DEPARTMENT OF NATURAL RESOURCES
MISSOURI AIR CONSERVATION COMMISSION

PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: 042012-011  Project Number: 2011-09-069
Installation Number: 187-0017

Parent Company: Piramal Glass USA, Inc.
Parent Company Address: 401 Route 73 North, Building #10 Suite 202, Marlton, NJ 08053

Installation Name: Piramal Glass USA, Inc.
Installation Address: 1000 Taylor Avenue, Park Hills, MO 63601
Location Information: St. Francois County, S6, T36N, R5E

Application for Authority to Construct was made for:
An increase in melting capacity of Furnace 52 from 110 tons per day to 120 tons per day by installing a 1080 KVA transformer and larger diameter electrodes. This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, Construction Permits Required.

☐ Standard Conditions (on reverse) are applicable to this permit.
☑ Standard Conditions (on reverse) and Special Conditions are applicable to this permit.

APR 30 2012
EFFECTIVE DATE
DIRECTOR OR DESIGNEE
DEPARTMENT OF NATURAL RESOURCES
STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review. In the event that there is a discrepancy between the permit application and this permit, the conditions of this permit shall take precedence. Specifically, all air contaminant control devises shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Departments' Air Pollution Control Program of the anticipated date of start up of these air contaminant sources. The information must be made available within 30 days of actual startup. Also, you must notify the Department of Natural Resources Regional office responsible for the area within which you are located within 15 days after the actual start up of these air contaminant sources.

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed special conditions to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.075.6 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed. If it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC.

If you choose not to appeal, this certificate, the project review and your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant sources(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Missouri Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention: Construction Permit Unit.
SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. “Conditions required by permitting authority.”

Piramal Glass USA, Inc.
St. Francois County, S6, T36N, R5E

1. Superseding Condition
   The conditions of this permit supersede Special Condition 1 found in the previously issued construction permit (Permit Number 022002-007) issued by the Air Pollution Control Program.

2. Performance Testing
   A. Piramal Glass USA, Inc. shall conduct performance testing on the Furnace #52 (EP5) sufficient to quantify the emission rates of Particulate Matter less than ten microns in diameter (PM_{10}), Particulate Matter less than 2.5 microns in diameter (PM_{2.5}), volatile organic compounds (VOC), sulfuric acid, carbon monoxide (CO), sulfur oxides (SO_{x}), and nitrogen oxides (NO_{x}) from Furnace #52.

   B. These tests shall be performed within 60 days after achieving the maximum production rate of the installation, but not later than 180 days after initial start-up for commercial operation and shall be conducted in accordance with the Stack Test Procedures outlined in Special Condition 3.

3. Proposed Test Plan and Test Report Requirements
   A. A completed Proposed Test Plan Form (enclosed) must be submitted to the Air Pollution Control Program 30 days prior to the proposed test date so that the Air Pollution Control Program may arrange a pretest meeting, if necessary, and assure that the test date is acceptable for an observer to be present. The Proposed Test Plan may serve the purpose of notification and must be approved by the Director prior to conducting the required emission testing.

   B. Two copies of a written report of the performance test results shall be submitted to the Director within 30 days of completion of any required testing. The report must include legible copies of the raw data sheets,
SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

analytical instrument laboratory data, and complete sample calculations from the required U.S. EPA Method for at least one sample run.

C. The test report is to fully account for all operational and emission parameters addressed both in the permit conditions as well as in any other applicable state or federal rules or regulations.

D. No later than 30 days after the performance test results are submitted, Piramal Glass USA, Inc. shall provide the director with a report that establishes the potential emissions of PM$_{2.5}$, PM$_{10}$, VOC, sulfuric acid, CO, SO$_x$, and NO$_x$ for the emission units tested according to Special Condition 2. The emission rates shall be reported in pounds per hour and tons per year so that the Air Pollution Control Program may verify the potential emissions of this project for PM$_{2.5}$, PM$_{10}$, VOC, sulfuric acid, CO, SO$_x$, and NO$_x$.

1) If the potential emissions are greater than what was indicated in this permit for PM$_{2.5}$, PM$_{10}$, VOC, CO, SO$_x$, and NO$_x$, then Piramal Glass USA, Inc. shall submit an application for an amendment to this permit to correct the potential emissions calculations.

2) For sulfuric acid, if the potential emissions are greater than 7.0 tons per year, then Piramal Glass USA, Inc. shall submit an application for an amendment to this permit to address sulfuric acid emissions from the project.

