PART 70
PERMIT TO OPERATE

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

Operating Permit Number: OP2015-019
Expiration Date: JUL 19 2021
Installation ID: 187-0017
Project Number: 2013-12-023

Installation Name and Address
Piramal Glass - USA, Inc.
1000 Taylor Avenue
Park Hills, MO 63601
St. Francois County

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

Installation Description:
Piramal Glass - USA, Inc. (Piramal), formerly known as Flat River Glass Company, is a manufacturing installation located in Park Hills, Missouri (St. Francois County) that produces glass containers using a soda-lime recipe. The installation is a major source of particulate matter and nitrogen oxides.

The equipment at the installation consists of two glass melting furnaces, one sulfur lehr oven and various other material handling and storage emission units. 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.

Prepared by:
Berhanu A. Getahun
Operating Permit Unit

Director or Designee
Department of Natural Resources
JUL 19 2016
Effective Date
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I. Installation Description and Equipment Listing

INSTALLATION DESCRIPTION
Piramal Glass - USA, Inc. (Piramal), formerly known as Flat River Glass Company, is a manufacturing installation located in Park Hills, Missouri (St. Francois County) that produces glass containers using a soda-lime recipe. Piramal is a major source of particulate matter and nitrogen oxides.

The equipment at the installation consists of two glass melting furnaces, one sulfur lehr oven and various other material handling and storage emission units. 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.

The reported actual emissions for the past five years for the installation are listed below:

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Particulate Matter ≤ Ten Microns (PM$_{10}$)</td>
<td>109.59</td>
<td>105.93</td>
<td>93.07</td>
<td>105.25</td>
<td>79.90</td>
</tr>
<tr>
<td>Particulate Matter ≤ 2.5 Microns (PM$_{2.5}$)</td>
<td>66.89</td>
<td>17.84</td>
<td>15.89</td>
<td>18.19</td>
<td>14.50</td>
</tr>
<tr>
<td>Sulfur Oxides (SO$_x$)</td>
<td>22.87</td>
<td>22.23</td>
<td>19.01</td>
<td>22.14</td>
<td>17.91</td>
</tr>
<tr>
<td>Nitrogen Oxides (NO$_x$)</td>
<td>423.48</td>
<td>413.66</td>
<td>363.23</td>
<td>406.36</td>
<td>303.39</td>
</tr>
<tr>
<td>Volatile Organic Compounds (VOC)</td>
<td>12.01</td>
<td>6.82</td>
<td>6.26</td>
<td>8.29</td>
<td>5.89</td>
</tr>
<tr>
<td>Carbon Monoxide (CO)</td>
<td>4.88</td>
<td>4.53</td>
<td>4.64</td>
<td>4.86</td>
<td>3.82</td>
</tr>
<tr>
<td>Ammonia (NH$_x$)</td>
<td>3.35</td>
<td>3.08</td>
<td>3.30</td>
<td>3.36</td>
<td>2.58</td>
</tr>
</tbody>
</table>
EMISSION UNITS WITH LIMITATIONS
The following list provides a description of the equipment at this installation that emits air pollutants and that are identified as having unit-specific emission limitations.

<table>
<thead>
<tr>
<th>Emission Unit #</th>
<th>Description of Emission Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU-04A-51</td>
<td>Glass Melting Furnace #51</td>
</tr>
<tr>
<td>EU-05A-52</td>
<td>Glass Melting Furnace #52</td>
</tr>
<tr>
<td>EU-09</td>
<td>Sulfur Lehr Oven</td>
</tr>
</tbody>
</table>

EMISSION UNITS WITHOUT LIMITATIONS
The following list provides a description of the equipment that does not have unit specific limitations at the time of permit issuance.

<table>
<thead>
<tr>
<th>Emission Unit #</th>
<th>Description of Emission Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU-04B-51</td>
<td>Refiner on Furnace #51, fugitive, natural gas-fired</td>
</tr>
<tr>
<td>EU-04C-51</td>
<td>Feeder on Furnace #51, fugitive, natural gas-fired</td>
</tr>
<tr>
<td>EU-05B-52</td>
<td>Refiner on Furnace #52, fugitive, natural gas-fired</td>
</tr>
<tr>
<td>EU-05C-52</td>
<td>Feeder on Furnace #52, fugitive, natural gas-fired</td>
</tr>
<tr>
<td>EU-01</td>
<td>Raw material (sand, limestone, soda ash) unloading, fugitive</td>
</tr>
<tr>
<td>EU-01</td>
<td>Raw material (sand, limestone, soda ash) conveying, fugitive</td>
</tr>
<tr>
<td>EU-02</td>
<td>Raw material (sand, limestone, soda ash) storage bins, fugitive</td>
</tr>
<tr>
<td>EU-06</td>
<td>Bottle forming machine lubrication, fugitive</td>
</tr>
<tr>
<td>EU-08</td>
<td>Degreaser, Stoddard solvent, fugitive</td>
</tr>
<tr>
<td>EU-10</td>
<td>Space heaters, natural gas-fired</td>
</tr>
<tr>
<td>EU-14</td>
<td>Cullet crusher, fugitive</td>
</tr>
</tbody>
</table>
II. Plant Wide Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

None
III. Emission Unit Specific Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Description</th>
<th>Manufacturer/Model #</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU-04A-51</td>
<td>Glass Melting Furnace #51: combination natural gas/LPG fired and electric boost glass manufacturing furnace; maximum production rate 4.37 tons glass/hr; installed 1977</td>
<td>In-house manufactured</td>
</tr>
</tbody>
</table>

**Permit Condition (EU-04A-51)-001**

10 CSR 10-6.220 Restriction of Emission of Visible Air Contaminants

**Emission Limitation:**

1) The permittee shall not cause or permit to be discharged into the atmosphere from any new source of emission, not exempted under this rule, any visible emissions with an opacity greater than 20%.

   Note: New source: any equipment, machine, device, article, contrivance or installation installed in the outstate Missouri area after February 24, 1971 as defined in 10 CSR 10-6.020 (2)(E)44.B.

2) Exception:

   The Permittee may discharge into the atmosphere from any source of emissions for a period(s) aggregating not more than six (6) minutes in any 60 minutes air contaminants with an opacity up to 60%.

**Monitoring:**

1) The permittee shall conduct opacity readings on the emission unit(s) using the procedures contained in USEPA Test Method 22. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. Readings are only required when the emission unit(s) is operating and when the weather conditions allow. If no visible or other significant emissions are observed using these procedures, then no further observations would be required. For emission units with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct a Method 9 observation.

2) The following monitoring schedule must be maintained:

   a) Observations must be made once per month. If a violation is noted, then
   b) Weekly observations shall be conducted for a minimum of eight (8) consecutive weeks. Should no violation of this regulation be observed during this period then monitoring reverts to monthly monitoring.

**Record keeping:**

1) The permittee shall maintain records of all observation results (see Attachment A), noting:

   a) Whether any air emissions (except for water vapor) were visible from the emission units,
b) All emission units from which visible emissions occurred, and  
c) Whether the visible emissions were normal for the process.  
d) The permittee shall maintain records of any equipment malfunctions.  

2) The permittee shall maintain records of any other Method 9 test performed in accordance with this permit condition. (See Attachment B)

**Reporting:**  
1) The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the permittee determined using the Method 9 test that the emission unit(s) exceeded the opacity limit.  
2) Reports of any deviations from monitoring, record keeping and reporting requirements of this permit condition shall be submitted semiannually, in the semi-annual monitoring report and annual compliance certification, as required by Section V of this permit.

### Permit Condition (EU-04A-51)-002

10 CSR 10-6.260 Restriction of Emission of Sulfur Compounds

**Emission Limitation:**  
Emissions from Glass Melting Furnace #51 (EU-04A-51) operation shall not contain more than five hundred parts per million by volume (500 ppmv) of sulfur dioxide or more than thirty-five milligrams per cubic meter (35 mg/m³) of sulfuric acid or sulfur trioxide or any combination of those gases averaged on any consecutive three hour time period.

**Operational Limitation/Equipment Specifications:**  
The permittee shall limit the emission unit to burning either pipeline grade natural gas or liquid petroleum gas (LPG).

**Monitoring/Recordkeeping:**  
The permit shall maintain documentation supporting the fuel used is pipeline grade natural gas or liquid petroleum gas (LPG).

**Reporting:**  
The permittee shall report to Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 no later than ten (10) days after any exceedance of any of the terms imposed by this permit condition.
**Permit Condition (EU-04A-51)-003**

10 CSR 10-6.400  Restriction of Emission of Particulate Matter from Industrial Processes

**Emission Limitation:**
1) The permittee shall not emit particulate matter in excess of 11 pounds per hour (lb/hr) from EU-04A-51.
2) The permittee shall not cause, allow or permit the emission of particulate matter from any source in a concentration in excess of 0.30 grain per standard cubic foot of exhaust gases.

**Monitoring/Record Keeping:**
The permittee shall retain the potential to emit calculations in Attachment C which demonstrate that the above emission limitation will never be exceeded. No monitoring, additional record keeping or reporting is required for this permit condition.

