.1 \text{ tons/day})(365 \text{ days/yr}) = 127,231 \text{ lb/yr}$$

The maximum permitted amount of emission control system by-pass time is 144 hr/yr (6 days/yr). Therefore, the maximum annual emissions would occur if the unit operated 6 days in emission control system by-pass mode and 359 days in normal mode.

$$\text{PM}_{10} = (0.45 \text{ lb/ton})(352.1 \text{ tons/day})(359 \text{ days/yr}) \\ + (0.71 \text{ lb/ton})(352.1 \text{ tons/day})(6 \text{ days/yr}) = 58,382 \text{ lb/yr}$$

**N-1662-3-16:**

Rated Throughput: 352.1 tons/day – Current PTO (no change)

$$\text{NO}_x = (1.4 \text{ lb/ton})(352.1 \text{ tons/day})(365 \text{ days/yr}) = 179,923 \text{ lb/yr}$$
$$\text{CO} = (0.01 \text{ lb/ton})(352.1 \text{ tons/hr})(365 \text{ days/yr}) = 1,285 \text{ lb/yr}$$
$$\text{VOC} = (0.23 \text{ lb/ton})(352.1 \text{ tons/hr})(365 \text{ days/yr}) = 29,559 \text{ lb/yr}$$



$$SO_x = (0.99 \text{ lb/ton})(352.1 \text{ tons/hr})(365 \text{ days/yr}) = 127,231 \text{ lb/yr}$$

The maximum permitted amount of emission control system by-pass time is 144 hr/yr (6 days/yr). Therefore, the maximum annual emissions would occur if the unit operated 6 days in emission control system by-pass mode and 359 days in normal mode.

$$PM_{10} = (0.45 \text{ lb/ton})(352.1 \text{ tons/day})(359 \text{ days/yr}) + (0.71 \text{ lb/ton})(352.1 \text{ tons/day})(6 \text{ days/yr}) = 58,382 \text{ lb/yr}$$

**N-1662-4-17:**

Rated Throughput: 637.9 tons/hr – Current PTO (no change)

$$NO_x = (1.3 \text{ lb/ton})(637.9 \text{ tons/day})(365 \text{ days/yr}) = 302,684 \text{ lb/yr}$$

$$CO = (0.20 \text{ lb/ton})(637.9 \text{ tons/hr})(365 \text{ days/yr}) = 46,567 \text{ lb/yr}$$

$$VOC = (0.23 \text{ lb/ton})(637.9 \text{ tons/hr})(365 \text{ days/yr}) = 53,552 \text{ lb/yr}$$

$$SO_x = (0.99 \text{ lb/ton})(637.9 \text{ tons/hr})(365 \text{ days/yr}) = 230,505 \text{ lb/yr}$$

The maximum permitted amount of emission control system by-pass time is 144 hr/yr (6 days/yr). Therefore, the maximum annual emissions would occur if the unit operated 6 days in emission control system by-pass mode and 359 days in normal mode.

$$PM_{10} = (0.45 \text{ lb/ton})(637.9 \text{ tons/day})(359 \text{ days/yr}) + (0.71 \text{ lb/ton})(637.9 \text{ tons/day})(6 \text{ days/yr}) = 105,770 \text{ lb/yr}$$

**D. Increase in Permitted Emissions (IPE)**

**1. Quarterly IPE**

**N-1662-1-15:**

$$NO_x = 265,771 \text{ lb/yr} - 552,081 \text{ lb/yr} = -286,310 \text{ lb/yr} (-71,577.5 \text{ lb/qtr})$$

$$CO = 7,593 \text{ lb/yr} - 7,593 \text{ lb/yr} = 0 \text{ lb/yr} (0 \text{ lb/qtr})$$

$$VOC = 43,662 \text{ lb/yr} - 47,459 \text{ lb/yr} = -3,797 \text{ lb/yr} (-949.25 \text{ lb/qtr})$$

$$SO_x = 187,938 \text{ lb/yr} - 187,938 \text{ lb/yr} = 0 \text{ lb/yr} (0 \text{ lb/qtr})$$

$$PM_{10} = 86,238 \text{ lb/yr} - 93,706 \text{ lb/yr} = -7,468 \text{ lb/yr} (-1,867 \text{ lb/qtr})$$

The emission profile for this ATC will include the following:

	NOx (lb)	SOx (lb)	PM10 (lb)	CO (lb)	VOC (lb)
Annual PE	265,771	187,938	86,238	7,593	43,662
Daily PE	728.1	514.9	369.3	20.8	119.6
Δ PE (Qtr 1)	-71,577	0	-1,867	0	-949
Δ PE (Qtr 2)	-71,577	0	-1,867	0	-949
Δ PE (Qtr 3)	-71,578	0	-1,867	0	-949
Δ PE (Qtr 4)	-71,578	0	-1,867	0	-950

**N-1662-2-16:**

NOx = 179,923 lb/yr – 690,136 lb/yr = -510,213 lb/yr (-127,553.25 lb/qtr)  
CO = 115,665 lb/yr – 128,517 lb/yr = -12,852 lb/yr (-3,213 lb/qtr)  
VOC = 29,559 lb/yr – 32,129 lb/yr = -2,570 lb/yr (-642.5 lb/qtr)  
SOx = 127,231 lb/yr – 127,231 lb/yr = 0 lb/yr (0 lb/qtr)  
PM10 = 58,382 lb/yr – 63,438 lb/yr = -5,056 lb/yr (-1,264 lb/qtr)

The emission profile for this ATC will include the following:

	NOx (lb)	SOx (lb)	PM10 (lb)	CO (lb)	VOC (lb)
Annual PE	179,923	127,231	58,382	115,665	29,559
Daily PE	492.9	348.6	250.0	316.9	81.0
Δ PE (Qtr 1)	-127,553	0	-1,264	-3,213	-642
Δ PE (Qtr 2)	-127,553	0	-1,264	-3,213	-642
Δ PE (Qtr 3)	-127,553	0	-1,264	-3,213	-643
Δ PE (Qtr 4)	-127,554	0	-1,264	-3,213	-643

**N-1662-3-16:**

NOx = 179,923 lb/yr – 617,889 lb/yr = 437,996 lb/yr (-109,491.5 lb/qtr)  
CO = 1,285 lb/yr – 1,285 lb/yr = 0 lb/yr (0 lb/qtr)  
VOC = 29,559 lb/yr – 32,129 lb/yr = -2,570 lb/yr (-642.5 lb/qtr)  
SOx = 127,231 lb/yr – 127,231 lb/yr = 0 lb/yr (0 lb/qtr)  
PM10 = 58,382 lb/yr – 63,438 lb/yr = 5,056 lb/yr (-1,264 lb/qtr)

The emission profile for this ATC will include the following:

	NOx (lb)	SOx (lb)	PM10 (lb)	CO (lb)	VOC (lb)
Annual PE	179,923	127,231	58,382	1,285	29,559
Daily PE	492.9	348.6	250.0	3.5	81.0
Δ PE (Qtr 1)	-109,491	0	-1,264	0	-642
Δ PE (Qtr 2)	-109,491	0	-1,264	0	-642
Δ PE (Qtr 3)	-109,492	0	1,264	0	-643
Δ PE (Qtr 4)	-109,492	0	-1,264	0	-643

**N-1662-4-17:**

NOx = 302,684 lb/yr – 586,825 lb/yr = -284,141 lb/yr (-71,035.25 lb/qtr)

CO = 46,567 lb/yr – 46,567 lb/yr = 0 lb/yr (0 lb/qtr)

VOC = 53,552 lb/yr – 53,552 lb/yr = 0 lb/yr (0 lb/qtr)

SOx = 230,505 lb/yr – 230,505 lb/yr = 0 lb/yr (0 lb/qtr)

PM10 = 105,770 lb/yr – 105,770 lb/yr = 0 lb/yr (0 lb/qtr)

The emission profile for this ATC will include the following:

	NOx (lb)	SOx (lb)	PM10 (lb)	CO (lb)	VOC (lb)
Annual PE	302,684	230,505	105,770	46,567	53,552
Daily PE	829.3	631.5	452.9	127.6	146.7
Δ PE (Qtr 1)	-71,035	0	0	0	0
Δ PE (Qtr 2)	-71,035	0	0	0	0
Δ PE (Qtr 3)	-71,035	0	0	0	0
Δ PE (Qtr 4)	-71,036	0	0	0	0

**2. Adjusted Increase in Permitted Emissions (AIPE)**

AIPE is used to determine whether or not Best Available Control Technology (BACT) is required for modified units. As shown in section VIII (Rule 2201 Compliance), this permitting action is exempt from BACT. Therefore, AIPE calculations are not necessary.

## E. Facility Emissions

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

The contributions for units N-1662-1-14, N-1662-2-15, N-1662-3-15 and N-1662-4-15 are calculated in section VII.C.2 of this document and the others are from the Application Review document for project N-1120773.

Permit #	SSPE1 (lb/yr)				
	NOx	CO	VOC	SOx	PM10
N-1662-1-14	552,081	7,593	47,459	187,938	93,706
N-1662-2-15	690,136	128,517	32,129	127,231	63,438
N-1662-3-15	617,889	1,285	32,129	127,231	63,438
N-1662-4-15	586,825	46,567	53,552	230,505	105,770
N-1662-5-3	0	0	0	0	1,840
N-1662-6-6	0	0	0	0	27,156
N-1662-7-3	0	0	0	0	114
N-1662-8-7	1,199	1,890	78	1,552	11,570
N-1662-10-3	5,994	1,297	488	2	171
N-1662-11-3	5,994	1,297	488	2	171
N-1662-12-3	5,994	1,297	488	2	171
N-1662-14-4	0	0	0	0	112,524
N-1662-15-3	324	1,350	27	26	108
Total w/o ERC's	2,466,436	191,093	166,838	674,489	480,177
ERC N-3-2	379,472	---	---	---	---
ERC N-54-2	85,737	---	---	---	---
ERC N-56-2	305,681	---	---	---	---
ERC N-107-2	326,978	---	---	---	---
ERC N-3-3	---	3,417	---	---	---
ERC N-56-3	---	2,044	---	---	---
ERC N-161-4	---	---	---	---	92,898
SSPE2	3,564,304	196,554	166,838	674,489	573,075

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

Permit #	SSPE2 (lb/yr)				
	NOx	CO	VOC	SOx	PM10
N-1662-1-15	265,771	7,593	43,662	187,938	86,238
N-1662-2-16	179,923	115,665	29,559	127,231	58,382
N-1662-3-16	179,923	1,285	29,559	127,231	58,382
N-1662-4-17	302,684	46,567	53,552	230,505	105,770
N-1662-5-3	0	0	0	0	1,840
N-1662-6-6	0	0	0	0	27,156
N-1662-7-3	0	0	0	0	114
N-1662-8-7	1,199	1,890	78	1,552	11,570
N-1662-10-3	5,994	1,297	488	2	171
N-1662-11-3	5,994	1,297	488	2	171
N-1662-12-3	5,994	1,297	488	2	171
N-1662-14-4	0	0	0	0	112,524
N-1662-15-3	324	1,350	27	26	108
Total w/o ERC's	947,806	178,241	157,901	674,489	462,597
ERC N-3-2	379,472	---	---	---	---
ERC N-54-2	85,737	---	---	---	---
ERC N-56-2	305,681	---	---	---	---
ERC N-107-2	326,978	---	---	---	---
ERC N-3-3	---	3,417	---	---	---
ERC N-56-3	---	2,044	---	---	---
ERC N-161-4	---	---	---	---	92,898
SSPE2	2,045,674	183,702	157,901	674,489	555,495

## 3. Stationary Source Increase in Permitted Emissions (SSIPE)

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

The SSPE1 and SSPE2 balances are from sections VII.E.1 and VII.E.2 of this document. Since only positive SSIPE values have meaning, negative values will be set to zero.

	SSPE2 (lb/yr)	SSPE1 (lb/yr)	SSIPE (lb/yr)
NOx	2,045,674	3,564,304	0
CO	183,702	196,554	0
VOC	157,901	166,838	0
SOx	674,489	674,489	0
PM10	555,495	573,075	0

## 4. Baseline Emissions

Baseline Emissions are used to determine the quantity of offsets required. As shown in section VIII (Rule 2201 Compliance), this permitting is exempt from offsets. Therefore, Baseline Emission calculations are not necessary.

## F. Major Source Determination

### Rule 2201 Major Source Determination:

The Major Source thresholds, the facility potentials to emit and whether or not the facility is a Major Source are shown on the following table. The Major Source thresholds are from Section 3.24.1 of Rule 2201 and the facility PE's are from section VII.E.2 of this document.

Pollutant	Threshold (lb/yr)	Facility PE (lb/yr)	Major Source
NOx	20,000	947,806	Yes
CO	200,000	178,241	Yes
VOC	20,000	157,901	Yes
SOx	140,000	674,489	Yes
PM10	140,000	462,597	Yes

### Rule 2410 Major Source Determination:

The Major Source thresholds, the facility potentials to emit and whether or not the facility is a Major Source are shown on the following table.

Pollutant	Threshold (tons/yr)	Facility PE (lb/yr)	Major Source
NOx	250	473.9	Yes
CO	250	The facility is a Rule 2410 Major Source for NOx. Therefore, the facility is a PSD Major Source and determinations for the other pollutants are not necessary.	
VOC	250		
SOx	250		
PM10	250		
PM	250		
CO <sub>2e</sub>	100,000		

**G. Major Modification Determination**

**SB-288 Major Modification:**

The purpose of SB-288 Major Modification calculations is to determine the following:

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

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

The SB-288 Major Modification Thresholds from section 3.36 of District Rule 2201 are shown on the following table:

Pollutant	Threshold (lb/yr)
NOx	50,000
VOC	50,000
SOx	80,000
PM10	30,000

NEI = PE2 – BAE, where  
 PE2 is the postmodification potential to emit  
 BAE is the Baseline Actual Emissions

The table below shows the Baseline Actual Emissions (BAE) and the postmodification potentials to emit (PE2) of the units in this project, as well as the Net Emission Increase (NEI) and whether or not an SB-288 Major Modification is triggered. The BAE were provided by the applicant and are tabulated in Appendix D of this document. The PE2 values are from Section VII.C.1 of this document.

$$PE2_{NOx} = 265,771 \text{ lb/yr} + 179,923 \text{ lb/yr} + 179,923 \text{ lb/yr} + 302,684 \text{ lb/yr} = 928,301 \text{ lb/yr}$$

$$PE2_{VOC} = 43,662 \text{ lb/yr} + 29,559 \text{ lb/yr} + 29,559 \text{ lb/yr} + 53,552 \text{ lb/yr} = 156,332 \text{ lb/yr}$$

$$PE2_{SOx} = 187,938 \text{ lb/yr} + 127,231 \text{ lb/yr} + 127,231 \text{ lb/yr} + 230,505 \text{ lb/yr} = 672,905 \text{ lb/yr}$$

$$PE2_{PM10} = 86,238 \text{ lb/yr} + 58,382 \text{ lb/yr} + 58,382 \text{ lb/yr} + 105,770 \text{ lb/yr} = 308,772 \text{ lb/yr}$$

Pollutant	PE2 (lb/yr)	BAE (lb/yr)	NEI (lb/yr)	SB-288 Major Modification
NOx	928,301	424,520	503,781	Yes
VOC	156,332	4,060	152,272	Yes
SOx	672,905	516,800	156,105	Yes
PM10	308,772	69,800	238,972	Yes

This permitting action is an SB-288 Major Modification for NOx, VOC, SOx and PM10.

### **Federal Major Modification:**

As shown in section VII.F of this document, the facility is a Major Source for NOx, VOC, SOx and PM10. Therefore, the proposed permitting action may be a Federal Major Modification. The Federal Major Modification thresholds are:

Pollutant	Threshold (lb/yr)
NOx	0
VOC	0
SOx	80,000
PM10	30,000
PM2.5	20,000 of direct PM2.5 or
	80,000 of SO <sub>2</sub> or
	80,000 of NOx

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

The rating, the potential to emit, nor the utilization rate of the furnaces will increase. Therefore, the above referenced draft policy allows the unused baseline capacity to be included in the Emission Increase (EI) calculation. EI is as follows:

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

PAE = post-project projected actual emissions

BAE = pre-project baseline actual emissions

unused baseline capacity = PE1 - BAE

$EI = PE2 - BAE - (PE1 - BAE)$

$= PE2 - BAE - PE1 + BAE$

$= PE2 - PE1$

As shown in section VII.C of this document, PE2 will not exceed PE1 for any pollutant. Therefore, this permitting action is not a Federal Major Modification.

## **VIII. Compliance**

### **Rule 2201 New and Modified Stationary Source Review Rule**

#### **A. BACT**

This modification is solely to modify emission limits for compliance with District Rule 4354, therefore, per section 4.3.2 of rule 2201, this permitting action is exempt from



BACT. Below are the section 4.2.3 requirements and a discussion regarding how compliance will be met:

- 4.2.3.1 There shall be no increase in the physical or operational design of the existing facility, except for those changes to the design needed for the installation or modification of the emission control technique itself;

The proposed modification will not result in any increase in the physical or operational design capacity of the facility. Therefore, the modification complies with this requirement.

- 4.2.3.2 There shall be no increase in the permitted rating or permitted operating schedule of the permitted unit;

This modification will not allow an increase in the permitted rating or permitted operating schedule of any of the furnaces involved in this project. Therefore, the modification complies with this requirement.

- 4.2.3.3 There shall be no increase in emissions from the stationary source that will cause or contribute to any violation of a National Ambient Air Quality Standard, Prevention of Significant Deterioration Increment, or Air quality Related Value in class I areas;

This modification will not allow any increases in emissions from the stationary source. Therefore, the modification complies with this requirement.

- 4.2.3.4 The project shall not result in an increase in permitted emissions or potential to emit of more than 25 tons per year of NO<sub>x</sub>, or 25 tons per year of VOC, or 15 tons per year of SO<sub>x</sub>, or 15 tons per year of PM<sub>10</sub>, or 50 tons per year of CO;

This modification will not result in any increases in emissions. Therefore, the modification complies with this requirement.

- 4.2.3.5 The project shall not constitute a Federal Major Modification

As shown in section VII.G of this document, this project is not a Federal Major Modification.

This project meets all of the requirements of section 4.2.3. Therefore, the equipment is exempt from BACT.

## **B. OFFSETS**

This modification is solely to modify emission limits for compliance with District Rule 4354, therefore, per section 4.6.8 of rule 2201, this permitting action is exempt from BACT. Below are the section 4.6.8 requirements and a discussion regarding how compliance will be met:

- 4.6.8.1 There shall be no increase in the physical or operational design of the existing facility, except for those changes to the design needed for the installation or modification of the emission control technique itself;

The proposed modification will not result in any increase in the physical or operational design capacity of the facility. Therefore, the modification complies with this requirement.

- 4.6.8.2 There shall be no increase in the permitted rating or permitted operating schedule of the permitted unit;

This modification will not allow an increase in the permitted rating or permitted operating schedule of any of the furnaces involved in this project. Therefore, the modification complies with this requirement.

- 4.6.8.3 There shall be no increase in emissions from the stationary source that will cause or contribute to any violation of a National Ambient Air Quality Standard, Prevention of Significant Deterioration Increment or Air quality Related Value in class I areas;

This modification will not allow any increases in emissions from the stationary source. Therefore, the modification complies with this requirement.

- 4.6.8.4 The project shall not result in an increase in permitted emissions or potential to emit of more than 25 tons per year of NO<sub>x</sub>, or 25 tons per year of VOC, or 15 tons per year of SO<sub>x</sub>, or 15 tons per year of PM<sub>10</sub>, or 50 tons per year of CO;

This modification will not result in any increases in emissions. Therefore, the modification complies with this requirement.

This project meets all of the requirements of section 4.6.8. Therefore, the equipment is exempt from offsets.

## **C. PUBLIC NOTIFICATION**

### **1. Applicability**

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

- a. New Major Sources
- b. Major Modifications
- c. New emission units with a PE > 100 lb/day of any one pollutant (IPE Notifications)

- d. Modifications with SSPE1 below an offset threshold and SSPE 2 above an offset threshold on a pollutant by pollutant basis (Existing Facility Offset Threshold Exceedence Notification)
- e. New stationary sources with SSPE2 exceeding offset thresholds (New Facility Offset Threshold Exceedence Notification)
- f. Any permitting action with a SSIPE exceeding 20,000 lb/yr for any one pollutant. (SSIPE Notice)

**a. New Major Source Notice Determination:**

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

**b. Major Modification Notice:**

As shown in section VIII.G of this document, this permitting action is an SB-288 Major Modification for NO<sub>x</sub>, VOC, SO<sub>x</sub> and PM<sub>10</sub>. Therefore a notification is required.

**c. PE Notification:**

A notification is required for each new emission unit with the potential to emit more than 100 pounds per day of any one affected pollutant.

This project does not include any new emission units, therefore, a public notice is not required.

**d. Existing Facility Offset Threshold Exceedence Notification**

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

**e. New Facility Offset Threshold Exceedence Notification**

This is an existing facility. Therefore, a public notification is not required.

**f. SSIPE Notification:**

A notification is required for any permitting action that results in a SSIPE of more than 20,000 lb/yr of any affected pollutant. As shown in section VII.E.3 of this document, the SSIPE of each pollutant will be less than 20,000 pounds per year. An SSIPE notification is not required.

**2. Public Notice**

As shown above, a public notification is required because this permitting action is an SB-288 Major Modification.

## **D. DAILY EMISSION LIMITS**

### **N-1662-1-15**

The amount of glass produced shall not exceed 520.1 tons during any one day.

The NO<sub>x</sub> emissions shall not exceed 1.4 lb/ton of glass produced. This performance based limit is to enforce the NO<sub>x</sub> emission reductions granted by emission reduction credit certificate N-106-2.

The CO emissions shall not exceed 0.04 lb/ton of glass produced. This performance based limit is to enforce the CO emission reductions granted by emission reduction credit certificate N-106-3.

The VOC emissions shall not exceed 0.23 lb/ton of glass produced.

The combined SO<sub>x</sub> emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with equal to or greater than 25% by weight mixed color cullet, shall not exceed 0.99 lb/ton of glass produced (over a rolling 30 day average).

The combined SO<sub>x</sub> emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with less than 25% by weight mixed color cullet, shall not exceed 0.81 lb/ton of glass produced (over a rolling 30 day average).

The PM<sub>10</sub> emissions, except during full or partial emission control system bypass episodes, shall not exceed 0.45 lb/ton of glass produced.

The PM<sub>10</sub> emissions, during full or partial emission control system bypass episodes, shall not exceed 0.71 lb/ton of glass produced.

During furnace idling, NO<sub>x</sub> emissions shall not exceed 780.2 pounds in any one day.

During furnace idling, CO emissions shall not exceed 520.1 pounds in any one day.

During furnace idling, VOC emissions shall not exceed 130.0 pounds in any one day.

During furnace idling, SO<sub>x</sub> emissions shall not exceed 572.1 pounds in any one day when producing glass with equal to or greater than 25% by weight mixed color cullet.

During furnace idling, SO<sub>x</sub> emissions shall not exceed 468.1 pounds in any one day when producing glass with less than 25% by weight mixed color cullet.

During furnace idling, PM<sub>10</sub> emissions shall not exceed 260.1 pounds in any one day.

## **N-1662-2-16**

The amount of glass produced shall not exceed 352.1 tons during any one day.

The NOx emissions shall not exceed 1.4 lb/ton of glass produced. This performance based limit is to enforce the NOx emission reductions granted by emission reduction credit certificate N-54-2.

The CO emissions shall not exceed 0.90 lb/ton of glass produced.

The VOC emissions shall not exceed 0.23 lb/ton of glass produced.

The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with equal to or greater than 25% by weight mixed color cullet, shall not exceed 0.99 lb/ton of glass produced (over a rolling 30 day average).

The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with less than 25% by weight mixed color cullet, shall not exceed 0.81 lb/ton of glass produced (over a rolling 30 day average).

The PM10 emissions, except during full or partial emission control system bypass episodes, shall not exceed 0.45 lb/ton of glass produced.

The PM10 emissions, during full or partial emission control system bypass episodes, shall not exceed 0.71 lb/ton of glass produced.

During furnace idling, NOx emissions shall not exceed 528.2 pounds in any one day.

During furnace idling, CO emissions shall not exceed 352.1 pounds in any one day.

During furnace idling, VOC emissions shall not exceed 88.0 pounds in any one day.

During furnace idling, SOx emissions shall not exceed 387.3 pounds in any one day when producing glass with equal to or greater than 25% by weight mixed color cullet.

During furnace idling, SOx emissions shall not exceed 316.9 pounds in any one day when producing glass with less than 25% by weight mixed color cullet.

During furnace idling, PM10 emissions shall not exceed 176.1 pounds in any one day.

## **N-1662-3-16**

The amount of glass produced shall not exceed 352.1 tons during any one day.

The NOx emissions shall not exceed 1.4 lb/ton of glass produced. This performance based limit is to enforce the NOx emission reductions granted by emission reduction credit certificate N-56-2.

The CO emissions shall not exceed 0.01 lb/ton of glass produced. This performance based limit is to enforce the CO emission reductions granted by emission reduction credit certificate N-56-3.

The VOC emissions shall not exceed 0.23 lb/ton of glass produced.

The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with equal to or greater than 25% by weight mixed color cullet, shall not exceed 0.99 lb/ton of glass produced (over a rolling 30 day average).

The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with less than 25% by weight mixed color cullet, shall not exceed 0.81 lb/ton of glass produced (over a rolling 30 day average).

The PM10 emissions, except during full or partial emission control system bypass episodes, shall not exceed 0.45 lb/ton of glass produced.

The PM10 emissions, during full or partial emission control system bypass episodes, shall not exceed 0.71 lb/ton of glass produced.

During furnace idling, NOx emissions shall not exceed 528.2 pounds in any one day.

During furnace idling, CO emissions shall not exceed 352.1 pounds in any one day.

During furnace idling, VOC emissions shall not exceed 88.0 pounds in any one day.

During furnace idling, SOx emissions shall not exceed 387.3 pounds in any one day when producing glass with equal to or greater than 25% by weight mixed color cullet.

During furnace idling, SOx emissions shall not exceed 316.9 pounds in any one day when producing glass with less than 25% by weight mixed color cullet.

During furnace idling, PM10 emissions shall not exceed 176.1 pounds in any one day.

## **N-1662-4-17**

The amount of glass produced shall not exceed 637.9 tons during any one day.

The NO<sub>x</sub> emissions shall not exceed 1.3 lb/ton of glass produced. This performance based limit is to enforce the NO<sub>x</sub> emission reductions granted by emission reduction credit certificate N-107-2.

The CO emissions shall not exceed 0.20 lb/ton of glass produced.

The VOC emissions shall not exceed 0.23 lb/ton of glass produced.

The combined SO<sub>x</sub> emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with equal to or greater than 25% by weight mixed color cullet, shall not exceed 0.99 lb/ton of glass produced (over a rolling 30 day average).

The combined SO<sub>x</sub> emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with less than 25% by weight mixed color cullet, shall not exceed 0.81 lb/ton of glass produced (over a rolling 30 day average).

The PM<sub>10</sub> emissions, except during full or partial emission control system bypass episodes, shall not exceed 0.45 lb/ton of glass produced.

The PM<sub>10</sub> emissions, during full or partial emission control system bypass episodes, shall not exceed 0.71 lb/ton of glass produced.

During furnace idling, NO<sub>x</sub> emissions shall not exceed 956.9 pounds in any one day.

During furnace idling, CO emissions shall not exceed 637.9 pounds in any one day.

During furnace idling, VOC emissions shall not exceed 159.5 pounds in any one day.

During furnace idling, SO<sub>x</sub> emissions shall not exceed 701.7 pounds in any one day while producing glass with equal to or greater than 25% by weight mixed color cullet.

During furnace idling, SO<sub>x</sub> emissions shall not exceed 574.1 pounds in any one day while producing glass with less than 25% by weight mixed color cullet.

During furnace idling, PM<sub>10</sub> emissions shall not exceed 319.0 pounds in any one day.