4. Control Device Requirement-Baghouse

A. Piramal Glass USA, Inc. shall control emissions from the following emission units under EP-1: “Mixer discharge to mixed batch conveyor and mixing” and “Mixed batch discharge into elevator”, using baghouses as specified in the permit application.

B. The baghouses shall be operated and maintained in accordance with the manufacturer's specifications. The baghouse shall be equipped with a gauge or meter, which indicates the pressure drop across the control device. These gauges or meters shall be located such that the Department of Natural Resources' employees may easily observe them.

C. Replacement filters for the baghouses shall be kept on hand at all times. The bags shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).
SPECIAL CONDITIONS:
The permittee is authorized to construct and operate subject to the following special conditions:

D. Piramal Glass USA, Inc. shall monitor and record the operating pressure drop across the baghouses at least once every 24 hours. The operating pressure drop shall be maintained within the design conditions specified by the manufacturer's performance warranty.

E. Piramal Glass USA, Inc. shall maintain an operating and maintenance log for the baghouses which shall include the following:
   1) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
   2) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

5. Record Keeping Requirements
Piramal Glass USA, Inc. shall maintain all records required by this permit for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.
REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE
SECTION (5) REVIEW
Project Number: 2011-09-069
Installation ID Number: 187-0017
Permit Number:

Piramal Glass USA, Inc. Complete: September 29, 2011
1000 Taylor Avenue
Park Hills, MO 63601

Parent Company:
Piramal Glass USA, Inc.
401 Route 73 North
Building #10 Suite 202
Marlton, NJ 08053

St. Francois County, S6, T36N, R5E

REVIEW SUMMARY

- Piramal Glass USA, Inc. has applied for authority to increase the melting capacity of Furnace 52 from 110 tons per day to 120 tons per day by installing a 1080 KVA transformer and larger diameter electrodes.

- Hazardous Air Pollutant (HAP) emissions are not expected from the proposed equipment.

- 40 CFR 60 Subpart CC, "Standards of Performance for Glass Manufacturing Plants" applies to the equipment.

- None of the National Emission Standards for Hazardous Air Pollutants or currently promulgated Maximum Achievable Control Technology regulations apply to the proposed equipment. This installation does not manufacture glass that is charged with one or more of the glass manufacturing metal HAP. Therefore, 40 CFR Part 63 Subpart SSSSSS, National Emission Standards for Glass Manufacturing Area, does not apply.

- A baghouse is being used to control the PM10 emissions from the equipment in this permit.

- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, Construction Permits Required. Potential emissions of all pollutants for the project are below de minimis levels.

- This installation is located in St. Francois County, an attainment area for all criteria pollutants.
This installation is not on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2. The installation's major source level is 250 tons per year and fugitive emissions are not counted toward major source applicability.

Ambient air quality modeling was not performed since potential emissions of the application are below de minimis levels.

Emissions testing is required for the equipment.

A revised Part 70 Operating Permit application is required for this installation within one year of equipment startup.

Approval of this permit is recommended with special conditions.

INSTALLATION DESCRIPTION

Piramal Glass USA, Inc. (Piramal), formerly known as Flat River Glass Company, is a manufacturing installation located in Park Hills, Missouri (St. Francis County) that produces glass containers using a soda-lime recipe. The existing source is considered to be a major source of air contaminants for construction permit purposes. A Part 70 Operating Permit was issued in May 2009 (OP2009-015).

The equipment at the installation consists of two glass melting furnaces, one sulfur lehr oven and various other material handling and storage emission points. The installation uses a soda-lime glass recipe with sand, limestone, soda ash and cullet (broken glass) being the raw materials used in the glass manufacturing process.

Table 1 lists the construction permits that have been issued to Piramal from the Air Pollution Control Program. Permit Number 022002-007 (Special Condition 1) contains a 12-month Nitrogen Oxide (NOx) emissions limit for Furnace 52. Since this project is for the modification of Furnace 52 and the installation of a low-NOx burner on Furnace 52, the emissions limit will no longer be valid upon issuance of this construction permit. Therefore, Special Condition 1 of this construction permit is intended to supercede the previous emissions limit and any associated recordkeeping and reporting requirements.

<table>
<thead>
<tr>
<th>Permit Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0586-005</td>
<td>A Section (5) permit to install a sulfur lehr that burns natural gas.</td>
</tr>
<tr>
<td>022002-007</td>
<td>A Section (5) permit to install two replacement electrical transformers with a resulting increase in the maximum production capacity of Furnace Number 52.</td>
</tr>
</tbody>
</table>

PROJECT DESCRIPTION

Piramal is proposing to increase the melting capacity of Furnace 52 from 110 tons per day to 120 tons per day. This will be accomplished by replacing the existing 750 KVA electrical transformer with a 1080 KVA transformer and installing larger diameter electrodes in the furnace tank to increase the electric boost input to the furnace.
Furnace Number 52 is a combination natural gas fired, electric boost glass manufacturing furnace that was originally constructed in 1979 and produces container glass products using a soda-lime recipe. An increase in emissions is expected from the furnace due to the increase in production. In addition Piramal proposes to install low NOx burners as an operational control.