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**EU-05A-52 – GLASS MELTING FURNACE #52**

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Description</th>
<th>Manufacturer/Model #</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU-05A-52</td>
<td>Glass Melting Furnace #52: combination natural gas/LPG fired and electric boost glass manufacturing furnace; maximum production rate 4.58 tons glass/hr, installed 1979; modified 1997, 1999 and 2012.</td>
<td>In-house manufactured</td>
</tr>
</tbody>
</table>

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**Permit Condition (EU-05A-52)-001**

10 CSR 10-6.060  Construction Permits Required
Construction Permit No. 022002-007, Issued February 7, 2002
10 CSR 10-6.070  New Source Performance Regulations
40 CFR Part 60 Subpart A  General Provisions and Subpart CC Standards of Performance for Glass Manufacturing Plants

**Emission Limitation:**
1) The permittee shall not discharge into the atmosphere from Glass Melting Furnace #52 (EU-05A-52), NOx, in excess of 187.5 tons in any consecutive 12-month period. [Construction Permit #022007-007, Condition Number 1A]
2) The permittee shall not cause to be discharged into the atmosphere from Glass Melting Furnace #52 (EU-05A-52): [%60.293(b)]
   a) Particulate matter at emission rates exceeding 0.5 gram of particulate per kilogram of glass produced (g/kg) as measured according to §60.293(e) for container glass, flat glass, and pressed and blown glass with a soda-lime recipe melting furnaces. [%60.293(b)(1)]

**Testing:**
1) The permittee shall conduct any performance test required to determine compliance with NSPS Subpart CC using the test methods and procedures as specified in §60.296 with the exception that to determine compliance for any glass melting furnace using modified processes and fired with either a gaseous fuel or a liquid fuel containing less than 0.50 weight percent sulfur, Method 5 shall be used with the probe and filter holder heating system in the sampling train set to provide a gas temperature of 120 ±14 degrees Celsius (°C) (248 ±25 degrees Fahrenheit (°F)). [Construction Permit #022007-007, Condition Number 2B and §60.293(f)]
2) In conducting the performance tests required in §60.8, the permittee shall use as reference methods and procedures the test methods in appendix A of part 60 or other methods and procedures as specified in §60.296, except as provided in §60.8(b). [§60.296(c)]

3) The permittee shall determine compliance with the particulate matter standards in §60.293 as follows: [§60.296(d)]
   a) The emission rate (E) of particulate matter shall be computed for each run using the following equation: [§60.296(d)(1)]

   \[ E = \frac{c_s \cdot Q_{sd} - A}{P} \]

   Where:
   - \( E \) = emission rate of particulate matter, g/kg.
   - \( c_s \) = concentration of particulate matter, gram per dry cubic meter (g/dsm).
   - \( Q_{sd} \) = volumetric flow rate, dscm/hr.
   - \( A \) = zero production rate correction
     - = 227 g/hr for container glass, pressed and blown (soda-lime and lead) glass, and pressed and blown (other than borosilicate, soda-lime, and lead) glass.
     - = 454 g/hr for pressed and blown (borosilicate) glass, wool fiberglass, and flat glass.
   - \( P \) = glass production rate, kg/hr.

   b) Method 5 shall be used to determine the particulate matter concentration (\( c_s \)) and volumetric flow rate (\( Q_{sd} \)) of the effluent gas. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dry cubic meter at standard conditions (dscm) (31.8 dry cubic feet at standard conditions (dscf)). As specified in §60.293(e), to determine compliance for any glass melting furnace using modified processes and fired with either a gaseous fuel or a liquid fuel containing less than 0.50 weight percent sulfur, Method 5 shall be used with the probe and filter holder heating system in the sampling train set to provide a gas temperature of 120 ±14 °C (248 ±25 °F). [§60.296(d)(2)]

   c) Direct measurement or material balance using good engineering practice shall be used to determine the amount of glass pulled during the performance test. The rate of glass produced is defined as the weight of glass pulled from the affected facility during the performance test divided by the number of hours taken to perform the performance test. [§60.296(d)(3)]

   d) Method 9 and the procedures in §60.11 shall be used to determine opacity. [§60.296(d)(4)]

**Monitoring/Record Keeping:**
1) The permittee shall maintain an accurate record of emissions of NO\(_X\) emitted into the atmosphere from Glass Melting Furnace #52 (EU-05A-52) and shall record the average hourly natural gas usage per day, the number of hours of operation per day and the average hourly, daily, monthly and running 12-month totals of NO\(_X\) emissions from Furnace #52 ((EU-05A-52)). The permittee shall use Attachment D, Monthly NO\(_X\) Emission Tracking Record - Furnace #52, or an equivalent form (upon receiving Missouri Air Pollution Control Program approval) for this purpose. [Construction Permit #022007-007, Condition Number 1B]

2) The permittee that is subject to emission limits specified under Emission Limitation Number 2 of this Permit Condition shall:
   [Construction Permit #022007-007, Condition Number 2C and §60.293(c)]
   a) Install, calibrate, maintain, and operate a continuous monitoring system for the measurement of the opacity of emissions discharged into the atmosphere from the affected facility.
b) During the performance test required to be conducted by §60.8 or for Emission Limitation #2, conduct continuous opacity monitoring during each test run.

c) Calculate 6-minute opacity averages from 24 or more data points equally spaced over each 6-minute period during the test runs for the most recently completed compliance testing.

d) Determine, based on the 6-minute opacity averages, the opacity value corresponding to the 99 percent upper confidence level of a normal distribution of average opacity values for the most recently completed compliance testing.

e) For the purposes of §60.7, report to the Director of the Air Pollution Program as excess emissions all of the 6-minute periods during which the average opacity, as measured by the continuous monitoring system installed under §60.293(c)(1), exceeds the opacity value corresponding to the 99 percent upper confidence level determined under §60.293(c)(4) for the most recently completed compliance testing.

3) The permittee may redetermine the opacity value corresponding to the 99 percent upper confidence level as described in §60.293(c)(4) if the owner or operator:

   [Construction Permit #022007-007, Condition Number 2D and §60.293(e)]
   a) Conducts continuous opacity monitoring during each test run of a performance test that demonstrates compliance with an emission limit of §60.293(b),
   b) Recalculates the 6-minute opacity averages as described in §60.293(c)(3), and
   c) Uses the re-determined opacity value corresponding to the 99 percent upper confidence level for the purposes of §60.293(c)(5).

4) After receipt and consideration of written application, the Director of the Air Pollution Program may approve alternative continuous monitoring systems for the measurement of one or more process or operating parameters that is or are demonstrated to enable accurate and representative monitoring of an emission limit specified in §60.293(b)(1). After the Director of the Air Program approves an alternate continuous monitoring system for an affected facility, the requirements of §60.293(c)(1) through (5), and Monitoring Requirements Number 3(a) through (e) of this Permit Condition will not apply for that affected facility.

   [Construction Permit #022007-007, Condition Number 2E and §60.293(d)(1)]

5) The permittee shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources’ personnel upon request. [Construction Permit #022007-007, Condition Number 4]

**Reporting:**

1) The permittee shall report to the Missouri Air Pollution Control Program (Air Program)
   Enforcement Section, P. O. Box 176, Jefferson City, Missouri 65102, no later than ten (10) days after the end of each month, if the 12-month cumulative total records show that the source exceeded the limitation of 187.5 tons of NOx from Furnace Number #52 (EU-05A-52) in any consecutive 12-month period. [Construction Permit #022007-007, Condition Number 1C]

2) Quarterly Excess Opacity Emissions Reporting Requirements: The permittee shall submit quarterly excess opacity emission reports to the Air Pollution Control Program Enforcement Section, P. O. Box 176, Jefferson City, MO 65102 within 15 days following the end of each calendar quarter. These reports must include, but are not limited to, the following information:

   [Construction Permit #022007-007, Condition Number 3]
   a) The date and time of commencement and completion of each period of excess emissions;
   b) The magnitude of the excess emissions;
   c) The amounts of natural gas and electrical boost consumption along with the 6-minute opacity readings for each period of excess emissions;
d) The nature and cause of the excess emissions (if known) and the corrective action taken or preventative measures adopted;
e) The date and time of commencement and completion of any period which the emissions monitoring system was inoperative except for zero and span checks. The report shall identify the repairs or adjustments made to the system;
f) When no excess emissions have occurred during the quarter and the monitoring system had no period of downtime or did not require repairs or adjustments, an excess emissions report shall be filed stating such information.

3) If a glass melting furnace with modified processes is changed to one without modified processes or if a glass melting furnace without modified processes is changed to one with modified processes, the permittee shall notify the Administrator at least 60 days before the change is scheduled to occur. [§60.296(a)]

<table>
<thead>
<tr>
<th>Permit Condition (EU-05A-52)-002</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 CSR 10-6.260  Restriction of Emission of Sulfur Compounds</td>
</tr>
</tbody>
</table>

**Emission Limitation:**
Emissions from Glass Melting Furnace #52 (EU-05A-52) operation shall not contain more than five hundred parts per million by volume (500 ppmv) of sulfur dioxide or more than thirty-five milligrams per cubic meter (35 mg/m³) of sulfuric acid or sulfur trioxide or any combination of those gases averaged on any consecutive three hour time period.

**Operational Limitation/Equipment Specifications:**
The permittee shall limit the emission unit to burning either pipeline grade natural gas or liquid petroleum gas (LPG).

**Monitoring/Recordkeeping:**
The permit shall maintain documentation supporting the fuel used is pipeline grade natural gas or liquid petroleum gas (LPG).

**Reporting:**
The permittee shall report to Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 no later than ten (10) days after any exceedance of any of the terms imposed by this permit condition.
EU-09 – SULFUR LEHR OVEN

<table>
<thead>
<tr>
<th>Emission Unit</th>
<th>Description</th>
<th>Manufacturer/ Model #</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU-09</td>
<td>Sulfur Lehr Oven: oven raises the temperature of glass bottles to between 1,000 and 1,100 degrees Fahrenheit and exposes the bottles to sulfur dioxide (SO2) gas for improved chemical durability; MHDR: 2 MMBtu/hr; permitted 1986</td>
<td>In-house manufactured</td>
</tr>
</tbody>
</table>

Permit Condition (EU-09)-001

10 CSR 10-6.060 Construction Permits Required
Construction Permit #0586-005A, Issued May 15, 1986

Operational Specifications/Emission Limitation:

1) The Sulfur Lehr Oven (EU-09) shall not be operated more than 24 hours per day, 80 days per year with a sulfur dioxide feed rate not to exceed 10 pound of SO2 per hour. [Construction Permit #0586-005A, Condition Number 2]

2) The process shall be operated in such a manner so as not to cause the opacity from the exhaust stack to exceed 20% as specified in Permit Condition (EU-09)-002. [Construction Permit #0586-005A, Condition Number 2]

3) If any of these conditions are violated, Construction Permit #0586-005A shall become void and the process shall cease operation until such time as all conditions are met. [Construction Permit #0586-005A, Condition Number 2]

Monitoring/Recordkeeping:

The facility shall maintain records on the number of hours per month the Sulfur Lehr Oven (EU-09) is in operation and the flow rate of SO2 per hour into the Sulfur Lehr Oven (EU-09). These records shall be kept for a period of at least 5 years and shall be made available to Missouri Department of Natural Resources’ personnel upon request. [Construction Permit #0586-005A, Condition Number 2]

Reporting:

1) The permittee shall report to the Air Pollution Control Program’s Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after records show that the limits established in this permit condition were exceeded.