### **E. Air Quality Impact Analysis:**

Section 4.14 of this rule requires that an ambient air quality analysis (AAQA) be conducted to determine whether the operation of the proposed equipment will cause or make worse a violation of an air quality standard. This permitting action will not

authorize an increase in the emissions of any air contaminant, therefore, an AAQA is not necessary.

#### **F. Alternative Siting Analysis**

Section 21002 of the Public Resources Code states that projects should not be approved as proposed if there are feasible alternatives or feasible mitigation measures that would substantially lessen the environmental impacts associated with that project. This section also states that in the event of specific economic, social or other conditions would make such a project infeasible then the project may be approved in spite of the significant effects.

The glass manufacturing plant includes a large amount of processing equipment and infrastructure and requiring the plant to relocate would cause a significant economic impact. Per § 21002 of the Public Resources Code, relocation of the equipment is not required.

#### **G. Compliance by Other Owned, Operated or Controlled Sources**

Section 4.15.2 of this rule requires that the owner of a new Major Source or a source undergoing a Federal Major Modification to demonstrate to the satisfaction of the District that all other Major Sources owned by such person and operating in California are in compliance with all applicable emission limitations and standards. The facility is not a new Major Source and this permitting action is not a Federal Major Modification. Therefore, this section does not apply.

#### **H. Reconstructed Stationary Source Determination**

Per section 3.25.2 of this rule, a reconstructed Stationary Source shall be treated as a new Stationary Source and not as a modification. To ensure that the requirements of Rule 2201 are properly applied, a reconstructed Stationary Source determination is necessary. For the purpose of this analysis, the section 3.34 definition of Reconstructed Source will be used. The definition of Reconstructed Source is:

*any Stationary Source undergoing reconstruction where the fixed capital cost of the new components exceeds 50% of the fixed capital cost of a comparable, entirely new Stationary Source. Fixed capital cost is the capital needed to provide depreciable components. Reconstructed Source cost shall include only the cost of all emission-producing equipment and associated integral activities at the stationary source. A reconstructed Stationary Source shall be considered a new Stationary Source and not as a modification of an existing Stationary Source.*

The Stationary Source includes numerous pieces of emission producing equipment and related infrastructure. The cost of the proposed modifications will not exceed 50% of the value of the entire Stationary Source (including only the emission producing equipment and associated infrastructure). Therefore, the facility is not a reconstructed Stationary Source.



## **I. Compliance Assurance**

### **1. Source Testing**

The facility showed compliance with all of the emission limits that will be included on these Authorities to Construct during the previous source test (5/8/2012), therefore, an initial source test is not required. Annual NO<sub>x</sub>, CO, VOC, SO<sub>x</sub> and PM<sub>10</sub> testing may continue on its current schedule.

### **2. Monitoring**

Refer to section VIII (Rule 4354 Compliance and 40 CFR Part 64) for discussions of the monitoring requirements.

### **3. Record Keeping**

Refer to section VIII (Rule 4354 Compliance and 40 CFR Part 64) for discussions of the Rule 4354 and Compliance Assurance Monitoring rerecord keeping requirements.

To verify compliance with the throughput limits of these permits, records of the daily throughputs will be required.

### **4. Reporting**

As they apply to the equipment currently under consideration, only 40 CFR Part 64 (Compliance Assurance Monitoring) requires reporting. To ensure compliance with section 64.9 (Reporting and Record Keeping Requirements), the following condition will be placed on the ATC and PTO for each unit:

The facility operator shall submit the specific power monitoring reports required by 40 CFR Part 64.9.

## Rule 2410 Prevention of Significant Deterioration

As shown in section VII.F of this document, the facility is a PSD Source. Since the facility is more than 10 kilometers from each Class 1 area, whether or not any action is required depends on whether the project will have a Significant Emission Increase. If it will, then further action will be required. If it will not, then no further action is necessary.

### Emission Increase:

The rating, the potential to emit, nor the utilization rate of the furnaces will increase. Therefore, per District policy APR-1010 (12/18/2012 draft) the unused baseline capacity is to be included in the Emission Increase (EI) calculation. The EI, as calculated per the above referenced policy, is as follows:

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

$PAE = \text{post-project projected actual emissions (PE2)}$

$BAE = \text{pre-project baseline actual emissions (PE1)}$

$\text{unused baseline capacity} = PE1 - BAE$

$EI = PE2 - BAE - (PE1 - BAE)$   
 $= PE2 - BAE - PE1 + BAE$   
 $= PE2 - PE1$

As shown in section VII.C of this document, PE2 will not exceed PE1 for any pollutant. Therefore, EI is zero for each pollutant. The following table shows the PSD Major Modification thresholds, EI associated with this project and whether or not this permitting results in a PSD significant emission increase.

PSD Significant Emission Increase Determination: Emission Increase (Tons/yr)						
	NO <sub>2</sub>	SO <sub>2</sub>	CO	PM	PM <sub>10</sub>	CO <sub>2e</sub>
Emission Increases	0	0	0	0	0	0
PSD Significant Emission Increase Thresholds	40	40	100	25	15	75,000
PSD Significant Emission Increase?	No	No	No	No	No	No

As can be seen, the emission increases associated with this project are less than the PSD significant emission increase thresholds. Therefore, this permitting action is not a PSD Major Modification.

## **Rule 2520 Federally Mandated Operating Permits**

The proposed permitting action is an SB-288 Major Modification and per sections 3.20.5 and 3.29 of this rule is a Significant Modification to the Title V permit. The applicant has proposed to receive the ATCs with Certificates of Conformity in accordance with the requirements of 40 CFR 70.6(c), 70.7 and 70.8. Therefore, the 45-day EPA comment period will be satisfied prior to the issuance of the ATCs. The following federally enforceable conditions will be placed on the Authorities to Construct:

*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).*

*Prior to operating with the modifications authorized by this Authority to Construct, the facility shall submit an application for an Administrative Amendment to its Title V permit.*

In accordance with Rule 2520, the application meets the procedural requirements of section 11.4 by including:

- A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs and
- The source's suggested draft permit (appendix A) and
- Certification by a responsible official (appendix D) that the proposed modification meets the criteria for use of significant permit modification procedures and a request that such procedures be used.

Per section 5.3.2 of this rule, the applicant must submit an application for a Significant Title V Permit Modification prior to operating with the requested changes.

## **Rule 4001 New Source Performance Standards**

40 CFR Part 60 Subpart CC Section 60.290(b) states that the requirements of this subpart apply to any facility that commenced construction or underwent a modification after June 15, 1979. The unit was installed prior to June 15, 1979 and has not undergone modifications as defined in section 60.2 since installation.

The units have undergone cold rebricking since their installations, but per section 60.14, such repairs are not considered modifications.

The furnaces are not subject to this subpart.

## **Rule 4002 National Emission Standards for Hazardous Air Pollutants**

40 CFR Part 63 Subpart SSSSSS – National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources

Compliance with the requirements of this subpart was determined during the processing of the applications for project N-1103820. A re-evaluation is not necessary.

#### **Rule 4101 Visible Emissions**

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

#### **Rule 4102 Nuisance**

##### **A. California Health & Safety Code 41700 (Risk Management Review)**

There will not be an increase in glass production, fuel usage or in any emission limit. Therefore, no increase in the emissions of any hazardous air pollutant (HAP) emissions will occur and there will not be an increase in health risk. A Risk Management Review is not required.

##### **B. Toxics BACT (T-BACT)**

There will not be an increase in HAP emissions, therefore, T-BACT is not required.

#### **Rule 4201 Particulate Matter Concentration**

This rule limits the particulate matter emission concentration to 0.1 gr/dscf.

The worst case particulate matter emission concentration will occur during operation with the emission control system (ESP and ceramic filter dust collector) by-passed. Compliance with the requirements of this rule was shown during the processing of the applications for project N-1052540 utilizing source test data. Continued compliance is expected.

## Rule 4202 Particulate Matter – Emission Rate

The purpose of this rule is to limit the TSP emission rate based on the throughput of the operation. The equation used to calculate the maximum allowable emission rate is:

$$E_{\max} = 17.31P^{0.16}, \text{ where } P > 30 \text{ tons/hr}$$

$$E_{\max} = 3.59P^{0.62}, \text{ where } P \leq 30 \text{ tons/hr}$$

Where: E = Maximum allowable emissions in lb/hr  
P = Process weight in tons/hr

### **N-1662-1-13 (furnace 1):**

Throughput: 21.67 tons/hr

PE: (21.67 tons/hr)(0.71 lb/ton) = 15.4 lb/hr

$$E_{\max} = 3.59(21.67)^{0.62} = 24.2 \text{ lb/hr}$$

The PM10 emissions will be less than applicable total particulate matter limit ( $E_{\max}$ ) calculated above. Compliance with total particulate matter limit is expected.

### **N-1662-2-14 (furnace 2):**

### **N-1662-3-14 (furnace 3):**

The throughput capacity and the potentials to emit of PM are the same for each of these units, therefore, the following applies to all of these furnaces.

Throughput: 14.67 tons/hr

PE: (14.67 tons/hr)(0.71 lb/ton) = 10.4 lb/hr

$$E_{\max} = 3.59(14.67)^{0.62} = 19.0 \text{ lb/hr}$$

The PM10 emissions will be less than applicable total particulate matter limit ( $E_{\max}$ ) calculated above. Compliance with total particulate matter limit is expected.

### **N-1662-4-14 (furnace 4):**

Throughput: 26.58 tons/hr

PE: (26.58 tons/hr)(0.71 lb/ton) = 18.9 lb/hr

$$E_{\max} = 3.59(26.58)^{0.62} = 27.4 \text{ lb/hr}$$

The PM10 emissions will be less than applicable total particulate matter limit ( $E_{\max}$ ) calculated above. Compliance with total particulate matter limit is expected.

## Rule 4354 Glass Melting Furnaces

### Emission Limits:

#### **NOx Emission Limits:**

Section 5.1.1 of this rule includes two container glass emission levels that become increasingly stringent (Tier 2 and Tier 3). This permitting action is to modify the permits for compliance with the Tier 3 emission limit. The Tier 3 limit for a single furnace is 1.5 lb/ton of glass pulled, however, the furnaces make up a multi-furnace battery. Per sections 5.1.2 and 9.7.1, furnace batteries are subject to a 10% air quality improvement deduction. Therefore, the applicable emission limit is:

$$\text{NOx Limit} = (1.5 \text{ lb/ton})(1-0.10) = 1.4 \text{ lb/ton of glass pulled}$$

Per section 5.1.1, the emission limit does not apply during periods of start-up, shutdown or idling.

The following table shows the proposed emission limits and whether compliance with the limit is expected.

Permit Number	NOx (lb/ton of glass produced)	Compliant
N-1662-1-15	1.4	Yes
N-1662-2-16	1.4	Yes
N-1662-3-16	1.4	Yes
N-1662-4-17	1.3	Yes

**CO and VOC Emission Limits:**

Section 5.2.1 of this rule includes CO and VOC emission limits. Those limits are 1.0 lb/ton and 0.25 lb/ton respectively - however, the furnaces make up a multi-furnace battery. Per sections 5.2.2 and 9.7.1, furnace batteries are subject to a 10% air quality improvement deduction. Therefore, the applicable emission limits are:

CO Limit =  $(1.0 \text{ lb/ton})(1-0.10) = 0.90 \text{ lb/ton}$  of glass pulled  
 VOC Limit =  $(0.25 \text{ lb/ton})(1-0.10) = 0.23 \text{ lb/ton}$  of glass pulled

Per section 5.2.1, the emission limit does not apply during periods of start-up, shutdown or idling.

The following table shows the proposed emission limits and whether compliance with the limit is expected.

Permit Number	Emission limits (lb per ton of glass produced)		Compliant
	CO	VOC	
N-1662-1-15	0.04	0.23	Yes
N-1662-2-16	0.90	0.23	Yes
N-1662-3-16	0.01	0.23	Yes
N-1662-4-17	0.20	0.23	Yes

**SOx Emission Limits:**

Section 5.3.2 of this rule includes SOx emission limits. Those limits are 1.1 lb/ton for oxy-fuel furnaces utilizing greater than or equal to 25.0% mixed color cullet and 0.9 lb/ton for oxy-fuel furnaces using less than 25% mixed color cullet. However, the furnaces make up a multi-furnace battery. Per sections 5.3.5 and 9.7.1, furnace batteries are subject to a 10% air quality improvement deduction. Therefore, the applicable emission limits are:

SOx ( $\geq 25.0\%$  mixed color cullet) =  $(1.1 \text{ lb/ton})(1-0.10) = 0.99 \text{ lb/ton}$  of glass pulled  
 SOx ( $< 25\%$  mixed color cullet) =  $(0.9 \text{ lb/ton})(1-0.10) = 0.81 \text{ lb/ton}$  of glass pulled

Per section 5.3.2, the emission limit does not apply during periods of start-up, shutdown or idling.

The following table shows the proposed emission limits and whether compliance with the limit is expected.

Permit Number	Emission limits (lb per ton of glass produced)		Compliant
	$\geq 25.0$ Mixed Color Cullet	$< 25\%$ Mixed Color Cullet	
N-1662-1-15	0.99	0.81	Yes
N-1662-2-16	0.99	0.81	Yes
N-1662-3-16	0.99	0.81	Yes
N-1662-4-17	0.99	0.81	Yes

**PM10 Emission Limits:**

Section 5.4.1 of this rule includes a PM10 emission limit. That limit is 0.50 lb/ton of glass pulled. However, the furnaces make up a multi-furnace battery and per sections 5.4.2 and 9.7.1, are subject to a 10% air quality improvement deduction. Therefore, the applicable emission limit is:

$$\text{PM10 Limit} = (0.50 \text{ lb/ton})(1-0.10) = 0.45 \text{ lb/ton of glass pulled}$$

Per section 5.4.1, the emission limit does not apply during periods of start-up, shutdown or idling.

The following table shows the proposed emission limits and whether compliance with the limit is expected.

Permit Number	PM10 (lb/ton of glass produced)	Compliant
N-1662-1-15	0.45	Yes
N-1662-2-16	0.45	Yes
N-1662-3-16	0.45	Yes
N-1662-4-17	0.45	Yes

**Idling Requirements:**

Section 5.7.2 states that the NOx, CO, VOC, SOx and PM10 emissions during idling shall not exceed the amount calculated utilizing the following equation:

$$E_{i, \text{max}} = E_i \times \text{Capacity}$$

Where:  $E_{i, \text{max}}$  is the maximum daily emissions of pollutant i during idling, in lb/day

$E_i$  is the applicable emission limit from Table 1, Table 2, Table 3 or Table 4 for pollutant I, in lb/ton of glass produced.

Capacity is the maximum daily capacity of the furnace, in tons of glass produced.

The following tables show  $E_i$ , the furnace capacity and  $E_{i, \text{max}}$ .

Note: The air quality benefit factor utilized in the non-idle emission factor calculations does not apply to idling emission limits.



**Idling Emissions for unit N-1662-1-15:**

Pollutant	Capacity (tons/day)	E <sub>i</sub> (lb/ton of glass produced)	E <sub>i, max</sub> (lb/day)
NOx	520.1	1.5 (Table 1)	780.2
CO		1.0 (Table 2)	520.1
VOC		0.25 (Table 2)	130.0
SOx ≥ 25.0% Colored Cullet		1.1 (Table 3)	572.1
SOx < 25.0% Colored Cullet		0.90 (Table 3)	468.1
PM10		0.50 (Table 4)	260.1

**Idling Emissions for unit N-1662-2-16 and N-1662-3-16:**

Pollutant	Capacity (tons/day)	E <sub>i</sub> (lb/ton of glass produced)	E <sub>i, max</sub> (lb/day)
NOx	352.1	1.5 (Table 1)	528.2
CO		1.0 (Table 2)	352.1
VOC		0.25 (Table 2)	88.0
SOx ≥ 25.0% Colored Cullet		1.1 (Table 3)	387.3
SOx < 25.0% Colored Cullet		0.90 (Table 3)	316.9
PM10		0.50 (Table 4)	176.1

**Idling Emissions for unit N-1662-4-17:**

Pollutant	Capacity (tons/day)	E <sub>i</sub> (lb/ton of glass produced)	E <sub>i, max</sub> (lb/day)
NOx	637.9	1.5 (Table 1)	956.9
CO		1.0 (Table 2)	637.9
VOC		0.25 (Table 2)	159.5
SOx ≥ 25.0% Colored Cullet		1.1 (Table 3)	701.7
SOx < 25.0% Colored Cullet		0.90 (Table 3)	574.1
PM10		0.50 (Table 4)	319.0

**Monitoring Requirements:**

**NOx Monitoring:**

Section 5.9.1 requires that NOx be monitored utilizing a Continuous Emissions Monitoring System (CEMS). The applicant currently monitors the NOx from the furnace battery utilizing such a device and will continue to do so. Battery monitoring is allowed by this section.

**CO and VOC Monitoring:**

Section 5.9.2.1 requires the use of a CO CEMS and section 5.9.2.2 requires the use of a VOC CEMS. However, section 5.5.2.3 allows the option of monitoring key system

parameters instead. The applicant is proposing to continue to monitor and record the oxygen to fuel ratio of the burners. The District has previously approved the monitoring of this key system operating parameter, therefore, further discussion is not necessary.

**SOx Monitoring:**

The applicant is proposing to comply with the SOx monitoring requirements by continuing to operate a SOx CEMS as allowed by section 5.9.3.1. A single CEMS will be utilized to monitor the total SOx emissions from the furnace battery as allowed by section 5.9.3.3.

**PM10 Monitoring:**

Section 5.9.4.1 requires that the applicant monitor and record key system operating parameters to satisfy the PM10 monitoring requirements. The permits currently require monitoring and recording of the specific power of the electrostatic precipitator. Specific power is a measure of the voltage and current supplied to the electrostatic precipitator. The District has previously approved the monitoring and recording of this key system operating parameter, therefore, further discussion is not necessary.

**Routine Maintenance of Add-On Emission Control Systems:**

Per section 5.10, the emission limits of section 5.1 through 5.4 do not apply during periods of routine maintenance of add-on control devices if:

*The combined duration of routine maintenance of all add-on controls does not exceed 144 hours per calendar year; and*

*Routine maintenance is conducted in a manner consistent with good air pollution control practices for minimizing emissions.*

The current Permits to Operate limit the annual ESP by-pass duration to 144 hours per year and to minimize the amount of material that must be discarded due to low quality, the facility must properly operate the furnaces during ESP by-pass episodes.

**Administrative Requirements:**

**Permitted Glass Production Capacity:**

Section 6.1 requires that the permit for each furnace include its production capacity. To comply with this requirement, the permits will continue to include the following capacity limits:

N-1662-1-15:	520.1 tons/day
N-1662-2-16:	352.1 tons/day
N-1662-3-16:	352.1 tons/day
N-1662-4-17:	637.9 tons/day

## **Record Keeping**

### **Sections 6.2.1 and 6.2.2:**

December 31, 2011 has passed, therefore, sections 6.2.1 and 6.2.2 are no longer in effect.

### **Section 6.3.1:**

To ensure compliance with the applicable record keeping requirements of this section, the following conditions will be placed on the Authorities to Construct and the Permits to Operate:

A daily record of the hours of operation, the amount of glass pulled from the furnace (in tons), the NO<sub>x</sub> emissions (in lb/ton of glass pulled), the SO<sub>x</sub> emissions (in lb/ton of glass pulled), the weight of mixed color mix cullet used, the total amount of cullet used (by weight) and the ratio of the mixed color cullet weight to the total cullet weight (in percent).

### **Section 6.3.2:**

CO, VOC and PM<sub>10</sub> are monitored using approved parametric monitoring arrangements. The permits will continue to include the following record keeping conditions:

*The air to fuel ratio of each burner shall be continuously monitored and recorded.*

*The specific power of the electrostatic precipitator shall be continuously monitored and recorded.*

### **Section 6.3.3:**

This section requires records of source tests, source test results, the acceptable range for each approved key system operating parameter established during the source test. To ensure compliance, the permits will continue to include the following record keeping condition:

*The facility operator shall keep records of all source tests, all source test results, all maintenance and repair and all malfunctions. Records of the acceptable range for the air to fuel ratio & the specific power, which were established during source testing shall also be kept.*

### **Section 6.3.4:**

This section requires that all records be retained for at least 5 years and requires that they be made available, during normal business hours, to the District, ARB and the EPA and that they be submitted to the same agencies upon request. The Authorities to Construct and the Permits to Operate will include such a condition.

### **Source Testing Requirements:**

This rule requires that the furnaces be source tested once each calendar year to show compliance with the emission limits specified in this rule. The current permit requires the testing and will continue to do so.

### **40 CFR Part 64 Compliance Assurance monitoring**

#### **NO<sub>x</sub>, CO, VOC and SO<sub>x</sub>:**

Compliance Assurance Monitoring (CAM) for these pollutants was addressed during the processing of the applications for projects N-1103820 and 1121288. No changes to the CAM requirements or compliance method will occur, therefore, a re-analysis is not required.

### **California Environmental Quality Act (CEQA)**

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

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

### **Greenhouse Gas (GHG) Significance Determination**

It is determined that no other agency has or will prepare an environmental review document for the project. Thus the District is the Lead Agency for this project. The District's engineering evaluation (this document) demonstrates that the project would not result in an increase in project specific greenhouse gas emissions. The District therefore concludes that the project would have a less than cumulatively significant impact on global climate change.

### **District CEQA Findings**

The District is the Lead Agency for this project because there is no other agency with broader statutory authority over this project. The District performed an Engineering Evaluation (this document) for the proposed project and determined that the activity will

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

**California Health & Safety Code 42301.6 (School Notice)**

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

**IX. Recommendation**

Issue Authorities to Construct with the conditions on the attached draft Authorities to Construct after successful completion of the required COC notice and the required public notice.

**X. Billing Information**

**Premodification:**

Permit #	Description	Fee Schedule
N-1662-1-14	75 MMBtu/hr	3020-2-H
N-1662-2-15	75 MMBtu/hr	3020-2-H
N-1662-3-15	75 MMBtu/hr	3020-2-H
N-1662-4-15	90 MMBtu/hr	3020-2-H

**Post modification:**

No Change.

**Appendices**

- Appendix A: Draft ATC
- Appendix B: Current PTO
- Appendix C: Previously Issued ATCs
- Appendix D: Baseline Actual Emission Calculations
- Appendix E: TV-009 Form

**Appendix A**  
**Draft Authority to Construct**

San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: N-1662-1-15

LEGAL OWNER OR OPERATOR: GALLO GLASS COMPANY  
MAILING ADDRESS: P.O. BOX 3044  
MODESTO, CA 95353

LOCATION: 605 S SANTA CRUZ AVE  
MODESTO, CA 95354

**EQUIPMENT DESCRIPTION:**

FURNACE #1 WITH 10 MAXON GAS/OXYGEN BURNERS AND ASSOCIATED EQUIPMENT (75 MMBTU/HR MAX HEAT CAPACITY). THIS FURNACE IS DUCTED THROUGH A STACK COMMON TO PERMIT UNITS N-1662-1, N-1662-2, N-1662-3 AND N-1662-4. THE FURNACES ARE SERVED BY A SHARED SOX SCRUBBER AND AN ELECTROSTATIC PRECIPITATOR AND/OR A TRI-MER UTF460 CERAMIC FILTER TYPE DUST COLLECTOR. MODIFICATION TO THE EMISSION LIMITS FOR RULE 4354 COMPLIANCE.

**CONDITIONS**

1. This Authority-to-Construct (ATC) shall not be converted to a Permit-to-Operate prior to the converting of ATC's N-1662-1-14, N-1662-2-15, N-1662-3-15, N-1662-4-15 or N-1662-4-16 to Permits-to-Operate. [District Rule 2201] Federally Enforceable Through Title V Permit
2. In the event that Authorities to Construct N-1662-1-14, N-1662-2-15, N-1662-3-15 and N-1662-4-16 are not previously implemented, the equipment description of this Authority to Construct Permit shall be modified to remove reference to the ceramic filter dust collector and all conditions related to the ceramic dust collector shall be modified or removed as appropriate. [District Rule 2201] Federally Enforceable Through Title V Permit
3. 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
4. Prior to operating with the modifications authorized by this Authority to Construct, the facility shall submit an application for an Administrative Amendment to its Title V permit. [District Rule 2520] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

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

Seyed Sadredin, Executive Director, APCO

**DAVID WARNER**, Director of Permit Services  
N-1662-1-15: Mar 11 2013 4:43PM - SCHOHHOM : Joint Inspection NOT Required

6. {4383} No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
7. Particulate matter emissions shall not exceed 0.1 grain/dscf in concentration. [District Rule 4201 and Stanislaus County Rule 404] Federally Enforceable Through Title V Permit
8. The furnace shall be fired on natural gas and LPG only. [District NSR Rule] Federally Enforceable Through Title V Permit
9. The furnace shall have continuous monitoring systems for NOx and SOx. The monitoring devices shall have continuous recording devices, and all records shall be kept on site. [District Rules 1080 and 4354, §5.9] Federally Enforceable Through Title V Permit
10. One continuous emissions monitoring (CEM) system may be used for monitoring oxy-fuel fired furnaces #1, #2, #3, and #4 provided all of the exhaust gases of each of these furnaces are ducted to a common stack, and monitored down stream of the common stack. The CEMS shall comply with the requirements of 40 Code of Federal Regulations (CFR) Part 51, 40 CFR Parts 60.7 and 60.13, 40 CFR Part 60 Appendix B (Performance Specifications) and Appendix F (Quality Assurance Procedures) and the applicable sections of Rule 1080 (Stack Monitoring). [District Rule 4354, 5.9 and 6.6.1] Federally Enforceable Through Title V Permit
11. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
12. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
13. During startups, the permittee shall comply with the requirements of section 5.5 of District Rule 4354. [District Rule 4354, §5.5] Federally Enforceable Through Title V Permit
14. The NOx control system shall be in operation as soon as technologically feasible during the startup period to minimize emissions. [District Rule 4354, §5.5.6] Federally Enforceable Through Title V Permit
15. The NOx control system shall be in operation whenever technologically feasible during shutdown to minimize emissions. [District Rule 4354, §5.6.2] Federally Enforceable Through Title V Permit
16. The NOx control system shall be in operation whenever technologically feasible during furnace idling to minimize emissions. [District Rule 4354, §5.7.1] Federally Enforceable Through Title V Permit
17. The duration of shutdown, as measured from the time the furnace operations drop below the idle threshold specified in section 3.17 of District Rule 4354 to when all emissions from the furnace cease, shall not exceed 20 days. [District Rule 4354, §5.6.1] Federally Enforceable Through Title V Permit
18. The oxygen to fuel ratio shall be maintained within the range shown by the most recent source test to result in compliance with the CO and VOC limits of this permit. The acceptable range of the oxygen to fuel ratio shall be established during the initial source test and during each subsequent annual source test. [District Rule 4354] Federally Enforceable Through Title V Permit
19. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation  $E=3.59P^{0.62}$  ( $P < 30$  tph) or  $E=17.31P^{0.16}$  ( $P > 30$  tph). [District Rule 4202] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE



20. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Stanislaus County Rule 407 and District Rule 4801] Federally Enforceable Through Title V Permit
21. Source testing to demonstrate compliance with permit conditions and all rules and regulations for both natural gas and LPG shall be conducted at least once every calendar year. NO<sub>x</sub> and CO testing shall be performed using CARB Method 100. VOC testing shall be performed using EPA method 25A. PM<sub>10</sub> testing shall be performed using EPA methods 201 and 202, EPA methods 201a and 202, or CARB methods 501 and 5. SO<sub>x</sub> testing shall be performed using EPA Method 8 and CARB Method 1-100. [District Rules 1081, 2201, 2520, §9.3.2; and 4354, 6.4 and 6.5] Federally Enforceable Through Title V Permit
22. Source testing when firing on LPG fuel need not be performed if the LPG fuel usage for this furnace does not exceed 100 hours during any one calendar year. A source test shall be performed within 90 days after this furnace exceeds 100 hours of operation, on LPG, on an annual basis. [District Rule 1081] Federally Enforceable Through Title V Permit
23. Source testing shall be conducted by a CARB-certified source testing contractor. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to source testing. The results of each source test shall be submitted to the District within 60 days after the source test date. [District Rule 1081] Federally Enforceable Through Title V Permit
24. Source test conditions shall be representative of operations equal to or greater than 60 percent of the fuel use capacity for each furnace as stated in the Permit to Operate. [District Rule 4354, §6.4.2] Federally Enforceable Through Title V Permit
25. PM and PM<sub>10</sub> source testing shall be conducted downstream of the electrostatic precipitator and the ceramic filter dust collector in the common stack. Furnaces #1, #2, #3, and #4 must operate simultaneously during source testing unless prior approval is obtained from the District. [District Rule 1081] Federally Enforceable Through Title V Permit
26. An annual Relative Accuracy Test Audit (RATA) shall be performed on the continuous monitoring system as outlined in 40 CFR Part 60 Appendix B. [District Rule 1080] Federally Enforceable Through Title V Permit
27. The owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F (CGAs and RATAs) and if applicable 40 CFR Part 75, Appendix B (linearity and RATAs) at least once every four calendar quarters and annually within 30 days of the anniversary date of the initial test. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
28. An exceedance of a NO<sub>x</sub> or SO<sub>x</sub> emission limit as indicated by the CEMS shall be reported by the operator to the APCO within 24 hours. The notification shall include 1) name and location of the facility, 2) identification of furnace(s) causing the exceedances, 3) calculation of actual NO<sub>x</sub>, CO and VOC emissions, and 4) corrective actions and schedules to complete the work. [District Rule 1080 and Stanislaus County Rule 108] Federally Enforceable Through Title V Permit
29. The operator shall notify the APCO no later than one hour after the detection of a breakdown of the CEMS. The operator shall inform the APCO of the intent to shut down the CEMS at least 24 hours prior to the event. [District Rule 1100] Federally Enforceable Through Title V Permit
30. The permittee shall submit a written report including copies of any Equipment Breakdown reports and/or pertinent variance decisions to the APCO for each calendar quarter, within 30 days of the end of the quarter, including: time intervals, data and magnitude of excess emissions, nature and cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting shall correspond to the averaging period for each respective emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

31. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
32. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
33. Cylinder gas audits (GGAs) of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
34. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201, Stanislaus County Rule 404, District Rule 4202 and Stanislaus County Rule 405. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
35. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4801 and Stanislaus County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
36. The requirements of District Rule 4301 and Stanislaus County Rule 408 were determined to not apply to this unit because the unit does not utilize indirect heat transfer. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
37. The requirements of 40 CFR Part 60, Subpart CC were determined to not apply to this unit because the unit was constructed prior to the effective date in the regulation and has not been modified (according to the definition of "modified" in the regulation). A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
38. The requirements of 40 CFR Part 61, Subpart N were determined to not apply to this unit because the unit does not use commercial arsenic. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
39. Any glass melting furnace located at an Area Source of hazardous air pollutants shall comply with 40 CFR Part 63 Subpart SSSSSS (National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources). [40 CFR Part 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
40. The amount of glass produced shall not exceed 520.1 tons during any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
41. NOx emissions shall not exceed 1.4 pounds per ton of glass produced. This performance based limit is to enforce the NOx emission reductions granted by certificate number N-106-2. [District NSR Rule] Federally Enforceable Through Title V Permit
42. CO emissions shall not exceed 0.04 pounds per ton of glass produced. This performance based limit is to enforce the CO emission reductions granted by certificate number N-106-3. [District NSR Rule] Federally Enforceable Through Title V Permit
43. The VOC emissions shall not exceed 0.23 pounds per ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
44. The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with equal to or greater than 25% by weight mixed color cullet, shall not exceed 0.99 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
45. The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with less than 25% by weight mixed color cullet, shall not exceed 0.81 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
46. The PM10 emissions, except during full or partial emission control system bypass episodes, shall not exceed 0.45 lb/ton of glass produced. [District NSR Rules 2201 and 4354] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

47. The PM10 emissions, during full or partial emission control system bypass episodes, shall not exceed 0.71 lb/ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
48. The amount of time that the furnace exhaust is not fully treated by a control device shall not exceed 144 hours per calendar year. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
49. The PM10 emissions shall not exceed 22,936 pounds during the first calendar quarter, 23,190 pounds during the second calendar quarter, 23,445 pounds during the third calendar quarter and 23,445 pounds during the fourth calendar quarter. These limits are to enforce the PM10 emission reductions granted by certificate number N-161-4. [District Rule 2201] Federally Enforceable Through Title V Permit
50. During furnace idling, NOx emissions shall not exceed 780.2 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
51. During furnace idling, CO emissions shall not exceed 520.1 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
52. During furnace idling, VOC emissions shall not exceed 130.0 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
53. During furnace idling, SOx emissions shall not exceed 572.1 pounds in any one day when producing glass with equal to or greater than 25% by weight mixed color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
54. During furnace idling, SOx emissions shall not exceed 468.1 pounds in any one day when producing glass with less than 25% by weight mixed color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
55. During furnace idling, PM10 emissions shall not exceed 260.1 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
56. The facility shall not use commercial arsenic as a raw material in the production process. [40 CFR Part 61 Subpart N] Federally Enforceable Through Title V Permit
57. The ceramic filter dust collector shall be maintained and operated according to manufacturer's specifications. [District Rule 2201] Federally Enforceable Through Title V Permit
58. The ceramic filter dust collector cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
59. Material removed from the ceramic filter dust collector shall be disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
60. Replacement filters numbering at least 10% of the total number of filters in the ceramic filter dust collector shall be maintained on the premises. [District Rule 2201] Federally Enforceable Through Title V Permit
61. Devices to measure the primary and secondary voltage and current of the electrostatic precipitator shall be maintained in accordance with the manufacturer's specifications. [District Rule 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
62. The specific power of the electrostatic precipitator shall be at least 70 milliwatts/acfm except during the bypass episodes allowed by this permit. [District Rule 2520, §9.3.2 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
63. The ceramic filter dust collector shall be equipped with a pressure differential gauge to indicate the pressure drop across the filters. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
64. During operation of the ceramic filter dust collector, the pressure differential gauge reading shall be 5 to 10 inches of water column. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
65. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

66. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
67. The permittee shall comply with the record keeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit.
68. The specific power of the electrostatic precipitator shall be continuously monitored and recorded. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
69. Dust collector filters shall be inspected annually while in operation for evidence of particulate matter breakthrough and replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
70. Dust collector filters shall be inspected annually while not in operation for tears, scuffs, abrasions or hole that might interfere with the PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
71. A daily record of the hours of operation, the amount of glass pulled from the furnace (in tons), the NOx emissions (in lb/ton of glass pulled), the SOx emissions (in lb/ton of glass pulled), the weight of mixed color mix cullet used, the total amount of cullet used (by weight) and the ratio of the mixed color cullet weight to the total cullet weight (in percent). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
72. The oxygen to fuel ratio shall be continuously monitored and recorded. [District Rule 4354] Federally Enforceable Through Title V Permit
73. The permittee shall maintain daily records of the aggregated NOx emissions. [District Rules 2520, 9.3.2 and 4354, 9.6.1 and 9.7] Federally Enforceable Through Title V Permit
74. The permittee shall maintain the burner oxygen to fuel ratio records required by this permit. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
75. A record of the PM10 emissions from this unit, in pounds per calendar quarter, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
76. A record of the cumulative annual number of hours that the emission control system is either fully or partially bypassed shall be kept. The record shall be updated at least weekly. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
77. The permittee shall maintain daily records of the specific power of the electrostatic precipitator (in milliwatts/acfm). [District Rules 2201, 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
78. The operator shall monitor and record the pressure differential gauge reading of the ceramic filter dust collector at least once during each day that the unit operates. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
79. Records of dust collector maintenance, inspections and repairs shall be maintained. The records shall include, date of inspection, change outs of filter media, corrective action taken, and identification of the individual performing the inspection. [District Rules 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
80. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

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San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

**PERMIT NO:** N-1662-2-16

**LEGAL OWNER OR OPERATOR:** GALLO GLASS COMPANY  
**MAILING ADDRESS:** P.O. BOX 3044  
MODESTO, CA 95353

**LOCATION:** 605 S SANTA CRUZ AVE  
MODESTO, CA 95354

**EQUIPMENT DESCRIPTION:**

GLASS FURNACE #2 WITH 10 MAXON GAS/OXYGEN BURNERS AND ASSOCIATED FORMING EQUIPMENT (75 MMBTU/HR MAX HEAT CAPACITY). THIS FURNACE IS DUCTED THROUGH A STACK COMMON TO PERMIT UNITS N-1662-1, N-1662-2, N-1662-3 AND N-1662-4. THE FURNACES ARE SERVED BY A SHARED SOX SCRUBBER AND AN ELECTROSTATIC PRECIPITATOR AND/OR A TRI-MER UTF460 CERAMIC FILTER TYPE DUST COLLECTOR. MODIFICATION TO THE EMISSION LIMITS FOR RULE 4354 COMPLIANCE.

**CONDITIONS**

1. This Authority-to-Construct (ATC) shall not be converted to a Permit-to-Operate prior to the converting of ATC's N-1662-1-14, N-1662-2-15, N-1662-3-15, N-1662-4-15 or N-1662-4-16 to Permits-to-Operate. [District Rule 2201] Federally Enforceable Through Title V Permit
2. In the event that Authorities to Construct N-1662-1-14, N-1662-2-15, N-1662-3-15 and N-1662-4-16 are not previously implemented, the equipment description of this Authority to Construct Permit shall be modified to remove reference to the ceramic filter dust collector and all conditions related to the ceramic dust collector shall be modified or removed as appropriate. [District Rule 2201] Federally Enforceable Through Title V Permit
3. 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
4. Prior to operating with the modifications authorized by this Authority to Construct, the facility shall submit an application for an Administrative Amendment to its Title V permit. [District Rule 2520] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

YOU **MUST** NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-8400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director, APCO

**DAVID WARNER**, Director of Permit Services  
N-1662-2-16: Mar 11 2013 4:43PM -- SCHOONHOM : Joint Inspection NOT Required

6. {4383} No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
7. Particulate matter emissions shall not exceed 0.1 grain/dscf in concentration. [District Rule 4201 and Stanislaus County Rule 404] Federally Enforceable Through Title V Permit
8. The furnace shall be fired on natural gas and LPG only. [District NSR Rule] Federally Enforceable Through Title V Permit
9. The furnace shall have continuous monitoring systems for NO<sub>x</sub> and SO<sub>x</sub>. The monitoring devices shall have continuous recording devices, and all records shall be kept on site. [District Rules 1080 and 4354, §5.9] Federally Enforceable Through Title V Permit
10. One continuous emissions monitoring (CEM) system may be used for monitoring oxy-fuel fired furnaces #1, #2, #3, and #4 provided all of the exhaust gases of each of these furnaces are ducted to a common stack, and monitored down stream of the common stack. The CEMS shall comply with the requirements of 40 Code of Federal Regulations (CFR) Part 51, 40 CFR Parts 60.7 and 60.13, 40 CFR Part 60 Appendix B (Performance Specifications) and Appendix F (Quality Assurance Procedures) and the applicable sections of Rule 1080 (Stack Monitoring). [District Rule 4354, 5.9 and 6.6.1] Federally Enforceable Through Title V Permit
11. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
12. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO<sub>x</sub>, CO, and O<sub>2</sub> analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
13. During startups, the permittee shall comply with the requirements of section 5.5 of District Rule 4354. [District Rule 4354, §5.5] Federally Enforceable Through Title V Permit
14. The NO<sub>x</sub> control system shall be in operation as soon as technologically feasible during the startup period to minimize emissions. [District Rule 4354, §5.5.6] Federally Enforceable Through Title V Permit
15. The NO<sub>x</sub> control system shall be in operation whenever technologically feasible during shutdown to minimize emissions. [District Rule 4354, §5.6.2] Federally Enforceable Through Title V Permit
16. The NO<sub>x</sub> control system shall be in operation whenever technologically feasible during furnace idling to minimize emissions. [District Rule 4354, §5.7.1] Federally Enforceable Through Title V Permit
17. The duration of shutdown, as measured from the time the furnace operations drop below the idle threshold specified in section 3.17 of District Rule 4354 to when all emissions from the furnace cease, shall not exceed 20 days. [District Rule 4354, §5.6.1] Federally Enforceable Through Title V Permit
18. The oxygen to fuel ratio shall be maintained within the range shown by the most recent source test to result in compliance with the CO and VOC limits of this permit. The acceptable range of the oxygen to fuel ratio shall be established during the initial source test and during each subsequent annual source test. [District Rule 4354] Federally Enforceable Through Title V Permit
19. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation  $E=3.59P^{0.62}$  ( $P < 30$  tph) or  $E=17.31P^{0.16}$  ( $P > 30$  tph). [District Rule 4202] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

20. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Stanislaus County Rule 407 and District Rule 4801] Federally Enforceable Through Title V Permit
21. Source testing to demonstrate compliance with permit conditions and all rules and regulations for both natural gas and LPG shall be conducted at least once every calendar year. NOx and CO testing shall be performed using CARB Method 100. VOC testing shall be performed using EPA method 25A. PM10 testing shall be performed using EPA methods 201 and 202, EPA methods 201a and 202, or CARB methods 501 and 5. SOx testing shall be performed using EPA Method 8 and CARB Method 1-100. [District Rules 1081, 2201, 2520, §9.3.2; and 4354, 6.4 and 6.5] Federally Enforceable Through Title V Permit
22. Source testing when firing on LPG fuel need not be performed if the LPG fuel usage for this furnace does not exceed 100 hours during any one calendar year. A source test shall be performed within 90 days after this furnace exceeds 100 hours of operation, on LPG, on an annual basis. [District Rule 1081] Federally Enforceable Through Title V Permit
23. Source testing shall be conducted by a CARB-certified source testing contractor. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to source testing. The results of each source test shall be submitted to the District within 60 days after the source test date. [District Rule 1081] Federally Enforceable Through Title V Permit
24. Source test conditions shall be representative of operations equal to or greater than 60 percent of the fuel use capacity for each furnace as stated in the Permit to Operate. [District Rule 4354, §6.4.2] Federally Enforceable Through Title V Permit
25. PM and PM10 source testing shall be conducted downstream of the electrostatic precipitator and the ceramic filter dust collector in the common stack. Furnaces #1, #2, #3, and #4 must operate simultaneously during source testing unless prior approval is obtained from the District. [District Rule 1081] Federally Enforceable Through Title V Permit
26. An annual Relative Accuracy Test Audit (RATA) shall be performed on the continuous monitoring system as outlined in 40 CFR Part 60 Appendix B. [District Rule 1080] Federally Enforceable Through Title V Permit
27. The owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F (CGAs and RATAs) and if applicable 40 CFR Part 75, Appendix B (linearity and RATAs) at least once every four calendar quarters and annually within 30 days of the anniversary date of the initial test. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
28. An exceedance of a NOx or SOx emission limit as indicated by the CEMS shall be reported by the operator to the APCO within 24 hours. The notification shall include 1) name and location of the facility, 2) identification of furnace(s) causing the exceedances, 3) calculation of actual NOx, CO and VOC emissions, and 4) corrective actions and schedules to complete the work. [District Rule 1080 and Stanislaus County Rule 108] Federally Enforceable Through Title V Permit
29. The operator shall notify the APCO no later than one hour after the detection of a breakdown of the CEMS. The operator shall inform the APCO of the intent to shut down the CEMS at least 24 hours prior to the event. [District Rule 1100] Federally Enforceable Through Title V Permit
30. The permittee shall submit a written report including copies of any Equipment Breakdown reports and/or pertinent variance decisions to the APCO for each calendar quarter, within 30 days of the end of the quarter, including: time intervals, data and magnitude of excess emissions, nature and cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting shall correspond to the averaging period for each respective emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080] Federally Enforceable Through Title V Permit

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31. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
32. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
33. Cylinder gas audits (GGAs) of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
34. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201, Stanislaus County Rule 404, District Rule 4202 and Stanislaus County Rule 405. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
35. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4801 and Stanislaus County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
36. The requirements of District Rule 4301 and Stanislaus County Rule 408 were determined to not apply to this unit because the unit does not utilize indirect heat transfer. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
37. The requirements of 40 CFR Part 60, Subpart CC were determined to not apply to this unit because the unit was constructed prior to the effective date in the regulation and has not been modified (according to the definition of "modified" in the regulation). A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
38. The requirements of 40 CFR Part 61, Subpart N were determined to not apply to this unit because the unit does not use commercial arsenic. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
39. Any glass melting furnace located at an Area Source of hazardous air pollutants shall comply with 40 CFR Part 63 Subpart SSSSSS (National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources). [40 CFR Part 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
40. The amount of glass produced shall not exceed 352.1 tons during any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
41. NOx emissions shall not exceed 1.4 pounds per ton of glass produced. This performance based limit is to enforce the NOx emission reductions granted by certificate number N-54-2. [District NSR Rule] Federally Enforceable Through Title V Permit
42. CO emissions shall not exceed 0.90 pounds per ton of glass produced. [District NSR Rule] Federally Enforceable Through Title V Permit
43. The VOC emissions shall not exceed 0.23 pounds per ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
44. The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with equal to or greater than 25% by weight mixed color cullet, shall not exceed 0.99 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
45. The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with less than 25% by weight mixed color cullet, shall not exceed 0.81 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
46. The PM10 emissions, except during full or partial emission control system bypass episodes, shall not exceed 0.45 lb/ton of glass produced. [District NSR Rules 2201 and 4354] Federally Enforceable Through Title V Permit

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47. The PM10 emissions, during full or partial emission control system bypass episodes, shall not exceed 0.71 lb/ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
48. The amount of time that the furnace exhaust is not fully treated by a control device shall not exceed 144 hours per calendar year. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
49. The PM10 emissions shall not exceed 15,527 pounds during the first calendar quarter, 15,699 pounds during the second calendar quarter, 15,872 pounds during the third calendar quarter and 15,872 pounds during the fourth calendar quarter. These limits are to enforce the PM10 emission reductions granted by certificate number N-161-4. [District NSR Rule] Federally Enforceable Through Title V Permit
50. During furnace idling, NOx emissions shall not exceed 528.2 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
51. During furnace idling, CO emissions shall not exceed 352.1 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
52. During furnace idling, VOC emissions shall not exceed 88.0 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
53. During furnace idling, SOx emissions shall not exceed 387.3 pounds in any one day when producing glass with equal to or greater than 25% by weight mixed color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
54. During furnace idling, SOx emissions shall not exceed 316.9 pounds in any one day when producing glass with less than 25% by weight mixed color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
55. During furnace idling, PM10 emissions shall not exceed 176.1 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
56. The facility shall not use commercial arsenic as a raw material in the production process. [40 CFR Part 61 Subpart N] Federally Enforceable Through Title V Permit
57. The ceramic filter dust collector shall be maintained and operated according to manufacturer's specifications. [District Rule 2201] Federally Enforceable Through Title V Permit
58. The ceramic filter dust collector cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
59. Material removed from the ceramic filter dust collector shall be disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
60. Replacement filters numbering at least 10% of the total number of filters in the ceramic filter dust collector shall be maintained on the premises. [District Rule 2201] Federally Enforceable Through Title V Permit
61. Devices to measure the primary and secondary voltage and current of the electrostatic precipitator shall be maintained in accordance with the manufacturer's specifications. [District Rule 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
62. The specific power of the electrostatic precipitator shall be at least 70 milliwatts/acfm except during the bypass episodes allowed by this permit. [District Rule 2520, §9.3.2 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
63. The ceramic filter dust collector shall be equipped with a pressure differential gauge to indicate the pressure drop across the filters. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
64. During operation of the ceramic filter dust collector, the pressure differential gauge reading shall be 5 to 10 inches of water column. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
65. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit

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66. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
67. The permittee shall comply with the record keeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
68. The specific power of the electrostatic precipitator shall be continuously monitored and recorded. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
69. Dust collector filters shall be inspected annually while in operation for evidence of particulate matter breakthrough and replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
70. Dust collector filters shall be inspected annually while not in operation for tears, scuffs, abrasions or hole that might interfere with the PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
71. A daily record of the hours of operation, the amount of glass pulled from the furnace (in tons), the NOx emissions (in lb/ton of glass pulled), the SOx emissions (in lb/ton of glass pulled), the weight of mixed color mix cullet used, the total amount of cullet used (by weight) and the ratio of the mixed color cullet weight to the total cullet weight (in percent). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
72. The oxygen to fuel ratio shall be continuously monitored and recorded. [District Rule 4354] Federally Enforceable Through Title V Permit
73. The permittee shall maintain daily records of the aggregated NOx emissions. [District Rules 2520, 9.3.2 and 4354, 9.6.1 and 9.7] Federally Enforceable Through Title V Permit
74. The permittee shall maintain the burner oxygen to fuel ratio records required by this permit. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
75. A record of the PM10 emissions from this unit, in pounds per calendar quarter, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
76. A record of the cumulative annual number of hours that the emission control system is either fully or partially bypassed shall be kept. The record shall be updated at least weekly. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
77. The permittee shall maintain daily records of the specific power of the electrostatic precipitator (in milliwatts/acfm). [District Rules 2201, 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
78. The operator shall monitor and record the pressure differential gauge reading of the ceramic filter dust collector at least once during each day that the unit operates. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
79. Records of dust collector maintenance, inspections and repairs shall be maintained. The records shall include, date of inspection, change outs of filter media, corrective action taken, and identification of the individual performing the inspection. [District Rules 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
80. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

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San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

PERMIT NO: N-1662-3-16

LEGAL OWNER OR OPERATOR: GALLO GLASS COMPANY  
MAILING ADDRESS: P.O. BOX 3044  
MODESTO, CA 95353

LOCATION: 605 S SANTA CRUZ AVE  
MODESTO, CA 95354

**EQUIPMENT DESCRIPTION:**

GLASS FURNACE #3 WITH 10 MAXON GAS/OXYGEN BURNERS AND ASSOCIATED FORMING EQUIPMENT (75 MMBTU/HR MAX HEAT CAPACITY). THIS FURNACE IS DUCTED THROUGH A STACK COMMON TO PERMIT UNITS N-1662-1, N-1662-2, N-1662-3 AND N-1662-4. THE FURNACES ARE SERVED BY A SHARED SOX SCRUBBER AND AN ELECTROSTATIC PRECIPITATOR AND/OR A TRI-MER UTF460 CERAMIC FILTER TYPE DUST COLLECTOR. MODIFICATION TO THE EMISSION LIMITS FOR RULE 4354 COMPLIANCE.

**CONDITIONS**

1. This Authority-to-Construct (ATC) shall not be converted to a Permit-to-Operate prior to the converting of ATC's N-1662-1-14, N-1662-2-15, N-1662-3-15, N-1662-4-15 or N-1662-4-16 to Permits-to-Operate. [District Rule 2201] Federally Enforceable Through Title V Permit
2. In the event that Authorities to Construct N-1662-1-14, N-1662-2-15, N-1662-3-15 and N-1662-4-16 are not previously implemented, the equipment description of this Authority to Construct Permit shall be modified to remove reference to the ceramic filter dust collector and all conditions related to the ceramic dust collector shall be modified or removed as appropriate. [District Rule 2201] Federally Enforceable Through Title V Permit
3. 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
4. Prior to operating with the modifications authorized by this Authority to Construct, the facility shall submit an application for an Administrative Amendment to its Title V permit. [District Rule 2520] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

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Seyed Sadredin, Executive Director APCCO

**DAVID WARNER**, Director of Permit Services

N-1662-3-16; Mar 11 2013 4:43PM -- SCHOHDM : Joint Inspection NOT Required

6. {4383} No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
7. Particulate matter emissions shall not exceed 0.1 grain/dscf in concentration. [District Rule 4201 and Stanislaus County Rule 404] Federally Enforceable Through Title V Permit
8. The furnace shall be fired on natural gas and LPG only. [District NSR Rule] Federally Enforceable Through Title V Permit
9. The furnace shall have continuous monitoring systems for NO<sub>x</sub> and SO<sub>x</sub>. The monitoring devices shall have continuous recording devices, and all records shall be kept on site. [District Rules 1080 and 4354, §5.9] Federally Enforceable Through Title V Permit
10. One continuous emissions monitoring (CEM) system may be used for monitoring oxy-fuel fired furnaces #1, #2, #3, and #4 provided all of the exhaust gases of each of these furnaces are ducted to a common stack, and monitored down stream of the common stack. The CEMS shall comply with the requirements of 40 Code of Federal Regulations (CFR) Part 51, 40 CFR Parts 60.7 and 60.13, 40 CFR Part 60 Appendix B (Performance Specifications) and Appendix F (Quality Assurance Procedures) and the applicable sections of Rule 1080 (Stack Monitoring). [District Rule 4354, 5.9 and 6.6.1] Federally Enforceable Through Title V Permit
11. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
12. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO<sub>x</sub>, CO, and O<sub>2</sub> analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
13. During startups, the permittee shall comply with the requirements of section 5.5 of District Rule 4354. [District Rule 4354, §5.5] Federally Enforceable Through Title V Permit
14. The NO<sub>x</sub> control system shall be in operation as soon as technologically feasible during the startup period to minimize emissions. [District Rule 4354, §5.5.6] Federally Enforceable Through Title V Permit
15. The NO<sub>x</sub> control system shall be in operation whenever technologically feasible during shutdown to minimize emissions. [District Rule 4354, §5.6.2] Federally Enforceable Through Title V Permit
16. The NO<sub>x</sub> control system shall be in operation whenever technologically feasible during furnace idling to minimize emissions. [District Rule 4354, §5.7.1] Federally Enforceable Through Title V Permit
17. The duration of shutdown, as measured from the time the furnace operations drop below the idle threshold specified in section 3.17 of District Rule 4354 to when all emissions from the furnace cease, shall not exceed 20 days. [District Rule 4354, §5.6.1] Federally Enforceable Through Title V Permit
18. The oxygen to fuel ratio shall be maintained within the range shown by the most recent source test to result in compliance with the CO and VOC limits of this permit. The acceptable range of the oxygen to fuel ratio shall be established during the initial source test and during each subsequent annual source test. [District Rule 4354] Federally Enforceable Through Title V Permit
19. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation  $E=3.59P^{0.62}$  ( $P < 30$  tph) or  $E=17.31P^{0.16}$  ( $P > 30$  tph). [District Rule 4202] Federally Enforceable Through Title V Permit

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20. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Stanislaus County Rule 407 and District Rule 4801] Federally Enforceable Through Title V Permit
21. Source testing to demonstrate compliance with permit conditions and all rules and regulations for both natural gas and LPG shall be conducted at least once every calendar year. NOx and CO testing shall be performed using CARB Method 100. VOC testing shall be performed using EPA method 25A. PM10 testing shall be performed using EPA methods 201 and 202, EPA methods 201a and 202, or CARB methods 501 and 5. SOx testing shall be performed using EPA Method 8 and CARB Method 1-100. [District Rules 1081, 2201, 2520, §9.3.2; and 4354, 6.4 and 6.5] Federally Enforceable Through Title V Permit
22. Source testing when firing on LPG fuel need not be performed if the LPG fuel usage for this furnace does not exceed 100 hours during any one calendar year. A source test shall be performed within 90 days after this furnace exceeds 100 hours of operation, on LPG, on an annual basis. [District Rule 1081] Federally Enforceable Through Title V Permit
23. Source testing shall be conducted by a CARB-certified source testing contractor. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to source testing. The results of each source test shall be submitted to the District within 60 days after the source test date. [District Rule 1081] Federally Enforceable Through Title V Permit
24. Source test conditions shall be representative of operations equal to or greater than 60 percent of the fuel use capacity for each furnace as stated in the Permit to Operate. [District Rule 4354, §6.4.2] Federally Enforceable Through Title V Permit
25. PM and PM10 source testing shall be conducted downstream of the electrostatic precipitator and the ceramic filter dust collector in the common stack. Furnaces #1, #2, #3, and #4 must operate simultaneously during source testing unless prior approval is obtained from the District. [District Rule 1081] Federally Enforceable Through Title V Permit
26. An annual Relative Accuracy Test Audit (RATA) shall be performed on the continuous monitoring system as outlined in 40 CFR Part 60 Appendix B. [District Rule 1080] Federally Enforceable Through Title V Permit
27. The owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F (CGAs and RATAs) and if applicable 40 CFR Part 75, Appendix B (linearity and RATAs) at least once every four calendar quarters and annually within 30 days of the anniversary date of the initial test. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
28. An exceedance of a NOx or SOx emission limit as indicated by the CEMS shall be reported by the operator to the APCO within 24 hours. The notification shall include 1) name and location of the facility, 2) identification of furnace(s) causing the exceedances, 3) calculation of actual NOx, CO and VOC emissions, and 4) corrective actions and schedules to complete the work. [District Rule 1080 and Stanislaus County Rule 108] Federally Enforceable Through Title V Permit
29. The operator shall notify the APCO no later than one hour after the detection of a breakdown of the CEMS. The operator shall inform the APCO of the intent to shut down the CEMS at least 24 hours prior to the event. [District Rule 1100] Federally Enforceable Through Title V Permit
30. The permittee shall submit a written report including copies of any Equipment Breakdown reports and/or pertinent variance decisions to the APCO for each calendar quarter, within 30 days of the end of the quarter, including: time intervals, data and magnitude of excess emissions, nature and cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting shall correspond to the averaging period for each respective emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080] Federally Enforceable Through Title V Permit

