



JUN 02 2014

Ms. Anne Root Becraft
Gallo Glass Company
PO Box 1230
Modesto, CA 95353

**Re: Proposed Authority to Construct/Certificate of Conformity (Minor Mod)
District Facility # N1662
Project # N-1141138**

Dear Ms. Root Becraft:

Enclosed for your review is the District's analysis of an application for Authority to Construct for the facility identified above. You requested that a Certificate of Conformity with the procedural requirements of 40 CFR Part 70 be issued with this project. This project is for the consolidation and modernization of Batch Plants #1 and #2.

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

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

Thank you for your cooperation in this matter.

Sincerely,



Arnaud Marjolle
Director of Permit Services

Enclosures

cc: Gerardo C. Rios, EPA (w/enclosure) via email

Seyed Sadredin
Executive Director/Air Pollution Control Officer

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**San Joaquin Valley Air Pollution Control District
Authority to Construct
Application Review**

**Consolidate Glass Plant Raw Material Batching Permits
and Modernize Batching Equipment**

Facility Name:	Gallo Glass Company	Date:	May 5, 2014
Mailing Address:	PO Box 1230 Modesto, CA 95353	Engineer:	James Harader
Contact Person:	Anne Root Becraft	Lead Engineer:	Nick Peirce
Telephone:	(209) 341-3778		
Application #'s:	N-1662-14-7		
Project #:	N-1141138		
Deemed Complete:	April 3, 2014		

I. Proposal

Gallo Glass Company has submitted an Authority to Construct application to consolidate two existing glass batching permits, Batch Plant #1 (N-1662-5-3) and Batch Plant #2 (N-1662-14-4), into a single batching permit. Please see Appendix I for a copy of the current Permits to Operate. Additionally, the facility will upgrade the receiving, storage, and batch making operation facilities to improve accuracy, reliability, maintainability, and dust suppression capability by converting the existing batching operations into a new state-of-the-art batch plant. Upon the implementation of the Authority to Construct for this project, the entire batching operation will all be permitted as N-1662-14; therefore, Permit to Operate N-1662-5 will be cancelled. The following condition will be included on the Authority to Construct permit:

- *Permit to Operate N-1662-5 shall be cancelled upon the implementation of this Authority to Construct permit. [District Rule 2201]*

The current batching equipment is capable of providing more than enough raw materials to operate all of the glass furnaces at their permitted potential, including the raw material necessary for the recently proposed expansion to Glass Furnace #2. Furthermore, the facility's maximum raw material throughput will be reduced by this proposal. Therefore, the proposed modifications to the batching operation at this facility will not debottleneck any of the other units at this facility. Additionally, it is not necessary to aggregate the proposed changes to batch plant and the project with the proposal to expand Glass Furnace #2, as the project to expand Glass Furnace #2 is not dependent on the proposed changes to the batching equipment.

Gallo Glass Company has been issued a Title V permit. This modification can be classified as a Title V minor modification pursuant to Rule 2520, and can be processed with a Certificate of Conformity (COC). Since the facility has specifically requested that this project be processed in that manner, the 45-day EPA comment period will be satisfied prior to the issuance of the Authority to Construct. Gallo Glass Company must apply to administratively amend their Title V permit.

II. Applicable Rules

Rule 2201 New and Modified Stationary Source Review Rule (4/21/11)
Rule 2410 Prevention of Significant Deterioration (6/16/11)
Rule 2520 Federally Mandated Operating permits (6/21/01)
Rule 4101 Visible Emissions (2/17/05)
Rule 4102 Nuisance (12/17/92)
Rule 4201 Particulate Matter Concentration (12/17/92)
Rule 4202 Particulate Matter-Emission Rate (12/17/92)
CH&SC 41700 Risk Management Review
CH&SC 42301.6 School Notice
Public Resources Code 21000-21177: California Environmental Quality Act (CEQA)
California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000-15387: CEQA Guidelines

III. Project Location

This equipment is operated at 605 S Santa Cruz Ave in Modesto, CA. The proposed location is not within 1000' of a K-12 school boundary; therefore, the noticing requirements of California Health and Safety Code Section 42301.6 do not apply.

IV. Process Description

Upon consolidating the batch plant permits and updating the equipment, the batch plant will serve two primary functions, raw material receiving/recycling and batch making.

Raw Material Receiving and Recycling Process Description

The consolidated batch plant will consist of 2 soda ash silos, 2 limestone silos, 7 sand silos, 12 cullet silos, and 13 micro ingredient silos. The soda ash, limestone, sand, and cullet silos are currently part of the Batch Plant #1 and Batch Plant #2 permits. The micro ingredient silos are being added, to move storage of micro ingredients into an enclosed environment.

Soda Ash

A new vacuum unloading system will pneumatically transport soda ash from a railcar to either of the two parallel soda ash silos. A dust collector, DC101, will control dust emissions from both soda ash silos.

Limestone

A new vacuum unloading system will pneumatically transport limestone from a railcar to either of two parallel limestone silos. A dust collector, DC102, will control dust emissions from both limestone silos.

Sand

Trucks will unload sand into one of two hoppers (one existing and one new). Conveyors will transport the sand from the new hopper to elevators that will lift the sand into the batch plant sand silos (currently part of Batch Plant #2), which will operate in two parallel trains. A dust collector, DC103, will control dust emissions from the conveyors on the new sand unloading system.

Additionally, there will be a separate silo, the existing sand silo that is currently part of Batch Plant #1. Existing conveyors will transport the sand from the existing hopper into that sand silo. An existing pneumatic conveying system will transport the sand from the silo that is currently part of Batch Plant #1 to the sand silos that are currently part of Batch Plant #2. An existing dust collector, DC20, will control dust emissions from the existing sand unloading system. Three dust collectors, DC104, DC105, and DC106, will control emissions from silos.

External Cullet

Trucks will unload flint, green, and amber cullet into hoppers, from which conveyors will transport the cullet to elevators that will lift the cullet into a diverter that will direct the cullet to either of two parallel silos for each type of cullet. Three dust collectors, DC107, DC109, and DC 111, will control dust emissions from the three conveyor lines, while three dust collectors, DC108, DC110, and DC112, will control dust emissions from each pair of silos.

Internal Cullet

The existing cullet processing operation, N-1662-6-6, will discharge flint, mixed, and green cullet into three pairs of parallel silos. Dust collectors, DC113, DC114, and DC115, will control dust emissions from each pair of silos.

Micro Ingredients

The facility adds small quantities of other raw materials to make batch. A blow pot will be used to transfer some of the micro ingredients into their respective silos. Dust collector DC116 will be used to control dust emissions from the blow pot. There will be 2 salt cake silos, 2 glass maker's carbon silos, 1 cobalt silo, 1 selenium silo, 1 carbocite silo, 1 iron scale silo, 1 iron chromite silo, 2 electrostatic precipitator dust silos, and two spare silos. Twelve dust collectors, DC 117 to DC128, will control dust emissions from the micro ingredient silos.

Batch Making Process Description

The soda ash, sand, and limestone silos will deposit raw material into a dedicated scale hopper that will weigh the material and then deposit it into one of two series of parallel batch conveyors and elevators that will deposit the batch into either of two scale hoppers that each feed a third, separate batch mixer. The micro ingredient hoppers will discharge raw material into the scale hoppers, which will discharge to either conveyor immediately upstream of the batch mix scale hoppers. The two parallel batch conveyor lines will share one common batch mixer. Water (2% to 3% by weight) will be added to the batch mixers to provide downstream dust control. Eight dust collectors, DC129 through DC136, will control emissions from each of these batch conveyors/elevators. The three batch mixers will be controlled by three dust collectors, DC137 through DC139. The batch mixers will deposit the mixed batch onto one of two main batch/cullet conveyors. Dust collectors DC140 and DC141 will control dust emissions from each of the main batch/cullet conveyors.

The cullet silos will deposit the cullet into dedicated scale conveyors that will deposit the cullet onto either of a series of parallel cullet conveyors. Elevators will lift the cullet to a diverter that will direct the cullet to either of the aforementioned batch/cullet conveyors. Four dust collectors, DC142 through DC145, will control dust emissions from the cullet conveyors and elevators.

The main batch/cullet conveyors feed a series of diverters and conveyors that will sequentially direct the batch to Furnace #5, Furnace #4, Furnace #3, Furnace #2, and lastly Furnace #1. Fourteen dust collectors, DC146 through DC149, DC151 through DC153, DC155 through DC157, and DC159 through DC162 control dust emissions from these conveyors. The conveyors ultimately will feed a batch hopper for each active furnace. Four dust collectors, DC150, DC154, DC158, and DC163, will control dust emissions from the batch hoppers.

Process Weight and Operating Schedule

The following table shows the process rates and operating schedules for the current batch plant configurations, Batch Plant #1 and Batch Plant #2, and the final consolidated Batch Plant.

Operation	Current Batch Plant #1	Current Batch Plant #2	Consolidated Batch Plant
Maximum Daily Throughput (tons/day)			
Railcar Truck Unloading:	2,384	2,275	4,300
Silo Filling:	2,384	2,275	4,300
Batch-making:	1,362	1,224	2,448
Daily/Annual Operating Hours			
Railcar/Truck Unloading:	24/6,240	24/6,240	16/4,160
Silo Filling:	24/6,240	24/6,240	16/4,160
Batch Making:	24/8,60	24/8,760	24/8,760
Maximum Annual Throughput (tons/year)	497,130	446,760	893,520

V. Equipment Listing

The dust collector specifications for the dust collectors serving the consolidated batch plant are included in Appendix III.