2) Reports of any deviations from monitoring, record keeping and reporting requirements of this permit condition shall be submitted semiannually, in the semi-annual monitoring report and annual compliance certification, as required by Section V of this permit.
Permit Condition (EU-09)-002

10 CSR 10-6.220  Restriction of Emission of Visible Air Contaminants

**Emission Limitation:**
1) The permittee shall not cause or permit to be discharged into the atmosphere from any new source of emission, not exempted under this rule, any visible emissions with an opacity greater than 20%.

Note: New source: any equipment, machine, device, article, contrivance or installation installed in the outstate Missouri area after February 24, 1971 as defined in 10 CSR 10-6.020 (2)(E)44.B.

2) Exception:
The Permittee may discharge into the atmosphere from any source of emissions for a period(s) aggregating not more than six (6) minutes in any 60 minutes air contaminants with an opacity up to 60%.

**Monitoring:**
1) The permittee shall conduct opacity readings on the emission unit(s) using the procedures contained in USEPA Test Method 22. At a minimum, the observer should be trained and knowledgeable about the effects on visibility of emissions caused by background contrast, ambient lighting, observer position relative to lighting, wind and the presence of uncombined water. Readings are only required when the emission unit(s) is operating and when the weather conditions allow. If no visible or other significant emissions are observed using these procedures, then no further observations would be required. For emission units with visible emissions perceived or believed to exceed the applicable opacity standard, the source representative would then conduct a Method 9 observation.

2) The following monitoring schedule must be maintained:
   a) Observations must be made once per month. If a violation is noted, then
   b) Weekly observations shall be conducted for a minimum of eight (8) consecutive weeks. Should no violation of this regulation be observed during this period then monitoring reverts to monthly monitoring.

**Record keeping:**
1) The permittee shall maintain records of all observation results (see Attachment A), noting:
   a) Whether any air emissions (except for water vapor) were visible from the emission units,
   b) All emission units from which visible emissions occurred, and
   c) Whether the visible emissions were normal for the process.
   d) The permittee shall maintain records of any equipment malfunctions.

2) The permittee shall maintain records of any other Method 9 test performed in accordance with this permit condition. (See Attachment B)

**Reporting:**
1) The permittee shall report to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after the permittee determined using the Method 9 test that the emission unit(s) exceeded the opacity limit.

2) Reports of any deviations from monitoring, record keeping and reporting requirements of this permit condition shall be submitted semiannually, in the semi-annual monitoring report and annual compliance certification, as required by Section V of this permit.
**Permit Condition (EU-09)-003**

10 CSR 10-6.260 Restriction of Emission of Sulfur Compounds

**Emission Limitation:**
Emissions from Sulfur Lehr Oven (EU-09) operation shall not contain more than five hundred parts per million by volume (500 ppmv) of sulfur dioxide or more than thirty-five milligrams per cubic meter (35 mg/m³) of sulfuric acid or sulfur trioxide or any combination of those gases averaged on any consecutive three hour time period.

**Operational Limitation/Equipment Specifications:**
The emission unit shall be limited to burning either pipeline grade natural gas or liquid petroleum gas (LPG).

**Monitoring/Recordkeeping:**
The permit shall maintain documentation supporting the fuel used is pipeline grade natural gas or liquid petroleum gas (LPG).

**Reporting:**
The permittee shall report to Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 no later than ten (10) days after any exceedance of any of the terms imposed by this permit condition.
IV. Core Permit Requirements

The installation shall comply with each of the following regulations or codes. Consult the appropriate sections in the Code of Federal Regulations (CFR), the Code of State Regulations (CSR), and local ordinances for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued. The following is only an excerpt from the regulation or code, and is provided for summary purposes only.

10 CSR 10-6.045 Open Burning Requirements

1) General Provisions. The open burning of tires, petroleum-based products, asbestos containing materials, and trade waste is prohibited, except as allowed below. Nothing in this rule may be construed as to allow open burning which causes or constitutes a public health hazard, nuisance, a hazard to vehicular or air traffic, nor which violates any other rule or statute.

2) Certain types of materials may be open burned provided an open burning permit is obtained from the director. The permit will specify the conditions and provisions of all open burning. The permit may be revoked if the owner or operator fails to comply with the conditions or any provisions of the permit.

3) Piramal Glass - USA, Inc. may be issued an annually renewable open burning permit for open burning provided that an air curtain destructor or incinerator is utilized and only tree trunks, tree limbs, vegetation or untreated wood waste are burned. Open burning shall occur at least two hundred (200) yards from the nearest occupied structure unless the owner or operator of the occupied structure provides a written waiver of this requirement. Any waiver shall accompany the open burning permit application. The permit may be revoked if Piramal Glass - USA, Inc. fails to comply with the provisions or any condition of the open burning permit.

(A) In a nonattainment area, as defined in 10 CSR 10-6.020, paragraph (2)(N)5., the director shall not issue a permit under this section unless the owner or operator can demonstrate to the satisfaction of the director that the emissions from the open burning of the specified material would be less than the emissions from any other waste management or disposal method.

4) Reporting and Record Keeping. New Source Performance Standard (NSPS) 40 CFR Part 60 Subpart CCCC establishes certain requirements for air curtain destructors or incinerators that burn wood trade waste. These requirements are established in 40 CFR 60.2245-60.2260. The provisions of 40 CFR part 60 Subpart CCCC promulgated as of September 22, 2005 shall apply and are hereby incorporated by reference in this rule, as published by the U.S. Government Printing Office, 732 N Capitol Street NW, Washington, DC 20401. To comply with NSPS 40 CFR 60.2245-60.2260, sources must conduct an annual Method 9 test. A copy of the annual Method 9 test results shall be submitted to the director.


10 CSR 10-6.050 Start-up, Shutdown and Malfunction Conditions

1) In the event of a malfunction, which results in excess emissions that exceed one hour, the permittee shall submit to the director within two business days, in writing, the following information:
   a) Name and location of installation;
   b) Name and telephone number of person responsible for the installation;
c) Name of the person who first discovered the malfunction and precise time and date that the malfunction was discovered.
d) Identity of the equipment causing the excess emissions;
e) Time and duration of the period of excess emissions;
f) Cause of the excess emissions;
g) Air pollutants involved;
h) Best estimate of the magnitude of the excess emissions expressed in the units of the applicable requirement and the operating data and calculations used in estimating the magnitude;
i) Measures taken to mitigate the extent and duration of the excess emissions; and
j) Measures taken to remedy the situation that caused the excess emissions and the measures taken or planned to prevent the recurrence of these situations.

2) The permittee shall submit the paragraph 1 information list to the director in writing at least ten days prior to any maintenance, start-up or shutdown, which is expected to cause an excessive release of emissions that exceed one hour. If notice of the event cannot be given ten days prior to the planned occurrence, it shall be given as soon as practicable prior to the release. If an unplanned excess release of emissions exceeding one hour occurs during maintenance, start-up or shutdown, the director shall be notified verbally as soon as practical during normal working hours and no later than the close of business of the following working day. A written notice shall follow within ten working days.

3) Upon receipt of a notice of excess emissions issued by an agency holding a certificate of authority under section 643.140, RSMo, the permittee may provide information showing that the excess emissions were the consequence of a malfunction, start-up or shutdown. The information, at a minimum, should be the paragraph 1 list and shall be submitted not later than 15 days after receipt of the notice of excess emissions. Based upon information submitted by the permittee or any other pertinent information available, the director or the commission shall make a determination whether the excess emissions constitute a malfunction, start-up or shutdown and whether the nature, extent and duration of the excess emissions warrant enforcement action under section 643.080 or 643.151, RSMo.

4) Nothing in this rule shall be construed to limit the authority of the director or commission to take appropriate action, under sections 643.080, 643.090 and 643.151, RSMo to enforce the provisions of the Air Conservation Law and the corresponding rule.

5) Compliance with this rule does not automatically absolve the permittee of liability for the excess emissions reported.

10 CSR 10-6.060 Construction Permits Required
The permittee shall not commence construction, modification, or major modification of any installation subject to this rule, begin operation after that construction, modification, or major modification, or begin operation of any installation which has been shut down longer than five years without first obtaining a permit from the permitting authority.

10 CSR 10-6.065 Operating Permits
The permittee shall file a complete application for renewal of this operating permit at least six months before the date of permit expiration. In no event shall this time be greater than eighteen months. [10 CSR 10-6.065(6)(B)1.A(V)] The permittee shall retain the most current operating permit issued to this installation on-site. [10 CSR 10-6.065(6)(C)1.C(II)] The permittee shall immediately make such permit available to any Missouri Department of Natural Resources personnel upon request. [10 CSR 10-6.065(6)(C)3.B]
1) The permittee shall follow the procedures and requirements of 40 CFR Part 61, Subpart M for any activities occurring at this installation which would be subject to provisions for 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos.
2) The permittee shall conduct monitoring to demonstrate compliance with registration, certification, notification, and Abatement Procedures and Practices standards as specified in 40 CFR Part 61, Subpart M.