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31. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
32. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
33. Cylinder gas audits (GGAs) of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
34. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201, Stanislaus County Rule 404, District Rule 4202 and Stanislaus County Rule 405. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
35. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4801 and Stanislaus County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
36. The requirements of District Rule 4301 and Stanislaus County Rule 408 were determined to not apply to this unit because the unit does not utilize indirect heat transfer. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
37. The requirements of 40 CFR Part 60, Subpart CC were determined to not apply to this unit because the unit was constructed prior to the effective date in the regulation and has not been modified (according to the definition of "modified" in the regulation). A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
38. The requirements of 40 CFR Part 61, Subpart N were determined to not apply to this unit because the unit does not use commercial arsenic. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
39. Any glass melting furnace located at an Area Source of hazardous air pollutants shall comply with 40 CFR Part 63 Subpart SSSSSS (National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources). [40 CFR Part 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
40. The amount of glass produced shall not exceed 352.1 tons during any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
41. NO<sub>x</sub> emissions shall not exceed 1.4 pounds per ton of glass produced. This performance based limit is to enforce the NO<sub>x</sub> emission reductions granted by certificate number N-56-2. [District NSR Rule] Federally Enforceable Through Title V Permit
42. CO emissions shall not exceed 0.01 pounds per ton of glass produced. This performance based limit is to enforce the CO emission reductions granted by certificate number N-56-3. [District NSR Rule] Federally Enforceable Through Title V Permit
43. The VOC emissions shall not exceed 0.23 pounds per ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
44. The combined SO<sub>x</sub> emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with equal to or greater than 25% by weight mixed color cullet, shall not exceed 0.99 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
45. The combined SO<sub>x</sub> emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with less than 25% by weight mixed color cullet, shall not exceed 0.81 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
46. The PM<sub>10</sub> emissions, except during full or partial emission control system bypass episodes, shall not exceed 0.45 lb/ton of glass produced. [District NSR Rules 2201 and 4354] Federally Enforceable Through Title V Permit

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47. The PM10 emissions, during full or partial emission control system bypass episodes, shall not exceed 0.71 lb/ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
48. The amount of time that the furnace exhaust is not fully treated by a control device shall not exceed 144 hours per calendar year. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
49. The PM10 emissions shall not exceed 15,527 pounds during the first calendar quarter, 15,699 pounds during the second calendar quarter, 15,872 pounds during the third calendar quarter and 15,872 pounds during the fourth calendar quarter. These limits are to enforce the PM10 emission reductions granted by certificate number N-161-4. [District NSR Rule] Federally Enforceable Through Title V Permit
50. During furnace idling, NOx emissions shall not exceed 528.2 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
51. During furnace idling, CO emissions shall not exceed 352.1 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
52. During furnace idling, VOC emissions shall not exceed 88.0 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
53. During furnace idling, SOx emissions shall not exceed 387.3 pounds in any one day when producing glass with equal to or greater than 25% by weight mixed color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
54. During furnace idling, SOx emissions shall not exceed 316.9 pounds in any one day when producing glass with less than 25% by weight mixed color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
55. During furnace idling, PM10 emissions shall not exceed 176.1 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
56. The facility shall not use commercial arsenic as a raw material in the production process. [40 CFR Part 61 Subpart N] Federally Enforceable Through Title V Permit
57. The ceramic filter dust collector shall be maintained and operated according to manufacturer's specifications. [District Rule 2201] Federally Enforceable Through Title V Permit
58. The ceramic filter dust collector cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
59. Material removed from the ceramic filter dust collector shall be disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
60. Replacement filters numbering at least 10% of the total number of filters in the ceramic filter dust collector shall be maintained on the premises. [District Rule 2201] Federally Enforceable Through Title V Permit
61. Devices to measure the primary and secondary voltage and current of the electrostatic precipitator shall be maintained in accordance with the manufacturer's specifications. [District Rule 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
62. The specific power of the electrostatic precipitator shall be at least 70 milliwatts/acfm except during the bypass episodes allowed by this permit. [District Rule 2520, §9.3.2 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
63. The ceramic filter dust collector shall be equipped with a pressure differential gauge to indicate the pressure drop across the filters. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
64. During operation of the ceramic filter dust collector, the pressure differential gauge reading shall be 5 to 10 inches of water column. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
65. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

66. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
67. The permittee shall comply with the record keeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
68. The specific power of the electrostatic precipitator shall be continuously monitored and recorded. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
69. Dust collector filters shall be inspected annually while in operation for evidence of particulate matter breakthrough and replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
70. Dust collector filters shall be inspected annually while not in operation for tears, scuffs, abrasions or hole that might interfere with the PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
71. A daily record of the hours of operation, the amount of glass pulled from the furnace (in tons), the NOx emissions (in lb/ton of glass pulled), the SOx emissions (in lb/ton of glass pulled), the weight of mixed color mix cullet used, the total amount of cullet used (by weight) and the ratio of the mixed color cullet weight to the total cullet weight (in percent). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
72. The oxygen to fuel ratio shall be continuously monitored and recorded. [District Rule 4354] Federally Enforceable Through Title V Permit
73. The permittee shall maintain daily records of the aggregated NOx emissions. [District Rules 2520, 9.3.2 and 4354, 9.6.1 and 9.7] Federally Enforceable Through Title V Permit
74. The permittee shall maintain the burner oxygen to fuel ratio records required by this permit. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
75. A record of the PM10 emissions from this unit, in pounds per calendar quarter, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
76. A record of the cumulative annual number of hours that the emission control system is either fully or partially bypassed shall be kept. The record shall be updated at least weekly. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
77. The permittee shall maintain daily records of the specific power of the electrostatic precipitator (in milliwatts/acfm). [District Rules 2201, 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
78. The operator shall monitor and record the pressure differential gauge reading of the ceramic filter dust collector at least once during each day that the unit operates. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
79. Records of dust collector maintenance, inspections and repairs shall be maintained. The records shall include, date of inspection, change outs of filter media, corrective action taken ,and identification of the individual performing the inspection. [District Rules 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
80. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 2201, 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

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San Joaquin Valley  
Air Pollution Control District

**AUTHORITY TO CONSTRUCT**

ISSUANCE DATE: DRAFT  
**DRAFT**

**PERMIT NO:** N-1662-4-17

**LEGAL OWNER OR OPERATOR:** GALLO GLASS COMPANY  
**MAILING ADDRESS:** P.O. BOX 3044  
MODESTO, CA 95353

**LOCATION:** 605 S SANTA CRUZ AVE  
MODESTO, CA 95354

**EQUIPMENT DESCRIPTION:**

GLASS FURNACE #4 WITH 12 MAXON GAS/OXYGEN BURNERS AND ASSOCIATED FORMING EQUIPMENT (90 MMBTU/HR MAX HEAT CAPACITY). THIS FURNACE IS DUCTED THROUGH A STACK COMMON TO PERMIT UNITS N-1662-1, N-1662-2, N-1662-3 AND N-1662-4. THE FURNACES ARE SERVED BY A SHARED SOX SCRUBBER AND AN ELECTROSTATIC PRECIPITATOR AND/OR A TRI-MER UTF460 CERAMIC FILTER TYPE DUST COLLECTOR. MODIFICATION TO THE EMISSION LIMITS FOR RULE 4354 COMPLIANCE.

**CONDITIONS**

1. This Authority-to-Construct (ATC) shall not be converted to a Permit-to-Operate prior to the converting of ATC's N-1662-1-14, N-1662-2-15, N-1662-3-15, N-1662-4-15 or N-1662-4-16 to Permits-to-Operate. [District Rule 2201] Federally Enforceable Through Title V Permit
2. In the event that Authorities to Construct N-1662-1-14, N-1662-2-15, N-1662-3-15 and N-1662-4-16 are not previously implemented, the equipment description of this Authority to Construct Permit shall be modified to remove reference to the ceramic filter dust collector and all conditions related to the ceramic dust collector shall be modified or removed as appropriate. [District Rule 2201] Federally Enforceable Through Title V Permit
3. 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 2520] Federally Enforceable Through Title V Permit
4. Prior to operating with the modifications authorized by this Authority to Construct, the facility shall submit an application for an Administrative Amendment to its Title V permit. [District Rule 2520] Federally Enforceable Through Title V Permit
5. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

CONDITIONS CONTINUE ON NEXT PAGE

YOU MUST NOTIFY THE DISTRICT COMPLIANCE DIVISION AT (209) 557-8400 WHEN CONSTRUCTION IS COMPLETED AND PRIOR TO OPERATING THE EQUIPMENT OR MODIFICATIONS AUTHORIZED BY THIS AUTHORITY TO CONSTRUCT. This is NOT a PERMIT TO OPERATE. Approval or denial of a PERMIT TO OPERATE will be made after an inspection to verify that the equipment has been constructed in accordance with the approved plans, specifications and conditions of this Authority to Construct, and to determine if the equipment can be operated in compliance with all Rules and Regulations of the San Joaquin Valley Unified Air Pollution Control District. Unless construction has commenced pursuant to Rule 2050, this Authority to Construct shall expire and application shall be cancelled two years from the date of issuance. The applicant is responsible for complying with all laws, ordinances and regulations of all other governmental agencies which may pertain to the above equipment.

Seyed Sadredin, Executive Director APCO

**DAVID WARNER, Director of Permit Services**

N-1662-4-17: Mar 11 2013 4:43PM -- SCHOINHOM : Joint Inspection NOT Required

6. {4383} No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
7. The unit is exempt from the NOx, CO and VOC emission limits of District Rule 4354 (Glass Melting Furnaces) during the furnace rebuild start-up period. The start-up period shall not exceed 18 days and shall start upon activation of the primary combustion system. [District Rule 4354] Federally Enforceable Through Title V Permit
8. During the furnace rebuild start-up period, the stoichiometric ratio of the primary furnace combustion system shall not exceed 5% excess oxygen, as calculated from the actual fuel and oxidant flow measurements for combustion in the glass melting furnace. [District Rule 4354] Federally Enforceable Through Title V Permit
9. The emission control system shall be in operation as soon as technologically feasible following the commencement of the furnace rebuild start-up to minimize emissions. [District Rule 4354] Federally Enforceable Through Title V Permit
10. A record of the post-rebuild start-up duration and of the dates of the start-up period activities shall be kept. The records shall be maintained for a period of at least five years and shall be made available to the District upon request. [District Rule 4354] Federally Enforceable Through Title V Permit
11. Particulate matter emissions shall not exceed 0.1 grain/dscf in concentration. [District Rule 4201 and Stanislaus County Rule 404] Federally Enforceable Through Title V Permit
12. The furnace shall be fired on natural gas and LPG only. [District NSR Rule] Federally Enforceable Through Title V Permit
13. The furnace shall have continuous monitoring systems for NOx and SOx. The monitoring devices shall have continuous recording devices, and all records shall be kept on site. [District Rules 1080 and 4354, §5.9] Federally Enforceable Through Title V Permit
14. One continuous emissions monitoring (CEM) system may be used for monitoring oxy-fuel fired furnaces #1, #2, #3, and #4 provided all of the exhaust gases of each of these furnaces are ducted to a common stack, and monitored down stream of the common stack. The CEMS shall comply with the requirements of 40 Code of Federal Regulations (CFR) Part 51, 40 CFR Parts 60.7 and 60.13, 40 CFR Part 60 Appendix B (Performance Specifications) and Appendix F (Quality Assurance Procedures) and the applicable sections of Rule 1080 (Stack Monitoring). [District Rule 4354, 5.9 and 6.6.1] Federally Enforceable Through Title V Permit
15. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
16. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
17. During startups, the permittee shall comply with the requirements of section 5.5 of District Rule 4354. [District Rule 4354, §5.5] Federally Enforceable Through Title V Permit
18. The NOx control system shall be in operation as soon as technologically feasible during the startup period to minimize emissions. [District Rule 4354, §5.5.6] Federally Enforceable Through Title V Permit
19. The NOx control system shall be in operation whenever technologically feasible during shutdown to minimize emissions. [District Rule 4354, §5.6.2] Federally Enforceable Through Title V Permit
20. The NOx control system shall be in operation whenever technologically feasible during furnace idling to minimize emissions. [District Rule 4354, §5.7.1] Federally Enforceable Through Title V Permit

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21. The duration of shutdown, as measured from the time the furnace operations drop below the idle threshold specified in section 3.17 of District Rule 4354 to when all emissions from the furnace cease, shall not exceed 20 days. [District Rule 4354, §5.6.1] Federally Enforceable Through Title V Permit
22. The oxygen to fuel ratio shall be maintained within the range shown by the most recent source test to result in compliance with the CO and VOC limits of this permit. The acceptable range of the oxygen to fuel ratio shall be established during the initial source test and during each subsequent annual source test. [District Rule 4354] Federally Enforceable Through Title V Permit
23. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation  $E=3.59P^{0.62}$  ( $P < 30$  tph) or  $E=17.31P^{0.16}$  ( $P > 30$  tph). [District Rule 4202] Federally Enforceable Through Title V Permit
24. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Stanislaus County Rule 407 and District Rule 4801] Federally Enforceable Through Title V Permit
25. Source testing to demonstrate compliance with permit conditions and all rules and regulations for both natural gas and LPG shall be conducted at least once every calendar year. NO<sub>x</sub> and CO testing shall be performed using CARB Method 100. VOC testing shall be performed using EPA method 25A. PM<sub>10</sub> testing shall be performed using EPA methods 201 and 202, EPA methods 201a and 202, or CARB methods 501 and 5. SO<sub>x</sub> testing shall be performed using EPA Method 8 and CARB Method 1-100. [District Rules 1081; 2520, §9.3.2; and 4354, 6.4 and 6.5] Federally Enforceable Through Title V Permit
26. Source testing when firing on LPG fuel need not be performed if the LPG fuel usage for this furnace does not exceed 100 hours during any one calendar year. A source test shall be performed within 90 days after this furnace exceeds 100 hours of operation, on LPG, on an annual basis. [District Rule 1081] Federally Enforceable Through Title V Permit
27. Source testing shall be conducted by a CARB-certified source testing contractor. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to source testing. The results of each source test shall be submitted to the District within 60 days after the source test date. [District Rule 1081] Federally Enforceable Through Title V Permit
28. Source test conditions shall be representative of operations equal to or greater than 60 percent of the fuel use capacity for each furnace as stated in the Permit to Operate. [District Rule 4354, §6.4.2] Federally Enforceable Through Title V Permit
29. PM and PM<sub>10</sub> source testing shall be conducted down stream of the particulate matter control equipment in the common stack. Furnaces #1, #2, #3, and #4 must operate simultaneously during source testing unless prior approval is obtained from the District. [District Rule 1081] Federally Enforceable Through Title V Permit
30. An annual Relative Accuracy Test Audit (RATA) shall be performed on the continuous monitoring system as outlined in 40 CFR Part 60 Appendix B. [District Rule 1080] Federally Enforceable Through Title V Permit
31. The owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F (CGAs and RATAs) and if applicable 40 CFR Part 75, Appendix B (linearity and RATAs) at least once every four calendar quarters and annually within 30 days of the anniversary date of the initial test. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
32. An exceedance of a NO<sub>x</sub> or SO<sub>x</sub> emission limit as indicated by the CEMS shall be reported by the operator to the APCO within 24 hours. The notification shall include 1) name and location of the facility, 2) identification of furnacc(s) causing the exceedances, 3) calculation of actual NO<sub>x</sub>, CO and VOC emissions, and 4) corrective actions and schedules to complete the work. [District Rule 1080 and Stanislaus County Rule 108] Federally Enforceable Through Title V Permit

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33. The operator shall notify the APCO no later than one hour after the detection of a breakdown of the CEMS. The operator shall inform the APCO of the intent to shut down the CEMS at least 24 hours prior to the event. [District Rule 1100] Federally Enforceable Through Title V Permit
34. The permittee shall submit a written report including copies of any Equipment Breakdown reports and/or pertinent variance decisions to the APCO for each calendar quarter, within 30 days of the end of the quarter, including: time intervals, data and magnitude of excess emissions, nature and cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting shall correspond to the averaging period for each respective emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080] Federally Enforceable Through Title V Permit
35. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
36. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
37. Cylinder gas audits (GGAs) of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
38. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201, Stanislaus County Rule 404, District Rule 4202 and Stanislaus County Rule 405. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
39. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4801 and Stanislaus County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
40. The requirements of District Rule 4301 and Stanislaus County Rule 408 were determined to not apply to this unit because the unit does not utilize indirect heat transfer. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
41. The requirements of 40 CFR Part 60, Subpart CC were determined to not apply to this unit because the unit was constructed prior to the effective date in the regulation and has not been modified (according to the definition of "modified" in the regulation). A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
42. The requirements of 40 CFR Part 61, Subpart N were determined to not apply to this unit because the unit does not use commercial arsenic. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
43. Any glass melting furnace located at an Area Source of hazardous air pollutants shall comply with 40 CFR Part 63 Subpart SSSSSS (National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources). [40 CFR Part 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
44. The amount of glass produced shall not exceed 637.9 tons during any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
45. NO<sub>x</sub> emissions shall not exceed 1.3 pounds per ton of glass produced. This performance based limit is to enforce the NO<sub>x</sub> emission reductions granted by certificate number N-107-2. [District NSR Rule] Federally Enforceable Through Title V Permit
46. CO emissions shall not exceed 0.20 pounds per ton of glass produced. [District NSR Rule] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

47. The VOC emissions shall not exceed 0.23 pounds per ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
48. The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with equal to or greater than 25% by weight mixed color cullet, shall not exceed 0.99 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
49. The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with less than 25% by weight mixed color cullet, shall not exceed 0.81 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
50. The PM10 emissions, except for during full or partial emission control system bypass episodes, shall not exceed 0.45 lb/ton of glass produced. [District NSR Rules 2201 and 4354] Federally Enforceable Through Title V Permit
51. The PM10 emissions, during full or partial emission control system bypass episodes, shall not exceed 0.71 lb/ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
52. The number of hours that the furnace exhaust is not fully treated by a control device shall not exceed 144 hours per calendar year. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
53. The PM10 emissions shall not exceed 28,132 pounds during the first calendar quarter, 28,445 pounds during the second calendar quarter, 28,757 pounds during the third calendar quarter and 28,758 pounds during the fourth calendar quarter. These limits are to enforce the PM10 emission reductions granted by certificate number N-161-4. [District NSR Rule] Federally Enforceable Through Title V Permit
54. During furnace idling, NOx emissions shall not exceed 956.9 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
55. During furnace idling, CO emissions shall not exceed 637.9 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
56. During furnace idling, VOC emissions shall not exceed 159.5 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
57. During furnace idling, SOx emissions shall not exceed 701.7 pounds in any one day when producing glass with equal to or greater than 25% by weight mixed color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
58. During furnace idling, SOx emissions shall not exceed 574.1 pounds in any one day when producing glass with less than 25% by weight mixed color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
59. During furnace idling, PM10 emissions shall not exceed 319.0 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
60. The facility shall not use commercial arsenic as a raw material in the production process. [40 CFR Part 61 Subpart N] Federally Enforceable Through Title V Permit
61. The ceramic filter dust collector shall be maintained and operated according to manufacturer's specifications. [District Rule 2201] Federally Enforceable Through Title V Permit
62. The ceramic filter dust collector cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
63. Material removed from the ceramic filter dust collector shall be disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
64. Replacement filters numbering at least 10% of the total number of filters in the ceramic filter dust collector shall be maintained on the premises. [District Rule 2201] Federally Enforceable Through Title V Permit
65. Devices to measure the primary and secondary voltage and current of the electrostatic precipitator shall be maintained in accordance with the manufacturer's specifications. [District Rule 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

66. The specific power of the electrostatic precipitator shall be at least 70 milliwatts/acfm except during the bypass episodes allowed by this permit. [District Rules 2520, §9.3.2 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
67. The ceramic filter dust collector shall be equipped with a pressure differential gauge to indicate the pressure drop across the filters. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
68. During operation of the ceramic filter dust collector, the pressure differential gauge reading shall be 5 to 10 inches of water column. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
69. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
70. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
71. The permittee shall comply with the record keeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
72. The specific power of the electrostatic precipitator shall be continuously monitored and recorded. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
73. Dust collector filters shall be inspected annually while in operation for evidence of particulate matter breakthrough and replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
74. Dust collector filters shall be inspected annually while not in operation for tears, scuffs, abrasions or hole that might interfere with the PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
75. A daily record of the hours of operation, the amount of glass pulled from the furnace (in tons), the NO<sub>x</sub> emissions (in lb/ton of glass pulled), the SO<sub>x</sub> emissions (in lb/ton of glass pulled), the weight of mixed color mix cullet used, the total amount of cullet used (by weight) and the ratio of the mixed color cullet weight to the total cullet weight (in percent) shall be kept. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
76. The oxygen to fuel ratio shall be continuously monitored and recorded. [District Rule 4354] Federally Enforceable Through Title V Permit
77. The permittee shall maintain daily records of the aggregated NO<sub>x</sub> emissions. [District Rules 2520, 9.3.2 and 4354, 9.6.1 and 9.7] Federally Enforceable Through Title V Permit
78. The permittee shall maintain the burner oxygen to fuel ratio records required by this permit. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
79. A record of the PM<sub>10</sub> emissions from this unit, in pounds per calendar quarter, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
80. A record of the cumulative annual number of hours that the emission control system is either fully or partially bypassed shall be kept. The record shall be updated at least weekly. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
81. The permittee shall maintain daily records of the specific power of the electrostatic precipitator (in milliwatts/acfm). [District Rules 2201, 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
82. The operator shall monitor and record the pressure differential gauge reading of the ceramic filter dust collector at least once during each day that the unit operates. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
83. Records of dust collector maintenance, inspections and repairs shall be maintained. The records shall include, date of inspection, change outs of filter media, corrective action taken, and identification of the individual performing the inspection. [District Rules 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

84. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

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## **Appendix B**

### **Current Permit to Operate**



# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** N-1662-1-10

**EXPIRATION DATE:** 06/30/2016

**EQUIPMENT DESCRIPTION:**

FURNACE #1 WITH 10 MAXON GAS/OXYGEN BURNERS AND ASSOCIATED EQUIPMENT (75 MMBTU/HR MAX HEAT CAPACITY). THIS FURNACE IS DUCTED THROUGH A STACK COMMON TO PERMIT UNITS N-1662-1, N-1662-2, N-1662-3 AND N-1662-4. THE FURNACES ARE SERVED BY A SHARED ELECTROSTATIC PRECIPITATOR AND SOX SCRUBBER.

## PERMIT UNIT REQUIREMENTS

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1. Particulate matter emissions shall not exceed 0.1 grain/dscf in concentration. [District Rule 4201 and Stanislaus County Rule 404] Federally Enforceable Through Title V Permit
2. The furnace shall be fired on natural gas and LPG only. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The furnace shall have continuous monitoring systems for NOx and SOx. The monitoring devices shall have continuous recording devices, and all records shall be kept on site. [District Rules 1080 and 4354, §5.9] Federally Enforceable Through Title V Permit
4. One continuous emissions monitoring (CEM) system may be used for monitoring oxy-fuel fired furnaces #1, #2, #3, and #4 provided all of the exhaust gases of each of these furnaces are ducted to a common stack, and monitored down stream of the common stack. The CEMS shall comply with the requirements of 40 Code of Federal Regulations (CFR) Part 51, 40 CFR Parts 60.7 and 60.13, 40 CFR Part 60 Appendix B (Performance Specifications) and Appendix F (Quality Assurance Procedures) and the applicable sections of Rule 1080 (Stack Monitoring). [District Rule 4354, 5.9 and 6.6.1] Federally Enforceable Through Title V Permit
5. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
6. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
7. During startups, the permittee shall comply with the requirements of section 5.5 of District Rule 4354. [District Rule 4354, §5.5] Federally Enforceable Through Title V Permit
8. The NOx control system shall be in operation as soon as technologically feasible during the startup period to minimize emissions. [District Rule 4354, §5.5.6] Federally Enforceable Through Title V Permit
9. The NOx control system shall be in operation whenever technologically feasible during shutdown to minimize emissions. [District Rule 4354, §5.6.2] Federally Enforceable Through Title V Permit
10. The NOx control system shall be in operation whenever technologically feasible during furnace idling to minimize emissions. [District Rule 4354, §5.7.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. The duration of shutdown, as measured from the time the furnace operations drop below the idle threshold specified in section 3.17 of District Rule 4354 to when all emissions from the furnace cease, shall not exceed 20 days. [District Rule 4354, §5.6.1] Federally Enforceable Through Title V Permit
12. The specific power of the electrostatic precipitator shall be at least 70 milliwatts/acfm except during the bypass episodes allowed by this permit. [District Rule 2520, §9.3.2] Federally Enforceable Through Title V Permit
13. The oxygen to fuel ratio shall be maintained within the range shown by the most recent source test to result in compliance with the CO and VOC limits of this permit. The acceptable range of the oxygen to fuel ratio shall be established during the initial source test and during each subsequent annual source test. [District Rule 4354] Federally Enforceable Through Title V Permit
14. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation  $E=3.59P^{0.62}$  ( $P < 30$  tph) or  $E=17.31P^{0.16}$  ( $P > 30$  tph). [District Rule 4202] Federally Enforceable Through Title V Permit
15. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Stanislaus County Rule 407 and District Rule 4801] Federally Enforceable Through Title V Permit
16. Source testing to demonstrate compliance with permit conditions and all rules and regulations for both natural gas and LPG shall be conducted at least once every calendar year. NOx and CO testing shall be performed using CARB Method 100. VOC testing shall be performed using EPA method 25A. PM10 testing shall be performed using EPA methods 201 and 202, EPA methods 201a and 202, or CARB methods 501 and 5. SOx testing shall be performed using EPA Method 8 and CARB Method 1-100. [District Rules 1081; 2520, §9.3.2; and 4354, 6.4 and 6.5] Federally Enforceable Through Title V Permit
17. Source testing when firing on LPG fuel need not be performed if the LPG fuel usage for this furnace does not exceed 100 hours during any one calendar year. A source test shall be performed within 90 days after this furnace exceeds 100 hours of operation, on LPG, on an annual basis. [District Rule 1081] Federally Enforceable Through Title V Permit
18. Source testing shall be conducted by a CARB-certified source testing contractor. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to source testing. The results of each source test shall be submitted to the District within 60 days after the source test date. [District Rule 1081] Federally Enforceable Through Title V Permit
19. Source test conditions shall be representative of operations equal to or greater than 60 percent of the fuel use capacity for each furnace as stated in the Permit to Operate. [District Rule 4354, §6.4.2] Federally Enforceable Through Title V Permit
20. PM and PM10 source testing shall be conducted down stream of the electrostatic precipitator in the common stack. Furnaces #1, #2, #3, and #4 must operate simultaneously during source testing unless prior approval is obtained from the District. [District Rule 1081] Federally Enforceable Through Title V Permit
21. An annual Relative Accuracy Test Audit (RATA) shall be performed on the continuous monitoring system as outlined in 40 CFR Part 60 Appendix B. [District Rule 1080] Federally Enforceable Through Title V Permit
22. The owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F (CGAs and RATAs) and if applicable 40 CFR Part 75, Appendix B (linearity and RATAs) at least once every four calendar quarters and annually within 30 days of the anniversary date of the initial test. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