Equipment Listing:

N-1662-14-7: BATCH PLANT SERVING GLASS MELTING FURNACES #1, #2, #3, #4, AND #5 AND THE CULLET PROCESSING OPERATION (N-1662-6), AND CONSISTING OF A SODA ASH RAILCAR UNLOADING AND STORAGE OPERATION SERVED BY A DUST COLLECTOR, A LIMESTONE RAILCAR UNLOADING AND STORAGE OPERATION SERVED BY A DUST COLLECTOR, SAND RECEIVING, STORAGE, AND CONVEYING OPERATION SERVED BY FIVE DUST COLLECTORS, EXTERNAL CULLET RECEIVING AND STORAGE OPERATION SERVED BY SIX DUST COLLECTORS, AN INTERNAL CULLET PROCESSING OPERATION SERVED BY THREE DUST COLLECTORS, A MICROINGREDIENTS RECEIVING AND STORAGE OPERATION SERVED BY TWELVE DUST COLLECTORS, AND A BATCH MAKING AND CONVEYING OPERATION SERVED BY 35 DUST COLLECTORS

VI. Emission Control Technology Evaluation

Particulate matter less than 10 microns in aerodynamic diameter (PM_{10}) will be emitted by this operation. PM_{10} emissions will be controlled using dust collectors. A PM_{10} filter efficiency of 99% is typical for dust collection systems.

VII. General Calculations

A. Assumptions

1. Particulate matter is the only pollutant emitted by this operation
2. All particulate matter exiting the dust collectors is PM_{10} .
3. The overall PM_{10} capture and control efficiency (CE) is 99%.
4. All other assumptions will be stated as they are made.

B. Emission Factors

1. Pre-Project Emission Factors

N-1662-5-3: Batch Plant #1

The following table shows the emission factors that will be used to estimate emissions from current Batch Plant #1:

Operation	PM10 Emission Factor	Source
Railcar/Truck Unloading	0.036 lb/ton	District Project N-1074121
Silo Loading	0.02 grains/cubic foot	Dust Collector Manufacturers
Batching	0.02 grains/cubic foot	Dust Collector Manufacturers

N-1662-14-4: Batch Plant #2

The following table shows the emission factors that will be used to estimate emissions from current Batch Plant #2:

Operation	PM10 Emission Factor	Source
Unloading/Storage	0.1 lb/ton	PTO N-1662-14-4
Batching	0.066 lb/ton	PTO N-1662-14-4

2. Post-Project Emission Factors

N-1662-14-7: Consolidated Batch Plant

The following table shows the emission factors that will be used to estimate emissions from the consolidated batch plant:

Operation	PM10 Emission Factor	Source
Railcar/Truck Unloading	0.036 lb/ton	District Project N-1074121
Silo Loading	0.0044 grains/cubic foot	Dust Collector Manufacturers
Batching	0.0044 grains/cubic foot	Dust Collector Manufacturers
Retained Sand Bin	0.02 grains/cubic foot	Dust Collector Manufacturer

C. Calculations

1. Pre-Project Potential to Emit (PE1)

N-1662-5-3: Batch Plant #1

From Railcar/Truck Unloading:

Daily and annual PM10 emissions from the railcar/truck unloading operations will be based upon the lb/ton emission factor presented earlier, and the maximum daily and annual throughputs presented earlier.

$$\begin{aligned}\text{Daily PM10} &= 2,384 \text{ tons/year} \times 0.036 \text{ lb-PM10/ton} \\ \text{Daily PM10} &= 85.8 \text{ lb-PM10/day}\end{aligned}$$

$$\begin{aligned}\text{Annual PM10} &= 497,130 \text{ tons/year} \times 0.036 \text{ lb-PM10/ton} \\ \text{Annual PM10} &= 17,897 \text{ lb-PM10/year}\end{aligned}$$

Annual PM2.5 emissions must also be calculated. This operation will be considered similar to aggregate handling. Per Equation 1 of Chapter 13.2.4 of AP-42 (November 2005), 15% of PM10 emissions are PM2.5 for aggregate handling. Thus,

$$\begin{aligned}\text{Annual PM2.5} &= \text{Annual PM10} \times 0.15 = 17,897 \text{ lb-PM10/year} \times 0.15 \\ \text{Annual PM2.5} &= 2,685 \text{ lb-PM2.5/year}\end{aligned}$$

From Silo Loading:

Daily and annual PM10 emissions from silo loading are based upon the total ventilation rate for the Batch Plant #1 silo dust collectors, the grain loading guarantee from the dust collector manufacturers, and the hours of operation. Pursuant to the applicant, the total ventilation rate for the silo dust collectors is 18,169 CFM for Batch Plant #1. Thus,

$$\begin{aligned}\text{Daily PM10} &= 18,169 \text{ CFM} \times 0.02 \text{ grains/CFM} \times \text{lb}/7000 \text{ grains} \times 1440 \text{ min/day} \\ \text{Daily PM10} &= 74.8 \text{ lb-PM10/day}\end{aligned}$$

$$\begin{aligned}\text{Annual PM10} &= 18,169 \text{ CFM} \times 0.02 \text{ grains/CFM} \times \text{lb}/7000 \text{ grains} \\ &\quad \times 6240 \text{ hr/year} \times 60 \text{ min/hr} \\ \text{Annual PM10} &= 19,436 \text{ lb/year}\end{aligned}$$

Annual PM2.5 emissions must also be calculated. This operation is similar to a controlled transfer point for pulverized mineral processing. Pursuant to AP-42 table 11.19.2-1 (August 2004) 28% of PM10 emissions are PM2.5 for a controlled transfer point of pulverized mineral. Thus,

$$\begin{aligned}\text{Annual PM2.5} &= \text{Annual PM10} \times 0.28 = 19,436 \text{ lb-PM10/year} \times 0.28 \\ \text{Annual PM2.5} &= 5,442 \text{ lb-PM2.5/year}\end{aligned}$$

From Batching:

Daily and annual PM10 emissions from batching are based upon the total ventilation rate for the Batch Plant #1 batching dust collectors, the grain loading guarantee from the dust collector manufacturers, and the hours of operation. Pursuant to the applicant, the total ventilation rate for the batching dust collectors for Batch Plant #1 is 7,149 CFM. Thus,

$$\begin{aligned}\text{Daily PM10} &= 7,149 \text{ CFM} \times 0.02 \text{ grains/CFM} \times \text{lb}/7000 \text{ grains} \times 1440 \text{ min/day} \\ \text{Daily PM10} &= 29.4 \text{ lb-PM10/day}\end{aligned}$$

$$\begin{aligned}\text{Annual PM10} &= 7,149 \text{ CFM} \times 0.02 \text{ grains/CFM} \times \text{lb}/7000 \text{ grains} \\ &\quad \times 8,760 \text{ hr/year} \times 60 \text{ min/hr} \\ \text{Annual PM10} &= 10,736 \text{ lb/year}\end{aligned}$$

Annual PM2.5 emissions must also be calculated. This operation is similar to a controlled transfer point for pulverized mineral processing. Pursuant to AP-42 table 11.19.2-1 (August 2004) 28% of PM10 emissions are PM2.5 for a controlled transfer point of pulverized mineral. Thus,

$$\begin{aligned}\text{Annual PM2.5} &= \text{Annual PM10} \times 0.28 = 10,736 \text{ lb-PM10/year} \times 0.28 \\ \text{Annual PM2.5} &= 3,006 \text{ lb-PM2.5/year}\end{aligned}$$

N-1662-14-4: Batch Plant #2

From Railcar/Truck unloading and Silo Loading:

Daily and annual PM10 emissions from the railcar/truck unloading and silo storage operations will be based upon the lb/ton emission factor presented earlier, and the maximum daily and annual throughputs presented earlier.

$$\begin{aligned}\text{Daily PM10} &= 2,275 \text{ tons/day} \times 0.1 \text{ lb-PM10/ton} \\ \text{Daily PM10} &= 227.5 \text{ lb-PM10/day}\end{aligned}$$

$$\begin{aligned}\text{Annual PM10} &= 446,760 \text{ tons/year} \times 0.1 \text{ lb-PM10/ton} \\ \text{Annual PM10} &= 44,676 \text{ lb-PM10/year}\end{aligned}$$

Annual PM2.5 emissions must also be calculated. This operation is similar to a controlled transfer point for pulverized mineral processing. Pursuant to AP42 table 11.19.2-1 (August 2004) 28% of PM10 emissions are PM2.5 for a controlled transfer point of pulverized mineral. Thus,

$$\begin{aligned}\text{Annual PM2.5} &= \text{Annual PM10} \times 0.28 = 44,676 \text{ lb-PM10/year} \times 0.28 \\ \text{Annual PM2.5} &= 12,509 \text{ lb-PM2.5/year}\end{aligned}$$

From Batching:

Daily and annual PM10 emissions from the railcar/truck unloading and silo storage operations will be based upon the lb/ton emission factor presented earlier, and the maximum daily and annual throughputs presented earlier.

$$\begin{aligned}\text{Daily PM10} &= 1,224 \text{ tons/day} \times 0.066 \text{ lb-PM10/ton} \\ \text{Daily PM10} &= 80.8 \text{ lb-PM10/day}\end{aligned}$$

$$\begin{aligned}\text{Annual PM10} &= 446,760 \text{ tons/year} \times 0.066 \text{ lb-PM10/ton} \\ \text{Annual PM10} &= 29,486 \text{ lb-PM10/year}\end{aligned}$$

Annual PM2.5 emissions must also be calculated. This operation is similar to a controlled transfer point for pulverized mineral processing. Pursuant to AP-42 table 11.19.2-1 (August 2004) 28% of PM10 emissions are PM2.5 for a controlled transfer point of pulverized mineral. Thus,

$$\begin{aligned}\text{Annual PM2.5} &= \text{Annual PM10} \times 0.28 = 29,486 \text{ lb-PM10/year} \times 0.28 \\ \text{Annual PM2.5} &= 8,256 \text{ lb-PM2.5/year}\end{aligned}$$

2. Post Project Potential to Emit (PE2)

N-1662-14-7: Consolidated Batch Plant

From Railcar/Truck unloading:

Daily and annual PM10 emissions from the railcar/truck unloading operations will be based upon the lb/ton emission factor presented earlier, and the maximum daily and annual throughputs presented earlier.