10 CSR 10-6.110  Submission of Emission Data, Emission Fees and Process Information
1) The permittee shall submit full emissions report either electronically via MoEIS, which requires Form 1.0 signed by an authorized company representative, or on Emission Inventory Questionnaire (EIQ) paper forms on the frequency specified in this rule and in accordance with the requirements outlined in this rule. Alternate methods of reporting the emissions, such as spreadsheet file, can be submitted for approval by the director.
2) The permittee may be required by the director to file additional reports.
3) Public Availability of Emission Data and Process Information. Any information obtained pursuant to the rule(s) of the Missouri Air Conservation Commission that would not be entitled to confidential treatment under 10 CSR 10-6.210 shall be made available to any member of the public upon request.
4) The permittee shall pay an annual emission fee per ton of regulated air pollutant emitted according to the schedule in the rule. This fee is an emission fee assessed under authority of RSMo. 643.079.
5) The fees shall be payable to the Department of Natural Resources and shall be accompanied by the emissions report.
6) The permittee shall complete required reports on state supplied EIQ forms or electronically via MoEIS. Alternate methods of reporting the emissions can be submitted for approval by the director. The reports shall be submitted to the director by April 1 after the end of each reporting year. If the full emissions report is filed electronically via MoEIS, this due date is extended to May 1.
7) The reporting period shall end on December 31 of each calendar year. Each report shall contain the required information for each emission unit for the twelve (12)-month period immediately preceding the end of the reporting period.
8) The permittee shall collect, record and maintain the information necessary to complete the required forms during each year of operation of the installation.

10 CSR 10-6.130  Controlling Emissions During Episodes of High Air Pollution Potential
This rule specifies the conditions that establish an air pollution alert (yellow/orange/red/purple), or emergency (maroon) and the associated procedures and emission reduction objectives for dealing with each. The permittee shall submit an appropriate emergency plan if required by the Director.

10 CSR 10-6.150  Circumvention
The permittee shall not cause or permit the installation or use of any device or any other means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission or air contaminant which violates a rule of the Missouri Air Conservation Commission.
10 CSR 10-6.170
Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin
1) The permittee shall not cause or allow to occur any handling, transporting or storing of any material; construction, repair, cleaning or demolition of a building or its appurtenances; construction or use of a road, driveway or open area; or operation of a commercial or industrial installation without applying reasonable measures as may be required to prevent, or in a manner which allows or may allow, fugitive particulate matter emissions to go beyond the premises of origin in quantities that the particulate matter may be found on surfaces beyond the property line of origin. The nature or origin of the particulate matter shall be determined to a reasonable degree of certainty by a technique proven to be accurate and approved by the director.
2) The permittee shall not cause nor allow to occur any fugitive particulate matter emissions to remain visible in the ambient air beyond the property line of origin.
3) Should it be determined that noncompliance has occurred, the director may require reasonable control measures as may be necessary. These measures may include, but are not limited to, the following:
   a) Revision of procedures involving construction, repair, cleaning and demolition of buildings and their appurtenances that produce particulate matter emissions;
   b) Paving or frequent cleaning of roads, driveways and parking lots;
   c) Application of dust-free surfaces;
   d) Application of water; and
   e) Planting and maintenance of vegetative ground cover.

10 CSR 10-6.180 Measurement of Emissions of Air Contaminants
1) The director may require any person responsible for the source of emission of air contaminants to make or have made tests to determine the quantity or nature, or both, of emission of air contaminants from the source. The director may specify testing methods to be used in accordance with good professional practice. The director may observe the testing. All tests shall be performed by qualified personnel.
2) The director may conduct tests of emissions of air contaminants from any source. Upon request of the director, the person responsible for the source to be tested shall provide necessary ports in stacks or ducts and other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants.
3) The director shall be given a copy of the test results in writing and signed by the person responsible for the tests.

10 CSR 10-6.165 Restriction of Emission of Odors
This requirement is not federally enforceable.
No person may cause, permit or allow the emission of odorous matter in concentrations and frequencies or for durations that odor can be perceived when one volume of odorous air is diluted with seven volumes of odor-free air for two separate trials not less than 15 minutes apart within the period of one hour. This odor evaluation shall be taken at a location outside of the installation’s property boundary.

10 CSR 10-6.250 Asbestos Abatement Projects – Certification, Accreditation, and Business Exemption Requirements
The permittee shall conduct all asbestos abatement projects within the procedures established for certification and accreditation by 10 CSR 10-6.250. This rule requires individuals who work in asbestos abatement projects to be certified by the Missouri Department of Natural Resources Air Pollution
Control Program. This rule requires training providers who offer training for asbestos abatement occupations to be accredited by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires persons who hold exemption status from certain requirements of this rule to allow the department to monitor training provided to employees. Each individual who works in asbestos abatement projects must first obtain certification for the appropriate occupation from the department. Each person who offers training for asbestos abatement occupations must first obtain accreditation from the department. Certain business entities that meet the requirements for state-approved exemption status must allow the department to monitor training classes provided to employees who perform asbestos abatement.

**Title VI – 40 CFR Part 82 Protection of Stratospheric Ozone**

1) The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
   a) All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to §82.106.
   b) The placement of the required warning statement must comply with the requirements pursuant to §82.108.
   c) The form of the label bearing the required warning statement must comply with the requirements pursuant to §82.110.
   d) No person may modify, remove, or interfere with the required warning statement except as described in §82.112.

2) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:
   a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
   b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
   c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
   d) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record keeping requirements pursuant to §82.166. ("MVAC-like" appliance as defined at §82.152).
   e) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156.
   f) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.

3) If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.

4) If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been
completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant.

5) The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. Federal Only - 40 CFR part 82

10 CSR 10-6.280 Compliance Monitoring Usage

1) The permittee is not prohibited from using the following in addition to any specified compliance methods for the purpose of submission of compliance certificates:
   a) Monitoring methods outlined in 40 CFR Part 64;
   b) Monitoring method(s) approved for the permittee pursuant to 10 CSR 10-6.065, “Operating Permits”, and incorporated into an operating permit; and
   c) Any other monitoring methods approved by the director.

2) Any credible evidence may be used for the purpose of establishing whether a permittee has violated or is in violation of any such plan or other applicable requirement. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred by a permittee:
   a) Monitoring methods outlined in 40 CFR Part 64;
   b) A monitoring method approved for the permittee pursuant to 10 CSR 10-6.065, “Operating Permits”, and incorporated into an operating permit; and
   c) Compliance test methods specified in the rule cited as the authority for the emission limitations.

3) The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:
   a) Applicable monitoring or testing methods, cited in:
      i) 10 CSR 10-6.030, “Sampling Methods for Air Pollution Sources”;
      ii) 10 CSR 10-6.040, “Reference Methods”;
      iii) 10 CSR 10-6.070, “New Source Performance Standards”;
      iv) 10 CSR 10-6.080, “Emission Standards for Hazardous Air Pollutants”; or
   b) Other testing, monitoring, or information gathering methods, if approved by the director, that produce information comparable to that produced by any method listed above.
V. General Permit Requirements
The installation shall comply with each of the following requirements. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued,

10 CSR 10-6.065(6)(C)1.B Permit Duration
This permit is issued for a term of five years, commencing on the date of issuance. This permit will expire at the end of this period unless renewed.

10 CSR 10-6.065(6)(C)1.C General Record Keeping and Reporting Requirements
1) Record Keeping
   a) All required monitoring data and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report or application.
   b) Copies of all current operating and construction permits issued to this installation shall be kept on-site for as long as the permits are in effect. Copies of these permits shall be made immediately available to any Missouri Department of Natural Resources’ personnel upon request.

2) Reporting
   a) All reports shall be submitted to the Air Pollution Control Program, Enforcement Section, P. O. Box 176, Jefferson City, MO 65102.
   b) The permittee shall submit a report of all required monitoring by:
      i) October 1st for monitoring which covers the January through June time period, and
      ii) April 1st for monitoring which covers the July through December time period.
      iii) Exception. Monitoring requirements which require reporting more frequently than semi annually shall report no later than 30 days after the end of the calendar quarter in which the measurements were taken.
   c) Each report shall identify any deviations from emission limitations, monitoring, record keeping, reporting, or any other requirements of the permit, this includes deviations or Part 64 exceedances.
   d) Submit supplemental reports as required or as needed. Supplemental reports are required no later than ten days after any exceedance of any applicable rule, regulation or other restriction. All reports of deviations shall identify the cause or probable cause of the deviations and any corrective actions or preventative measures taken.
      i) Notice of any deviation resulting from an emergency (or upset) condition as defined in paragraph (6)(C)7.A of 10 CSR 10-6.065 (Emergency Provisions) shall be submitted to the permitting authority either verbally or in writing within two working days after the date on which the emission limitation is exceeded due to the emergency, if the permittee wishes to assert an affirmative defense. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that indicate an emergency occurred and the permittee can identify the cause(s) of the emergency. The permitted installation must show that it was operated properly at the time and that during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or requirements in the permit. The notice must contain a description of the emergency, the steps taken to mitigate emissions, and the corrective actions taken.
      ii) Any deviation that poses an imminent and substantial danger to public health, safety or the environment shall be reported as soon as practicable.
iii) Any other deviations identified in the permit as requiring more frequent reporting than the
permittee's semiannual report shall be reported on the schedule specified in this permit, and
no later than ten days after any exceedance of any applicable rule, regulation, or other
restriction.
e) Every report submitted shall be certified by the responsible official, except that, if a report of a
deviation must be submitted within ten days after the deviation, the report may be submitted
without a certification if the report is resubmitted with an appropriate certification within ten
days after that, together with any corrected or supplemental information required concerning the
deviation.
f) The permittee may request confidential treatment of information submitted in any report of
deviation.