23. An exceedance of a NO<sub>x</sub> or SO<sub>x</sub> emission limit as indicated by the CEMS shall be reported by the operator to the APCO within 24 hours. The notification shall include 1) name and location of the facility, 2) identification of furnace(s) causing the exceedances, 3) calculation of actual NO<sub>x</sub>, CO and VOC emissions, and 4) corrective actions and schedules to complete the work. [District Rule 1080 and Stanislaus County Rule 108] Federally Enforceable Through Title V Permit
24. The operator shall notify the APCO no later than one hour after the detection of a breakdown of the CEMS. The operator shall inform the APCO of the intent to shut down the CEMS at least 24 hours prior to the event. [District Rule 1100] Federally Enforceable Through Title V Permit
25. The permittee shall submit a written report including copies of any Equipment Breakdown reports and/or pertinent variance decisions to the APCO for each calendar quarter, within 30 days of the end of the quarter, including: time intervals, data and magnitude of excess emissions, nature and cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting shall correspond to the averaging period for each respective emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080] Federally Enforceable Through Title V Permit
26. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
27. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
28. Cylinder gas audits (GGAs) of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
29. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201, Stanislaus County Rule 404, District Rule 4202 and Stanislaus County Rule 405. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
30. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4801 and Stanislaus County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
31. The requirements of District Rule 4301 and Stanislaus County Rule 408 were determined to not apply to this unit because the unit does not utilize indirect heat transfer. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
32. The requirements of 40 CFR Part 60, Subpart CC were determined to not apply to this unit because the unit was constructed prior to the effective date in the regulation and has not been modified (according to the definition of "modified" in the regulation). A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
33. The requirements of 40 CFR Part 61, Subpart N were determined to not apply to this unit because the unit does not use commercial arsenic. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
34. Any glass melting furnace located at an Area Source of hazardous air pollutants shall comply with 40 CFR Part 63 Subpart SSSSSS (National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources). [40 CFR Part 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
35. The amount of glass produced shall not exceed 520.1 tons during any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

36. NOx emissions shall not exceed 1.5 pounds per ton of glass produced. This performance based limit is to enforce the NOx emission reductions granted by certificate number N-106-2. [District NSR Rule] Federally Enforceable Through Title V Permit
37. Except during furnace idling, shutdown, and startup, the aggregated NOx emissions shall not exceed 3.6 lb-NOx per ton of glass produced (based on a block 24-hour average). Aggregated NOx emission are the NOx emissions as measured at the common stack divided by the sum of the daily amount of glass produced by permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4. [District Rule 4354, 9.0 and 9.6] Federally Enforceable Through Title V Permit
38. CO emissions shall not exceed 0.04 pounds per ton of glass produced. This performance based limit is to enforce the CO emission reductions granted by certificate number N-106-3. [District NSR Rule] Federally Enforceable Through Title V Permit
39. The VOC emissions shall not exceed 0.25 pounds per ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
40. The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with equal to or greater than 25% by weight color cullet, shall not exceed 0.99 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
41. The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with less than 25% by weight mixed color cullet, shall not exceed 0.81 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
42. PM10 emissions, except during electrostatic precipitator bypass episodes, shall not exceed 0.49 pound per ton of glass produced. [District NSR Rules 2201 and 4354] Federally Enforceable Through Title V Permit
43. The PM10 emissions, during electrostatic precipitator bypass episodes, shall not exceed 0.71 pound per ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
44. The electrostatic precipitator may be bypassed only for maintenance and repair. The duration of electrostatic precipitator bypass episodes shall not exceed 144 hours per calendar year. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
45. The PM10 emissions shall not exceed 22,936 pounds during the first calendar quarter, 23,190 pounds during the second calendar quarter, 23,445 pounds during the third calendar quarter and 23,445 pounds during the fourth calendar quarter. These limits are to enforce the PM10 emission reductions granted by certificate number N-161-4. [District Rule 2201] Federally Enforceable Through Title V Permit
46. During furnace idling, NOx emissions shall not exceed 2,080.4 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
47. During furnace idling, CO emissions shall not exceed 520.1 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
48. During furnace idling, VOC emissions shall not exceed 130.0 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
49. During furnace idling, SOx emissions shall not exceed 572.1 pounds in any one day when producing glass with equal to or greater than 25% by weight color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
50. During furnace idling, SOx emissions shall not exceed 468.1 pounds in any one day when producing glass with less than 25% by weight color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
51. During furnace idling, PM10 emissions shall not exceed 260.1 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
52. The facility shall not use commercial arsenic as a raw material in the production process. [40 CFR Part 61 Subpart N] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

53. Devices used to measure primary and secondary voltage and current shall be maintained in accordance with the manufacturer's specifications. [40 CFR Part 64] Federally Enforceable Through Title V Permit
54. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
55. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
56. The permittee shall comply with the record keeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
57. The specific power of the electrostatic precipitator shall be continuously monitored and recorded. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
58. A daily record of the hours of operation, the amount of glass pulled from the furnace (in tons), the NOx emissions (in lb/ton of glass pulled), the SOx emissions (in lb/ton of glass pulled), the weight of mixed color mix cullet used, the total amount of cullet used (by weight) and the ratio of the mixed color cullet weight to the total cullet weight (in percent). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
59. The oxygen to fuel ratio shall be continuously monitored and recorded. [District Rule 4354] Federally Enforceable Through Title V Permit
60. The permittee shall maintain daily records of the aggregated NOx emissions and the specific power (in milliwatts/acfm) of the electrostatic precipitator. [District Rules 2520, 9.3.2 and 4354, 9.6.1 and 9.7] Federally Enforceable Through Title V Permit
61. The permittee shall maintain the burner oxygen to fuel ratio records required by this permit. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
62. The permittee shall maintain the specific power records required by this permit. [District Rules 2201, 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
63. A record of the PM10 emissions from this unit, in pounds per calendar quarter, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
64. A record of the cumulative annual electrostatic precipitator bypass duration, in hours, shall be kept. The record shall be updated at least weekly. [District Rule 1070] Federally Enforceable Through Title V Permit
65. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-1662-2-11

EXPIRATION DATE: 06/30/2016

## EQUIPMENT DESCRIPTION:

GLASS FURNACE #2 WITH 10 MAXON GAS/OXYGEN BURNERS AND ASSOCIATED FORMING EQUIPMENT (75 MMBTU/HR MAX HEAT CAPACITY). THIS FURNACE IS DUCTED THROUGH A STACK COMMON TO PERMIT UNITS N-1662-1, N-1662-2, N-1662-3 AND N-1662-4. THE FURNACES ARE SERVED BY A SHARED ELECTROSTATIC PRECIPITATOR AND SOX SCRUBBER.

## PERMIT UNIT REQUIREMENTS

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1. Particulate matter emissions shall not exceed 0.1 grain/dscf in concentration. [District Rule 4201 and Stanislaus County Rule 404] Federally Enforceable Through Title V Permit
2. The furnace shall be fired on natural gas and LPG only. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The furnace shall have continuous monitoring systems for NOx and SOx. The monitoring devices shall have continuous recording devices, and all records shall be kept on site. [District Rules 1080 and 4354, §5.9] Federally Enforceable Through Title V Permit
4. One continuous emissions monitoring (CEM) system may be used for monitoring oxy-fuel fired furnaces #1, #2, #3, and #4 provided all of the exhaust gases of each of these furnaces are ducted to a common stack, and monitored down stream of the common stack. The CEMS shall comply with the requirements of 40 Code of Federal Regulations (CFR) Part 51, 40 CFR Parts 60.7 and 60.13, 40 CFR Part 60 Appendix B (Performance Specifications) and Appendix F (Quality Assurance Procedures) and the applicable sections of Rule 1080 (Stack Monitoring). [District Rule 4354, 5.9 and 6.6.1] Federally Enforceable Through Title V Permit.
5. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
6. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
7. During startups, the permittee shall comply with the requirements of section 5.5 of District Rule 4354. [District Rule 4354, §5.5] Federally Enforceable Through Title V Permit
8. The NOx control system shall be in operation as soon as technologically feasible during the startup period to minimize emissions. [District Rule 4354, §5.5.6] Federally Enforceable Through Title V Permit
9. The NOx control system shall be in operation whenever technologically feasible during shutdown to minimize emissions. [District Rule 4354, §5.6.2] Federally Enforceable Through Title V Permit
10. The NOx control system shall be in operation whenever technologically feasible during furnace idling to minimize emissions. [District Rule 4354, §5.7.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

11. The duration of shutdown, as measured from the time the furnace operations drop below the idle threshold specified in section 3.17 of District Rule 4354 to when all emissions from the furnace cease, shall not exceed 20 days. [District Rule 4354, §5.6.1] Federally Enforceable Through Title V Permit
12. The specific power of the electrostatic precipitator shall be at least 70 milliwatts/acfm except during the bypass episodes allowed by this permit. [District Rule 2520, §9.3.2] Federally Enforceable Through Title V Permit
13. The oxygen to fuel ratio shall be maintained within the range shown by the most recent source test to result in compliance with the CO and VOC limits of this permit. The acceptable range of the oxygen to fuel ratio shall be established during the initial source test and during each subsequent annual source test. [District Rule 4354] Federally Enforceable Through Title V Permit
14. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation  $E=3.59P^{0.62}$  ( $P < 30$  tph) or  $E=17.31P^{0.16}$  ( $P > 30$  tph). [District Rule 4202] Federally Enforceable Through Title V Permit
15. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Stanislaus County Rule 407 and District Rule 4801] Federally Enforceable Through Title V Permit
16. Source testing to demonstrate compliance with permit conditions and all rules and regulations for both natural gas and LPG shall be conducted at least once every calendar year. NOx and CO testing shall be performed using CARB Method 100. VOC testing shall be performed using EPA method 25A. PM10 testing shall be performed using EPA methods 201 and 202, EPA methods 201a and 202, or CARB methods 501 and 5. SOx testing shall be performed using EPA Method 8 and CARB Method 1-100. [District Rules 1081; 2520, §9.3.2; and 4354, 6.4 and 6.5] Federally Enforceable Through Title V Permit
17. Source testing when firing on LPG fuel need not be performed if the LPG fuel usage for this furnace does not exceed 100 hours during any one calendar year. A source test shall be performed within 90 days after this furnace exceeds 100 hours of operation, on LPG, on an annual basis. [District Rule 1081] Federally Enforceable Through Title V Permit
18. Source testing shall be conducted by a CARB-certified source testing contractor. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to source testing. The results of each source test shall be submitted to the District within 60 days after the source test date. [District Rule 1081] Federally Enforceable Through Title V Permit
19. Source test conditions shall be representative of operations equal to or greater than 60 percent of the fuel use capacity for each furnace as stated in the Permit to Operate. [District Rule 4354, §6.4.2] Federally Enforceable Through Title V Permit
20. PM and PM10 source testing shall be conducted down stream of the electrostatic precipitator in the common stack. Furnaces #1, #2, #3, and #4 must operate simultaneously during source testing unless prior approval is obtained from the District. [District Rule 1081] Federally Enforceable Through Title V Permit
21. An annual Relative Accuracy Test Audit (RATA) shall be performed on the continuous monitoring system as outlined in 40 CFR Part 60 Appendix B. [District Rule 1080] Federally Enforceable Through Title V Permit
22. The owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F (CGAs and RATAs) and if applicable 40 CFR Part 75, Appendix B (linearity and RATAs) at least once every four calendar quarters and annually within 30 days of the anniversary date of the initial test. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

23. An exceedance of a NOx or SOx emission limit as indicated by the CEMS shall be reported by the operator to the APCO within 24 hours. The notification shall include 1) name and location of the facility, 2) identification of furnace(s) causing the exceedances, 3) calculation of actual NOx, CO and VOC emissions, and 4) corrective actions and schedules to complete the work. [District Rule 1080 and Stanislaus County Rule 108] Federally Enforceable Through Title V Permit
24. The operator shall notify the APCO no later than one hour after the detection of a breakdown of the CEMS. The operator shall inform the APCO of the intent to shut down the CEMS at least 24 hours prior to the event. [District Rule 1100] Federally Enforceable Through Title V Permit
25. The permittee shall submit a written report including copies of any Equipment Breakdown reports and/or pertinent variance decisions to the APCO for each calendar quarter, within 30 days of the end of the quarter, including: time intervals, data and magnitude of excess emissions, nature and cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting shall correspond to the averaging period for each respective emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080] Federally Enforceable Through Title V Permit
26. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
27. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
28. Cylinder gas audits (GGAs) of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
29. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201, Stanislaus County Rule 404, District Rule 4202 and Stanislaus County Rule 405. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
30. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4801 and Stanislaus County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
31. The requirements of District Rule 4301 and Stanislaus County Rule 408 were determined to not apply to this unit because the unit does not utilize indirect heat transfer. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
32. The requirements of 40 CFR Part 60, Subpart CC were determined to not apply to this unit because the unit was constructed prior to the effective date in the regulation and has not been modified (according to the definition of "modified" in the regulation). A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
33. The requirements of 40 CFR Part 61, Subpart N were determined to not apply to this unit because the unit does not use commercial arsenic. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
34. Any glass melting furnace located at an Area Source of hazardous air pollutants shall comply with 40 CFR Part 63 Subpart SSSSSS (National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources). [40 CFR Part 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
35. The amount of glass produced shall not exceed 352.1 tons during any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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



36. NOx emissions shall not exceed 2.77 pounds per ton of glass produced. This performance based limit is to enforce the NOx emission reductions granted by certificate number N-54-2. [District NSR Rule] Federally Enforceable Through Title V Permit
37. Except during furnace idling, shutdown, and startup, the aggregated NOx emissions shall not exceed 3.6 lb-NOx per ton of glass produced (based on a block 24-hour average). Aggregated NOx emission are the NOx emissions as measured at the common stack divided by the sum of the daily amount of glass produced by permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4. [District Rule 4354, 9.0 and 9.6] Federally Enforceable Through Title V Permit
38. CO emissions shall not exceed 1.0 pounds per ton of glass produced. [District NSR Rule] Federally Enforceable Through Title V Permit
39. The VOC emissions shall not exceed 0.25 pounds per ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
40. The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with equal to or greater than 25% by weight color cullet, shall not exceed 0.99 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
41. The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with less than 25% by weight mixed color cullet, shall not exceed 0.81 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
42. PM10 emissions, except during electrostatic precipitator bypass episodes, shall not exceed 0.49 pound per ton of glass produced. [District NSR Rules 2201 and 4354] Federally Enforceable Through Title V Permit
43. The PM10 emissions, during electrostatic precipitator bypass episodes, shall not exceed 0.71 pound per ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
44. The electrostatic precipitator may be bypassed only for maintenance and repair. The duration of electrostatic precipitator bypass episodes shall not exceed 144 hours per calendar year. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
45. The PM10 emissions shall not exceed 15,527 pounds during the first calendar quarter, 15,699 pounds during the second calendar quarter, 15,872 pounds during the third calendar quarter and 15,872 pounds during the fourth calendar quarter. These limits are to enforce the PM10 emission reductions granted by certificate number N-161-4. [District NSR Rule] Federally Enforceable Through Title V Permit
46. During furnace idling, NOx emissions shall not exceed 1,408.4 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
47. During furnace idling, CO emissions shall not exceed 352.1 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
48. During furnace idling, VOC emissions shall not exceed 88.0 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
49. During furnace idling, SOx emissions shall not exceed 387.3 pounds in any one day when producing glass with equal to or greater than 25% by weight color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
50. During furnace idling, SOx emissions shall not exceed 316.9 pounds in any one day when producing glass with less than 25% by weight color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
51. During furnace idling, PM10 emissions shall not exceed 176.1 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
52. The facility shall not use commercial arsenic as a raw material in the production process. [40 CFR Part 61 Subpart N] Federally Enforceable Through Title V Permit
53. Devices used to measure primary and secondary voltage and current shall be maintained in accordance with the manufacturer's specifications. [40 CFR Part 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

54. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
55. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
56. The permittee shall comply with the record keeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
57. The specific power of the electrostatic precipitator shall be continuously monitored and recorded. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
58. A daily record of the hours of operation, the amount of glass pulled from the furnace (in tons), the NOx emissions (in lb/ton of glass pulled), the SOx emissions (in lb/ton of glass pulled), the weight of mixed color mix cullet used, the total amount of cullet used (by weight) and the ratio of the mixed color cullet weight to the total cullet weight (in percent). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
59. The oxygen to fuel ratio shall be continuously monitored and recorded. [District Rule 4354] Federally Enforceable Through Title V Permit
60. The permittee shall maintain daily records of the aggregated NOx emissions and the specific power (in milliwatts/acfm) of the electrostatic precipitator. [District Rules 2520, 9.3.2 and 4354, 9.6.1 and 9.7] Federally Enforceable Through Title V Permit
61. The permittee shall maintain the burner oxygen to fuel ratio records required by this permit. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
62. The permittee shall maintain the specific power records required by this permit. [District Rules 2201, 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
63. A record of the PM10 emissions from this unit, in pounds per calendar quarter, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
64. A record of the cumulative annual electrostatic precipitator bypass duration, in hours, shall be kept. The record shall be updated at least weekly. [District Rule 1070] Federally Enforceable Through Title V Permit
65. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** N-1662-3-11

**EXPIRATION DATE:** 06/30/2016

**EQUIPMENT DESCRIPTION:**

GLASS FURNACE #3 WITH 10 MAXON GAS/OXYGEN BURNERS AND ASSOCIATED FORMING EQUIPMENT (75 MMBTU/HR MAX HEAT CAPACITY). THIS FURNACE IS DUCTED THROUGH A STACK COMMON TO PERMIT UNITS N-1662-1, N-1662-2, N-1662-3 AND N-1662-4. THE FURNACES ARE SERVED BY A SHARED ELECTROSTATIC PRECIPITATOR AND SOX SCRUBBER.

## PERMIT UNIT REQUIREMENTS

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1. Particulate matter emissions shall not exceed 0.1 grain/dscf in concentration. [District Rule 4201 and Stanislaus County Rule 404] Federally Enforceable Through Title V Permit
2. The furnace shall be fired on natural gas and LPG only. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The furnace shall have continuous monitoring systems for NOx and SOx. The monitoring devices shall have continuous recording devices, and all records shall be kept on site. [District Rules 1080 and 4354, §5.9] Federally Enforceable Through Title V Permit
4. One continuous emissions monitoring (CEM) system may be used for monitoring oxy-fuel fired furnaces #1, #2, #3, and #4 provided all of the exhaust gases of each of these furnaces are ducted to a common stack, and monitored down stream of the common stack. The CEMS shall comply with the requirements of 40 Code of Federal Regulations (CFR) Part 51, 40 CFR Parts 60.7 and 60.13, 40 CFR Part 60 Appendix B (Performance Specifications) and Appendix F (Quality Assurance Procedures) and the applicable sections of Rule 1080 (Stack Monitoring). [District Rule 4354, 5.9 and 6.6.1] Federally Enforceable Through Title V Permit
5. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
6. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
7. During startups, the permittee shall comply with the requirements of section 5.5 of District Rule 4354. [District Rule 4354, §5.5] Federally Enforceable Through Title V Permit
8. The NOx control system shall be in operation as soon as technologically feasible during the startup period to minimize emissions. [District Rule 4354, §5.5.6] Federally Enforceable Through Title V Permit
9. The NOx control system shall be in operation whenever technologically feasible during shutdown to minimize emissions. [District Rule 4354, §5.6.2] Federally Enforceable Through Title V Permit
10. The NOx control system shall be in operation whenever technologically feasible during furnace idling to minimize emissions. [District Rule 4354, §5.7.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE  
These terms and conditions are part of the Facility-wide Permit to Operate.

11. The duration of shutdown, as measured from the time the furnace operations drop below the idle threshold specified in section 3.17 of District Rule 4354 to when all emissions from the furnace cease, shall not exceed 20 days. [District Rule 4354, §5.6.1] Federally Enforceable Through Title V Permit
12. The specific power of the electrostatic precipitator shall be at least 70 milliwatts/acfm except during the bypass episodes allowed by this permit. [District Rule 2520, §9.3.2] Federally Enforceable Through Title V Permit
13. The oxygen to fuel ratio shall be maintained within the range shown by the most recent source test to result in compliance with the CO and VOC limits of this permit. The acceptable range of the oxygen to fuel ratio shall be established during the initial source test and during each subsequent annual source test. [District Rule 4354] Federally Enforceable Through Title V Permit
14. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation  $E=3.59P^{0.62}$  ( $P < 30$  tph) or  $E=17.31P^{0.16}$  ( $P > 30$  tph). [District Rule 4202] Federally Enforceable Through Title V Permit
15. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Stanislaus County Rule 407 and District Rule 4801] Federally Enforceable Through Title V Permit
16. Source testing to demonstrate compliance with permit conditions and all rules and regulations for both natural gas and LPG shall be conducted at least once every calendar year. NO<sub>x</sub> and CO testing shall be performed using CARB Method 100. VOC testing shall be performed using EPA method 25A. PM<sub>10</sub> testing shall be performed using EPA methods 201 and 202, EPA methods 201a and 202, or CARB methods 501 and 5. SO<sub>x</sub> testing shall be performed using EPA Method 8 and CARB Method 1-100. [District Rules 1081; 2520, §9.3.2; and 4354, 6.4 and 6.5] Federally Enforceable Through Title V Permit
17. Source testing when firing on LPG fuel need not be performed if the LPG fuel usage for this furnace does not exceed 100 hours during any one calendar year. A source test shall be performed within 90 days after this furnace exceeds 100 hours of operation, on LPG, on an annual basis. [District Rule 1081] Federally Enforceable Through Title V Permit
18. Source testing shall be conducted by a CARB-certified source testing contractor. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to source testing. The results of each source test shall be submitted to the District within 60 days after the source test date. [District Rule 1081] Federally Enforceable Through Title V Permit
19. Source test conditions shall be representative of operations equal to or greater than 60 percent of the fuel use capacity for each furnace as stated in the Permit to Operate. [District Rule 4354, §6.4.2] Federally Enforceable Through Title V Permit
20. PM and PM<sub>10</sub> source testing shall be conducted down stream of the electrostatic precipitator in the common stack. Furnaces #1, #2, #3, and #4 must operate simultaneously during source testing unless prior approval is obtained from the District. [District Rule 1081] Federally Enforceable Through Title V Permit
21. An annual Relative Accuracy Test Audit (RATA) shall be performed on the continuous monitoring system as outlined in 40 CFR Part 60 Appendix B. [District Rule 1080] Federally Enforceable Through Title V Permit
22. The owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F (CGAs and RATAs) and if applicable 40 CFR Part 75, Appendix B (linearity and RATAs) at least once every four calendar quarters and annually within 30 days of the anniversary date of the initial test. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

23. An exceedance of a NO<sub>x</sub> or SO<sub>x</sub> emission limit as indicated by the CEMS shall be reported by the operator to the APCO within 24 hours. The notification shall include 1) name and location of the facility, 2) identification of furnace(s) causing the exceedances, 3) calculation of actual NO<sub>x</sub>, CO and VOC emissions, and 4) corrective actions and schedules to complete the work. [District Rule 1080 and Stanislaus County Rule 108] Federally Enforceable Through Title V Permit
24. The operator shall notify the APCO no later than one hour after the detection of a breakdown of the CEMS. The operator shall inform the APCO of the intent to shut down the CEMS at least 24 hours prior to the event. [District Rule 1100] Federally Enforceable Through Title V Permit
25. The permittee shall submit a written report including copies of any Equipment Breakdown reports and/or pertinent variance decisions to the APCO for each calendar quarter, within 30 days of the end of the quarter, including: time intervals, data and magnitude of excess emissions, nature and cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting shall correspond to the averaging period for each respective emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080] Federally Enforceable Through Title V Permit
26. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
27. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
28. Cylinder gas audits (GGAs) of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
29. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201, Stanislaus County Rule 404, District Rule 4202 and Stanislaus County Rule 405. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
30. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4801 and Stanislaus County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
31. The requirements of District Rule 4301 and Stanislaus County Rule 408 were determined to not apply to this unit because the unit does not utilize indirect heat transfer. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
32. The requirements of 40 CFR Part 60, Subpart CC were determined to not apply to this unit because the unit was constructed prior to the effective date in the regulation and has not been modified (according to the definition of "modified" in the regulation). A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
33. The requirements of 40 CFR Part 61, Subpart N were determined to not apply to this unit because the unit does not use commercial arsenic. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
34. Any glass melting furnace located at an Area Source of hazardous air pollutants shall comply with 40 CFR Part 63 Subpart SSSSSS (National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources). [40 CFR Part 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
35. The amount of glass produced shall not exceed 352.1 tons during any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

36. NOx emissions shall not exceed 2.48 pounds per ton of glass produced. This performance based limit is to enforce the NOx emission reductions granted by certificate number N-56-2. [District NSR Rule] Federally Enforceable Through Title V Permit
37. Except during furnace idling, shutdown, and startup, the aggregated NOx emissions shall not exceed 3.6 lb-NOx per ton of glass produced (based on a block 24-hour average). Aggregated NOx emission are the NOx emissions as measured at the common stack divided by the sum of the daily amount of glass produced by permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4. [District Rule 4354, 9.0 and 9.6] Federally Enforceable Through Title V Permit
38. CO emissions shall not exceed 0.01 pounds per ton of glass produced. This performance based limit is to enforce the CO emission reductions granted by certificate number N-106-3. [District NSR Rule] Federally Enforceable Through Title V Permit
39. The VOC emissions shall not exceed 0.25 pounds per ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
40. The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with equal to or greater than 25% by weight color cullet, shall not exceed 0.99 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
41. The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with less than 25% by weight mixed color cullet, shall not exceed 0.81 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
42. PM10 emissions, except during electrostatic precipitator bypass episodes, shall not exceed 0.49 pound per ton of glass produced. [District NSR Rules 2201 and 4354] Federally Enforceable Through Title V Permit
43. The PM10 emissions, during electrostatic precipitator bypass episodes, shall not exceed 0.71 pound per ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
44. The electrostatic precipitator may be bypassed only for maintenance and repair. The duration of electrostatic precipitator bypass episodes shall not exceed 144 hours per calendar year. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
45. The PM10 emissions shall not exceed 15,527 pounds during the first calendar quarter, 15,699 pounds during the second calendar quarter, 15,872 pounds during the third calendar quarter and 15,872 pounds during the fourth calendar quarter. These limits are to enforce the PM10 emission reductions granted by certificate number N-161-4. [District NSR Rule] Federally Enforceable Through Title V Permit
46. During furnace idling, NOx emissions shall not exceed 1,408.4 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
47. During furnace idling, CO emissions shall not exceed 352.1 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
48. During furnace idling, VOC emissions shall not exceed 88.0 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
49. During furnace idling, SOx emissions shall not exceed 387.3 pounds in any one day when producing glass with equal to or greater than 25% by weight color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
50. During furnace idling, SOx emissions shall not exceed 316.9 pounds in any one day when producing glass with less than 25% by weight color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
51. During furnace idling, PM10 emissions shall not exceed 176.1 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
52. The facility shall not use commercial arsenic as a raw material in the production process. [40 CFR Part 61 Subpart N] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

53. Devices used to measure primary and secondary voltage and current shall be maintained in accordance with the manufacturer's specifications. [40 CFR Part 64] Federally Enforceable Through Title V Permit
54. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
55. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
56. The permittee shall comply with the record keeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
57. The specific power of the electrostatic precipitator shall be continuously monitored and recorded. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
58. A daily record of the hours of operation, the amount of glass pulled from the furnace (in tons), the NOx emissions (in lb/ton of glass pulled), the SOx emissions (in lb/ton of glass pulled), the weight of mixed color mix cullet used, the total amount of cullet used (by weight) and the ratio of the mixed color cullet weight to the total cullet weight (in percent). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
59. The oxygen to fuel ratio shall be continuously monitored and recorded. [District Rule 4354] Federally Enforceable Through Title V Permit
60. The permittee shall maintain daily records of the aggregated NOx emissions and the specific power (in milliwatts/acfm) of the electrostatic precipitator. [District Rules 2520, 9.3.2 and 4354, 9.6.1 and 9.7] Federally Enforceable Through Title V Permit
61. The permittee shall maintain the burner oxygen to fuel ratio records required by this permit. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
62. The permittee shall maintain the specific power records required by this permit. [District Rules 2201, 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
63. A record of the PM10 emissions from this unit, in pounds per calendar quarter, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
64. A record of the cumulative annual electrostatic precipitator bypass duration, in hours, shall be kept. The record shall be updated at least weekly. [District Rule 1070] Federally Enforceable Through Title V Permit
65. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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

# San Joaquin Valley Air Pollution Control District

**PERMIT UNIT:** N-1662-4-12

**EXPIRATION DATE:** 06/30/2016

**EQUIPMENT DESCRIPTION:**

GLASS FURNACE #4 WITH 12 MAXON GAS/OXYGEN BURNERS AND ASSOCIATED FORMING EQUIPMENT (90 MMBTU/HR MAX HEAT CAPACITY). THIS FURNACE IS DUCTED THROUGH A STACK COMMON TO PERMIT UNITS N-1662-1, N-1662-2, N-1662-3 AND N-1662-4. THE FURNACES ARE SERVED BY A SHARED ELECTROSTATIC PRECIPITATOR AND SOX SCRUBBER.