$$\begin{aligned}\text{Daily PM10} &= 4,300 \text{ tons/day} \times 0.036 \text{ lb-PM10/ton} \\ \text{Daily PM10} &= 154.8 \text{ lb-PM10/day}\end{aligned}$$

$$\begin{aligned}\text{Annual PM10} &= 893,520 \text{ tons/year} \times 0.036 \text{ lb-PM10/ton} \\ \text{Annual PM10} &= 32,167 \text{ lb-PM10/year}\end{aligned}$$

Annual PM2.5 emissions must also be calculated. This operation will be considered similar to aggregate handling. Per Equation 1 of Chapter 13.2.4 of AP-42 (November 2005), 15% of PM10 emissions are PM2.5 for aggregate handling. Thus,

$$\begin{aligned}\text{Annual PM2.5} &= \text{Annual PM10} \times 0.15 = 32,167 \text{ lb-PM10/year} \times 0.15 \\ \text{Annual PM2.5} &= 4,825 \text{ lb-PM2.5/year}\end{aligned}$$

From Silo Loading:

Daily and annual PM10 emissions from silo loading are based upon the total ventilation rate for the consolidated batch plant silo dust collectors, the grain loading guarantee from the dust collector manufacturers, and the hours of operation. Pursuant to the applicant, the total ventilation rate for the silo dust collectors is 15,503 CFM. Thus,

$$\begin{aligned}\text{Daily PM10} &= 15,503 \text{ CFM} \times 0.0044 \text{ grains/CFM} \times \text{lb}/7000 \text{ grains} \times 960 \text{ min/day} \\ \text{Daily PM10} &= 9.4 \text{ lb-PM10/day}\end{aligned}$$

$$\begin{aligned}\text{Annual PM10} &= 15,503 \text{ CFM} \times 0.0044 \text{ grains/CFM} \times \text{lb}/7000 \text{ grains} \\ &\quad \times 4,160 \text{ hr/year} \times 60 \text{ min/hr} \\ \text{Annual PM10} &= 2,432 \text{ lb/year}\end{aligned}$$

Annual PM2.5 emissions must also be calculated. This operation is similar to a controlled transfer point for pulverized mineral processing. Pursuant to AP-42 table 11.19.2-1 (August 2004) 28% of PM10 emissions are PM2.5 for a controlled transfer point of pulverized mineral. Thus,

$$\begin{aligned}\text{Annual PM2.5} &= \text{Annual PM10} \times 0.28 = 2,432 \text{ lb-PM10/year} \times 0.28 \\ \text{Annual PM2.5} &= 681 \text{ lb-PM2.5/year}\end{aligned}$$

From Retained Sand Bin:

Daily and annual PM10 emissions from the retained sand bin are based upon the total ventilation rate of 6,500 CFM for the retained sand bin dust collectors, the grain loading guarantee from the dust collector manufacturers, and the hours of operation. Thus,

$$\begin{aligned}\text{Daily PM10} &= 6,500 \text{ CFM} \times 0.02 \text{ grains/CFM} \times \text{lb}/7000 \text{ grains} \times 960 \text{ min/day} \\ \text{Daily PM10} &= 17.8 \text{ lb-PM10/day}\end{aligned}$$

$$\begin{aligned}\text{Annual PM10} &= 6,500 \text{ CFM} \times 0.02 \text{ grains/CFM} \times \text{lb}/7000 \text{ grains} \\ &\quad \times 4,160 \text{ hr/year} \times 60 \text{ min/hr} \\ \text{Annual PM10} &= 4,635 \text{ lb/year}\end{aligned}$$

Annual PM2.5 emissions must also be calculated. This operation is similar to a controlled transfer point for pulverized mineral processing. Pursuant to AP-42 table 11.19.2-1 (August 2004) 28% of PM10 emissions are PM2.5 for a controlled transfer point of pulverized mineral. Thus,

$$\begin{aligned}\text{Annual PM2.5} &= \text{Annual PM10} \times 0.28 = 4,635 \text{ lb-PM10/year} \times 0.28 \\ \text{Annual PM2.5} &= 1,298 \text{ lb-PM2.5/year}\end{aligned}$$

From Batching:

Daily and annual PM10 emissions from batching are based upon the total ventilation rate for the consolidated batch plant batching dust collectors, the grain loading guarantee from the dust collector manufacturers, and the hours of operation. Pursuant to the applicant, the total ventilation rate for the batching dust collectors is 31,430 CFM. Thus,

$$\begin{aligned} \text{Daily PM10} &= 31,430 \text{ CFM} \times 0.0044 \text{ grains/CFM} \times \text{lb}/7000 \text{ grains} \times 1440 \text{ min/day} \\ \text{Daily PM10} &= 28.4 \text{ lb-PM10/day} \end{aligned}$$

$$\begin{aligned} \text{Annual PM10} &= 31,430 \text{ CFM} \times 0.0044 \text{ grains/CFM} \times \text{lb}/7000 \text{ grains} \\ &\quad \times 8,760 \text{ hr/year} \times 60 \text{ min/hr} \\ \text{Annual PM10} &= 10,384 \text{ lb/year} \end{aligned}$$

Annual PM2.5 emissions must also be calculated. This operation is similar to a controlled transfer point for pulverized mineral processing. Pursuant to AP-42 table 11.19.2-1 (August 2004) 28% of PM10 emissions are PM2.5 for a controlled transfer point of pulverized mineral. Thus,

$$\begin{aligned} \text{Annual PM2.5} &= \text{Annual PM10} \times 0.28 = 10,384 \text{ lb-PM10/year} \times 0.28 \\ \text{Annual PM2.5} &= 2,908 \text{ lb-PM2.5/year} \end{aligned}$$

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

Pursuant to Section 4.9 of District Rule 2201, the Pre-Project Stationary Source Potential to Emit (SSPE1) is the Potential to Emit (PE) from all units with valid ATCs or PTOs at the Stationary Source and the quantity of Emission Reduction Credits (ERCs) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site. Except for the units in this project, the following data was obtained from District Project N-1132601.

Permit Unit	NOx (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)	PM2.5 (lb/yr)	CO (lb/yr)	VOC (lb/yr)
N-1662-1-15	265,771	189,938	86,238	61,229 ¹	7,593	43,662
N-1662-2-16	179,923	127,231	58,382	41,451 ¹	115,665	29,559
N-1662-3-16	179,923	127,231	58,382	41,451 ¹	1,285	29,559
N-1662-4-17	302,684	230,505	105,770	105,770 ¹	46,567	53,552
N-1662-5-3	0	0	48,069	11,133	0	0
N-1662-6-6	0	0	27,156	7,604 ²	0	0
N-1662-7-3	0	0	114	32 ²	0	0
N-1662-8-7	1,199	1,552	11,570	8,215 ¹	1,890	78
N-1662-10-3	5,994	2	171	171 ³	1,297	488
N-1662-11-3	5,994	2	171	171 ³	1,297	488
N-1662-12-3	5,994	2	171	171 ³	1,297	488
N-1662-14-4	0	0	74,162	20,765	0	0
N-1662-15-3	324	26	108	108 ³	1,350	27
ATC N-1662-16-0	0	0	5	1 ²	0	0
ERC N-3-2	379,472	0	0	N/A	0	0
ERC N-54-2	85,737	0	0	N/A	0	0
ERC N-56-2	305,681	0	0	N/A	0	0
ERC N-107-2	326,978	0	0	N/A	0	0
ERC N-3-3	0	0	0	N/A	3,427	0
ERC N-56-3	0	0	0	N/A	2,044	0
ERC N-161-4	0	0	92,898	N/A	0	0
SSPE1 (w/o ERCs)	947,806	676,489	470,469	298,272	178,241	157,901
SSPE1 (w/ERC's)	2,045,674	676,489	563,367	298,272	183,712	157,901

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

Pursuant to Section 4.10 of District Rule 2201, the Post Project Stationary Source Potential to Emit (SSPE2) is the Potential to Emit (PE) from all units with valid Authorities to Construct (ATC) or Permits to Operate (PTO) at the Stationary Source and the quantity of emission reduction credits (ERC) which have been banked since September 19, 1991 for Actual Emissions Reductions that have occurred at the source, and which have not been used on-site.

¹ 71% of PM10 emissions are assumed to be PM2.5 (based on the particulate size data for controlled glass furnaces in AP-42 Table 11.15-3.

² 28% of PM10 emissions from these processes are assumed to be PM2.5, based on AP-42 Table 11.19.2-1 for pulverized minerals.

³ 100% of PM10 emissions from IC engines is expected to be PM2.5.

Permit Unit	NOx (lb/yr)	SOx (lb/yr)	PM10 (lb/yr)	PM2.5 (lb/yr)	CO (lb/yr)	VOC (lb/yr)
N-1662-1-15	265,771	189,938	86,238	61,229	7,593	43,662
N-1662-2-16	179,923	127,231	58,382	41,451	115,665	29,559
N-1662-3-16	179,923	127,231	58,382	41,451	1,285	29,559
N-1662-4-17	302,684	230,505	105,770	105,770	46,567	53,552
N-1662-6-6	0	0	27,156	7,604	0	0
N-1662-7-3	0	0	114	32	0	0
N-1662-8-7	1,199	1,552	11,570	8,215	1,890	78
N-1662-10-3	5,994	2	171	171	1,297	488
N-1662-11-3	5,994	2	171	171	1,297	488
N-1662-12-3	5,994	2	171	171	1,297	488
ATC N-1662-14-7	0	0	49,618	9,712	0	0
N-1662-15-3	324	26	108	108	1,350	27
ATC N-1662-16-0	0	0	5	1	0	0
ERC N-768-2	53,220	0	0	N/A	0	0
ERC N-900-2	256,098	0	0	N/A	0	0
ERC N-966-2	229,479	0	0	N/A	0	0
ERC N-56-3	0	0	0	N/A	2,044	0
ERC N-161-4	0	0	92898	N/A	0	0
ERC N-106-3	0	0	0	N/A	3,427	0
SSPE2 (w/o ERCs)	947,806	676,489	397,856	276,086	178,241	157,901
SSPE2 (w/ERC's)	2,045,674	676,489	490,754	276,086	183,712	157,901

5. Major Source Determination

Rule 2201 Major Source Determination:

A Major Source is a source with an SSPE2 that equals or exceeds any of the following Major Source thresholds. The following table compares the pre-project and post-project facility-wide annual emissions in order to determine if the facility is already an existing Major Source or if the facility is becoming a Major Source as the result of this project. ERC certificates are not included when determining whether a facility is a Major Source.