10 CSR 10-6.065(6)(C)1.D Risk Management Plan Under Section 112(r)
The permittee shall comply with the requirements of 40 CFR Part 68, Accidental Release Prevention
Requirements. If the permittee has more than a threshold quantity of a regulated substance in process, as
determined by 40 CFR Section 68.115, the permittee shall submit a Risk Management Plan in
accordance with 40 CFR Part 68 no later than the latest of the following dates:
1) June 21, 1999;
2) Three years after the date on which a regulated substance is first listed under 40 CFR Section
   68.130; or
3) The date on which a regulated substance is first present above a threshold quantity in a process.

10 CSR 10-6.065(6)(C)1.F Severability Clause
In the event of a successful challenge to any part of this permit, all uncontested permit conditions shall
continue to be in force. All terms and conditions of this permit remain in effect pending any
administrative or judicial challenge to any portion of the permit. If any provision of this permit is
invalidated, the permittee shall comply with all other provisions of the permit.

10 CSR 10-6.065(6)(C)1.G General Requirements
1) The permittee must comply with all of the terms and conditions of this permit. Any noncompliance
   with a permit condition constitutes a violation and is grounds for enforcement action, permit
termination, permit revocation and re-issuance, permit modification or denial of a permit renewal
   application.
2) The permittee may not use as a defense in an enforcement action that it would have been necessary
   for the permittee to halt or reduce the permitted activity in order to maintain compliance with the
   conditions of the permit
3) The permit may be modified, revoked, reopened, reissued or terminated for cause. Except as
   provided for minor permit modifications, the filing of an application or request for a permit
   modification, revocation and reissuance, or termination, or the filing of a notification of planned
   changes or anticipated noncompliance, does not stay any permit condition.
4) This permit does not convey any property rights of any sort, nor grant any exclusive privilege.
5) The permittee shall furnish to the Air Pollution Control Program, upon receipt of a written request
   and within a reasonable time, any information that the Air Pollution Control Program reasonably
   may require to determine whether cause exists for modifying, reopening, reissuing or revoking the
   permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to
   the Air Pollution Control Program copies of records required to be kept by the permittee. The
permittee may make a claim of confidentiality for any information or records submitted pursuant to 10 CSR 10-6.065(6)(C)1.

10 CSR 10-6.065(6)(C)1.H Incentive Programs Not Requiring Permit Revisions
No permit revision will be required for any installation changes made under any approved economic incentive, marketable permit, emissions trading, or other similar programs or processes provided for in this permit.

10 CSR 10-6.065(6)(C)1.I Reasonably Anticipated Operating Scenarios
None

10 CSR 10-6.065(6)(C)3 Compliance Requirements
1) Any document (including reports) required to be submitted under this permit shall contain a certification signed by the responsible official.
2) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized officials of the Missouri Department of Natural Resources, or their authorized agents, to perform the following (subject to the installation’s right to seek confidential treatment of information submitted to, or obtained by, the Air Pollution Control Program):
   a) Enter upon the premises where a permitted installation is located or an emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
   b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
   c) Inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
   d) As authorized by the Missouri Air Conservation Law, Chapter 643, RSMo or the Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the terms of this permit, and all applicable requirements as outlined in this permit.
3) All progress reports required under an applicable schedule of compliance shall be submitted semiannually (or more frequently if specified in the applicable requirement). These progress reports shall contain the following:
   a) Dates for achieving the activities, milestones or compliance required in the schedule of compliance, and dates when these activities, milestones or compliance were achieved, and
   b) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measures adopted.
4) The permittee shall submit an annual certification that it is in compliance with all of the federally enforceable terms and conditions contained in this permit, including emissions limitations, standards, or work practices. These certifications shall be submitted annually by April 1st, unless the applicable requirement specifies more frequent submission. These certifications shall be submitted to EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, as well as the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102. All deviations and Part 64 exceedances and excursions must be included in the compliance certifications. The compliance certification shall include the following:
   a) The identification of each term or condition of the permit that is the basis of the certification;
   b) The current compliance status, as shown by monitoring data and other information reasonably available to the installation;
   c) Whether compliance was continuous or intermittent;
d) The method(s) used for determining the compliance status of the installation, both currently and over the reporting period; and
e) Such other facts as the Air Pollution Control Program will require in order to determine the compliance status of this installation.

10 CSR 10-6.065(6)(C)6 Permit Shield
1) Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements as of the date that this permit is issued, provided that:
   a) The applicable requirements are included and specifically identified in this permit, or
   b) The permitting authority, in acting on the permit revision or permit application, determines in writing that other requirements, as specifically identified in the permit, are not applicable to the installation, and this permit expressly includes that determination or a concise summary of it.
2) Be aware that there are exceptions to this permit protection. The permit shield does not affect the following:
   a) The provisions of section 303 of the Act or section 643.090, RSMo concerning emergency orders,
   b) Liability for any violation of an applicable requirement which occurred prior to, or was existing at, the time of permit issuance,
   c) The applicable requirements of the acid rain program,
   d) The authority of the Environmental Protection Agency and the Air Pollution Control Program of the Missouri Department of Natural Resources to obtain information, or
   e) Any other permit or extra-permit provisions, terms or conditions expressly excluded from the permit shield provisions.

10 CSR 10-6.065(6)(C)7 Emergency Provisions
1) An emergency or upset as defined in 10 CSR 10-6.065(6)(C)7.A shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emissions limitations. To establish an emergency- or upset-based defense, the permittee must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, the following:
   a) That an emergency or upset occurred and that the permittee can identify the source of the emergency or upset,
   b) That the installation was being operated properly,
   c) That the permittee took all reasonable steps to minimize emissions that exceeded technology-based emissions limitations or requirements in this permit, and
   d) That the permittee submitted notice of the emergency to the Air Pollution Control Program within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.
2) Be aware that an emergency or upset shall not include noncompliance caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

10 CSR 10-6.065(6)(C)8 Operational Flexibility
An installation that has been issued a Part 70 operating permit is not required to apply for or obtain a permit revision in order to make any of the changes to the permitted installation described below if the changes are not Title I modifications, the changes do not cause emissions to exceed emissions allowable under the permit, and the changes do not result in the emission of any air contaminant not previously
emitted. The permittee shall notify the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, at least seven days in advance of these changes, except as allowed for emergency or upset conditions. Emissions allowable under the permit means a federally enforceable permit term or condition determined at issuance to be required by an applicable requirement that establishes an emissions limit (including a work practice standard) or a federally enforceable emissions cap that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject.

1) Section 502(b)(10) changes. Changes that, under section 502(b)(10) of the Act, contravene an express permit term may be made without a permit revision, except for changes that would violate applicable requirements of the Act or contravene federally enforceable monitoring (including test methods), record keeping, reporting or compliance requirements of the permit.

a) Before making a change under this provision, The permittee shall provide advance written notice to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219, describing the changes to be made, the date on which the change will occur, and any changes in emission and any permit terms and conditions that are affected. The permittee shall maintain a copy of the notice with the permit, and the APCP shall place a copy with the permit in the public file. Written notice shall be provided to the EPA and the APCP as above at least seven days before the change is to be made. If less than seven days notice is provided because of a need to respond more quickly to these unanticipated conditions, the permittee shall provide notice to the EPA and the APCP as soon as possible after learning of the need to make the change.

b) The permit shield shall not apply to these changes.

10 CSR 10-6.065(6)(C)9 Off-Permit Changes

1) Except as noted below, the permittee may make any change in its permitted operations, activities or emissions that is not addressed in, constrained by or prohibited by this permit without obtaining a permit revision. Insignificant activities listed in the application, but not otherwise addressed in or prohibited by this permit, shall not be considered to be constrained by this permit for purposes of the off-permit provisions of this section. Off-permit changes shall be subject to the following requirements and restrictions:

a) The change must meet all applicable requirements of the Act and may not violate any existing permit term or condition; the permittee may not change a permitted installation without a permit revision if this change is subject to any requirements under Title IV of the Act or is a Title I modification;

b) The permittee must provide contemporaneous written notice of the change to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 11201 Renner Blvd., Lenexa, KS 66219. This notice shall not be required for changes that are insignificant activities under 10 CSR 10-6.065(6)(B)3 of this rule. This written notice shall describe each change, including the date, any change in emissions, pollutants emitted and any applicable requirement that would apply as a result of the change.

c) The permittee shall keep a record describing all changes made at the installation that result in emissions of a regulated air pollutant subject to an applicable requirement and the emissions resulting from these changes; and

d) The permit shield shall not apply to these changes.
10 CSR 10-6.020(2)(R)12 Responsible Official
The application utilized in the preparation of this permit was signed by Ed Magee, Plant Manager. On November 20, 2014, the Air Pollution Control Program was informed that Mr. Rajendra Kulkarni is now the responsible official. If this person terminates employment, or is reassigned different duties such that a different person becomes the responsible person to represent and bind the installation in environmental permitting affairs, the owner or operator of this air contaminant source shall notify the Director of the Air Pollution Control Program of the change. Said notification shall be in writing and shall be submitted within 30 days of the change. The notification shall include the name and title of the new person assigned by the source owner or operator to represent and bind the installation in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the installation until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

10 CSR 10-6.065(6)(E)6 Reopening-Permit for Cause
This permit may be reopened for cause if:
1) The Missouri Department of Natural Resources (MDNR) receives notice from the Environmental Protection Agency (EPA) that a petition for disapproval of a permit pursuant to 40 CFR § 70.8(d) has been granted, provided that the reopening may be stayed pending judicial review of that determination,
2) MDNR or EPA determines that the permit contains a material mistake or that inaccurate statements were made which resulted in establishing the emissions limitation standards or other terms of the permit,
3) Additional applicable requirements under the Act become applicable to the installation; however, reopening on this ground is not required if—:
   a) The permit has a remaining term of less than three years;
   b) The effective date of the requirement is later than the date on which the permit is due to expire;
   or
   c) The additional applicable requirements are implemented in a general permit that is applicable to the installation and the installation receives authorization for coverage under that general permit,
4) The installation is an affected source under the acid rain program and additional requirements (including excess emissions requirements), become applicable to that source, provided that, upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the permit;
5) MDNR or EPA determines that the permit must be reopened and revised to assure compliance with applicable requirements.

10 CSR 10-6.065(6)(E)1.C Statement of Basis
This permit is accompanied by a statement setting forth the legal and factual basis for the permit conditions (including references to applicable statutory or regulatory provisions). This Statement of Basis, while referenced by the permit, is not an actual part of the permit.

VI. Attachments
Attachments follow.
Attachment A - Method 22 Opacity Emission Observations

This attachment or an equivalent may be used to help meet the record keeping requirements of the Visible Emissions Permit Conditions.

<table>
<thead>
<tr>
<th>Date</th>
<th>Method 22 Test Observer</th>
<th>Visible Emissions (yes/no)</th>
<th>If Visible emissions, was a method 9 done? (yes/no)</th>
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Attachment B - Method 22 Opacity Emission Observations

This attachment or an equivalent may be used to help meet the record keeping requirements of Method 9 Opacity Emissions Observations.

<table>
<thead>
<tr>
<th>Method 9 Opacity Emissions Observations</th>
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<tbody>
<tr>
<td>Company</td>
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<td>Location</td>
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<td>Date</td>
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<td>Time</td>
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<tr>
<th>Hour</th>
<th>Minute</th>
<th>Seconds</th>
<th>Steam Plume (check if applicable)</th>
<th>Comments</th>
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**SUMMARY OF AVERAGE OPACITY**

<table>
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<tr>
<th>Set Number</th>
<th>Time</th>
<th>Opacity</th>
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<tr>
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<td>Start</td>
<td>End</td>
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Readings ranged from _________ to ________ % opacity.

Was the emission unit in compliance at the time of evaluation? **YES**    **NO**    ____ Signature of Observer
Attachment C - 10 CSR 10-6.400 Compliance Demonstration

This attachment may be used to demonstrate that Glass Melting Furnace #51 (EU-04A-51) is in compliance with 10 CSR 10-6.400, *Restriction of Emission of Particulate Matter from Industrial Processes*.

**Allowable PM Emission Rate (E)**

\[
E \ (\text{lbs/}hr) = 4.10(P)^{0.67}
\]

Where:

\[
P = \text{process weight rate in tons/}hr = 4.37 \text{ tons/}hr
\]

\[
E = 4.10(4.37)^{0.67}
\]

\[
E = 11.01 \text{ lbs/}hr
\]

**Potential Uncontrolled PM Emission Rate (PTE)**

\[
PTE (\text{lbs/}hr) = \text{MHDR (ton/}hr) \times \text{Emission Factor (lbs/ton)}
\]

Where:

\[
\text{PM Emission Factor} = 2.06 \text{ lb/ton} \quad \text{[Source: June 2006 Stack Testing]}
\]

\[
PTE = 4.37 \text{ tons/}hr \times 2.06 \text{ lbs/ton}
\]

\[
PTE = 9.00 \text{ lbs/}hr \quad \text{IN COMPLIANCE}
\]

**Allowable PM Concentration** = 0.3 gr/scf

**Potential PM Concentration**

\[
\text{Emission rate (gr/}scf) = \frac{\text{Emission Rate (lbs/}hr) \times (7000 \text{ grains/}lb)}{\text{Stack flow rate (scfm)}} / (60 \text{ min/}hr)
\]

Where:

\[
\text{Emission Rate} = 9.00 \text{ lbs/}hr
\]

\[
\text{Stack Flow Rate} = 21,246 \text{ scfm} \quad \text{[Source: June 2006 Stack Testing]}
\]

\[
\text{Emission rate (gr/}scf) = 9.00 \text{ lbs/}hr \times 7000 \text{ grains/}lb / 21,246 \text{ scfm} / 60 \text{ min/}hr
\]

\[
\text{Emission rate (gr/}scf) = 0.049 \text{ gr/}scf \quad \text{IN COMPLIANCE}
\]
Attachment D - Monthly NO\textsubscript{x} Emission Tracking Record - Furnace #52

<table>
<thead>
<tr>
<th>Date</th>
<th>Avg. Hourly Natural Gas Usage for Day (cubic ft/hr)</th>
<th>Avg. Hourly NO\textsubscript{x} Emissions (lbs/hr)</th>
<th>Hours of Operation per Day</th>
<th>Daily NO\textsubscript{x} Emissions (lbs/day)</th>
<th>Date</th>
<th>Avg. Hourly Natural Gas Usage for Day (cubic ft/hr)</th>
<th>Avg. Hourly NO\textsubscript{x} Emissions (lbs/hr)</th>
<th>Hours of Operation per Day</th>
<th>Daily NO\textsubscript{x} Emissions (lbs/day)</th>
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(a) Sum of NO\textsubscript{x} Emissions Calculated for this Month in Pounds:
(b) Total of NO\textsubscript{x} Emissions Calculated for this Month in Tons [Sum of (a)/2000]:
(c) 12-Month NO\textsubscript{x} Emission Total (e) from Previous Month’s Worksheet E, in Tons:
(d) Monthly NO\textsubscript{x} Emissions Total (b) from Previously Year’s Worksheet E, in Tons:
(e) Current 12-Month Total of NO\textsubscript{x} Emissions in Tons: [(b) + (c) - (d)]

Note 1: The Avg. Hourly NO\textsubscript{x} Emissions can be calculated by using the following formula: $Y = (0.0146X - 114 - 67)$ as determined from the April 2001 stack tests. In the above formula, “Y” is the Avg. Hourly NO\textsubscript{x} Emissions value in lbs/hr and “X” is the Avg. Hourly Natural Gas Usage value in cubic feet/hr.

Note 2: The daily NO\textsubscript{x} emissions (lbs/day) can be obtained by multiplying the Avg Hourly NO\textsubscript{x} Emissions (lbs/hr) by the Hours of Operation per Day.

Note 3: A current consecutive 12-month NO\textsubscript{x} emissions rate (e) of less than 187.5 tons indicates compliance.
STATEMENT OF BASIS

Permit Reference Documents
These documents were relied upon in the preparation of the operating permit. Because they are not incorporated by reference, they are not an official part of the operating permit.

1) Part 70 Operating Permit Application, received December 17, 2013;
2) Part 70 Operating Permit, Permit No. OP2009-015, Issued May 18, 2009;
3) 2013 Emissions Inventory Questionnaire, received March 28, 2014;
5) Air Pollution Control Program Construction Permits Issued to Piramal Glass- USA, Inc.

<table>
<thead>
<tr>
<th>Permit Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0586-005A</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>
<tr>
<td>042012-011</td>
<td>A Section (5) permit to install a 1080 KVA transformer and larger diameter electrodes with a resulting increase in the in melting capacity of Furnace 52 from 110 tons per day to 120 tons per day.</td>
</tr>
</tbody>
</table>

Process Description
Piramal Glass-USA, Inc. (Piramal) operates a glass container manufacturing facility located at 1000 Taylor Avenue in Park Hills, Missouri.

The primary equipment at the facility consists of two (2) glass melting furnaces, one (1) sulfur lehr oven and various other material handling storage emission units. The installation uses soda-lime glass recipe which utilizes sand, limestone, soda ash and cullet (broken glass) as the raw materials in the glass manufacturing process. The sand, limestone and soda ash raw materials are unloaded and conveyed to separate storage bins. Cullet is produced from damaged or undesirable glass produced in the furnaces and is crushed before being transferred 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.

As the mixture enters the melting furnaces, it floats on top of the molten glass already in the furnaces. The solid material melts and passes to the front of the melting furnaces, eventually flowing out through a throat leading to the refiners. In the refiner, the molten glass is heat conditioned for delivery to the forming process. The bottle forming machines form the molten glass into desired shapes and some of the glass bottles will also go through the sulfur lehr process. In the sulfur lehr process, the temperature of the glass is raised to between 1,000 to 1,100 degrees Fahrenheit and exposed to sulfur dioxide (SO₂) gas. At these temperatures the alkali on the glass surface reacts with SO₂ and is converted from caustic salt which can then be flushed away in washing machines. The glass container products are then inspected and prepared for shipment to market.
The insignificant activities associated with the glass manufacturing process include the raw material storage bins, cullet crushing, natural gas refiner and feeder for each glass furnaces, annealing lehrs, bottle forming machine lubrication, degreaser, and natural gas fired space heaters.

**Applicable Requirements Included in the Operating Permit but Not in the Application or Previous Operating Permits**

In the operating permit application, the installation indicated they were not subject to the following regulation(s). However, in the review of the application, the agency has determined that the installation is subject to the following regulation(s) for the reasons stated.

None

**Other Air Regulations Determined Not to Apply to the Operating Permit**

The Air Pollution Control Program (APCP) has determined the following requirements to not be applicable to this installation at this time for the reasons stated.

1) 10 CSR 10-6.100, *Alternate Emission Limits*
   This rule is not applicable because the installation is in an ozone attainment area.

2) Construction Permit No. 042012-011, Issued April 30, 2012
   This construction permit allows the installation to install two replacement electrical transformers with a resulting increase in the maximum production capacity of Furnace Number 52. Since the issuance of the construction permit 042012-011 until the drafting of this operating permit, the project has not been constructed or implemented. Therefore, the conditions and requirements of this construction permit are not included in this operating permit.

   According to 10 CSR 10-6.065 (6)(B)A.(II), the permittee shall file a revised Part 70 Operating Permit application within one year of equipment startup.