## PERMIT UNIT REQUIREMENTS

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1. Particulate matter emissions shall not exceed 0.1 grain/dscf in concentration. [District Rule 4201 and Stanislaus County Rule 404] Federally Enforceable Through Title V Permit
2. The furnace shall be fired on natural gas and LPG only. [District NSR Rule] Federally Enforceable Through Title V Permit
3. The furnace shall have continuous monitoring systems for NOx and SOx. The monitoring devices shall have continuous recording devices, and all records shall be kept on site. [District Rules 1080 and 4354, §5.9] Federally Enforceable Through Title V Permit
4. One continuous emissions monitoring (CEM) system may be used for monitoring oxy-fuel fired furnaces #1, #2, #3, and #4 provided all of the exhaust gases of each of these furnaces are ducted to a common stack, and monitored down stream of the common stack. The CEMS shall comply with the requirements of 40 Code of Federal Regulations (CFR) Part 51, 40 CFR Parts 60.7 and 60.13, 40 CFR Part 60 Appendix B (Performance Specifications) and Appendix F (Quality Assurance Procedures) and the applicable sections of Rule 1080 (Stack Monitoring). [District Rule 4354, 5.9 and 6.6.1] Federally Enforceable Through Title V Permit
5. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
6. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
7. During startups, the permittee shall comply with the requirements of section 5.5 of District Rule 4354. [District Rule 4354, §5.5] Federally Enforceable Through Title V Permit
8. The NOx control system shall be in operation as soon as technologically feasible during the startup period to minimize emissions. [District Rule 4354, §5.5.6] Federally Enforceable Through Title V Permit
9. The NOx control system shall be in operation whenever technologically feasible during shutdown to minimize emissions. [District Rule 4354, §5.6.2] Federally Enforceable Through Title V Permit
10. The NOx control system shall be in operation whenever technologically feasible during furnace idling to minimize emissions. [District Rule 4354, §5.7.1] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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



11. The duration of shutdown, as measured from the time the furnace operations drop below the idle threshold specified in section 3.17 of District Rule 4354 to when all emissions from the furnace cease, shall not exceed 20 days. [District Rule 4354, §5.6.1] Federally Enforceable Through Title V Permit
12. The total startup time, as defined in section 3.22 of District Rule 4354 (Glass Melting Furnaces), shall not exceed 18 days. [District Rule 4354, §5.2.1] Federally Enforceable Through Title V Permit
13. The specific power of the electrostatic precipitator shall be at least 70 milliwatts/acfm except during the bypass episodes allowed by this permit. [District Rule 2520, §9.3.2] Federally Enforceable Through Title V Permit
14. The oxygen to fuel ratio shall be maintained within the range shown by the most recent source test to result in compliance with the CO and VOC limits of this permit. The acceptable range of the oxygen to fuel ratio shall be established during the initial source test and during each subsequent annual source test. [District Rule 4354]
15. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation  $E=3.59P^{0.62}$  ( $P < 30$  tph) or  $E=17.31P^{0.16}$  ( $P > 30$  tph). [District Rule 4202] Federally Enforceable Through Title V Permit
16. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Stanislaus County Rule 407 and District Rule 4801] Federally Enforceable Through Title V Permit
17. Source testing to demonstrate compliance with permit conditions and all rules and regulations for both natural gas and LPG shall be conducted at least once every calendar year. NOx and CO testing shall be performed using CARB Method 100. VOC testing shall be performed using EPA method 25A. PM10 testing shall be performed using EPA methods 201 and 202, EPA methods 201a and 202, or CARB methods 501 and 5. SOx testing shall be performed using EPA Method 8 and CARB Method 1-100. [District Rules 1081; 2520, §9.3.2; and 4354, 6.4 and 6.5] Federally Enforceable Through Title V Permit
18. Source testing when firing on LPG fuel need not be performed if the LPG fuel usage for this furnace does not exceed 100 hours during any one calendar year. A source test shall be performed within 90 days after this furnace exceeds 100 hours of operation, on LPG, on an annual basis. [District Rule 1081] Federally Enforceable Through Title V Permit
19. Source testing shall be conducted by a CARB-certified source testing contractor. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to source testing. The results of each source test shall be submitted to the District within 60 days after the source test date. [District Rule 1081] Federally Enforceable Through Title V Permit
20. Source test conditions shall be representative of operations equal to or greater than 60 percent of the fuel use capacity for each furnace as stated in the Permit to Operate. [District Rule 4354, §6.4.2] Federally Enforceable Through Title V Permit
21. PM and PM10 source testing shall be conducted down stream of the electrostatic precipitator in the common stack. Furnaces #1, #2, #3, and #4 must operate simultaneously during source testing unless prior approval is obtained from the District. [District Rule 1081] Federally Enforceable Through Title V Permit
22. An annual Relative Accuracy Test Audit (RATA) shall be performed on the continuous monitoring system as outlined in 40 CFR Part 60 Appendix B. [District Rule 1080] Federally Enforceable Through Title V Permit
23. The owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F (CGAs and RATAs) and if applicable 40 CFR Part 75, Appendix B (linearity and RATAs) at least once every four calendar quarters and annually within 30 days of the anniversary date of the initial test. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

24. An exceedance of a NO<sub>x</sub> or SO<sub>x</sub> emission limit as indicated by the CEMS shall be reported by the operator to the APCO within 24 hours. The notification shall include 1) name and location of the facility, 2) identification of furnace(s) causing the exceedances, 3) calculation of actual NO<sub>x</sub>, CO and VOC emissions, and 4) corrective actions and schedules to complete the work. [District Rule 1080 and Stanislaus County Rule 108] Federally Enforceable Through Title V Permit
25. The operator shall notify the APCO no later than one hour after the detection of a breakdown of the CEMS. The operator shall inform the APCO of the intent to shut down the CEMS at least 24 hours prior to the event. [District Rule 1100] Federally Enforceable Through Title V Permit
26. The permittee shall submit a written report including copies of any Equipment Breakdown reports and/or pertinent variance decisions to the APCO for each calendar quarter, within 30 days of the end of the quarter, including: time intervals, data and magnitude of excess emissions, nature and cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting shall correspond to the averaging period for each respective emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080] Federally Enforceable Through Title V Permit
27. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
28. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
29. Cylinder gas audits (GGAs) of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
30. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201, Stanislaus County Rule 404, District Rule 4202 and Stanislaus County Rule 405. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
31. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4801 and Stanislaus County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
32. The requirements of District Rule 4301 and Stanislaus County Rule 408 were determined to not apply to this unit because the unit does not utilize indirect heat transfer. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
33. The requirements of 40 CFR Part 60, Subpart CC were determined to not apply to this unit because the unit was constructed prior to the effective date in the regulation and has not been modified (according to the definition of "modified" in the regulation). A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
34. The requirements of 40 CFR Part 61, Subpart N were determined to not apply to this unit because the unit does not use commercial arsenic. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
35. Any glass melting furnace located at an Area Source of hazardous air pollutants shall comply with 40 CFR Part 63 Subpart SSSSSS (National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources). [40 CFR Part 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
36. The amount of glass produced shall not exceed 637.9 tons during any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

37. NOx emissions shall not exceed 2.95 pounds per ton of glass produced. This performance based limit is to enforce the NOx emission reductions granted by certificate number N-107-2. [District NSR Rule] Federally Enforceable Through Title V Permit
38. Except during furnace idling, shutdown, and startup, the aggregated NOx emissions shall not exceed 3.6 lb-NOx per ton of glass produced (based on a block 24-hour average). Aggregated NOx emission are the NOx emissions as measured at the common stack divided by the sum of the daily amount of glass produced by permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4. [District Rule 4354, 9.0 and 9.6] Federally Enforceable Through Title V Permit
39. CO emissions shall not exceed 1.0 pounds per ton of glass produced. [District NSR Rule] Federally Enforceable Through Title V Permit
40. The VOC emissions shall not exceed 0.25 pounds per ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
41. The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with equal to or greater than 25% by weight color cullet, shall not exceed 0.99 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
42. The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with less than 25% by weight mixed color cullet, shall not exceed 0.81 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
43. PM10 emissions, except during electrostatic precipitator bypass episodes, shall not exceed 0.49 pound per ton of glass produced. [District NSR Rules 2201 and 4354] Federally Enforceable Through Title V Permit
44. The PM10 emissions, during electrostatic precipitator bypass episodes, shall not exceed 0.71 pound per ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
45. The electrostatic precipitator may be bypassed only for maintenance and repair. The duration of electrostatic precipitator bypass episodes shall not exceed 144 hours per calendar year. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
46. The PM10 emissions shall not exceed 28,132 pounds during the first calendar quarter, 28,445 pounds during the second calendar quarter, 28,757 pounds during the third calendar quarter and 28,758 pounds during the fourth calendar quarter. These limits are to enforce the PM10 emission reductions granted by certificate number N-161-4. [District NSR Rule] Federally Enforceable Through Title V Permit
47. During furnace idling, NOx emissions shall not exceed 1,888.0 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
48. During furnace idling, CO emissions shall not exceed 637.9 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
49. During furnace idling, VOC emissions shall not exceed 159.5 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
50. During furnace idling, SOx emissions shall not exceed 701.7 pounds in any one day when producing glass with equal to or greater than 25% by weight color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
51. During furnace idling, SOx emissions shall not exceed 574.1 pounds in any one day when producing glass with less than 25% by weight color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
52. During furnace idling, PM10 emissions shall not exceed 319.0 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
53. The facility shall not use commercial arsenic as a raw material in the production process. [40 CFR Part 61 Subpart N] Federally Enforceable Through Title V Permit
54. Devices used to measure primary and secondary voltage and current shall be maintained in accordance with the manufacturer's specifications. [40 CFR Part 64] Federally Enforceable Through Title V Permit

PERMIT UNIT REQUIREMENTS CONTINUE ON NEXT PAGE

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

55. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
56. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
57. The permittee shall comply with the record keeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
58. The specific power of the electrostatic precipitator shall be continuously monitored and recorded. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
59. A daily record of the hours of operation, the amount of glass pulled from the furnace (in tons), the NOx emissions (in lb/ton of glass pulled), the SOx emissions (in lb/ton of glass pulled), the weight of mixed color mix cullet used, the total amount of cullet used (by weight) and the ratio of the mixed color cullet weight to the total cullet weight (in percent). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
60. The oxygen to fuel ratio shall be continuously monitored and recorded. [District Rule 4354] Federally Enforceable Through Title V Permit
61. The permittee shall maintain daily records of the aggregated NOx emissions and the specific power (in milliwatts/acfm) of the electrostatic precipitator. [District Rules 2520, 9.3.2 and 4354, 9.6.1 and 9.7] Federally Enforceable Through Title V Permit
62. The permittee shall maintain the burner oxygen to fuel ratio records required by this permit. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
63. The permittee shall maintain the specific power records required by this permit. [District Rules 2201, 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
64. A record of the PM10 emissions from this unit, in pounds per calendar quarter, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
65. A record of the cumulative annual electrostatic precipitator bypass duration, in hours, shall be kept. The record shall be updated at least weekly. [District Rule 1070] Federally Enforceable Through Title V Permit
66. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 1070] Federally Enforceable Through Title V Permit

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

## **Appendix D**

### **Previously Issued ATCs**



## AUTHORITY TO CONSTRUCT

PERMIT NO: N-1662-1-14

ISSUANCE DATE: 09/28/2012

LEGAL OWNER OR OPERATOR: GALLO GLASS COMPANY  
MAILING ADDRESS: P.O. BOX 3044  
MODESTO, CA 95353

LOCATION: 605 S SANTA CRUZ AVE  
MODESTO, CA 95354

**EQUIPMENT DESCRIPTION:**

FURNACE #1 WITH 10 MAXON GAS/OXYGEN BURNERS AND ASSOCIATED EQUIPMENT (75 MMBTU/HR MAX HEAT CAPACITY). THIS FURNACE IS DUCTED THROUGH A STACK COMMON TO PERMIT UNITS N-1662-1, N-1662-2, N-1662-3 AND N-1662-4. THE FURNACES ARE SERVED BY A SHARED ELECTROSTATIC PRECIPITATOR AND SOX SCRUBBER. MODIFICATION TO INSTALL A TRI-MER UTF460 CERAMIC FILTER TYPE DUST COLLECTOR.

### CONDITIONS

1. 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. Prior to operating with the modifications authorized by this Authority to Construct, the District shall receive an application for an Administrative Permit Amendment. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grain/dscf in concentration. [District Rule 4201 and Stanislaus County Rule 404] 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 Sacredin, Executive Director / AICO



DAVID WARNER, Director of Permit Services

N-1662-1-14, Sep 28 2012 10:12AM - SCHOINHOM : Joint Inspection NOT Required

6. The furnace shall be fired on natural gas and LPG only. [District NSR Rule] Federally Enforceable Through Title V Permit
7. The furnace shall have continuous monitoring systems for NO<sub>x</sub> and SO<sub>x</sub>. The monitoring devices shall have continuous recording devices, and all records shall be kept on site. [District Rules 1080 and 4354, §5.9] Federally Enforceable Through Title V Permit
8. One continuous emissions monitoring (CEM) system may be used for monitoring oxy-fuel fired furnaces #1, #2, #3, and #4 provided all of the exhaust gases of each of these furnaces are ducted to a common stack, and monitored down stream of the common stack. The CEMS shall comply with the requirements of 40 Code of Federal Regulations (CFR) Part 51, 40 CFR Parts 60.7 and 60.13, 40 CFR Part 60 Appendix B (Performance Specifications) and Appendix F (Quality Assurance Procedures) and the applicable sections of Rule 1080 (Stack Monitoring). [District Rule 4354, 5.9 and 6.6.1] Federally Enforceable Through Title V Permit
9. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
10. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO<sub>x</sub>, CO, and O<sub>2</sub> analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
11. During startups, the permittee shall comply with the requirements of section 5.5 of District Rule 4354. [District Rule 4354, §5.5] Federally Enforceable Through Title V Permit
12. The NO<sub>x</sub> control system shall be in operation as soon as technologically feasible during the startup period to minimize emissions. [District Rule 4354, §5.5.6] Federally Enforceable Through Title V Permit
13. The NO<sub>x</sub> control system shall be in operation whenever technologically feasible during shutdown to minimize emissions. [District Rule 4354, §5.6.2] Federally Enforceable Through Title V Permit
14. The NO<sub>x</sub> control system shall be in operation whenever technologically feasible during furnace idling to minimize emissions. [District Rule 4354, §5.7.1] Federally Enforceable Through Title V Permit
15. The duration of shutdown, as measured from the time the furnace operations drop below the idle threshold specified in section 3.17 of District Rule 4354 to when all emissions from the furnace cease, shall not exceed 20 days. [District Rule 4354, §5.6.1] Federally Enforceable Through Title V Permit
16. The oxygen to fuel ratio shall be maintained within the range shown by the most recent source test to result in compliance with the CO and VOC limits of this permit. The acceptable range of the oxygen to fuel ratio shall be established during the initial source test and during each subsequent annual source test. [District Rule 4354] Federally Enforceable Through Title V Permit
17. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation  $E=3.59P^{0.62}$  ( $P < 30$  tph) or  $E=17.31P^{0.16}$  ( $P > 30$  tph). [District Rule 4202] Federally Enforceable Through Title V Permit
18. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Stanislaus County Rule 407 and District Rule 4801] Federally Enforceable Through Title V Permit
19. Within 60 days after the start-up of each ceramic filter dust collector module, a source test for PM<sub>10</sub> emissions shall be conducted. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

20. Source testing to demonstrate compliance with permit conditions and all rules and regulations for both natural gas and LPG shall be conducted at least once every calendar year. NO<sub>x</sub> and CO testing shall be performed using CARB Method 100. VOC testing shall be performed using EPA method 25A. PM<sub>10</sub> testing shall be performed using EPA methods 201 and 202, EPA methods 201a and 202, or CARB methods 501 and 5. SO<sub>x</sub> testing shall be performed using EPA Method 8 and CARB Method 1-100. [District Rules 1081, 2201, 2520, §9.3.2; and 4354, 6.4 and 6.5] Federally Enforceable Through Title V Permit
21. Source testing when firing on LPG fuel need not be performed if the LPG fuel usage for this furnace does not exceed 100 hours during any one calendar year. A source test shall be performed within 90 days after this furnace exceeds 100 hours of operation, on LPG, on an annual basis. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Source testing shall be conducted by a CARB-certified source testing contractor. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to source testing. The results of each source test shall be submitted to the District within 60 days after the source test date. [District Rule 1081] Federally Enforceable Through Title V Permit
23. Source test conditions shall be representative of operations equal to or greater than 60 percent of the fuel use capacity for each furnace as stated in the Permit to Operate. [District Rule 4354, §6.4.2] Federally Enforceable Through Title V Permit
24. PM and PM<sub>10</sub> source testing shall be conducted downstream of the electrostatic precipitator and the ceramic filter dust collector in the common stack. Furnaces #1, #2, #3, and #4 must operate simultaneously during source testing unless prior approval is obtained from the District. [District Rule 1081] Federally Enforceable Through Title V Permit
25. An annual Relative Accuracy Test Audit (RATA) shall be performed on the continuous monitoring system as outlined in 40 CFR Part 60 Appendix B. [District Rule 1080] Federally Enforceable Through Title V Permit
26. The owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F (CGAs and RATAs) and if applicable 40 CFR Part 75, Appendix B (linearity and RATAs) at least once every four calendar quarters and annually within 30 days of the anniversary date of the initial test. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
27. An exceedance of a NO<sub>x</sub> or SO<sub>x</sub> emission limit as indicated by the CEMS shall be reported by the operator to the APCO within 24 hours. The notification shall include 1) name and location of the facility, 2) identification of furnace(s) causing the exceedances, 3) calculation of actual NO<sub>x</sub>, CO and VOC emissions, and 4) corrective actions and schedules to complete the work. [District Rule 1080 and Stanislaus County Rule 108] Federally Enforceable Through Title V Permit
28. The operator shall notify the APCO no later than one hour after the detection of a breakdown of the CEMS. The operator shall inform the APCO of the intent to shut down the CEMS at least 24 hours prior to the event. [District Rule 1100] Federally Enforceable Through Title V Permit
29. The permittee shall submit a written report including copies of any Equipment Breakdown reports and/or pertinent variance decisions to the APCO for each calendar quarter, within 30 days of the end of the quarter, including: time intervals, data and magnitude of excess emissions, nature and cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting shall correspond to the averaging period for each respective emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080] Federally Enforceable Through Title V Permit
30. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE



31. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
32. Cylinder gas audits (GGAs) of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
33. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201, Stanislaus County Rule 404, District Rule 4202 and Stanislaus County Rule 405. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
34. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4801 and Stanislaus County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
35. The requirements of District Rule 4301 and Stanislaus County Rule 408 were determined to not apply to this unit because the unit does not utilize indirect heat transfer. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
36. The requirements of 40 CFR Part 60, Subpart CC were determined to not apply to this unit because the unit was constructed prior to the effective date in the regulation and has not been modified (according to the definition of "modified" in the regulation). A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
37. The requirements of 40 CFR Part 61, Subpart N were determined to not apply to this unit because the unit does not use commercial arsenic. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
38. Any glass melting furnace located at an Area Source of hazardous air pollutants shall comply with 40 CFR Part 63 Subpart SSSSSS (National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources). [40 CFR Part 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
39. The amount of glass produced shall not exceed 520.1 tons during any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
40. NO<sub>x</sub> emissions shall not exceed 1.5 pounds per ton of glass produced. This performance based limit is to enforce the NO<sub>x</sub> emission reductions granted by certificate number N-106-2. [District NSR Rule] Federally Enforceable Through Title V Permit
41. Except during furnace idling, shutdown, and startup, the aggregated NO<sub>x</sub> emissions shall not exceed 3.6 lb-NO<sub>x</sub> per ton of glass produced (based on a block 24-hour average). Aggregated NO<sub>x</sub> emissions are the NO<sub>x</sub> emissions as measured at the common stack divided by the sum of the daily amount of glass produced by permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4. [District Rule 4354, 9.0 and 9.6] Federally Enforceable Through Title V Permit
42. CO emissions shall not exceed 0.04 pounds per ton of glass produced. This performance based limit is to enforce the CO emission reductions granted by certificate number N-106-3. [District NSR Rule] Federally Enforceable Through Title V Permit
43. The VOC emissions shall not exceed 0.25 pounds per ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
44. The combined SO<sub>x</sub> emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with equal to or greater than 25% by weight mixed color cullet, shall not exceed 0.99 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
45. The combined SO<sub>x</sub> emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with less than 25% by weight mixed color cullet, shall not exceed 0.81 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
46. The PM<sub>10</sub> emissions, except during full or partial emission control system bypass episodes, shall not exceed 0.49 lb/ton of glass produced. [District NSR Rules 2201 and 4354] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

47. The PM10 emissions, during full or partial emission control system bypass episodes, shall not exceed 0.71 lb/ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
48. The amount of time that the furnace exhaust is not fully treated by a control device shall not exceed 144 hours per calendar year. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
49. The PM10 emissions shall not exceed 22,936 pounds during the first calendar quarter, 23,190 pounds during the second calendar quarter, 23,445 pounds during the third calendar quarter and 23,445 pounds during the fourth calendar quarter. These limits are to enforce the PM10 emission reductions granted by certificate number N-161-4. [District Rule 2201] Federally Enforceable Through Title V Permit
50. During furnace idling, NOx emissions shall not exceed 2,080.4 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
51. During furnace idling, CO emissions shall not exceed 520.1 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
52. During furnace idling, VOC emissions shall not exceed 130.0 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
53. During furnace idling, SOx emissions shall not exceed 572.1 pounds in any one day when producing glass with equal to or greater than 25% by weight mixed color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
54. During furnace idling, SOx emissions shall not exceed 468.1 pounds in any one day when producing glass with less than 25% by weight mixed color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
55. During furnace idling, PM10 emissions shall not exceed 260.1 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
56. The facility shall not use commercial arsenic as a raw material in the production process. [40 CFR Part 61 Subpart N] Federally Enforceable Through Title V Permit
57. The ceramic filter dust collector shall be maintained and operated according to manufacturer's specifications. [District Rule 2201] Federally Enforceable Through Title V Permit
58. The ceramic filter dust collector cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
59. Material removed from the ceramic filter dust collector shall be disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
60. Replacement filters numbering at least 10% of the total number of filters in the ceramic filter dust collector shall be maintained on the premises. [District Rule 2201] Federally Enforceable Through Title V Permit
61. Devices to measure the primary and secondary voltage and current of the electrostatic precipitator shall be maintained in accordance with the manufacturer's specifications. [District Rule 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
62. The specific power of the electrostatic precipitator shall be at least 70 milliwatts/acfm except during the bypass episodes allowed by this permit. [District Rule 2520, §9.3.2 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
63. The ceramic filter dust collector shall be equipped with a pressure differential gauge to indicate the pressure drop across the filters. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
64. During operation of the ceramic filter dust collector, the pressure differential gauge reading shall be 5 to 10 inches of water column. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
65. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

66. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
67. The permittee shall comply with the record keeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
68. The specific power of the electrostatic precipitator shall be continuously monitored and recorded. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
69. Dust collector filters shall be inspected annually while in operation for evidence of particulate matter breakthrough and replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
70. Dust Collector filters shall be inspected annually while not in operation for tears, scuffs, abrasions or hole that might interfere with the PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
71. A daily record of the hours of operation, the amount of glass pulled from the furnace (in tons), the NO<sub>x</sub> emissions (in lb/ton of glass pulled), the SO<sub>x</sub> emissions (in lb/ton of glass pulled), the weight of mixed color mix cullet used, the total amount of cullet used (by weight) and the ratio of the mixed color cullet weight to the total cullet weight (in percent). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
72. The oxygen to fuel ratio shall be continuously monitored and recorded. [District Rule 4354] Federally Enforceable Through Title V Permit
73. The permittee shall maintain daily records of the aggregated NO<sub>x</sub> emissions. [District Rules 2520, 9.3.2 and 4354, 9.6.1 and 9.7] Federally Enforceable Through Title V Permit
74. The permittee shall maintain the burner oxygen to fuel ratio records required by this permit. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
75. A record of the PM<sub>10</sub> emissions from this unit, in pounds per calendar quarter, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
76. A record of the cumulative annual number of hours that the emission control system is either fully or partially bypassed shall be kept. The record shall be updated at least weekly. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
77. The permittee shall maintain daily records of the specific power of the electrostatic precipitator (in milliwatts/acfm). [District Rules 2201, 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
78. The operator shall monitor and record the pressure differential gauge reading of the ceramic filter dust collector at least once during each day that the unit operates. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
79. Records of dust collector maintenance, inspections and repairs shall be maintained. The records shall include, date of inspection, change outs of filter media, corrective action taken, and identification of the individual performing the inspection. [District Rules 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
80. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rule 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit



## AUTHORITY TO CONSTRUCT

PERMIT NO: N-1662-2-15

ISSUANCE DATE: 09/28/2012

LEGAL OWNER OR OPERATOR: GALLO GLASS COMPANY

MAILING ADDRESS: P.O. BOX 3044  
MODESTO, CA 95353

LOCATION: 605 S SANTA CRUZ AVE  
MODESTO, CA 95354

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF GLASS FURNACE #2 WITH 10 MAXON GAS/OXYGEN BURNERS AND ASSOCIATED FORMING EQUIPMENT (75 MMBTU/HR MAX HEAT CAPACITY). THIS FURNACE IS DUCTED THROUGH A STACK COMMON TO PERMIT UNITS N-1662-1, N-1662-2, N-1662-3 AND N-1662-4. THE FURNACES ARE SERVED BY A SHARED ELECTROSTATIC PRECIPITATOR AND SOX SCRUBBER. MODIFICATION TO INSTALL A TRI-MER UTF460 CERAMIC FILTER TYPE DUST COLLECTOR.

## CONDITIONS

1. 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. Prior to operating with the modifications authorized by this Authority to Construct, the District shall receive an application for an Administrative Permit Amendment. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grain/dscf in concentration. [District Rule 4201 and Stanislaus County Rule 404] 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 Sadeghin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

N-1662-2-15, Sep 28 2012 10:12AM - SCHOHMOM : Job Inspection NOT Required

6. The furnace shall be fired on natural gas and LPG only. [District NSR Rule] Federally Enforceable Through Title V Permit
7. The furnace shall have continuous monitoring systems for NOx and SOx. The monitoring devices shall have continuous recording devices, and all records shall be kept on site. [District Rules 1080 and 4354, §5.9] Federally Enforceable Through Title V Permit
8. One continuous emissions monitoring (CEM) system may be used for monitoring oxy-fuel fired furnaces #1, #2, #3, and #4 provided all of the exhaust gases of each of these furnaces are ducted to a common stack, and monitored down stream of the common stack. The CEMS shall comply with the requirements of 40 Code of Federal Regulations (CFR) Part 51, 40 CFR Parts 60.7 and 60.13, 40 CFR Part 60 Appendix B (Performance Specifications) and Appendix F (Quality Assurance Procedures) and the applicable sections of Rule 1080 (Stack Monitoring). [District Rule 4354, 5.9 and 6.6.1] Federally Enforceable Through Title V Permit
9. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
10. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
11. During startups, the permittee shall comply with the requirements of section 5.5 of District Rule 4354. [District Rule 4354, §5.5] Federally Enforceable Through Title V Permit
12. The NOx control system shall be in operation as soon as technologically feasible during the startup period to minimize emissions. [District Rule 4354, §5.5.6] Federally Enforceable Through Title V Permit
13. The NOx control system shall be in operation whenever technologically feasible during shutdown to minimize emissions. [District Rule 4354, §5.6.2] Federally Enforceable Through Title V Permit
14. The NOx control system shall be in operation whenever technologically feasible during furnace idling to minimize emissions. [District Rule 4354, §5.7.1] Federally Enforceable Through Title V Permit
15. The duration of shutdown, as measured from the time the furnace operations drop below the idle threshold specified in section 3.17 of District Rule 4354 to when all emissions from the furnace cease, shall not exceed 20 days. [District Rule 4354, §5.6.1] Federally Enforceable Through Title V Permit
16. The oxygen to fuel ratio shall be maintained within the range shown by the most recent source test to result in compliance with the CO and VOC limits of this permit. The acceptable range of the oxygen to fuel ratio shall be established during the initial source test and during each subsequent annual source test. [District Rule 4354] Federally Enforceable Through Title V Permit
17. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation  $E=3.59P^{0.62}$  ( $P < 30$  tph) or  $E=17.31P^{0.16}$  ( $P > 30$  tph). [District Rule 4202] Federally Enforceable Through Title V Permit
18. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Stanislaus County Rule 407 and District Rule 480] Federally Enforceable Through Title V Permit
19. Within 60 days after the start-up of each ceramic filter dust collector module, a source test for PM10 emissions shall be conducted. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

20. Source testing to demonstrate compliance with permit conditions and all rules and regulations for both natural gas and LPG shall be conducted at least once every calendar year. NOx and CO testing shall be performed using CARB Method 100. VOC testing shall be performed using EPA method 25A. PM10 testing shall be performed using EPA methods 201 and 202, EPA methods 201a and 202, or CARB methods 501 and 5. SOx testing shall be performed using EPA Method 8 and CARB Method 1-100. [District Rules 1081, 2201, 2520, §9.3.2; and 4354, 6.4 and 6.5] Federally Enforceable Through Title V Permit
21. Source testing when firing on LPG fuel need not be performed if the LPG fuel usage for this furnace does not exceed 100 hours during any one calendar year. A source test shall be performed within 90 days after this furnace exceeds 100 hours of operation, on LPG, on an annual basis. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Source testing shall be conducted by a CARB-certified source testing contractor. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to source testing. The results of each source test shall be submitted to the District within 60 days after the source test date. [District Rule 1081] Federally Enforceable Through Title V Permit
23. Source test conditions shall be representative of operations equal to or greater than 60 percent of the fuel use capacity for each furnace as stated in the Permit to Operate. [District Rule 4354, §6.4.2] Federally Enforceable Through Title V Permit
24. PM and PM10 source testing shall be conducted downstream of the electrostatic precipitator and the ceramic filter dust collector in the common stack. Furnaces #1, #2, #3, and #4 must operate simultaneously during source testing unless prior approval is obtained from the District. [District Rule 1081] Federally Enforceable Through Title V Permit
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27. An exceedance of a NOx or SOx emission limit as indicated by the CEMS shall be reported by the operator to the APCO within 24 hours. The notification shall include 1) name and location of the facility, 2) identification of furnace(s) causing the exceedances, 3) calculation of actual NOx, CO and VOC emissions, and 4) corrective actions and schedules to complete the work. [District Rule 1080 and Stanislaus County Rule 108] Federally Enforceable Through Title V Permit
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29. The permittee shall submit a written report including copies of any Equipment Breakdown reports and/or pertinent variance decisions to the APCO for each calendar quarter, within 30 days of the end of the quarter, including: time intervals, data and magnitude of excess emissions, nature and cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting shall correspond to the averaging period for each respective emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080] Federally Enforceable Through Title V Permit
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CONDITIONS CONTINUE ON NEXT PAGE

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33. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201, Stanislaus County Rule 404, District Rule 4202 and Stanislaus County Rule 405. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
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35. The requirements of District Rule 4301 and Stanislaus County Rule 408 were determined to not apply to this unit because the unit does not utilize indirect heat transfer. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
36. The requirements of 40 CFR Part 60, Subpart CC were determined to not apply to this unit because the unit was constructed prior to the effective date in the regulation and has not been modified (according to the definition of "modified" in the regulation). A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
37. The requirements of 40 CFR Part 61, Subpart N were determined to not apply to this unit because the unit does not use commercial arsenic. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
38. Any glass melting furnace located at an Area Source of hazardous air pollutants shall comply with 40 CFR Part 63 Subpart SSSSSS (National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources). [40 CFR Part 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
39. The amount of glass produced shall not exceed 352.1 tons during any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
40. NO<sub>x</sub> emissions shall not exceed 2.77 pounds per ton of glass produced. This performance based limit is to enforce the NO<sub>x</sub> emission reductions granted by certificate number N-54-2. [District NSR Rule] Federally Enforceable Through Title V Permit
41. Except during furnace idling, shutdown, and startup, the aggregated NO<sub>x</sub> emissions shall not exceed 3.6 lb-NO<sub>x</sub> per ton of glass produced (based on a block 24-hour average). Aggregated NO<sub>x</sub> emissions are the NO<sub>x</sub> emissions as measured at the common stack divided by the sum of the daily amount of glass produced by permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4. [District Rule 4354, 9.0 and 9.6] Federally Enforceable Through Title V Permit
42. CO emissions shall not exceed 1.0 pounds per ton of glass produced. [District NSR Rule] Federally Enforceable Through Title V Permit
43. The VOC emissions shall not exceed 0.25 pounds per ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
44. The combined SO<sub>x</sub> emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with equal to or greater than 25% by weight mixed color cullet, shall not exceed 0.99 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
45. The combined SO<sub>x</sub> emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with less than 25% by weight mixed color cullet, shall not exceed 0.81 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
46. The PM<sub>10</sub> emissions, except during full or partial emission control system bypass episodes, shall not exceed 0.49 lb/ton of glass produced. [District NSR Rules 2201 and 4354] Federally Enforceable Through Title V Permit

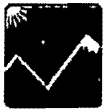
CONDITIONS CONTINUE ON NEXT PAGE

47. The PM10 emissions, during full or partial emission control system bypass episodes, shall not exceed 0.71 lb/ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
48. The amount of time that the furnace exhaust is not fully treated by a control device shall not exceed 144 hours per calendar year. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
49. The PM10 emissions shall not exceed 15,527 pounds during the first calendar quarter, 15,699 pounds during the second calendar quarter, 15,872 pounds during the third calendar quarter and 15,872 pounds during the fourth calendar quarter. These limits are to enforce the PM10 emission reductions granted by certificate number N-161-4. [District NSR Rule] Federally Enforceable Through Title V Permit
50. During furnace idling, NOx emissions shall not exceed 1,408.4 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
51. During furnace idling, CO emissions shall not exceed 352.1 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
52. During furnace idling, VOC emissions shall not exceed 88.0 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
53. During furnace idling, SOx emissions shall not exceed 387.3 pounds in any one day when producing glass with equal to or greater than 25% by weight mixed color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
54. During furnace idling, SOx emissions shall not exceed 316.9 pounds in any one day when producing glass with less than 25% by weight mixed color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
55. During furnace idling, PM10 emissions shall not exceed 176.1 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
56. The facility shall not use commercial arsenic as a raw material in the production process. [40 CFR Part 61 Subpart N] Federally Enforceable Through Title V Permit
57. The ceramic filter dust collector shall be maintained and operated according to manufacturer's specifications. [District Rule 2201] Federally Enforceable Through Title V Permit
58. The ceramic filter dust collector cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
59. Material removed from the ceramic filter dust collector shall be disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
60. Replacement filters numbering at least 10% of the total number of filters in the ceramic filter dust collector shall be maintained on the premises. [District Rule 2201] Federally Enforceable Through Title V Permit
61. Devices to measure the primary and secondary voltage and current of the electrostatic precipitator shall be maintained in accordance with the manufacturer's specifications. [District Rule 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
62. The specific power of the electrostatic precipitator shall be at least 70 milliwatts/acfm except during the bypass episodes allowed by this permit. [District Rule 2520, §9.3.2 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
63. The ceramic filter dust collector shall be equipped with a pressure differential gauge to indicate the pressure drop across the filters. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
64. During operation of the ceramic filter dust collector, the pressure differential gauge reading shall be 5 to 10 inches of water column. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
65. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE



66. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
67. The permittee shall comply with the record keeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
68. The specific power of the electrostatic precipitator shall be continuously monitored and recorded. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
69. Dust collector filters shall be inspected annually while in operation for evidence of particulate matter breakthrough and replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
70. Dust Collector filters shall be inspected annually while not in operation for tears, scuffs, abrasions or hole that might interfere with the PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
71. A daily record of the hours of operation, the amount of glass pulled from the furnace (in tons), the NO<sub>x</sub> emissions (in lb/ton of glass pulled), the SO<sub>x</sub> emissions (in lb/ton of glass pulled), the weight of mixed color mix cullet used, the total amount of cullet used (by weight) and the ratio of the mixed color cullet weight to the total cullet weight (in percent). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
72. The oxygen to fuel ratio shall be continuously monitored and recorded. [District Rule 4354] Federally Enforceable Through Title V Permit
73. The permittee shall maintain daily records of the aggregated NO<sub>x</sub> emissions. [District Rules 2520, 9.3.2 and 4354, 9.6.1 and 9.7] Federally Enforceable Through Title V Permit
74. The permittee shall maintain the burner oxygen to fuel ratio records required by this permit. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
75. A record of the PM<sub>10</sub> emissions from this unit, in pounds per calendar quarter, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
76. A record of the cumulative annual number of hours that the emission control system is either fully or partially bypassed shall be kept. The record shall be updated at least weekly. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
77. The permittee shall maintain daily records of the specific power of the electrostatic precipitator (in milliwatts/acfm). [District Rules 2201, 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
78. The operator shall monitor and record the pressure differential gauge reading of the ceramic filter dust collector at least once during each day that the unit operates. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
79. Records of dust collector maintenance, inspections and repairs shall be maintained. The records shall include, date of inspection, change outs of filter media, corrective action taken, and identification of the individual performing the inspection. [District Rules 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
80. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit



**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT



## AUTHORITY TO CONSTRUCT

PERMIT NO: N-1662-3-15

ISSUANCE DATE: 09/28/2012

LEGAL OWNER OR OPERATOR: GALLO GLASS COMPANY  
MAILING ADDRESS: P.O. BOX 3044  
MODESTO, CA 95353

LOCATION: 605 S SANTA CRUZ AVE  
MODESTO, CA 95354

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF GLASS FURNACE #3 WITH 10 MAXON GAS/OXYGEN BURNERS AND ASSOCIATED FORMING EQUIPMENT (75 MMBTU/HR MAX HEAT CAPACITY). THIS FURNACE IS DUCTED THROUGH A STACK COMMON TO PERMIT UNITS N-1662-1, N-1662-2, N-1662-3 AND N-1662-4. THE FURNACES ARE SERVED BY A SHARED ELECTROSTATIC PRECIPITATOR AND SOX SCRUBBER. MODIFICATION TO INSTALL A TRI-MER UTF460 CERAMIC FILTER TYPE DUST COLLECTOR.

### CONDITIONS

1. 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. Prior to operating with the modifications authorized by this Authority to Construct, the District shall receive an application for an Administrative Permit Amendment. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
4. No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
5. Particulate matter emissions shall not exceed 0.1 grain/dscf in concentration. [District Rule 4201 and Stanislaus County Rule 404] 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 Sabredin, Executive Director / ABCO

DAVID WARNER, Director of Permit Services

N-1662-3-15 : Sep 28 2012 10:12AM - ECHOINHOM : Joint Inspection NOT Required

6. The furnace shall be fired on natural gas and LPG only. [District NSR Rule] Federally Enforceable Through Title V Permit
7. The furnace shall have continuous monitoring systems for NOx and SOx. The monitoring devices shall have continuous recording devices, and all records shall be kept on site. [District Rules 1080 and 4354, §5.9] Federally Enforceable Through Title V Permit
8. One continuous emissions monitoring (CEM) system may be used for monitoring oxy-fuel fired furnaces #1, #2, #3, and #4 provided all of the exhaust gases of each of these furnaces are ducted to a common stack, and monitored down stream of the common stack. The CEMS shall comply with the requirements of 40 Code of Federal Regulations (CFR) Part 51, 40 CFR Parts 60.7 and 60.13, 40 CFR Part 60 Appendix B (Performance Specifications) and Appendix F (Quality Assurance Procedures) and the applicable sections of Rule 1080 (Stack Monitoring). [District Rule 4354, 5.9 and 6.6.1] Federally Enforceable Through Title V Permit
9. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
10. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NOx, CO, and O2 analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
11. During startups, the permittee shall comply with the requirements of section 5.5 of District Rule 4354. [District Rule 4354, §5.5] Federally Enforceable Through Title V Permit
12. The NOx control system shall be in operation as soon as technologically feasible during the startup period to minimize emissions. [District Rule 4354, §5.5.6] Federally Enforceable Through Title V Permit
13. The NOx control system shall be in operation whenever technologically feasible during shutdown to minimize emissions. [District Rule 4354, §5.6.2] Federally Enforceable Through Title V Permit
14. The NOx control system shall be in operation whenever technologically feasible during furnace idling to minimize emissions. [District Rule 4354, §5.7.1] Federally Enforceable Through Title V Permit
15. The duration of shutdown, as measured from the time the furnace operations drop below the idle threshold specified in section 3.17 of District Rule 4354 to when all emissions from the furnace cease, shall not exceed 20 days. [District Rule 4354, §5.6.1] Federally Enforceable Through Title V Permit
16. The oxygen to fuel ratio shall be maintained within the range shown by the most recent source test to result in compliance with the CO and VOC limits of this permit. The acceptable range of the oxygen to fuel ratio shall be established during the initial source test and during each subsequent annual source test. [District Rule 4354] Federally Enforceable Through Title V Permit
17. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation  $E=3.59P^{0.62}$  ( $P < 30$  tph) or  $E=17.31P^{0.16}$  ( $P > 30$  tph). [District Rule 4202] Federally Enforceable Through Title V Permit
18. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Stanislaus County Rule 407 and District Rule 4801] Federally Enforceable Through Title V Permit
19. Within 60 days after the start-up of each ceramic filter dust collector module, a source test for PM10 emissions shall be conducted. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

20. Source testing to demonstrate compliance with permit conditions and all rules and regulations for both natural gas and LPG shall be conducted at least once every calendar year. NOx and CO testing shall be performed using CARB Method 100. VOC testing shall be performed using EPA method 25A. PM10 testing shall be performed using EPA methods 201 and 202, EPA methods 201a and 202, or CARB methods 501 and 5. SOx testing shall be performed using EPA Method 8 and CARB Method 1-100. [District Rules 1081, 2201, 2520, §9.3.2; and 4354, 6.4 and 6.5] Federally Enforceable Through Title V Permit
21. Source testing when firing on LPG fuel need not be performed if the LPG fuel usage for this furnace does not exceed 100 hours during any one calendar year. A source test shall be performed within 90 days after this furnace exceeds 100 hours of operation, on LPG, on an annual basis. [District Rule 1081] Federally Enforceable Through Title V Permit
22. Source testing shall be conducted by a CARB-certified source testing contractor. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to source testing. The results of each source test shall be submitted to the District within 60 days after the source test date. [District Rule 1081] Federally Enforceable Through Title V Permit
23. Source test conditions shall be representative of operations equal to or greater than 60 percent of the fuel use capacity for each furnace as stated in the Permit to Operate. [District Rule 4354, §6.4.2] Federally Enforceable Through Title V Permit
24. PM and PM10 source testing shall be conducted downstream of the electrostatic precipitator and the ceramic filter dust collector in the common stack. Furnaces #1, #2, #3, and #4 must operate simultaneously during source testing unless prior approval is obtained from the District. [District Rule 1081] Federally Enforceable Through Title V Permit
25. An annual Relative Accuracy Test Audit (RATA) shall be performed on the continuous monitoring system as outlined in 40 CFR Part 60 Appendix B. [District Rule 1080] Federally Enforceable Through Title V Permit
26. The owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F (CGAs and RATAs) and if applicable 40 CFR Part 75, Appendix B (linearity and RATAs) at least once every four calendar quarters and annually within 30 days of the anniversary date of the initial test. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
27. An exceedance of a NOx or SOx emission limit as indicated by the CEMS shall be reported by the operator to the APCO within 24 hours. The notification shall include 1) name and location of the facility, 2) identification of furnace(s) causing the exceedances, 3) calculation of actual NOx, CO and VOC emissions, and 4) corrective actions and schedules to complete the work. [District Rule 1080 and Stanislaus County Rule 108] Federally Enforceable Through Title V Permit
28. The operator shall notify the APCO no later than one hour after the detection of a breakdown of the CEMS. The operator shall inform the APCO of the intent to shut down the CEMS at least 24 hours prior to the event. [District Rule 1100] Federally Enforceable Through Title V Permit
29. The permittee shall submit a written report including copies of any Equipment Breakdown reports and/or pertinent variance decisions to the APCO for each calendar quarter, within 30 days of the end of the quarter, including: time intervals, data and magnitude of excess emissions, nature and cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting shall correspond to the averaging period for each respective emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080] Federally Enforceable Through Title V Permit
30. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

31. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
32. Cylinder gas audits (GGAs) of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
33. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201, Stanislaus County Rule 404, District Rule 4202 and Stanislaus County Rule 405. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
34. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4801 and Stanislaus County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
35. The requirements of District Rule 4301 and Stanislaus County Rule 408 were determined to not apply to this unit because the unit does not utilize indirect heat transfer. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
36. The requirements of 40 CFR Part 60, Subpart CC were determined to not apply to this unit because the unit was constructed prior to the effective date in the regulation and has not been modified (according to the definition of "modified" in the regulation). A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
37. The requirements of 40 CFR Part 61, Subpart N were determined to not apply to this unit because the unit does not use commercial arsenic. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
38. Any glass melting furnace located at an Area Source of hazardous air pollutants shall comply with 40 CFR Part 63 Subpart SSSSSS (National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources). [40 CFR Part 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
39. The amount of glass produced shall not exceed 352.1 tons during any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
40. NOx emissions shall not exceed 2.48 pounds per ton of glass produced. This performance based limit is to enforce the NOx emission reductions granted by certificate number N-56-2. [District NSR Rule] Federally Enforceable Through Title V Permit
41. Except during furnace idling, shutdown, and startup, the aggregated NOx emissions shall not exceed 3.6 lb-NOx per ton of glass produced (based on a block 24-hour average). Aggregated NOx emissions are the NOx emissions as measured at the common stack divided by the sum of the daily amount of glass produced by permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4. [District Rule 4354, 9.0 and 9.6] Federally Enforceable Through Title V Permit
42. CO emissions shall not exceed 0.01 pounds per ton of glass produced. This performance based limit is to enforce the CO emission reductions granted by certificate number N-56-3. [District NSR Rule] Federally Enforceable Through Title V Permit
43. The VOC emissions shall not exceed 0.25 pounds per ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
44. The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with equal to or greater than 25% by weight mixed color cullet, shall not exceed 0.99 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
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70. Dust Collector filters shall be inspected annually while not in operation for tears, scuffs, abrasions or hole that might interfere with the PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
71. A daily record of the hours of operation, the amount of glass pulled from the furnace (in tons), the NO<sub>x</sub> emissions (in lb/ton of glass pulled), the SO<sub>x</sub> emissions (in lb/ton of glass pulled), the weight of mixed color mix cullet used, the total amount of cullet used (by weight) and the ratio of the mixed color cullet weight to the total cullet weight (in percent). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
72. The oxygen to fuel ratio shall be continuously monitored and recorded. [District Rule 4354] Federally Enforceable Through Title V Permit
73. The permittee shall maintain daily records of the aggregated NO<sub>x</sub> emissions. [District Rules 2520, 9.3.2 and 4354, 9.6.1 and 9.7] Federally Enforceable Through Title V Permit
74. The permittee shall maintain the burner oxygen to fuel ratio records required by this permit. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
75. A record of the PM<sub>10</sub> emissions from this unit, in pounds per calendar quarter, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
76. A record of the cumulative annual number of hours that the emission control system is either fully or partially bypassed shall be kept. The record shall be updated at least weekly. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
77. The permittee shall maintain daily records of the specific power of the electrostatic precipitator (in milliwatts/acfm). [District Rules 2201, 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
78. The operator shall monitor and record the pressure differential gauge reading of the ceramic filter dust collector at least once during each day that the unit operates. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
79. Records of dust collector maintenance, inspections and repairs shall be maintained. The records shall include, date of inspection, change outs of filter media, corrective action taken, and identification of the individual performing the inspection. [District Rules 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
80. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 2201, 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit



**San Joaquin Valley**  
AIR POLLUTION CONTROL DISTRICT



## AUTHORITY TO CONSTRUCT

PERMIT NO: N-1662-4-16

ISSUANCE DATE: 09/28/2012

LEGAL OWNER OR OPERATOR: GALLO GLASS COMPANY  
MAILING ADDRESS: P.O. BOX 3044  
MODESTO, CA 95353

LOCATION: 605 S SANTA CRUZ AVE  
MODESTO, CA 95354

**EQUIPMENT DESCRIPTION:**

MODIFICATION OF GLASS FURNACE #4 WITH 12 MAXON GAS/OXYGEN BURNERS AND ASSOCIATED FORMING EQUIPMENT (90 MMBTU/HR MAX HEAT CAPACITY). THIS FURNACE IS DUCTED THROUGH A STACK COMMON TO PERMIT UNITS N-1662-1, N-1662-2, N-1662-3 AND N-1662-4. THE FURNACES ARE SERVED BY A SHARED ELECTROSTATIC PRECIPITATOR AND SOX SCRUBBER. MODIFICATION TO INSTALL A TRI-MER UTF460 CERAMIC FILTER TYPE DUST COLLECTOR.

## CONDITIONS

1. This Authority-to-Construct permit shall not be implemented after the implementation of ATC N-1662-4-15. [District Rule 2201]
2. 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. Prior to operating with the modifications authorized by this Authority to Construct, the District shall receive an application for an Administrative Permit Amendment. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
4. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
5. No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit

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 Sadeghin, Executive Director / APCO

DAVID WARNER, Director of Permit Services

N-1662-4-16: 5:52 28 2012 10:12AM ECHOHDM : John Inspection NOT Required



6. Particulate matter emissions shall not exceed 0.1 grain/dscf in concentration. [District Rule 4201 and Stanislaus County Rule 404] Federally Enforceable Through Title V Permit
7. The furnace shall be fired on natural gas and LPG only. [District NSR Rule] Federally Enforceable Through Title V Permit
8. The furnace shall have continuous monitoring systems for NO<sub>x</sub> and SO<sub>x</sub>. The monitoring devices shall have continuous recording devices, and all records shall be kept on site. [District Rules 1080 and 4354, §5.9] Federally Enforceable Through Title V Permit
9. One continuous emissions monitoring (CEM) system may be used for monitoring oxy-fuel fired furnaces #1, #2, #3, and #4 provided all of the exhaust gases of each of these furnaces are ducted to a common stack, and monitored down stream of the common stack. The CEMS shall comply with the requirements of 40 Code of Federal Regulations (CFR) Part 51, 40 CFR Parts 60.7 and 60.13, 40 CFR Part 60 Appendix B (Performance Specifications) and Appendix F (Quality Assurance Procedures) and the applicable sections of Rule 1080 (Stack Monitoring). [District Rule 4354, 5.9 and 6.6.1] Federally Enforceable Through Title V Permit
10. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
11. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO<sub>x</sub>, CO, and O<sub>2</sub> analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
12. During startups, the permittee shall comply with the requirements of section 5.5 of District Rule 4354. [District Rule 4354, §5.5] Federally Enforceable Through Title V Permit
13. The NO<sub>x</sub> control system shall be in operation as soon as technologically feasible during the startup period to minimize emissions. [District Rule 4354, §5.5.6] Federally Enforceable Through Title V Permit
14. The NO<sub>x</sub> control system shall be in operation whenever technologically feasible during shutdown to minimize emissions. [District Rule 4354, §5.6.2] Federally Enforceable Through Title V Permit
15. The NO<sub>x</sub> control system shall be in operation whenever technologically feasible during furnace idling to minimize emissions. [District Rule 4354, §5.7.1] Federally Enforceable Through Title V Permit
16. The duration of shutdown, as measured from the time the furnace operations drop below the idle threshold specified in section 3.17 of District Rule 4354 to when all emissions from the furnace cease, shall not exceed 20 days. [District Rule 4354, §5.6.1] Federally Enforceable Through Title V Permit
17. The oxygen to fuel ratio shall be maintained within the range shown by the most recent source test to result in compliance with the CO and VOC limits of this permit. The acceptable range of the oxygen to fuel ratio shall be established during the initial source test and during each subsequent annual source test. [District Rule 4354] Federally Enforceable Through Title V Permit
18. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation  $E=3.59P^{0.62}$  ( $P < 30$  tph) or  $E=17.31P^{0.16}$  ( $P > 30$  tph). [District Rule 4202] Federally Enforceable Through Title V Permit
19. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Stanislaus County Rule 407 and District Rule 4801] Federally Enforceable Through Title V Permit
20. Within 60 days after the start-up of each ceramic filter dust collector module, a source test for PM<sub>10</sub> emissions shall be conducted. [District Rule 2201] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

21. Source testing to demonstrate compliance with permit conditions and all rules and regulations for both natural gas and LPG shall be conducted at least once every calendar year. NOx and CO testing shall be performed using CARB Method 100. VOC testing shall be performed using EPA method 25A. PM10 testing shall be performed using EPA methods 201 and 202, EPA methods 201a and 202, or CARB methods 501 and 5. SOx testing shall be performed using EPA Method 8 and CARB Method 1-100. [District Rules 1081, 2201, 2520, §9.3.2; and 4354, 6.4 and 6.5] Federally Enforceable Through Title V Permit
22. Source testing when firing on LPG fuel need not be performed if the LPG fuel usage for this furnace does not exceed 100 hours during any one calendar year. A source test shall be performed within 90 days after this furnace exceeds 100 hours of operation, on LPG, on an annual basis. [District Rule 1081] Federally Enforceable Through Title V Permit
23. Source testing shall be conducted by a CARB-certified source testing contractor. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to source testing. The results of each source test shall be submitted to the District within 60 days after the source test date. [District Rule 1081] Federally Enforceable Through Title V Permit
24. Source test conditions shall be representative of operations equal to or greater than 60 percent of the fuel use capacity for each furnace as stated in the Permit to Operate. [District Rule 4354, §6.4.2] Federally Enforceable Through Title V Permit
25. PM and PM10 source testing shall be conducted downstream of the electrostatic precipitator and the ceramic filter dust collector in the common stack. Furnaces #1, #2, #3, and #4 must operate simultaneously during source testing unless prior approval is obtained from the District. [District Rule 1081] Federally Enforceable Through Title V Permit
26. An annual Relative Accuracy Test Audit (RATA) shall be performed on the continuous monitoring system as outlined in 40 CFR Part 60 Appendix B. [District Rule 1080] Federally Enforceable Through Title V Permit
27. The owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F (CGAs and RATAs) and if applicable 40 CFR Part 75, Appendix B (linearity and RATAs) at least once every four calendar quarters and annually within 30 days of the anniversary date of the initial test. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
28. An exceedance of a NOx or SOx emission limit as indicated by the CEMS shall be reported by the operator to the APCO within 24 hours. The notification shall include 1) name and location of the facility, 2) identification of furnace(s) causing the exceedances, 3) calculation of actual NOx, CO and VOC emissions, and 4) corrective actions and schedules to complete the work. [District Rule 1080 and Stanislaus County Rule 108] Federally Enforceable Through Title V Permit
29. The operator shall notify the APCO no later than one hour after the detection of a breakdown of the CEMS. The operator shall inform the APCO of the intent to shut down the CEMS at least 24 hours prior to the event. [District Rule 1100] Federally Enforceable Through Title V Permit
30. The permittee shall submit a written report including copies of any Equipment Breakdown reports and/or pertinent variance decisions to the APCO for each calendar quarter, within 30 days of the end of the quarter, including: time intervals, data and magnitude of excess emissions, nature and cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting shall correspond to the averaging period for each respective emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080] Federally Enforceable Through Title V Permit
31. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

32. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
33. Cylinder gas audits (GGAs) of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
34. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201, Stanislaus County Rule 404, District Rule 4202 and Stanislaus County Rule 405. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
35. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4801 and Stanislaus County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
36. The requirements of District Rule 4301 and Stanislaus County Rule 408 were determined to not apply to this unit because the unit does not utilize indirect heat transfer. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
37. The requirements of 40 CFR Part 60, Subpart CC were determined to not apply to this unit because the unit was constructed prior to the effective date in the regulation and has not been modified (according to the definition of "modified" in the regulation). A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
38. The requirements of 40 CFR Part 61, Subpart N were determined to not apply to this unit because the unit does not use commercial arsenic. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
39. Any glass melting furnace located at an Area Source of hazardous air pollutants shall comply with 40 CFR Part 63 Subpart SSSSSS (National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources). [40 CFR Part 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
40. The amount of glass produced shall not exceed 637.9 tons during any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
41. NOx emissions shall not exceed 2.95 pounds per ton of glass produced. This performance based limit is to enforce the NOx emission reductions granted by certificate number N-107-2. [District NSR Rule] Federally Enforceable Through Title V Permit
42. Except during furnace idling, shutdown, and startup, the aggregated NOx emissions shall not exceed 3.6 lb-NOx per ton of glass produced (based on a block 24-hour average). Aggregated NOx emission are the NOx emissions as measured at the common stack divided by the sum of the daily amount of glass produced by permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4. [District Rule 4354, 9.0 and 9.6] Federally Enforceable Through Title V Permit
43. CO emissions shall not exceed 1.0 pounds per ton of glass produced. [District NSR Rule] Federally Enforceable Through Title V Permit
44. The VOC emissions shall not exceed 0.25 pounds per ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
45. The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with equal to or greater than 25% by weight mixed color cullet, shall not exceed 0.99 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
46. The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with less than 25% by weight mixed color cullet, shall not exceed 0.81 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
47. The PM10 emissions, except during full or partial emission control system bypass episodes, shall not exceed 0.49 lb/ton of glass produced. [District NSR Rules 2201 and 4354] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

48. The PM10 emissions, during full or partial emission control system bypass episodes, shall not exceed 0.71 lb/ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
49. The amount of time that the furnace exhaust is not fully treated by a control device shall not exceed 144 hours per calendar year. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
50. The PM10 emissions shall not exceed 28,132 pounds during the first calendar quarter, 28,445 pounds during the second calendar quarter, 28,757 pounds during the third calendar quarter and 28,758 pounds during the fourth calendar quarter. These limits are to enforce the PM10 emission reductions granted by certificate number N-161-4. [District NSR Rule] Federally Enforceable Through Title V Permit
51. During furnace idling, NOx emissions shall not exceed 1,888.0 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
52. During furnace idling, CO emissions shall not exceed 637.9 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
53. During furnace idling, VOC emissions shall not exceed 159.5 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
54. During furnace idling, SOx emissions shall not exceed 701.7 pounds in any one day when producing glass with equal to or greater than 25% by weight mixed color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
55. During furnace idling, SOx emissions shall not exceed 574.1 pounds in any one day when producing glass with less than 25% by weight mixed color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
56. During furnace idling, PM10 emissions shall not exceed 319.0 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
57. The facility shall not use commercial arsenic as a raw material in the production process. [40 CFR Part 61 Subpart N] Federally Enforceable Through Title V Permit
58. The ceramic filter dust collector shall be maintained and operated according to manufacturer's specifications. [District Rule 2201] Federally Enforceable Through Title V Permit
59. The ceramic filter dust collector cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
60. Material removed from the ceramic filter dust collector shall be disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
61. Replacement filters numbering at least 10% of the total number of filters in the ceramic filter dust collector shall be maintained on the premises. [District Rule 2201] Federally Enforceable Through Title V Permit
62. Devices to measure the primary and secondary voltage and current of the electrostatic precipitator shall be maintained in accordance with the manufacturer's specifications. [District Rule 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
63. The specific power of the electrostatic precipitator shall be at least 70 milliwatts/acfm except during the bypass episodes allowed by this permit. [District Rule 2520, §9.3.2 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
64. The ceramic filter dust collector shall be equipped with a pressure differential gauge to indicate the pressure drop across the filters. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
65. During operation of the ceramic filter dust collector, the pressure differential gauge reading shall be 5 to 10 inches of water column. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
66. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

67. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
68. The permittee shall comply with the record keeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
69. The specific power of the electrostatic precipitator shall be continuously monitored and recorded. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
70. Dust collector filters shall be inspected annually while in operation for evidence of particulate matter breakthrough and replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
71. Dust Collector filters shall be inspected annually while not in operation for tears, scuffs, abrasions or hole that might interfere with the PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
72. A daily record of the hours of operation, the amount of glass pulled from the furnace (in tons), the NO<sub>x</sub> emissions (in lb/ton of glass pulled), the SO<sub>x</sub> emissions (in lb/ton of glass pulled), the weight of mixed color mix cullet used, the total amount of cullet used (by weight) and the ratio of the mixed color cullet weight to the total cullet weight (in percent). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
73. The oxygen to fuel ratio shall be continuously monitored and recorded. [District Rule 4354] Federally Enforceable Through Title V Permit
74. The permittee shall maintain daily records of the aggregated NO<sub>x</sub> emissions. [District Rules 2520, 9.3.2 and 4354, 9.6.1 and 9.7] Federally Enforceable Through Title V Permit
75. The permittee shall maintain the burner oxygen to fuel ratio records required by this permit. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
76. A record of the PM<sub>10</sub> emissions from this unit, in pounds per calendar quarter, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
77. A record of the cumulative annual number of hours that the emission control system is either fully or partially bypassed shall be kept. The record shall be updated at least weekly. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
78. The permittee shall maintain daily records of the specific power of the electrostatic precipitator (in milliwatts/acfm). [District Rules 2201, 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
79. The operator shall monitor and record the pressure differential gauge reading of the ceramic filter dust collector at least once during each day that the unit operates. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
80. Records of dust collector maintenance, inspections and repairs shall be maintained. The records shall include, date of inspection, change outs of filter media, corrective action taken, and identification of the individual performing the inspection. [District Rules 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit
81. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 2201, and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit



## AUTHORITY TO CONSTRUCT

PERMIT NO: N-1662-4-15

ISSUANCE DATE: 09/28/2012

LEGAL OWNER OR OPERATOR: GALLO GLASS COMPANY  
MAILING ADDRESS: P.O. BOX 3044

MODESTO, CA 95353

LOCATION: 605 S SANTA CRUZ AVE  
MODESTO, CA 95354

**EQUIPMENT DESCRIPTION:**

GLASS FURNACE #4 WITH 12 MAXON GAS/OXYGEN BURNERS AND ASSOCIATED FORMING EQUIPMENT (90 MMBTU/HR MAX HEAT CAPACITY). THIS FURNACE IS DUCTED THROUGH A STACK COMMON TO PERMIT UNITS N-1662-1, N-1662-2, N-1662-3 AND N-1662-4. THE FURNACES ARE SERVED BY A SHARED SOX SCRUBBER AND AN ELECTROSTATIC PRECIPITATOR AND/OR A TRI-MER UTF460 CERAMIC FILTER TYPE DUST COLLECTOR. MODIFICATION TO REBRICK THE FURNACE AND TO INCREASE ITS FOOTPRINT WITHOUT A THROUGHPUT INCREASE.

### CONDITIONS

1. In the event that Authorities to Construct N-1662-1-14, N-1662-2-15, N-1662-3-15 and N-1662-4-16 are not previously implemented, the equipment description of this Authority to Construct Permit shall be modified to remove reference to the ceramic filter dust collector and all conditions related to the ceramic dust collector shall be modified or removed as appropriate. [District Rule 2201]
2. 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 2520] Federally Enforceable Through Title V Permit
3. Prior to operating with the modifications authorized by this Authority to Construct, the facility shall submit an application for an administrative amendment to its Title V permit, in accordance with District Rule 2520, Section 11.4.2. [District Rule 2520] Federally Enforceable Through Title V Permit
4. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

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 Saadadin, Executive Director / APCD

DAVID WARNER, Director of Permit Services

N-1662-4-15: Sep 28 2012 10:07AM - DC140404CM - Joint Inspection NOT Required

5. No air contaminants shall be discharged into the atmosphere for a period or periods aggregating more than 3 minutes in any one hour which is as dark or darker than Ringelmann #1 or equivalent to 20% opacity and greater, unless specifically exempted by District Rule 4101 (02/17/05). If the equipment or operation is subject to a more stringent visible emission standard as prescribed in a permit condition, the more stringent visible emission limit shall supersede this condition. [District Rule 4101, and County Rules 401 (in all eight counties in the San Joaquin Valley)] Federally Enforceable Through Title V Permit
6. The unit is exempt from the NO<sub>x</sub>, CO and VOC emission limits of District Rule 4354 (Glass Melting Furnaces) during the furnace rebuild start-up period. The start-up period shall not exceed 18 days and shall start upon activation of the primary combustion system. [District Rule 4354] Federally Enforceable Through Title V Permit
7. During the furnace rebuild start-up period, the stoichiometric ratio of the primary furnace combustion system shall not exceed 5% excess oxygen, as calculated from the actual fuel and oxidant flow measurements for combustion in the glass melting furnace. [District Rule 4354] Federally Enforceable Through Title V Permit
8. The emission control system shall be in operation as soon as technologically feasible following the commencement of the furnace rebuild start-up to minimize emissions. [District Rule 4354] Federally Enforceable Through Title V Permit
9. A record of the post-rebuild start-up duration and of the dates of the start-up period activities shall be kept. The records shall be maintained for a period of at least five years and shall be made available to the District upon request. [District Rule 4354] Federally Enforceable Through Title V Permit
10. Particulate matter emissions shall not exceed 0.1 grain/dscf in concentration. [District Rule 4201 and Stanislaus County Rule 404] Federally Enforceable Through Title V Permit
11. The furnace shall be fired on natural gas and LPG only. [District NSR Rule] Federally Enforceable Through Title V Permit
12. The furnace shall have continuous monitoring systems for NO<sub>x</sub> and SO<sub>x</sub>. The monitoring devices shall have continuous recording devices, and all records shall be kept on site. [District Rules 1080 and 4354, §5.9] Federally Enforceable Through Title V Permit
13. One continuous emissions monitoring (CEM) system may be used for monitoring oxy-fuel fired furnaces #1, #2, #3, and #4 provided all of the exhaust gases of each of these furnaces are ducted to a common stack, and monitored down stream of the common stack. The CEMS shall comply with the requirements of 40 Code of Federal Regulations (CFR) Part 51, 40 CFR Parts 60.7 and 60.13, 40 CFR Part 60 Appendix B (Performance Specifications) and Appendix F (Quality Assurance Procedures) and the applicable sections of Rule 1080 (Stack Monitoring). [District Rule 4354, 5.9 and 6.6.1] Federally Enforceable Through Title V Permit
14. The facility shall install and maintain equipment, facilities, and systems compatible with the District's CEM data polling software system and shall make CEM data available to the District's automated polling system on a daily basis. [District Rule 1080] Federally Enforceable Through Title V Permit
15. The exhaust stack shall be equipped with permanent provisions to allow collection of stack gas samples consistent with EPA test methods and shall be equipped with safe permanent provisions to sample stack gases with a portable NO<sub>x</sub>, CO, and O<sub>2</sub> analyzer during District inspections. The sampling ports shall be located in accordance with the CARB regulation titled California Air Resources Board Air Monitoring Quality Assurance Volume VI, Standard Operating Procedures for Stationary Source Emission Monitoring and Testing. [District Rule 1081] Federally Enforceable Through Title V Permit
16. During startups, the permittee shall comply with the requirements of section 5.5 of District Rule 4354. [District Rule 4354, §5.5] Federally Enforceable Through Title V Permit
17. The NO<sub>x</sub> control system shall be in operation as soon as technologically feasible during the startup period to minimize emissions. [District Rule 4354, §5.5.6] Federally Enforceable Through Title V Permit
18. The NO<sub>x</sub> control system shall be in operation whenever technologically feasible during shutdown to minimize emissions. [District Rule 4354, §5.6.2] Federally Enforceable Through Title V Permit
19. The NO<sub>x</sub> control system shall be in operation whenever technologically feasible during furnace idling to minimize emissions. [District Rule 4354, §5.7.1] Federally Enforceable Through Title V Permit

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20. The duration of shutdown, as measured from the time the furnace operations drop below the idle threshold specified in section 3.17 of District Rule 4354 to when all emissions from the furnace cease, shall not exceed 20 days. [District Rule 4354, §5.6.1] Federally Enforceable Through Title V Permit
21. The oxygen to fuel ratio shall be maintained within the range shown by the most recent source test to result in compliance with the CO and VOC limits of this permit. The acceptable range of the oxygen to fuel ratio shall be established during the initial source test and during each subsequent annual source test. [District Rule 4354] Federally Enforceable Through Title V Permit
22. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation  $E=3.59P^{0.62}$  ( $P < 30$  tph) or  $E=17.31P^{0.16}$  ( $P > 30$  tph). [District Rule 4202] Federally Enforceable Through Title V Permit
23. Sulfur compound emissions shall not exceed 0.2% by volume, 2000 ppmv, on a dry basis averaged over 15 consecutive minutes. [Stanislaus County Rule 407 and District Rule 4801] Federally Enforceable Through Title V Permit
24. Source testing to demonstrate compliance with the NO<sub>x</sub>, CO, VOC, SO<sub>x</sub> and PM<sub>10</sub> emission limits of this permit shall be conducted within 60 days after initial startup. [District Rules 2201 and 4354]
25. Source testing to demonstrate compliance with permit conditions and all rules and regulations for both natural gas and LPG shall be conducted at least once every calendar year. NO<sub>x</sub> and CO testing shall be performed using CARB Method 100. VOC testing shall be performed using EPA method 25A. PM<sub>10</sub> testing shall be performed using EPA methods 201 and 202, EPA methods 201a and 202, or CARB methods 501 and 5. SO<sub>x</sub> testing shall be performed using EPA Method 8 and CARB Method 1-100. [District Rules 1081; 2520, §9.3.2; and 4354, 6.4 and 6.5] Federally Enforceable Through Title V Permit
26. Source testing when firing on LPG fuel need not be performed if the LPG fuel usage for this furnace does not exceed 100 hours during any one calendar year. A source test shall be performed within 90 days after this furnace exceeds 100 hours of operation, on LPG, on an annual basis. [District Rule 1081] Federally Enforceable Through Title V Permit
27. Source testing shall be conducted by a CARB-certified source testing contractor. Source testing shall be conducted using the methods and procedures approved by the District. The District must be notified 30 days prior to any compliance source test, and a source test plan must be submitted for approval at least 15 days prior to source testing. The results of each source test shall be submitted to the District within 60 days after the source test date. [District Rule 1081] Federally Enforceable Through Title V Permit
28. Source test conditions shall be representative of operations equal to or greater than 60 percent of the fuel use capacity for each furnace as stated in the Permit to Operate. [District Rule 4354, §6.4.2] Federally Enforceable Through Title V Permit
29. PM and PM<sub>10</sub> source testing shall be conducted down stream of the particulate matter control equipment in the common stack. Furnaces #1, #2, #3, and #4 must operate simultaneously during source testing unless prior approval is obtained from the District. [District Rule 1081] Federally Enforceable Through Title V Permit
30. An annual Relative Accuracy Test Audit (RATA) shall be performed on the continuous monitoring system as outlined in 40 CFR Part 60 Appendix B. [District Rule 1080] Federally Enforceable Through Title V Permit
31. The owner/operator shall perform a relative accuracy test audit (RATA) as specified by 40 CFR Part 60, Appendix F (CGAs and RATAs) and if applicable 40 CFR Part 75, Appendix B (linearity and RATAs) at least once every four calendar quarters and annually within 30 days of the anniversary date of the initial test. The permittee shall comply with the applicable requirements for quality assurance testing and maintenance of the continuous emission monitor equipment in accordance with the procedures and guidance specified in 40 CFR Part 60, Appendix F. [District Rule 1080] Federally Enforceable Through Title V Permit
32. An exceedance of a NO<sub>x</sub> or SO<sub>x</sub> emission limit as indicated by the CEMS shall be reported by the operator to the APCO within 24 hours. The notification shall include 1) name and location of the facility, 2) identification of furnace(s) causing the exceedances, 3) calculation of actual NO<sub>x</sub>, CO and VOC emissions, and 4) corrective actions and schedules to complete the work. [District Rule 1080 and Stanislaus County Rule 108] Federally Enforceable Through Title V Permit

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33. The operator shall notify the APCO no later than one hour after the detection of a breakdown of the CEMS. The operator shall inform the APCO of the intent to shut down the CEMS at least 24 hours prior to the event. [District Rule 1100] Federally Enforceable Through Title V Permit
34. The permittee shall submit a written report including copies of any Equipment Breakdown reports and/or pertinent variance decisions to the APCO for each calendar quarter, within 30 days of the end of the quarter, including: time intervals, data and magnitude of excess emissions, nature and cause of excess emissions (if known), corrective actions taken and preventive measures adopted; averaging period used for data reporting shall correspond to the averaging period for each respective emission standard; applicable time and date of each period during which the CEM was inoperative (except for zero and span checks) and the nature of system repairs and adjustments; and a negative declaration when no excess emissions occurred. [District Rule 1080] Federally Enforceable Through Title V Permit
35. Upon notice by the District that the facility's CEM system is not providing polling data, the facility may continue to operate without providing automated data for a maximum of 30 days per calendar year provided the CEM data is sent to the District by a District-approved alternative method. [District Rule 1080] Federally Enforceable Through Title V Permit
36. Results of continuous emissions monitoring shall be reduced according to the procedure established in 40 CFR, Part 51, Appendix P, paragraphs 5.0 through 5.3.3, or by other methods deemed equivalent by mutual agreement with the District, the ARB, and the EPA. [District Rule 1080] Federally Enforceable Through Title V Permit
37. Cylinder gas audits (GGAs) of continuous emission monitors shall be conducted quarterly, except during quarters in which relative accuracy and total accuracy testing is performed, in accordance with EPA guidelines. The District shall be notified prior to completion of the audits. Audit reports shall be submitted along with quarterly compliance reports to the District. [District Rule 1080] Federally Enforceable Through Title V Permit
38. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4201, Stanislaus County Rule 404, District Rule 4202 and Stanislaus County Rule 405. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
39. Compliance with the conditions in the permit requirements for this unit shall be deemed compliance with District Rule 4801 and Stanislaus County Rule 407. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
40. The requirements of District Rule 4301 and Stanislaus County Rule 408 were determined to not apply to this unit because the unit does not utilize indirect heat transfer. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
41. The requirements of 40 CFR Part 60, Subpart CC were determined to not apply to this unit because the unit was constructed prior to the effective date in the regulation and has not been modified (according to the definition of "modified" in the regulation). A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
42. The requirements of 40 CFR Part 61, Subpart N were determined to not apply to this unit because the unit does not use commercial arsenic. A permit shield is granted from these requirements. [District Rule 2520, §13.2] Federally Enforceable Through Title V Permit
43. Any glass melting furnace located at an Area Source of hazardous air pollutants shall comply with 40 CFR Part 63 Subpart SSSSSS (National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources). [40 CFR Part 63 Subpart SSSSSS] Federally Enforceable Through Title V Permit
44. The amount of glass produced shall not exceed 637.9 tons during any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
45. NOx emissions shall not exceed 1.3 pounds per ton of glass produced. This performance based limit is to enforce the NOx emission reductions granted by certificate number N-107-2. [District NSR Rule] Federally Enforceable Through Title V Permit
46. Except during furnace idling, shutdown, and startup, the aggregated NOx emissions shall not exceed 3.6 lb-NOx per ton of glass produced (based on a block 24-hour average). Aggregated NOx emission are the NOx emissions as measured at the common stack divided by the sum of the daily amount of glass produced by permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4. [District Rule 4354, 9.0 and 9.6] Federally Enforceable Through Title V Permit

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47. CO emissions shall not exceed 0.20 pounds per ton of glass produced. [District NSR Rule] Federally Enforceable Through Title V Permit
48. The VOC emissions shall not exceed 0.2 pounds per ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
49. The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with equal to or greater than 25% by weight mixed color cullet, shall not exceed 0.99 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
50. The combined SOx emissions from permit units N-1662-1, N-1662-2, N-1662-3 and N-1662-4, while producing glass with less than 25% by weight mixed color cullet, shall not exceed 0.81 lb/ton of glass produced (over a rolling 30 day average). [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
51. The PM10 emissions, except for during full or partial emission control system bypass episodes, shall not exceed 0.45 lb/ton of glass produced. [District NSR Rules 2201 and 4354] Federally Enforceable Through Title V Permit
52. The PM10 emissions, during full or partial emission control system bypass episodes, shall not exceed 0.71 lb/ton of glass produced. [District Rule 2201] Federally Enforceable Through Title V Permit
53. The number of hours that the furnace exhaust is not fully treated by a control device shall not exceed 144 hours per calendar year. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
54. The PM10 emissions shall not exceed 28,132 pounds during the first calendar quarter, 28,445 pounds during the second calendar quarter, 28,757 pounds during the third calendar quarter and 28,758 pounds during the fourth calendar quarter. These limits are to enforce the PM10 emission reductions granted by certificate number N-161-4. [District NSR Rule] Federally Enforceable Through Title V Permit
55. During furnace idling, NOx emissions shall not exceed 1,888.0 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
56. During furnace idling, CO emissions shall not exceed 637.9 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
57. During furnace idling, VOC emissions shall not exceed 159.5 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
58. During furnace idling, SOx emissions shall not exceed 701.7 pounds in any one day when producing glass with equal to or greater than 25% by weight mixed color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
59. During furnace idling, SOx emissions shall not exceed 574.1 pounds in any one day when producing glass with less than 25% by weight mixed color cullet. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
60. During furnace idling, PM10 emissions shall not exceed 319.0 pounds in any one day. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
61. The facility shall not use commercial arsenic as a raw material in the production process. [40 CFR Part 61 Subpart N] Federally Enforceable Through Title V Permit
62. The ceramic filter dust collector shall be maintained and operated according to manufacturer's specifications. [District Rule 2201] Federally Enforceable Through Title V Permit
63. The ceramic filter dust collector cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
64. Material removed from the ceramic filter dust collector shall be disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
65. Replacement filters numbering at least 10% of the total number of filters in the ceramic filter dust collector shall be maintained on the premises. [District Rule 2201] Federally Enforceable Through Title V Permit
66. Devices to measure the primary and secondary voltage and current of the electrostatic precipitator shall be maintained in accordance with the manufacturer's specifications. [District Rule 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

67. The specific power of the electrostatic precipitator shall be at least 70 milliwatts/acfm except during the bypass episodes allowed by this permit. [District Rules 2520, §9.3.2 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
68. The ceramic filter dust collector shall be equipped with a pressure differential gauge to indicate the pressure drop across the filters. The gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
69. During operation of the ceramic filter dust collector, the pressure differential gauge reading shall be 5 to 10 inches of water column. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
70. The permittee shall comply with the compliance assurance monitoring operation and maintenance requirements of 40 CFR Part 64.7. [40 CFR Part 64] Federally Enforceable Through Title V Permit
71. If the District or EPA determine that a Quality Improvement Plan is required under 40 CFR Part 64.7(d)(2), the permittee shall develop and implement the Quality Improvement Plan in accordance with 40 CFR Part 64.8. [40 CFR Part 64] Federally Enforceable Through Title V Permit
72. The permittee shall comply with the record keeping and reporting requirements of 40 CFR Part 64.9. [40 CFR Part 64] Federally Enforceable Through Title V Permit
73. The specific power of the electrostatic precipitator shall be continuously monitored and recorded. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
74. Dust collector filters shall be inspected annually while in operation for evidence of particulate matter breakthrough and replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
75. Dust Collector filters shall be inspected annually while not in operation for tears, scuffs, abrasions or hole that might interfere with the PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.4.2] Federally Enforceable Through Title V Permit
76. A daily record of the hours of operation, the amount of glass pulled from the furnace (in tons), the NOx emissions (in lb/ton of glass pulled), the SOx emissions (in lb/ton of glass pulled), the weight of mixed color mix cullet used, the total amount of cullet used (by weight) and the ratio of the mixed color cullet weight to the total cullet weight (in percent) shall be kept. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
77. The oxygen to fuel ratio shall be continuously monitored and recorded. [District Rule 4354] Federally Enforceable Through Title V Permit
78. The permittee shall maintain daily records of the aggregated NOx emissions. [District Rules 2520, 9.3.2 and 4354, 9.6.1 and 9.7] Federally Enforceable Through Title V Permit
79. The permittee shall maintain the burner oxygen to fuel ratio records required by this permit. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
80. A record of the PM10 emissions from this unit, in pounds per calendar quarter, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
81. A record of the cumulative annual number of hours that the emission control system is either fully or partially bypassed shall be kept. The record shall be updated at least weekly. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit
82. The permittee shall maintain daily records of the specific power of the electrostatic precipitator (in milliwatts/acfm). [District Rules 2201, 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
83. The operator shall monitor and record the pressure differential gauge reading of the ceramic filter dust collector at least once during each day that the unit operates. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit
84. Records of dust collector maintenance, inspections and repairs shall be maintained. The records shall include, date of inspection, change outs of filter media, corrective action taken, and identification of the individual performing the inspection. [District Rules 2201 and 2520, 9.4.2] Federally Enforceable Through Title V Permit

CONDITIONS CONTINUE ON NEXT PAGE

85. All records shall be maintained and retained on-site for a period of at least 5 years and shall be made available for District inspection upon request. [District Rules 2201 and 4354 and 40 CFR Part 64] Federally Enforceable Through Title V Permit

## **Appendix D**

### **Baseline Actual Emission Calculations**

The District has selected the five complete calendar years immediately preceding the application date as the baseline period for determining the Baseline Actual Emissions (BAE). Those emissions, which were provided by the applicant, are shown in the table below. The amounts shown on the table are the combined BAEs for all of the units in this project.

Calendar Year	Baseline Actual Emissions (Tons)			
	NOx	VOC	SOx	PM10
2007 (Q3 & Q4)	117.99	0.53	150.1	23.4
2008	258.82	1.0	220.3	52.1
2009	166.86	0.9	300.0	23.8
2010	194.96	3.2	284.5	49.7
2011	218.36	3.8	212.2	15.8
2012 (Q1 & Q2)	104.31	0.7	124.91	9.60
5 yr Average (tons)	212.26	2.03	258.4	34.9
5 yr Average (lb)	424,520	4,060	516,800	69,800

**Appendix E**  
**TV-009 Form**

**San Joaquin Valley  
Unified Air Pollution Control District**

**TITLE V MODIFICATION - COMPLIANCE CERTIFICATION FORM**

**I. TYPE OF PERMIT ACTION (Check appropriate box)**

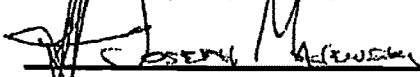
- SIGNIFICANT PERMIT MODIFICATION                       ADMINISTRATIVE AMENDMENT  
 MINOR PERMIT MODIFICATION

COMPANY NAME: <u>GAULO GLASS COMPANY</u>	FACILITY ID: <u>N-1662</u>
1. Type of Organization: <input checked="" type="checkbox"/> Corporation <input type="checkbox"/> Sole Ownership <input type="checkbox"/> Government <input type="checkbox"/> Partnership <input type="checkbox"/> Utility	
2. Owner's Name:	
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 foregoing is correct and true:

  
Signature of Responsible Official

10/10/12  
Date

JOSEPH MAJEWSKI  
Name of Responsible Official (please print)

SR. DIRECTOR - OPERATIONS  
Title of Responsible Official (please print)