Major Source Determination					
Pollutant	SSPE1 (lb/yr)	SSPE2 (lb/yr)	Major Source Threshold (lb/yr)	Existing Major Source?	Becoming a Major Source?
NO _x	947,806	947,806	20,000	Yes	No
SO _x	676,489	676,489	140,000	Yes	No
PM ₁₀	470,469	397,856	140,000	Yes	No
PM2.5	298,272	276,086	200,000	Yes	No
CO	178,241	178,241	200,000	No	No
VOC	157,901	157,901	20,000	Yes	No

Rule 2410 Major Source Determination:

The facility or the equipment evaluated under this project is not listed as one of the categories specified in 40 CFR 52.21 (b)(1)(i). Therefore the following PSD Major Source thresholds are applicable.

PSD Major Source Determination (tons/year)	
	NO₂
Facility PE before Project Increase	473.9
PSD Major Source Thresholds	250
PSD Major Source ? (Y/N)	Yes

As shown above, the facility is an existing major source for PSD.

6. Baseline Emissions (BE)

BE = Pre-project Potential to Emit for:

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

Clean Unit Determination

Batch Plants #1 and #2 are controlled by dust collectors with an estimated capture and control efficiency of 99%. Pursuant to Section 3.13.1, a unit equipped with an emission control technology with a minimum control efficiency of at least 95% is a clean emission unit. Therefore, the existing units are clean for PM10 emissions.

Thus,

BE = PE1

7. SB288 Modification

An SB 288 Major Modification is defined in 40 CFR Part 51.165 (in effect 12/19/02) as *"any physical change in or change in the method of operation of a major stationary source that would result in a significant net emissions increase of any pollutant subject to regulation under the Act."*

This facility is a Major Source for NO_x, SO_x, PM₁₀, and PM_{2.5} emissions; however, the units in this project only emit particulate. Additionally, there is no threshold for PM_{2.5} emissions; therefore, an SB288 Modification could only be triggered for PM₁₀ emissions. The SB288 Modification threshold for PM₁₀ is 30,000 lb-PM₁₀/year.

For existing units, NEI is equal to PE2 – BAE, where:

BAE = Baseline Average Annual Emissions over a representative 2-year period.

As shown earlier in this evaluation, PE2 for the consolidated batch plant is:

PE2 = 49,618 lb-PM₁₀/year

PM₁₀ Baseline Average Annual Emissions for Batch Plant #1

For Batch Plant #1, the total batch throughput for the last 2 years of operation is shown in the table below.

Year	Batch Production (tons/year)
2012	419,860
2013	336,839
Average Annual Throughput	378,350

As stated in the potential to emit calculations earlier in this evaluation, the maximum throughput for batch plant #1 is 497,130 tons/year, and the potential to emit for batch plant #1 is 48,069 lb-PM₁₀/year. Thus,

EF PM₁₀ = 48,069 lb-PM₁₀/year + 497,130 tons/year

EF PM₁₀ = 0.097 lb-PM₁₀/ton

The BAE for Batch Plant #1 is:

$$\text{BAE PM10} = 378,350 \text{ tons/year} \times 0.097 \text{ lb-PM10/ton}$$

$$\text{BAE PM10} = 36,700 \text{ lb-PM10/year}$$

PM10 Baseline Average Annual Emissions for Batch Plant #2

For Batch Plant #2, the total batch throughput for the last 2 years of operation is shown in the table below.

Year	Batch Production (tons/year)
2012	184,167
2013	107,050
Average Annual Throughput	145,609

As stated in the potential to emit calculations earlier in this evaluation, the maximum throughput for Batch Plant #2 is 446,760 tons/year, and the potential to emit for Batch Plant #2 is 74,162 lb-PM10/year. Thus,

$$\text{EF PM10} = 74,162 \text{ lb-PM10/year} + 446,760 \text{ tons/year}$$

$$\text{EF PM10} = 0.166 \text{ lb-PM10/ton}$$

The BAE for Batch Plant #2 is:

$$\text{BAE PM10} = 145,609 \text{ tons/year} \times 0.166 \text{ lb-PM10/ton}$$

$$\text{BAE PM10} = 24,171 \text{ lb-PM10/year}$$

Net Emissions Increase Calculation

$$\text{NEI} = \text{PE2} - \text{BAE}$$

$$\text{NEI} = 49,618 \text{ lb-PM10/year} - 36,700 \text{ lb-PM10/year} - 24,171 \text{ lb-PM10/year}$$

$$\text{NEI} < 0$$

Since the NEI is less than 30,000 lb-PM10/year, an SB288 Modification will not be triggered by this proposal. No further analysis is necessary.

8. Federal Major Modification

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

This facility is a Major Source for NO_x, SO_x, PM₁₀, and PM_{2.5} emissions; however, the units in this project only emit particulate. Therefore, a Federal Major Modification could only be triggered for PM_{2.5} or PM₁₀ emissions. The Federal Major Modification thresholds are 20,000 lb/year of Direct-PM_{2.5} and 30,000 lb/year of PM₁₀.

For existing units, the net increase in emissions is calculated as:

$$NEI = PAE - BAE$$

Where,

PAE = Projected Actual Emissions

BAE = Baseline Actual Emissions (any 24-month period within the last 10 years)

For this project, the facility has chosen to use PE2 as their projected actual emissions.

PM_{2.5} and PM₁₀ Baseline Average Annual Emissions for Batch Plant #1

A baseline period of December 2010 through November 2012 was chosen by the facility. For Batch Plant #1, the total batch throughput for this 2-year period is shown in the table below.

Year	Batch Production (tons/year)
December 2010 – November 2011	410,793
December 2011 – November 2012	422,445
Average Annual Throughput	416,619

As stated in the potential to emit calculations earlier in this evaluation, the maximum throughput for batch plant #1 is 497,130 tons/year, and the potential to emit for batch plant #1 is 11,133 lb-PM_{2.5}/year. Thus,

$$EF_{PM2.5} = 11,133 \text{ lb-PM}_{2.5}/\text{year} + 497,130 \text{ tons/year}$$

$$EF_{PM2.5} = 0.022 \text{ lb-PM}_{2.5}/\text{ton}$$

EF PM₁₀ was calculated earlier in the SB288 modification section as:

$$EF_{PM10} = 0.097 \text{ lb-PM}_{10}/\text{ton}$$

The BAE for Batch Plant #1 is:

$$\text{BAE PM}_{2.5} = 416,619 \text{ tons/year} \times 0.022 \text{ lb-PM}_{2.5}/\text{ton}$$

$$\text{BAE PM}_{2.5} = 9,166 \text{ lb-PM}_{2.5}/\text{year}$$

$$\text{BAE PM}_{10} = 416,619 \text{ tons/year} \times 0.097 \text{ lb-PM}_{10}/\text{ton}$$

$$\text{BAE PM}_{10} = 40,412 \text{ lb-PM}_{10}/\text{year}$$

PM_{2.5} and PM₁₀ Baseline Average Annual Emissions for Batch Plant #2

A baseline period of December 2010 through November 2012 was chosen by the facility. For Batch Plant #2, the total batch throughput for this 2-year period is shown in the table below.

Year	Batch Production (tons/year)
December 2010 – November 2011	183,938
December 2011 – November 2012	187,079
Average Annual Throughput	185,509

As stated in the potential to emit calculations earlier in this evaluation, the maximum throughput for Batch Plant #2 is 446,760 tons/year, and the potential to emit for Batch Plant #2 is 20,765 lb-PM_{2.5}/year. Thus,

$$\text{EF PM}_{2.5} = 20,765 \text{ lb-PM}_{2.5}/\text{year} \div 446,760 \text{ tons/year}$$

$$\text{EF PM}_{2.5} = 0.046 \text{ lb-PM}_{2.5}/\text{ton}$$

EF PM₁₀ was calculated earlier in the SB288 modification section as:

$$\text{EF PM}_{10} = 0.166 \text{ lb-PM}_{10}/\text{ton}$$

The BAE for Batch Plant #2 is:

$$\text{BAE PM}_{2.5} = 185,509 \text{ tons/year} \times 0.046 \text{ lb-PM}_{2.5}/\text{ton}$$

$$\text{BAE PM}_{2.5} = 8,533 \text{ lb-PM}_{2.5}/\text{year}$$

$$\text{BAE PM}_{10} = 185,509 \text{ tons/year} \times 0.166 \text{ lb-PM}_{10}/\text{ton}$$

$$\text{BAE PM}_{10} = 30,794 \text{ lb-PM}_{10}/\text{year}$$

Net Emissions Increase Calculation

$$\text{NEI} = \text{PE2} - \text{BAE}$$

$$\begin{aligned} \text{NEI PM}_{2.5} &= 9,712 \text{ lb-PM}_{2.5}/\text{year} - 9,166 \text{ lb-PM}_{2.5}/\text{year} - 8,533 \text{ lb-PM}_{2.5}/\text{year} \\ \text{NEI PM}_{2.5} &< 0 \end{aligned}$$

$$\begin{aligned} \text{NEI PM}_{10} &= 49,618 \text{ lb-PM}_{10}/\text{year} - 40,412 \text{ lb-PM}_{10}/\text{year} - 30,794 \text{ lb-PM}_{10}/\text{year} \\ \text{NEI PM}_{10} &< 0 \end{aligned}$$

Since the NEI is less than both 20,000 lb-PM_{2.5}/year and 30,000 lb-PM₁₀/year, a Federal Major Modification will not be triggered by this proposal. No further analysis is necessary.