Although there are no physical changes being proposed with the raw material handling equipment, an increase in raw material throughput and associated emissions is expected due to the increase in production. The raw materials used for this process are sand, limestone and soda ash, which are received, unloaded and conveyed to separate storage bins. Cullet, which is damaged or undesirable glass produced in the furnaces, is crushed before being transferred back to internal storage silos for re-introduction into the raw material feed mixture. These raw materials are transferred to a weighing system where the desired proportion of each material is selected and the materials are mixed together before transfer to the feeding system of the melting furnaces. According to the applicant, a raw material batch weight of 9254 pounds would yield 8240 pounds of molten glass.

Piramal is proposing to increase the maximum glass throughput to accommodate larger glass container sizes. Piramal has indicated that this will not result in an increase in emissions from equipment downstream from the furnace. The larger container size is not expected to increase the use of natural gas in the refining, glass forming and annealing Lehr ovens. In addition, no increase of volatile organic compounds (VOCs) from the mold release is expected due to the slower lines speeds.

EMISSIONS/CONTROLS EVALUATION

Potential emissions of the application represent the potential of the modified equipment, assuming continuous operation (8760 hours per year). The potential emissions were based on an increase in throughput in the raw material handling operations and an increase in furnace pull rate.

Historically, Piramal has grouped all raw material handling emissions under three emission points and reported those emissions under three emission points in their annual Emissions Inventory Questionnaire (EIQ). However, emissions from each transfer point have been calculated for the purposes of this permit review. It should be noted that two emission units that were grouped under EP-1 are controlled using a baghouse. As such, a special condition requiring the use of the baghouse to control the emissions from those raw material handling equipment has been included in this construction permit. A control efficiency of 99% for PM_{10} was given for the use of a baghouse. A capture efficiency of 99% was used based on information from the applicant on the pickup point for the baghouse. For the emission units with a dust collector, no control efficiency was used in the calculation of the potential emissions since the applicant has requested no requirements be associated with these control devices. A list of the emission units reviewed under this project along with maximum hourly design rates, emission factors, and a summary of the emission points reported in the EIQ can be found in Appendix A.
To determine if the proposed modification to the existing equipment will result in a significant emissions increase, Piramal has proposed the use of the actual-to-projected-actual applicability test as outlined in 40 CFR 52.21(a)(2)(iv)(c). The baseline actual emissions, as defined in paragraphs (b)(48)(i) and (ii) of the same section, were based on the 24-month period of November 2006 through October 2008.

In determining the projected actual emissions of this project for the material handling equipment and Furnace #52, a glass pull rate of 120 tons per day was proposed by the Piramal. There are no federal or state regulations that became effective during or after the baseline period that would cause a change in the emissions during that period. In addition, demand growth is not being considered. Therefore, only projected actual emissions and baseline actual emissions were considered during this review.

Although stack testing has been completed for the requirements of the original construction permit, additional stack testing is required for the modification to verify that the emission rates of Furnace 52 are similar to the projected actual emissions. In addition, information from other glass manufacturing plants has indicated sulfuric acid emissions are possible from the process. Since Piramal has not previously characterized sulfuric acid emissions from the furnace, Piramal will be required to test for sulfuric acid emissions to ensure the project emissions are not greater than the de minimis level. Piramal will be required to submit an amendment to this construction permit if the testing results indicate that sulfuric acid emissions are greater than the de minimis level.

The haul road associated with truck delivery is an existing paved haul road that was never accounted for in previous permits or EIqs. The haul road emissions have been considered in this permit review. The emission factor used for the paved haul road was taken from the EPA document AP-42, Fifth Edition, Section 13.2.1, \textit{Paved Roads} (1/11).

Greenhouse gas (GHG) emissions were calculated using the calculations methodology of 40 CFR Part 98 Subpart N for glass production. In addition, since Furnace #52 does not produce glass that contains metal HAPs, no HAPs are expected from this project.