**Construction Permit Revisions**

The following revisions were made to construction permits for this installation:

1) APCP Construction Permit #0586-005A, issued May 15, 1986, authorized the installation of Sulfur Lehr Oven (EU-09).
   a) This construction permit required that records be kept for a period of at least two year. This requirement has been revised in the operating permit such that records must be kept for a period of at least five years to comply with General Permit and Record Keeping Requirements of 10 CSR 10-6.065.
   b) This construction permit required that the opacity from the exhaust stack not exceed 20% as specified in 10 CSR 10-3.080. 10 CSR 10-3.080 was rescinded on May 30, 2000 and replaced by 10 CSR 10-6.220. The requirements of 10 CSR 10-6.220 are included in Permit Condition (EU-09)-002.

2) APCP Construction Permit #022002-007, issued February 7, 2002, authorized the installation of two replacement electrical transformers with a resulting increase in the maximum production capacity of Glass Melting Furnace #52 (EU-05A-52).
   a) 10 CSR 10-6.220 was listed as an applicable rule; however, according to §(1)(H), emission sources regulated by 40 CFR part 60 and 10 CSR 10-6.070 are exempt. Therefore, 10 CSR 10-6.220 was not applied to Glass Melting Furnace #52 (EU-05A-52).
New Source Performance Standards (NSPS) Applicability
10 CSR 10-6.070, New Source Performance Regulations
1) 40 CFR Part 60, Subpart CC, Standards of Performance for Glass Manufacturing Plants
   The provisions of this subpart apply to each glass melting furnace that commenced construction, reconstruction or modification on or after June 15, 1979. This subpart does not apply to hand glass melting furnaces, glass melting furnaces designed to produce less than 4.55 Mg (5 tons) of glass per day and all-electric melters.
   a) Glass Melting Furnace #51 (EU-045A-51) is not subject to this rule because the unit was constructed in 1977.
   b) Glass Melting Furnace #52 (EU-05A-52) was modified after June 15, 1979 and therefore is subject to this rule. Emission testing conducted at the installation on June 21 and 22, 2006 demonstrated that the emission unit is in compliance with the rule.

Maximum Achievable Control Technology (MACT) Applicability
10 CSR 10-6.075, Maximum Achievable Control Technology Regulations
1) 40 CFR Part 63, Subpart T, National Emission Standards for Halogenated Solvent Cleaning
   The cleaning solvents covered by the MACT standard are solvents containing methylene chloride, perchloroethylene, trichloroethylene, 1,1,1-trichloroethane, carbon tetrachloride or chloroform, or any combination of these halogenated HAP solvents, in a total concentration greater than 5 percent by weight, as a cleaning and/or drying agent.
   The installation operates degreaser (EU-08) that use stoddard solvent as the cleaning agent. Therefore, the installation is not subject to the MACT.

2) 40 CFR Part 63 Subpart SSSSSS, National Emission Standards for Glass Manufacturing Area Sources
   On December 26, 2007, the US EPA promulgated standards for glass manufacturing area sources that operate one or more glass melting furnaces that produce at least 45 megagrams per year (Mg/yr) (50 tons per year (tpy)) of glass and are charged with one or more of the glass manufacturing metal HAP. This installation does not manufacture glass that is charged with one or more of the glass manufacturing metal HAP and therefore will not be subject to this rule.

   The Subpart applies to a facility that owns or operates a industrial boilers, institutional boilers, commercial boilers, and process heaters that is a major source, or is located at a major source, or is part of a major source of HAP emissions. A process heater is defined as a unit in which the combustion gases do not directly come into contact with process material or gases in the combustion chamber (e.g., indirect fired). A boiler is defined as an enclosed device using controlled flame combustion and having the primary purpose of recovering thermal energy in the form of steam or hot water.
   Piramal is an area source of HAPs and operates process and space heaters. The provisions of 40 CFR Part 63, Subpart DDDDDD do not apply to this installation.
4) 40 CFR Part 63, Subpart JJJJJJ, *National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers - Area Sources*

This regulation applies to boilers at area source facilities that burn coal, oil, biomass, or non-waste materials. Boilers burning natural gas as defined in this regulation would not be affected by the rule.

Piramal does not own or operate an industrial, commercial, or institutional boiler as defined in §63.11237 of this regulation, therefore, this regulation does not apply to Piramal.

**National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability**


40 CFR Part 61 Subpart M applies to all installations in the state of Missouri as described in Section IV Core Permit Requirements

**Compliance Assurance Monitoring (CAM) Applicability**

40 CFR Part 64, *Compliance Assurance Monitoring (CAM)*

The CAM rule applies to each pollutant specific emission unit that:

- Is subject to an emission limitation or standard, and
- Uses a control device to achieve compliance, and
- Has pre-control emissions that exceed or are equivalent to the major source threshold.

40 CFR Part 64 is not applicable because none of the pollutant-specific emission units uses a control device to achieve compliance with a relevant standard.

**Greenhouse Gas Emissions**

On May 13, 2010, EPA issued the GHG Tailoring Rule which set the major source threshold for CO$_2$e to be 100,000 tons per year within 40 CFR Part 70. As of July 1, 2011 all Title V operating permits are required to include GHG emissions. Potential emissions of greenhouse gases (CO$_2$e) for this installation are calculated to be 23,737.96 tons, classifying the installation as a minor source of GHGs. There are no currently issued GHG regulations applicable to this installation. Missouri regulations do not require the installation to report CO$_2$e emissions in their Missouri Emissions Inventory Questionnaire; therefore, the installation’s CO$_2$e emissions were not included within this permit.

**Updated Potential to Emit for the Installation**

<table>
<thead>
<tr>
<th>Pollutant</th>
<th>Potential to Emit (tons/yr)$^1$</th>
</tr>
</thead>
<tbody>
<tr>
<td>CO</td>
<td>19.29</td>
</tr>
<tr>
<td>CO$_2$e</td>
<td>23,737.96</td>
</tr>
<tr>
<td>HAP</td>
<td>0.29</td>
</tr>
<tr>
<td>NO$_x$</td>
<td>551.36</td>
</tr>
<tr>
<td>PM$_{10}$</td>
<td>141.73</td>
</tr>
<tr>
<td>PM$_{25}$</td>
<td>91.11</td>
</tr>
<tr>
<td>SO$_x$</td>
<td>30.11</td>
</tr>
<tr>
<td>VOC</td>
<td>13.78</td>
</tr>
</tbody>
</table>

$^1$Each emission unit was evaluated at 8,760 hours of uncontrolled annual operation unless otherwise noted.

- NO$_x$ emissions from Glass Melting Furnace #52 is based on the Construction Permit #022002-007 limit of 187.5 tons per year.
Other Regulatory Determinations

1) 10 CSR 10-6.220, Restriction of Emission of Visible Air Contaminants
   a) Glass Melting Furnace #52 (EU-05A-52) is not subject to this rule because according to §(1)(H), emission sources regulated by 40 CFR part 60 and 10 CSR 10-6.070 are exempt.

2) 10 CSR 10-6.260, Restriction of Emission of Sulfur Compounds
   a) Glass Melting Furnace #51 (EU-04A-51) and Glass Melting Furnace #52 (EU-05A-52) combust pipeline grade natural gas and/or liquid petroleum gas exclusively; however, since an electrical boost is used; this rule is applied in the operating permit. Based on results from the 2006 stack test, the maximum predicted concentration of SO2 from EU-04A-51 and EU-05A-52 are 12.9 and 27 ppmv, respectively. Therefore, the test results show that the units are in compliance with this rule.
   b) Sulfur Lehr Oven (EU-09) combusts pipeline grade natural gas and/or liquid petroleum gas exclusively; however, since sulfur dioxide (SO2) is pumped into the oven, this rule is applied in the operating permit. The sulfur dioxide (SO2) is pumped into the oven to convert any alkali salt on the glass surface to a neutral salt that can be flushed away in washing machines. According to Construction Permit #0586-005A, the maximum sulfur dioxide concentration of the stack gas is reported by the installation to be 130 ppm.
   c) The following emission units are not subject to this rule because according to §(1)(A)2, combustion equipment that uses exclusively pipeline grade natural gas as defined in 40 CFR 72.2 or liquid petroleum gas as defined in American Society for Testing and Materials (ASTM), or any combination of these fuels are exempt:
      i) Refiner on Furnace #51, fugitive, natural gas-fired (EU-04B-51)
      ii) Feeder on Furnace #51, fugitive, natural gas-fired (EU-04C-51)
      iii) Refiner on Furnace #52, fugitive, natural gas-fired (EU-05B-52)
      iv) Feeder on Furnace #52, fugitive, natural gas-fired (EU-05C-52)
      v) Annealing Lehrs, fugitive, natural gas-fired (EU-9)
      vi) Space heaters, natural gas-fired (EU-10)

3) 10 CSR 10-6.400, Restriction of Emission of Particulate Matter from Industrial Processes
   a) Glass Melting Furnace #51 (EU-04A-51) is subject to this rule. Calculations demonstrating compliance are listed in Attachment D.
   b) Glass Melting Furnace #52 (EU-05A-52) is subject to this rule. However, as shown below, the emission limit established by this rule is less restrictive than the emission limit that is established by NSPS Subpart CC in Permit Condition (EU-05A-52)-001. Therefore, the emission limit established by 10 CSR 10-6.400 is not included in the operating permit.
      10 CSR 10-6.400 PM emission limit:
      \[ \text{Allowable PM Emission Rate (E)} = 4.10 \times (P)^{0.67} \]  
      \[ \text{Where P = Process weight rate in tons/hr} \]
      \[ E = 4.10 \times (4.58)^{0.67} = 11.36 \text{ lbs/hr} \]
      NSPS Subpart CC PM emission limit:
      \[ \text{PM Emission Limit} = 0.5 \text{ g/kg or } 1.0 \text{ lb/ton glass} \]  
      \[ \text{Maximum Production Rate} = 110 \text{ tons glass/day} \]  
      \[ \text{PM emission limit} = 1.0 \text{ lb/ton x 110 tons/24 hours} = 4.58 \text{ lbs/hr} \]
   c) Sulfur Lehr Oven (EU-09) is not subject to this rule because according to §(1)(B)11, emission units that at maximum design capacity have a potential to emit less than one-half (0.5) pounds
per hour of particulate matter are exempt. As demonstrated below, Sulfur Lehr Oven (EU-09) has the potential to emit less than 0.5 lbs PM/hr.

MHDR: 2.0 MMBtu/hr [Source: Construction Permit #0586-005A]

PM Emission factor: 7.6 lb/MMcf [Source: EPA document AP-42, Table 1.4-2]

Natural gas heating value: 1020 MMBtu/MMcf [Source: EPA document AP-42, Table 1.4-2]

\[
PTE_{PM} = \frac{2.0 \text{ MMBtu/hr}}{\text{hr}} \times \frac{7.6 \text{ lbs PM/MMcft}}{\text{MMcft}} \times \frac{\text{MMcft}}{1020 \text{ MMBtu}} = 0.015 \text{ lbs/hr}
\]

d) The following emission units are not subject to this rule because according to §(1)(B)7, fugitive emissions are exempt:

i) Raw material (sand, limestone, soda ash) unloading, fugitive (EP-1)
ii) Raw material (sand, limestone, soda ash) conveying, fugitive (EP-1)
iii) Raw material (sand, limestone, soda ash) storage bins, fugitive (EP-2)
iv) Cullet (broken glass) crusher, fugitive (EP-14)

4) The units listed in the “Emission Units Without Limitations” section in the front of this permit either have no applicable regulations associated with them or are considered insignificant activities.

a) The sources in the table below listed as units without limitation are fugitive sources that do not emit regulated pollutants from a discrete stack or vent. These sources emit particulate matter directly into the ambient air. These sources do not have any type of capture/control devices and are not covered or required to control their emissions based on any past or current regulations. These sources are not subject to any specific rule except the core permit requirement of 10 CSR 10-6.170 and must comply with this requirement.

<table>
<thead>
<tr>
<th>Emission Unit #</th>
<th>Description of Emission Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU-04B-51</td>
<td>Refiner on Furnace #51, fugitive, natural gas-fired</td>
</tr>
<tr>
<td>EU-04C-51</td>
<td>Feeder on Furnace #51, fugitive, natural gas-fired</td>
</tr>
<tr>
<td>EU-05B-52</td>
<td>Refiner on Furnace #52, fugitive, natural gas-fired</td>
</tr>
<tr>
<td>EU-05C-52</td>
<td>Feeder on Furnace #52, fugitive, natural gas-fired</td>
</tr>
<tr>
<td>EU-01</td>
<td>Raw material (sand, limestone, soda ash) unloading, fugitive</td>
</tr>
<tr>
<td>EU-02</td>
<td>Raw material (sand, limestone, soda ash) storage bins, fugitive</td>
</tr>
<tr>
<td>EU-14</td>
<td>Cullet crusher, fugitive</td>
</tr>
</tbody>
</table>

b) The following is the list of equipment not subject to an applicable requirement identified as insignificant activities at the time of permit issuance.

<table>
<thead>
<tr>
<th>Emission Unit #</th>
<th>Description of Emission Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>EU-06</td>
<td>Bottle forming machine lubrication, fugitive</td>
</tr>
<tr>
<td>EU-08</td>
<td>Degreaser, Stoddard solvent, fugitive</td>
</tr>
<tr>
<td>EU-10</td>
<td>Space heaters, natural gas-fired</td>
</tr>
</tbody>
</table>
Other Regulations Not Cited in the Operating Permit or the Above Statement of Basis
Any regulation which is not specifically listed in either the Operating Permit or in the above Statement of Basis does not appear, based on this review, to be an applicable requirement for this installation for one or more of the following reasons:

1. The specific pollutant regulated by that rule is not emitted by the installation;
2. The installation is not in the source category regulated by that rule;
3. The installation is not in the county or specific area that is regulated under the authority of that rule;
4. The installation does not contain the type of emission unit which is regulated by that rule;
5. The rule is only for administrative purposes.

Should a later determination conclude that the installation is subject to one or more of the regulations cited in this Statement of Basis or other regulations which were not cited, the installation shall determine and demonstrate, to the APCP's satisfaction, the installation's compliance with that regulation(s). If the installation is not in compliance with a regulation which was not previously cited, the installation shall submit to the APCP a schedule for achieving compliance for that regulation(s).
MEMORANDUM

DATE: April 8, 2015

TO: 2013 12-023 File, Piramal Glass – USA, Inc.

FROM: Michael J. Stansfield, Environmental Engineer

SUBJECT: Response to Public Comments

There were five (5) comments received on July 18, 2014 from EPA Region 7. The comments are addressed in the order in which they appear within the letter and are quoted verbatim.

Comment #1: Emission Limitation #1 in Permit Condition (EU-045-A-51)-001 and Permit Condition (EU-09)-002 restrict the permittee from discharging into the atmosphere visible emissions with an opacity greater than 20% from any “new” (emphasis added) source. EPA suggests MDNR either define “new” (emphasis added) or use the date after which sources are considered “new.”

Response to Comment: The APCP agrees with your comment and the draft permit has been modified. A note stating that “New source: any equipment, machine, device, article, contrivance or installation installed in the outstate Missouri area after February 24, 1971 as defined in 10 CSR 10-6.020 (2)(E)44.B.” to clarify “new.”

Comment #2: EPA suggests MDNR re-word the Operational Limitation/ Equipment Specification in Permit Condition (EU-09)-003 to say “Permittee shall limit the emission unit to burning either pipeline grade natural gas or liquid petroleum gas (LPG).

Response to Comment: The APCP has rewarded the Operational Limitation/ Equipment Specification in Permit Condition (EU-09)-003 as suggested.

Comment #3: The Monitoring/Record keeping/Reporting requirement in Permit Condition (EU-04A-051)-002; Permit Condition (EU-04A-51)-003; Permit Condition (EU-05A-52)-002; and Permit Condition (EU-09)-003 all say “The permittee is assumed always to be in compliance with this regulation.” Federal Part 70 regulations and Missouri Air Pollution Control Regulations both require that Title V permits contain all applicable permit conditions that are practically enforceable and contain adequate monitoring to assure compliance. EPA is concerned that MDNR’s assumption that the permittee is always in compliance does not satisfy the assurance test required by regulations.

In the draft Statement of Basis, for this draft Part 70 operating permit, MDNR provides a written narrative, including calculations, which indicate the permittee achieves compliance with the sulfur and particulate matter emission limitations. MDNR’s presentation in the Statement of Basis is based on actual 2006 stack test data and accepted emission calculation formulas. Therefore, it would appear that the permittee compliance is not based on assumptions but on actual data. EPA recommends MDNR consider re-wording the first sentence in each of the Monitoring/Record keeping/Reporting requirements of Permit Condition (EU-04A-051)-002; Permit Condition (EU-04A-51)-003; Permit Condition (EU-05A-52)-002; and Permit Condition (EU-09)-003. Additionally, EPA recommends MDNR consider the addition of periodic stack gas testing to verify that the emission factor continues to provide compliance assurance.
Response to Comment: The APCP agrees in part and reworded the Monitoring/Record keeping/Reporting requirements of Permit Condition (EU-04A-051)-002; Permit Condition (EU-04A-51)-003; Permit Condition (EU-05A-52)-002; and Permit Condition (EU-09)-003 as recommended, but also disagrees with portions of EPA’s recommendation of the addition of stack gas testing. Since the potential emission rates of particulate matter and sulfur compounds are much less than their corresponding regulatory limits and since there is no provision in the underlying applicable requirements (Construction Permit 022002-007 and/or 40 CFR Part 60 Subpart CC) requiring additional periodic testing, the APCP will not require Piramal Glass conduct periodic performance testing.

Comment #4: The Emission Limitation and Operational Limitation/Equipment Specification in permit condition (EU-04A-51)-002 and Permit Condition (EU-09)-003 appear to be drafted as statements of fact and not as permittee requirements. EPA recommends MDNR consider rewording the Emission Limitation and Operational Limitation/Equipment Specification in permit condition (EU-04A-51)-002 and Permit Condition (EU-09)-003 to reflect permittee requirements.

Response to Comment: The APCP has rewarded the Operational Limitation/ Equipment Specification in Permit Condition (EU-04A-51)-002 and (EU-09)-003 as recommended.

Comment #5: Emission Limitation #1 in Permit Condition (EU-04A-51)-003 refers to emission unit EU-045A-51 and EPA believes the correct emission unit is EU04A-51 and recommends MDNR correct the emission unit number.

Response to Comment: The APCP agrees with your comment and the typographical error has been corrected.
Mr. Rajendra Kulkarni  
Piramal Glass - USA, Inc.  
1000 Taylor Avenue  
Park Hills, MO 63601  

Re: Piramal Glass - USA, Inc., 187-0017  
Permit Number: OP2015-019

Dear Mr. Kulkarni:

Enclosed with this letter is your Part 70 operating permit. Please review this document carefully. Operation of your installation in accordance with the rules and regulations cited in this document is necessary for continued compliance. It is very important that you read and understand the requirements contained in your permit.

You may appeal this permit to the Administrative Hearing Commission (AHC), P.O. Box 1557, Jefferson City, MO 65102, as provided in RSMo 643.078.16 and 621.250.3. If you choose to appeal, you must file a petition with the AHC within thirty 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 have any questions or need additional information regarding this permit, please do not hesitate to contact Berhanu Getahun at the St. Louis Regional Office, 7545 S. Lindbergh, Suite 210, St. Louis, MO 63125, or by telephone at (314) 416-2960. You may also contact me with the Department's Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102, or by telephone at (573) 751-4817.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Michael J. Stansfield, P.E.  
Operating Permit Unit Chief

MJS:bg

Enclosures

PAMS File: 2013-12-023