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

Rule 2410 applies to pollutants for which the District is in attainment or for unclassified, pollutants. The pollutants addressed in the PSD applicability determination are listed as follows:

- NO₂ (as a primary pollutant)
- SO₂ (as a primary pollutant)
- CO
- PM
- PM₁₀
- Greenhouse gases (GHG): CO₂, N₂O, CH₄, HFCs, PFCs, and SF₆

The first step of this PSD evaluation consists of determining whether the facility is an existing PSD Major Source or not (See Section VII.C.5 of this document).

In the case the facility is an existing PSD Major Source, the second step of the PSD evaluation is to determine if the project results in a PSD significant increase.

This facility is an existing PSD Major Source.

I. Project Location Relative to Class 1 Area

As demonstrated in the “PSD Major Source Determination” Section above, the facility was determined to be a existing major source for PSD. Because the project is not located within 10 km of a Class 1 area – modeling of the emission increase is not required to determine if the project is subject to the requirements of Rule 2410.

II. Significance of Project Emission Increase Determination

a. Potential to Emit of attainment/unclassified pollutant for New or Modified Emission Units vs PSD Significant Emission Increase Thresholds

As a screening tool, the potential to emit from all new and modified units is compared to the PSD significant emission increase thresholds, and if total potential to emit from all new and modified units is below this threshold, no further analysis will be needed.

PSD Significant Emission Increase Determination: Potential to Emit (tons/year)						
	NO2	SO2	CO	PM	PM10	CO2e
Total PE from New and Modified Units	0	0	0	24.8	24.8	0
PSD Significant Emission Increase Thresholds	40	40	100	25	15	75,000
PSD Significant Emission Increase?	N	N	N	N	Y	N

As demonstrated above, because the project has a total potential to emit from all new and modified emission units greater than PSD significant emission increase threshold for PM10, further analysis is required to determine if the project has an emission increase greater than the PSD significant emission increase threshold for PM10, see step below.

b. Emission Increase for Each Attainment/Unclassified Pollutant with a Significant Emission Increase vs PSD Significant Emission Increase Thresholds

It was determined in the previous step that further analysis is necessary to determine whether the project will result in a PSD significant emission increase. In this step, the net emission increase for PM10 is compared to the PSD significant emission increase thresholds, and if the net emission increase for PM10 is below this threshold, no further analysis is needed.

For existing emissions units, the increase in emissions is calculated as follows:

$$\text{Emission Increase} = \text{PAE} - \text{BAE} - \text{UBC}$$

Where: PAE = Projected Actual Emissions, and
 BAE = Baseline Actual Emissions
 UBC = Unused baseline capacity

The applicant has chosen to use PE2 as their projected actual emissions. The NEI calculations are identical to those performed in the Federal Major Modification section of this project. It was determined in the Federal Major Modification section that there is no net emission increase of PM10 emissions. Thus,

PSD Significant Emission Increase Determination: Emission Increase (tons/year)	
	PM10
Emission Increases (only)	0
PSD Significant Emission Increase Thresholds	15
PSD Significant Emission Increase?	N

Further analysis demonstrates that a Net Emission Increase will not occur for PM10. Therefore the project does not result in a PSD major modification due to a significant emission increase and no further discussion is required.

10. Quarterly Net Emissions Change (QNEC)

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

VIII. Compliance

Rule 2201 New and Modified Stationary Source Review Rule

A. BACT

1. BACT Applicability

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

- Any new emissions unit with a potential to emit exceeding two pounds per day*,
- The relocation from one Stationary Source to another of an existing emissions unit with a potential to emit exceeding two pounds per day*,
- Modifications to an existing emissions unit with a valid Permit to Operate resulting in an AIPE exceeding two pounds per day*, and/or

- The pollutants for which a Title I Modification has been triggered (regardless of Daily PE increase).

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

BACT Guideline 8.4.1 for dry material storage and conveying, and BACT Guideline 8.4.3 for dry material handling operation – mixing, blending, milling or storage, applies to the batch plant (see Appendix IV). These guidelines require:

Guideline 8.4.1: Storage, augers, and conveyors all enclosed and vented to a fabric filter baghouse

Guideline 8.4.3: Mixer, augers, elevators conveyors all enclosed and vented to a fabric filter baghouse, or equivalent (99% or greater control efficiency)

All of the equipment that makes up the consolidated batch plant is vented to fabric filter dust collectors and meets the above BACT requirements. Therefore, BACT requirements are satisfied and no further analysis is necessary.

B. Offsets

1. Offset Applicability

Offsets are triggered on a pollutant-by-pollutant basis. Unless exempted pursuant to District Rule 2201, Section 4.6, offsets will be triggered if the post-project SSPE2 equals or exceeds the following offset threshold levels. The following table compares the Post-Project Stationary Source Potential to Emit (SSPE2) to the offset thresholds in order to determine whether offsets are triggered. Since this project only involves units that emit PM10, only PM10 is shown in the table.

Pollutant	SSPE2 W/ERC's	Offset Thresholds	Offsets triggered?
PM10	490,754 lb-PM10/year	29,200 lb-PM ₁₀ /year	Yes

Section 4.5.4 states that offsets shall be required for PM2.5 and PM2.5 precursor emissions for such increases that constitute new major sources or Federal Major Modifications. Since this project does not constitute a new Major Source of PM2.5 and does not trigger a Federal Major Modification for PM2.5, PM2.5 offsets are not triggered.

2. Quantity of Offsets Required

As seen in the previous table, SSPE2 is greater than the offset threshold for PM10; therefore offset calculations will be required for this project.

The quantity of offsets in pounds per year is calculated as follows for sources with an SSPE1 greater than the offset threshold levels before implementing the project being evaluated.

Offsets Required (lb/year) = $(PE2 - BE + ICCE) \times DOR$, for all new or modified emissions units in the project,

Where,

PE2 = Post Project Potential to Emit, (lb/year)
 BE = Baseline Emissions, (lb/year)
 ICCE = Increase in Cargo Carrier Emissions, (lb/year)
 DOR = Distance Offset Ratio

There are no increases in cargo carrier emissions; therefore offsets can be determined as follows:

Offsets Required (lb/year) = $(PE2 - BE) \times DOR$

As demonstrated earlier in this evaluation, BE is equal to PE1 since the units are clean. The following table demonstrates that offsets are not required for this project, since $\sum(PE2 - PE1)$ is less than zero.

Unit	PE2 (lb/year)	PE 1 (lb/year)	PE2 - PE1 (lb/year)
N-1662-5	0	48,069	-48,069
N-1662-14	49,618	74,162	-24,544
		$\sum(PE2 - PE1)$	< 0

C. Public Notification

1. Applicability

Public noticing is required for:

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

a. New Major Source

A new Major Source is a new facility that is also a Major Source. As shown in section VII.C.5 of this document, this facility is not a new Major Source.

b. Major Modification

As shown in section VII.C.7 of this document, this project is not an SB288 or Federal Major Modification.

c. New Units with PE > 100 lb/day

For new emissions units, public notification is required if the PE exceeds 100 lb/day for any pollutant. There are no new emission units with a PE exceeding 100 lb/day for any pollutant.

d. Offset Threshold

The following table compares the pre-project SSPE with the post-project SSPE in order to determine if any offset thresholds have been surpassed.

Offset Thresholds				
Pollutant	SSPE1 lb/year	SSPE2 lb/year	Offset Threshold lb/year	Public Notice Required?
NOx	947,806	947,806	20,000	No
SOx	676,489	676,489	54,750	No
PM ₁₀	470,469	397,856	29,200	No
CO	178,241	178,241	200,000	No
VOC	157,901	157,901	20,000	No

As shown in the previous table, emissions are already above the offset thresholds and are either remaining the same or decreasing.

e. SSIPE > 20,000 lb/year

Public notification is required for any permitting action that results in a Stationary Source Increase in Potential to Emit (SSIPE) greater than 20,000 lb/year of any affected pollutant. According to District Policy, SSIPE is equal to SSPE2 minus SSPE1. The following table compares the SSIPE for each pollutant to the public notice threshold of 20,000 lb/year.

SSIPE Public Notice Thresholds					
Pollutant	SSPE2 lb/year	SSPE1 lb/year	SSIPE lb/year	Public Notice Threshold lb/year	Public Notice Triggered?
NOx	947,806	947,806	0	20,000	No
SOx	676,489	676,489	0	20,000	No
PM ₁₀	397,856	470,469	< 0	20,000	No
CO	178,241	178,241	0	20,000	No
VOC	157,901	157,901	0	20,000	No

As shown in the previous table, the SSIPE is below 20,000 lb/year for all pollutants.

2. Public Notice Action

As demonstrated above, a public notice is not required for this project.

D. Daily Emission Limits (DELs)

The following conditions will be included on the permit to enforce the daily emission limits:

- *The quantity of material received by the raw material loading operation shall not exceed 4,300 tons in any one day and 893,520 tons per each rolling-12 month period. [District Rule 2201]*
- *PM10 emissions from the raw material loading operation shall not exceed 0.036 lb/ton. [District Rule 2201]*
- *The throughput for the sand bin shall not exceed 4,300 tons in any one day and 893,520 tons per each rolling 12-month period. [District Rule 2201]*
- *PM10 emissions from the sand bin shall not exceed 0.0041 lb/ton⁴. [District Rule 2201]*
- *The throughput for the silo filling operation shall not exceed 4,300 tons in any one day and 893,520 tons per each rolling 12-month period. [District Rule 2201]*

⁴ Daily sand bin emissions were calculated to be 17.8 lb-PM10. At a throughput of 4,300 tons/day, the emission rate is:

$$EF = 17.8 \text{ lb-PM10/day} + 4,300 \text{ tons/day} = 0.0041 \text{ lb-PM10/ton}$$

- *PM10 emissions from the silo filling operation shall not exceed 0.0022 lb/ton⁵. [District Rule 2201]*
- *The throughput for the batch making operation shall not exceed 2,448 tons in any one day. [District Rule 2201]*
- *PM10 emissions from the batch making operation shall not exceed 0.0116 lb/ton⁶. [District Rule 2201]*

E. Compliance Assurance

1. Source Testing

Pursuant to District Policy APR 1705, source testing is not required to demonstrate compliance with Rule 2201 for units served by a dust collector with emissions less than 30 pounds of PM₁₀ per day. Since the proposed emissions rate for each dust collector will be less than 30 pounds of PM₁₀ per day, source testing is not required.

2. Monitoring

Each dust collector is equipped with a pressure differential gauge; therefore, pressure differential gauge monitoring requirements are applicable to this operation. Therefore, the following conditions will be included on the Authority to Construct permit:

- *Each dust collector shall be equipped with a pressure differential gauge to indicate the pressure drop across the bags, and the gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District Rule 2201]*
- *When in operation, the differential pressure of each dust collector shall not be less than 2 inches water column nor greater than 8 inches water column. [District Rule 2201]*
- *The differential operating pressure of each dust collector shall be monitored and recorded on each day that it operates. [District Rule 2201]*

⁵Daily silo loading emissions were calculated to be 9.4 lb-PM10. At a throughput of 4,300 tons/day, the emission rate is:

$$EF = 9.4 \text{ lb-PM10/day} \div 4,300 \text{ tons/day} = 0.0022 \text{ lb-PM10/ton}$$

⁶Daily silo loading emissions were calculated to be 28.4 lb-PM10. At a throughput of 2,448 tons/day, the emission rate is:

$$EF = 28.4 \text{ lb-PM10/day} \div 2,448 \text{ tons/day} = 0.0116 \text{ lb-PM10/ton}$$

3. Record Keeping

The following recordkeeping requirements will be included on the permit:

- *Permittee shall keep a record of the daily quantity of material, in tons, received by the raw material unloading operation. [District Rule 2201]*
- *Permittee shall keep a record of the rolling 12-month quantity of material, in tons, received by the raw material unloading operation. This record shall be updated on at least a monthly basis. [District Rule 2201]*
- *Permittee shall keep a record of the daily quantity of material, in tons, processed by the sand bin. [District Rule 2201]*
- *Permittee shall keep a record of the rolling 12-month quantity of material, in tons, processed by the sand bin. This record shall be updated on at least a monthly basis. [District Rule 2201]*
- *Permittee shall keep a record of the daily quantity of material, in tons, processed by the silo loading operation. [District Rule 2201]*
- *Permittee shall keep a record of the rolling 12-month quantity of material, in tons, processed by the silo loading operation. This record shall be updated on at least a monthly basis. [District Rule 2201]*
- *Permittee shall keep a record of the daily quantity of material, in tons, processed by the batch making operation. [District Rule 2201]*
- *Records of all maintenance for each dust collector, including all change out outs of filter media, shall be maintained. [District Rule 2201]*
- *All records shall be retained for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 2201]*

4. Reporting

No reporting is required to demonstrate compliance with Rule 2201.

Rule 2520 Federally Mandated Operating Permits

This facility is subject to this Rule, and has received their Title V Operating Permit. The proposed modification is a Minor Modification to the Title V Permit.

In accordance with Rule 2520, these modifications:

1. Do not violate requirements of any applicable federally enforceable local or federal requirement;
2. Do not relax monitoring, reporting, or recordkeeping requirements in the permit and are not significant changes in existing monitoring permit terms or conditions;
3. Do not require or change a case-by-case determination of an emission limitation or other standard, or a source-specific determination for temporary sources of ambient impacts, or a visibility or increment analysis;
4. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include:
 - a. A federally enforceable emission cap assumed to avoid classification as a modification under any provisions of Title I of the Federal Clean Air Act; and
 - b. An alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Federal Clean Air Act; and
5. Are not Title I modifications as defined in District Rule 2520 or modifications as defined in section 111 or 112 of the Federal Clean Air Act; and
6. Do not seek to consolidate overlapping applicable requirements.

As discussed above, the facility has applied for a Certificate of Conformity (COC). Therefore, the facility must apply to modify their Title V permit with an administrative amendment, prior to operating with the proposed modifications. Continued compliance with this rule is expected. The facility may construct/operate under the ATC upon submittal of the Title V administrative amendment application.

Rule 4101 Visible Emissions

As long as the equipment is properly maintained and operated, the emission units shall not discharge, into the atmosphere, any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour which is as dark, or darker, in shade as that designated as No. 1 on the Ringelmann Chart or equivalent to 20% opacity.

Per District Policy SSP 1005, the visible emissions from processes served by a baghouse or fabric filter shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. If the equipment is properly maintained this condition should not be exceeded. The following conditions will be included on the permit:

- *{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)]*
- *Visible emissions from the exhaust of each dust collector shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201]*

Rule 4102 Nuisance

As long as the equipment is properly maintained and operated the emission units will not discharge any air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons or to the public or which endanger the comfort, repose, health or safety of any such person or public or which cause or have a natural tendency to cause injury or damage to business or property. The following condition will be included on the Authority to Construct permit:

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

California Health & Safety Code 41700 (Health Risk Assessment)

District Policy APR 1905 - Risk Management Policy for Permitting New and Modified Sources (dated 3/2/01) specifies that for an increase in emissions associated with a proposed new source or modification, the District perform an analysis to determine the possible impact to the nearest resident or worksite.

This project will result in a decrease in hazardous air pollutant emissions and will not result in a significant change in the stack parameters used for modeling. Therefore, a risk management review is not required.

Rule 4201 Particulate Matter Concentration

Rule 4201 requires that particulate matter emissions shall not exceed 0.1 grain per cubic foot of gas at dry standard condition.

The units in this project are served by dust collectors that are either guaranteed to have a grain loading of 0.02 grains/dscf or 0.0044 grains/dscf, all below 0.1 grains/dscf. Therefore, compliance with District Rule 4201 requirements is expected.

The following condition will be listed on the permit:

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

Rule 4202 Particulate Matter - Emission Rate

Per Sec. 4.1, the particulate matter emissions from any source operation shall not exceed the allowable hourly emission rate (E) as calculated using the following formulas:

$$E \text{ (lb/hr)} = 3.59 P^{0.62} \text{ for process rates } < 30 \text{ tons/hr}$$
$$E \text{ (lb/hr)} = 17.31 P^{0.16} \text{ for process rates } > 30 \text{ tons/hr}$$

Where P = process weight in tons/hr

All PM emitted by this operation is expected to be PM10.

Raw Material Unloading

The applicant provided a process rate of 4,300 tons/day and a 16-hr/day schedule.

$$\text{Hourly Process Rate} = 4,300 \text{ tons/day} \div 16 \text{ hr/day} = 268.75 \text{ tons/hr}$$
$$E = 17.31 * (268.75)^{0.16} = 42.36 \text{ lb/hr}$$

Emissions from the operation are expected to be 9.68 lb/hr (154.8 lb/day \div 16 hr/day). Since the actual emission rate is less than the maximum allowable emission rate, compliance is expected.

Sand Bin

The applicant provided a process rate of 4,300 tons/day and a 16-hr/day schedule.

$$\text{Hourly Process Rate} = 4,300 \text{ tons/day} \div 16 \text{ hr/day} = 268.75 \text{ tons/hr}$$
$$E = 17.31 * (268.75)^{0.16} = 42.36 \text{ lb/hr}$$

Emissions from the operation are expected to be 1.11 lb/hr (17.8 lb/day \div 16 hr/day). Since the actual emission rate is less than the maximum allowable emission rate, compliance is expected.

Silo Loading

The applicant provided a process rate of 4,300 tons/day and a 16-hr/day schedule.

$$\text{Hourly Process Rate} = 4,300 \text{ tons/day} \div 16 \text{ hr/day} = 268.75 \text{ tons/hr}$$
$$E = 17.31 * (268.75)^{0.16} = 42.36 \text{ lb/hr}$$

Emissions from the operation are expected to be 0.59 lb/hr (9.4 lb/day \div 16 hr/day). Since the actual emission rate is less than the maximum allowable emission rate, compliance is expected.

Batch Making

The applicant provided a process rate of 2,448 tons/day and a 24-hr/day schedule.

$$\text{Hourly Process Rate} = 2,448 \text{ tons/day} \div 24 \text{ hr/day} = 102.00 \text{ tons/hr}$$
$$E = 17.31 * (102.00)^{0.16} = 36.28 \text{ lb/hr}$$

Emissions from the operation are expected to be 1.18 lb/hr (28.4 lb/day ÷ 24 hr/day). Since the actual emission rate is less than the maximum allowable emission rate, compliance is expected.

California Environmental Quality Act (CEQA)

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

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

Greenhouse Gas (GHG) Significance Determination

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

On December 17, 2009, the District's Governing Board adopted a policy, APR 2005, *Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency*, for addressing GHG emission impacts when the District is Lead Agency under CEQA and approved the District's guidance document for use by other agencies when addressing GHG impacts as lead agencies under CEQA. Under this policy, the District's determination of significance of project-specific GHG emissions is founded on the principal that projects with GHG emission reductions consistent with AB 32 emission reduction targets are considered to have a less than significant impact on global climate change. Consistent with District Policy 2005, projects complying with an approved GHG emission reduction plan or GHG mitigation program, which avoids or substantially reduces GHG emissions

within the geographic area in which the project is located, would be determined to have a less than significant individual and cumulative impact for GHG emission.

The California Air Resources Board (ARB) adopted a Cap-and-Trade regulation as part one of the strategies identified for AB 32. This Cap-and-Trade regulation is a statewide plan, supported by a CEQA compliant environmental review document, aimed at reducing or mitigating GHG emissions from targeted industries. Facilities subject to the Cap-and-Trade regulation are subject to an industry-wide cap on overall GHG emissions. Any growth in emissions must be accounted for under that cap such that a corresponding and equivalent reduction in emissions must occur to allow any increase. Further, the cap decreases over time, resulting in an overall decrease in GHG emissions.