Existing potential emission were taken from Permit 022002-007. Existing actual emissions were taken from the installation’s 2010 EIQ. Projected actual emissions of the application represent the potential of the new equipment at a production rate of 120 tons of glass pulled per day, assuming continuous operation (8760 hours per year). The following table provides an emissions summary for this project.
Table 2: Emissions Summary (tons per year)

<table>
<thead>
<tr>
<th></th>
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<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>PM$_{2.5}$</td>
<td>10.0</td>
<td>N/D</td>
<td>18.19</td>
<td>23.7</td>
<td>30.6</td>
<td>8.3</td>
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<tr>
<td>PM$_{10}$</td>
<td>15.0</td>
<td>145.44</td>
<td>105.25</td>
<td>44.5</td>
<td>53.1</td>
<td>12.9</td>
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<tr>
<td>SOx</td>
<td>40.0</td>
<td>44.93</td>
<td>22.14</td>
<td>12.6</td>
<td>15.8</td>
<td>3.1</td>
</tr>
<tr>
<td>NOx</td>
<td>40.0</td>
<td>502.82</td>
<td>406.36</td>
<td>157.2</td>
<td>176.5</td>
<td>19.3</td>
</tr>
<tr>
<td>VOC</td>
<td>40.0</td>
<td>10.81</td>
<td>8.28</td>
<td>0.9</td>
<td>1.1</td>
<td>0.2</td>
</tr>
<tr>
<td>CO</td>
<td>100.0</td>
<td>36.11</td>
<td>4.86</td>
<td>0.9</td>
<td>1.1</td>
<td>0.2</td>
</tr>
<tr>
<td>GHG</td>
<td>75,000*</td>
<td>N/D</td>
<td>N/D</td>
<td>N/D</td>
<td>11,321</td>
<td>N/A</td>
</tr>
<tr>
<td>HAPs</td>
<td>10.0/25.0</td>
<td>N/D</td>
<td>N/D</td>
<td>N/D</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

N/A = Not Applicable; N/D = Not Determined
*Based on carbon dioxide equivalence

PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants for this project are below de minimis levels.

APPLICABLE REQUIREMENTS

Piramal Glass USA, Inc. shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110
- *Operating Permits*, 10 CSR 10-6.065
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-6.165
SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400


- *Restriction of Emission of Sulfur Compounds*, 10 CSR 10-6.260

STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

________________________________   _________________________________
Emily Wilbur                    Date
Environmental Engineer

PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated September 19, 2011, received September 29, 2011, designating Piramal Glass USA, Inc. as the owner and operator of the installation.


- Southeast Regional Office Site Survey, dated October 2, 2011.
## Appendix A – List of Equipment