Under District policy APR 2025, *CEQA Determinations of Significance for Projects Subject to ARB's GHG Cap-and-Trade Regulation*, the District finds that the Cap-and-Trade is a regulation plan approved by ARB, consistent with AB32 emission reduction targets, and supported by a CEQA compliant environmental review document. As such, consistent with District Policy 2005, projects complying project complying with Cap-and-Trade requirements are determined to have a less than significant individual and cumulative impact for GHG emissions.

Facility N-1662 is subject to the Cap-and-Trade regulation. Therefore, as discussed above, consistent with District Policies APR 2005 and APR 2025, the District concludes that the GHG emissions increases associated with this project would have a less than significant individual and cumulative 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 § 15301 (Existing Facilities), and finds that the project is exempt per the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment (CEQA Guidelines §15061(b)(3)).

IX. Recommendation

Issue the Authority to Construct permit subject to the conditions on the attached Draft Authority to Construct permit in Appendix I.

X. Billing Information

Permit Number	Fee Schedule	Fee Description	Previous Fee Schedule
N-1662-14-7	3020-01-D	120 Electric HP	3020-01-E

Appendixes

- I: Draft Authority to Construct N-1662-14-7
- II: Current Permits to Operate N-1662-5-3 and N-1662-14-4
- III: Dust Collector Specifications for Consolidated Batch Plant
- IV: BACT Guidelines 8.4.1 and 8.4.3
- V: Quarterly Net Emission Change

DRAFT Authority to Construct N-1662-14-7

Appendix I

San Joaquin Valley
Air Pollution Control District

AUTHORITY TO CONSTRUCT

ISSUANCE DATE: DRAFT
DRAFT

PERMIT NO: N-1662-14-7

LEGAL OWNER OR OPERATOR: GALLO GLASS COMPANY
MAILING ADDRESS: PO BOX 1230
MODESTO, CA 95353

LOCATION: 605 S SANTA CRUZ AVE
MODESTO, CA 95354

EQUIPMENT DESCRIPTION:

MODIFICATION OF BATCH PLANT #2 SERVING GLASS MELTING FURNACES 4 AND 5 (PERMITS N- 1662-4 AND N-1662-8 RESPECTIVELY) AND THE CULLET PROCESSING OPERATION (N-1662-6): TO CONSOLIDATE BATCH PLANT #2 AND BATCH PLANT #1 (N-1662-5) INTO A SINGLE OPERATION AND TO MODERNIZE THE PROCESSING EQUIPMENT AND EMISSION CONTROL EQUIPMENT SUCH THAT THE POST-PROJECT EQUIPMENT DESCRIPTION BECOMES: BATCH PLANT SERVING GLASS MELTING FURNACES #1, #2, #3, #4, AND #5 AND THE CULLET PROCESSING OPERATION (N-1662-6), AND CONSISTING OF A SODA ASH RAILCAR UNLOADING AND STORAGE OPERATION SERVED BY A DUST COLLECTOR, A LIMESTONE RAILCAR UNLOADING AND STORAGE OPERATION SERVED BY FIVE DUST COLLECTORS, EXTERNAL CULLET RECEIVING AND STORAGE OPERATION SERVED BY SIX DUST COLLECTORS, AN INTERNAL CULLET PROCESSING OPERATION SERVED BY THREE DUST COLLECTORS, A MICROINGREDIENTS RECEIVING AND STORAGE OPERATION SERVED BY TWELVE DUST COLLECTORS, AND A BATCH MAKING AND CONVEYING OPERATION SERVED BY 35 DUST COLLECTORS

CONDITIONS

1. {1830} This Authority to Construct serves as a written certificate of conformity with the procedural requirements of 40 CFR 70.7 and 70.8 and with the compliance requirements of 40 CFR 70.6(c). [District Rule 2201] Federally Enforceable Through Title V Permit
2. {1831} Prior to operating with modifications authorized by this Authority to Construct, the facility shall submit an application to modify the Title V permit with an administrative amendment in accordance with District Rule 2520 Section 5.3.4. [District Rule 2520, 5.3.4] Federally Enforceable Through Title V Permit
3. Permit to Operate N-1662-5 shall be cancelled upon the implementation of this Authority to Construct permit. [District Rule 2201] Federally Enforceable Through Title V Permit
4. {98} No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]

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

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Arnaud Marjolle, Director of Permit Services

N-1662-14-7 May 28 2014 4:43PM - HARADERU Joint Inspection NOT Required

5. {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
6. Visible emissions from the exhaust of each dust collector shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit
7. Particulate matter emissions shall not exceed 0.1 grains/dscf in concentration. [District Rule 4201] Federally Enforceable Through Title V Permit
8. The dust collectors shall be maintained and operated according to manufacturer's specifications. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The dust collector cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District Rule 2201] Federally Enforceable Through Title V Permit
10. Material removed from the dust collector(s) shall be disposed of in a manner preventing entrainment into the atmosphere. [District Rule 2201] Federally Enforceable Through Title V Permit
11. Replacement bags numbering at least 10% of the total number of bags in the largest baghouse, and for each type of bag, shall be maintained on the premises. [District Rule 2201] Federally Enforceable Through Title V Permit
12. The quantity of material received by the raw material loading operation shall not exceed 4,300 tons in any one day and 893,520 tons per each rolling-12 month period. [District Rule 2201] Federally Enforceable Through Title V Permit
13. PM10 emissions from the raw material loading operation shall not exceed 0.036 lb/ton. [District Rule 2201] Federally Enforceable Through Title V Permit
14. The throughput for the sand bin shall not exceed 4,300 tons in any one day and 893,520 tons per each rolling 12-month period. [District Rule 2201] Federally Enforceable Through Title V Permit
15. PM10 emissions from the sand bin shall not exceed 0.0041 lb/ton. [District Rule 2201] Federally Enforceable Through Title V Permit
16. The throughput for the silo filling operation shall not exceed 4,300 tons in any one day and 893,520 tons per each rolling 12-month period. [District Rule 2201] Federally Enforceable Through Title V Permit
17. PM10 emissions from the silo filling operation shall not exceed 0.0022 lb/ton. [District Rule 2201] Federally Enforceable Through Title V Permit
18. The throughput for the batch making operation shall not exceed 2,448 tons in any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
19. PM10 emissions from the batch making operation shall not exceed 0.0116 lb/ton. [District Rule 2201] Federally Enforceable Through Title V Permit
20. Each dust collector shall be equipped with a pressure differential gauge to indicate the pressure drop across the bags, and the gauge shall be maintained in good working condition at all times and shall be located in an easily accessible location. [District Rule 2201] Federally Enforceable Through Title V Permit
21. When in operation, the differential pressure of each dust collector shall not be less than 2 inches water column nor greater than 8 inches water column. [District Rule 2201] Federally Enforceable Through Title V Permit
22. The differential operating pressure of each dust collector shall be monitored and recorded on each day that it operates. [District Rule 2201] Federally Enforceable Through Title V Permit
23. Permittee shall keep a record of the daily quantity of material, in tons, received by the raw material unloading operation. [District Rule 2201] Federally Enforceable Through Title V Permit

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CONDITIONS CONTINUE ON NEXT PAGE

24. Permittee shall keep a record of the rolling 12-month quantity of material, in tons, received by the raw material unloading operation. This record shall be updated on at least a monthly basis. [District Rule 2201] Federally Enforceable Through Title V Permit
25. Permittee shall keep a record of the daily quantity of material, in tons, processed by the sand bin. [District Rule 2201] Federally Enforceable Through Title V Permit
26. Permittee shall keep a record of the rolling 12-month quantity of material, in tons, processed by the sand bin. This record shall be updated on at least a monthly basis. [District Rule 2201] Federally Enforceable Through Title V Permit
27. Permittee shall keep a record of the daily quantity of material, in tons, processed by the silo loading operation. [District Rule 2201] Federally Enforceable Through Title V Permit
28. Permittee shall keep a record of the rolling 12-month quantity of material, in tons, processed by the silo loading operation. This record shall be updated on at least a monthly basis. [District Rule 2201] Federally Enforceable Through Title V Permit
29. Permittee shall keep a record of the daily quantity of material, in tons, processed by the batch making operation. [District Rule 2201] Federally Enforceable Through Title V Permit
30. Records of all maintenance for each dust collector, including all change out outs of filter media, shall be maintained. [District Rule 2201] Federally Enforceable Through Title V Permit
31. All records shall be retained for a minimum of five years, and shall be made available for District inspection upon request. [District Rule 2201] Federally Enforceable Through Title V Permit

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Appendix II

Current Permits to Operate N-1662-5-3 and N-1662-14-4

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-1662-5-3

EXPIRATION DATE: 06/30/2016

EQUIPMENT DESCRIPTION:
BATCH PLANT #1 AND MANUFACTURING EQUIPMENT

PERMIT UNIT REQUIREMENTS

1. All equipment shall be constructed, maintained and operated according to the specifications and plans contained in the permit application except as otherwise specified herein. [District Rule 4102]
2. Dust collector filters shall be inspected weekly while in operation for evidence of particulate matter breakthrough and replaced as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
3. Dust collector filters shall be inspected monthly while not in operation for tears, scuffs, abrasions or holes which might interfere with the PM collection efficiency and shall be replaced as needed. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
4. Records of dust collector maintenance, inspections, and repair shall be maintained. The records shall include identification of the equipment, date of inspection, corrective action taken, and identification of the individual performing the inspection. [District Rule 2520, 9.4.2] 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
6. 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
7. 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

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

San Joaquin Valley Air Pollution Control District

PERMIT UNIT: N-1662-14-4

EXPIRATION DATE: 06/30/2016

EQUIPMENT DESCRIPTION:

BATCH PLANT #2 SERVING GLASS MELTING FURNACES 4 AND 5 (PERMITS N- 1662-4 AND N-1662-8 RESPECTIVELY) AND THE CULLET PROCESSING OPERATION (N-1662-6). THE PLANT CONSISTS OF 7 RAW MATERIAL RECEIVING PITS, 7 UNDERGROUND RAW MATERIAL STORAGE SILOS AND VARIOUS CONVEYORS AND ELEVATORS. EXCEPT FOR THE RECEIVING PITS, THE OPERATION IS SERVED BY A MIKROPUL 64S820 DUST COLLECTOR (DC-1), A MIKROPUL 130-8-20 DUST COLLECTOR (DC-3), A MIKROPUL 144S-820C DUST COLLECTOR (DC-6), A MIKROPUL SQ100-101 DUST COLLECTOR (DC-10) AND A MIKROPUL 144S-820C (DC-39) DUST COLLECTOR. THE RECEIVING PITS UTILIZE CHOKE FEEDING

PERMIT UNIT REQUIREMENTS

1. The two Homan & Lawrence storage silos are shared with the equipment operating under District permit N-1662-6. [District NSR Rule] Federally Enforceable Through Title V Permit
2. 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
3. Visible emissions from the receiving and storage bins shall be inspected annually under material and environmental conditions, such as dry and windy, where high emissions are expected. [District Rule 2520, 9.3.2] Federally Enforceable Through Title V Permit
4. Particulate matter emissions shall not exceed the hourly rate as calculated in District Rule 4202 using the equation $E=3.59 \times P^{0.62}$ if P is less than or equal to 30 tons per hour, or $E=17.31 \times P^{0.16}$ if P is greater than 30 tons per hour. [District Rule 4202] Federally Enforceable Through Title V Permit
5. No air contaminant shall be released into the atmosphere which causes a public nuisance. [District Rule 4102]
6. 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 (11/15/01). 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 visible emissions from the baghouses shall not equal or exceed 5% opacity for a period or periods aggregating more than three minutes in any one hour. [District Rule 2201] Federally Enforceable Through Title V Permit
8. The quantity of material received and transferred to storage shall not exceed 2,275 tons during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
9. The PM10 emissions from the receiving and storage operation shall not exceed 0.1 lb/ton. [District Rule 2201] Federally Enforceable Through Title V Permit
10. The quantity of material transferred from the storage silos shall not exceed 1,224 tons during any one day. [District Rule 2201] Federally Enforceable Through Title V Permit
11. The PM10 emissions due to the transfer of material from the storage silos shall not exceed 0.066 lb/ton. [District Rule 2201] 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.

12. Material removed from the baghouses shall be disposed of in a manner preventing entrainment into the atmosphere. [District NSR Rule] Federally Enforceable Through Title V Permit
13. The baghouse cleaning frequency and duration shall be adjusted to optimize the control efficiency. [District NSR Rule] Federally Enforceable Through Title V Permit
14. The baghouses shall be maintained and operated according to manufacturer's specifications. [District Rule 2201] Federally Enforceable Through Title V Permit
15. Records of all baghouse maintenance, including all change outs of filter media, shall be maintained. [District Rule 2201] Federally Enforceable Through Title V Permit
16. A daily record of the quantity of material received and transferred to storage, in tons, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
17. A daily record of the quantity of material transferred from the storage silos, in tons, shall be kept. [District Rule 2201] Federally Enforceable Through Title V Permit
18. Records shall be retained on-site for a period of at least five years and made available for District inspection upon request. [District Rules 2201 and 4354] Federally Enforceable Through Title V Permit

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

Appendix III

Dust Collector Specifications for Consolidated Batch Plant

Equipment (dust collector, elevator, conveyor, etc)	Process (i.e. soda ash)	Manufacturer	Model #	differential pressure gauge (Y or N) If Y, answer k →	manufacturer's recommended differential pressure operating range (inches water column)	blower/fan air flow rate (dscfm)
Jet Filter (with fan) - 12m ²	Sand (Conveyor)	WAM	FPHT912	Y	1,968 - 7,874	1047.66
Jet Filter (with fan) - 12m ²	Sand (Silo)	WAM	FPHT912	Y	1,968 - 7,874	1047.66
Jet Filter (with fan) - 12m ²	Sand (Silo)	WAM	FPHT912	Y	1,968 - 7,874	1047.66
Jet Filter (with fan) - 12m ²	Sand (Silo)	WAM	FPHT912	Y	1,968 - 7,874	1047.66
Jet Filter (with fan) - 12m ²	Flint Cullet (Silo)	WAM	FPHT912	Y	1,968 - 7,874	1047.66
Jet Filter (with fan) - 12m ²	Flint Cullet (Silo)	WAM	FPHT912	Y	1,968 - 7,874	1047.66
Jet Filter (with fan) - 12m ²	Green Cullet (Silo)	WAM	FPHT912	Y	1,968 - 7,874	1047.66
Jet Filter (with fan) - 12m ²	Green Cullet (Silo)	WAM	FPHT912	Y	1,968 - 7,874	1047.66
Jet Filter (with fan) - 12m ²	Amber Cullet (Silo)	WAM	FPHT912	Y	1,968 - 7,874	1047.66
Jet Filter (with fan) - 12m ²	Amber Cullet (Silo)	WAM	FPHT912	Y	1,968 - 7,874	1047.66
Jet Filter (with fan) - 12m ²	F4 Cullet (Silo)	WAM	FPHT912	Y	1,968 - 7,874	1047.66
Jet Filter (with fan) - 12m ²	F1-F3 Flint Cullet (Silo)	WAM	FPHT912	Y	1,968 - 7,874	1047.66
Jet Filter (with fan) - 12m ²	F1-F3 Mixed Cullet (Silo)	WAM	FPHT912	Y	1,968 - 7,874	1047.66
Jet Filter (with fan) - 5m ²	Carbon (Silo)	WAM	FPHT205	Y	1,968 - 7,874	470.86
Jet Filter (with fan) - 5m ²	Cobalt (Silo)	WAM	FPHT205	Y	1,968 - 7,874	470.86
Jet Filter (with fan) - 5m ²	Selenium (Silo)	WAM	FPHT205	Y	1,968 - 7,874	470.86
Jet Filter (with fan) - 5m ²	Micro Ingredients (Blow Pot) - Pneumatic	WAM	FPHT205	Y	1,968 - 7,874	470.86
Jet Filter (no fan) - 22m ²	Salt Cake (Silo) - Pneumatic	WAM	FPHTM22	Y	1,968 - 7,874	N/A
Jet Filter (no fan) - 22m ²	Carbosite (Silo) - Pneumatic	WAM	FPHTM22	Y	1,968 - 7,874	N/A
Jet Filter (no fan) - 22m ²	Iron Slag (Silo) - Pneumatic	WAM	FPHTM22	Y	1,968 - 7,874	N/A
Jet Filter (no fan) - 22m ²	Iron Chromite (Silo) - Pneumatic	WAM	FPHTM22	Y	1,968 - 7,874	N/A
Jet Filter (no fan) - 22m ²	Carbon (Silo) - Pneumatic	WAM	FPHTM22	Y	1,968 - 7,874	N/A
Jet Filter (no fan) - 22m ²	EP Dust (Silo) - Pneumatic	WAM	FPHTM22	Y	1,968 - 7,874	N/A
Jet Filter (no fan) - 22m ²	EP Dust (Silo) - Pneumatic	WAM	FPHTM22	Y	1,968 - 7,874	N/A
Jet Filter (Pneumatic Cleaning and exhaust fan) - 22m ²	Dry Batch (Conveyor)	WAM	FPHTM22	Y	1,968 - 7,874	N/A
Jet Filter (with fan) - 12m ²	Dry Batch (Conveyor)	WAM	FPHTM912	Y	1,968 - 7,874	1047.66
Jet Filter (with fan) - 12m ²	Dry Batch (Conveyor)	WAM	FPHT912	Y	1,968 - 7,874	1047.66
Jet Filter (with fan) - 12m ²	Dry Batch (Conveyor)	WAM	FPHT912	Y	1,968 - 7,874	1047.66
Jet Filter (Pneumatic Cleaning and exhaust fan) - 22m ²	Dry Batch (Conveyor)	WAM	FPHTM22	Y	1,968 - 7,874	N/A
Jet Filter (with fan) - 12m ²	Dry Batch (Conveyor)	WAM	FPHTM912	Y	1,968 - 7,874	1047.66

Appendix IV

BACT Guidelines 8.4.1 and 8.4.3

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 8.4.1*

Last Update 10/20/1992

Dry Material Storage and Conveying Operation, 100 tons/day

Pollutant	Achieved in Practice or contained in the SIP	Technologically Feasible	Alternate Basic Equipment
PM10	Storage, augers, elevators, conveyors all enclosed and vented to a fabric filter baghouse		

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

***This is a Summary Page for this Class of Source**

San Joaquin Valley
Unified Air Pollution Control District

Best Available Control Technology (BACT) Guideline 8.4.3*

Last Update 4/2/2012

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

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

BACT is the most stringent control technique for the emissions unit and class of source. Control techniques that are not achieved in practice or contained in a state implementation plan must be cost effective as well as feasible. Economic analysis to demonstrate cost effectiveness is required for all determinations that are not achieved in practice or contained in an EPA approved State Implementation Plan.

***This is a Summary Page for this Class of Source**

Quarterly Net Emission Change

Appendix V

For the purposes of this project,

$$QNEC = (PE2 - BE) \div 4$$

As shown in Section VII.C.5, BE is equal to PE1 for all pollutants. Therefore, the equation for QNEC reduces to:

$$QNEC = (PE2 - PE1) \div 4$$

For N-1662-5, the permit will be deleted. Therefore, QNEC calculations are not required for that unit.

For N-1662-14, the QNEC is:

Pollutant	PM10	PE2 (lb/year)	PE1 (lb/year)	QNEC (lb/yr)
		49,618	74,162	-6,136