**Piramal Glass USA, Inc.**

**St. Francois County, S6, T36N, R5E**

**Project Number:** 2011-09-069

**Installation ID Number:** 187-0017

**Permit Number:** __

<table>
<thead>
<tr>
<th>EIQ Emission Point ID</th>
<th>EIQ Emission Point Description</th>
<th>Emission Sources</th>
<th>Control Device</th>
<th>Control Efficiency</th>
<th>Pollutant</th>
<th>Emission Factor</th>
<th>Units</th>
<th>EF Source</th>
<th>Projected Actual Rate*</th>
<th>Units</th>
</tr>
</thead>
<tbody>
<tr>
<td>EP 1</td>
<td>Raw Material Conveyor</td>
<td>Raw material transfer to unloading pit</td>
<td>building enclosure</td>
<td>3.2 PM10*</td>
<td>1.5 lb/ton</td>
<td>AP-42 Sect 11.13</td>
<td>4.1 tons/hr</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Raw material transfer from elevator chute to raw material conveyor</td>
<td>shroud enclosure</td>
<td>3.2 PM10*</td>
<td>0.0011 lb/ton</td>
<td>AP-42 Sect 11.19.2</td>
<td>4.1 tons/hr</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Silo transfer to conveyor scales (sand)</td>
<td>shroud enclosure</td>
<td>3.2 PM10*</td>
<td>0.095 lb/ton</td>
<td>AP-42 Sect 11.13</td>
<td>2.5 tons/hr</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Silo transfer to conveyor scales (soda ash)</td>
<td>shroud enclosure</td>
<td>3.2 PM10*</td>
<td>0.095 lb/ton</td>
<td>AP-42 Sect 11.13</td>
<td>0.8 tons/hr</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Silo transfer to conveyor scales (other materials)</td>
<td>shroud enclosure</td>
<td>3.2 PM10*</td>
<td>0.095 lb/ton</td>
<td>AP-42 Sect 11.13</td>
<td>0.8 tons/hr</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Mixed batch discharge into elevator</td>
<td>pickup to baghouse</td>
<td>98 PM10*</td>
<td>0.0011 lb/ton</td>
<td>AP-42 Sect 11.19.2</td>
<td>4.1 tons/hr</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Divertor to furnace 52</td>
<td>pickup to baghouse</td>
<td>98 PM10*</td>
<td>0.0011 lb/ton</td>
<td>AP-42 Sect 11.19.2</td>
<td>5.6 tons/hr</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Furnace 52 conveyor to day bin</td>
<td>shroud enclosure</td>
<td>3.2 PM10*</td>
<td>0.3 lb/ton</td>
<td>AP-42 Sect 11.13</td>
<td>5.6 tons/hr</td>
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<tr>
<td>EP 2</td>
<td>Raw Material Storage</td>
<td>Sand silo bin vent</td>
<td>dust collector</td>
<td>0 PM10*</td>
<td>0.3 lb/ton</td>
<td>AP-42 Sect 11.13</td>
<td>2.5 tons/hr</td>
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<td></td>
<td></td>
<td>Soda ash silo bin vent</td>
<td>dust collector</td>
<td>0 PM10*</td>
<td>0.0011 lb/ton</td>
<td>AP-42 Sect 11.19.2</td>
<td>0.8 tons/hr</td>
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<tr>
<td></td>
<td></td>
<td>Dolomite, limestone, alumina, gypsum transfer silo bin vent</td>
<td>dust collector</td>
<td>0 PM10*</td>
<td>0.0011 lb/ton</td>
<td>AP-42 Sect 11.19.2</td>
<td>0.8 tons/hr</td>
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<tr>
<td></td>
<td></td>
<td>Day bin 52</td>
<td>shroud enclosure</td>
<td>3.2 PM10*</td>
<td>0.3 lb/ton</td>
<td>AP-42 Sect 11.13</td>
<td>5.6 tons/hr</td>
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<td>EP 14</td>
<td>Cullet Crusher</td>
<td>Cullet addition to mixed batch conveyor</td>
<td>shroud enclosure</td>
<td>3.2 PM10*</td>
<td>0.1 lb/ton</td>
<td>AP-42 Sect 11.13</td>
<td>1.55 tons/hr</td>
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<td>EP 5</td>
<td>Glass Melting Furnace 52</td>
<td>furnace</td>
<td>none</td>
<td>0 PM10**</td>
<td>0.95 lb/ton</td>
<td>95% of NSPS PM limit</td>
<td>120 tons/day</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>none</td>
<td>0 PM2.5**</td>
<td>0.91 lb/ton</td>
<td>95% of NSPS PM limit</td>
<td>120 tons/day</td>
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<tr>
<td></td>
<td></td>
<td>none</td>
<td>0 CO</td>
<td>0.05 lb/ton</td>
<td>2006 test data</td>
<td>120 tons/day</td>
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<td></td>
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<tr>
<td></td>
<td></td>
<td>none</td>
<td>0 Nox</td>
<td>8.06 lb/ton</td>
<td>proposed based on reduction in 2006 test data</td>
<td>120 tons/day</td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td>none</td>
<td>0 SOx</td>
<td>0.72 lb/ton</td>
<td>2006 test data</td>
<td>120 tons/day</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Haul Roads</td>
<td>Haul Roads</td>
<td>paved</td>
<td>0 PM10</td>
<td>0.03 lb/ton</td>
<td>AP-42 Sect 13</td>
<td>0.03 tons/yr</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* PM2.5 is based on particle size distribution found in AP-42 Appendix B, category 3 (i.e. 15% of PM emissions)

**Existing Equipment (not included in modification)**

- EP 4 Glass Melting Furnace 51
- EP 6 Bottle Forming Machine Lubrication
- EP 8 Degreasers
- EP 9 Annealing Lehrs
- EP 10 Space Heaters
Mr. Scott Winder  
HR Manager  
Piramal Glass USA, Inc.  
1000 Taylor Avenue  
Park Hills, MO 63601  

RE: New Source Review Permit - Project Number: 2011-09-069  

Dear Mr. Winder:  

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct", is part of the permit and should be kept with this permit in your files. Operation in accordance with these conditions, your new source review permit application and with your amended operating permit is necessary for continued compliance. The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.  

If you have any questions regarding this permit, please do not hesitate to contact Emily Wilbur, at the department’s Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102, or by telephone at (573) 751-4817. Thank you for your attention to this matter.  

Sincerely,  

AIR POLLUTION CONTROL PROGRAM  

Susan Heckenkamp  
New Source Review Unit Chief  

SH:ewk  

Enclosures  

c: Southeast Regional Office  
PAMS File: 2011-09-069  

Permit Number: