MISSOURI
DEPARTMENT OF
NATURAL RESOURCES
Air Pollution Control Program

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: OP2018-049
Expiration Date: JUN 0 5 2023
Installation ID: 099-0068
Project Number: 2011-12-011

Installation Name and Address
Ardagh Glass Inc.
1500 Ardagh Group Drive
Pevely, MO 63070
Jefferson County

Parent Company's Name and Address
Ardagh Glass Inc.
10194 Crosspoint Blvd, Suite 410
Indianapolis, IN 46256

Installation Description:
Ardagh Glass Inc. (formerly Saint-Gobain Containers, Inc.) owns and operates a soda-lime glass container manufacturing facility in Pevely, Missouri. Ardagh operates two (2) oxy-fuel glass furnaces.

Batches of dry ingredients are melted in two oxy-fuel glass furnaces and then processed into glass bottles for the beverage industry by molding, annealing, coating, and packaging operations. Ancillary operations include waste water treatment and general maintenance.

This installation is on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2, Number 27, any other stationary source category which as of August 7, 1980 is being regulated under section 111 or 112 of the Act. The installation is a major source of nitrogen oxides (NO_X).

for Michael Stansfield

Prepared by
Berhanu A. Getahun
Operating Permit Unit

Director or Designee
Department of Natural Resources

JUN 0 5 2018

Effective Date

Table of Contents

I. Installation Equipment Listing

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.

Emission Unit	Description of Emission Unit
EP02	Glass Melting Furnace Number 20
EP03	Glass Melting Furnace Number 21
EP06	Raw Material Handling:
	Rail Car Unloading (Screw), Baghouse Number 12
	Rail Car Unloading (Conveyor), Baghouse Number 13
EP27	1,100 GPM Cooling Water Tower (Mold Shop)
EP29	1,078 GPM Cooling Water Tower Number 1
EP32	Paved Haul Road
EP33	Unpaved Haul Road (Sand and Gravel)
EP34	Emergency Generator
EP35	ESP Precipitate Silo
EP36	Scrubber Soda Ash Silo
EP37	1,078 GPM Cooling Water Tower Number 2
EP39	Gasoline Aboveground Storage Tank (AST)
EP40	Emergency Fire Pump

EMISSION UNITS WITHOUT SPECIFIC LIMITATIONS

The following list provides a description of the equipment that does not have unit specific limitations at the time of permit issuance.

Emission Unit	Description of Emission Unit
EP04	Glass Annealing Lehr Number 20 – 8 Million British thermal units (MMBtu)/hr, pipeline natural gas fired
EP05	Glass Annealing Lehr Number 21 – 12 MMBtu/hr, pipeline natural gas fired
EP07	Mold Swabbing
EP12	Cullet Crushing System
EP13	Space Heaters, 1.504 MMBtu/hr total, pipeline natural gas fired
EP14	Parts Washer Units (using aqueous solvent)
EP15	Mold Preheat Ovens, 2.4 MMBtu/hr total, pipeline natural gas fired
EP16	Hot and Cold Melt Glue
EP17	Distributor Number 20 - 4.952 MMBtu/hr, pipeline natural gas fired
EP18	Distributor Number 21 -15.5 MMBtu/hr, pipeline natural gas fired
EP19	Hot End Coating for Furnace 20
EP20	Hot End Coating for Furnace 21
EP21	Forehearths Number 20 -4.024 MMBtu/hr total, pipeline natural gas fired
EP22	Forehearths Number 21 -11.7 MMBtu/hr total, pipeline natural gas fired
EP23	Laser Jet Date Coders
EP28	Three Above Ground Storage Tanks 10,800 Gallon Hydraulic Oil Tank 2,500 Gallon Used Oil Tank 300 Gallon Diesel Storage Tank
EP30	Carton Coding
EP38	Steam Clean Units -2.4 MMBtu/hr total
N/A	Electric Mold Preheat Ovens
N/A	Mold Repair
N/A	Sandblasting
N/A	Caustic Dip Tank

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. The plant wide conditions apply to all emission units at this installation. All emission units are listed in Section I under Emission Units with Limitations and Emission Units without Limitations.

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.

EP02 and EP03 — Glass Melting Furnaces

With an electrostatic precipitator (ESP) for the control of PM emissions and a semi-dry scrubber for the control of SO_2 emissions for both Furnaces 20 and 21.

Emission Unit	Description	Manufacturer/ Model #
EP02	Glass Melting Furnace Number 20, Oxy-fueled, 70 MMBtu/hr pipe line natural gas, Constructed 1980	Saint-Gobain Containers/ Oxy-fuel
EP03	Glass Melting Furnace Number 21, Oxy-fueled, 98 MMBtu/hr pipe line natural gas, Constructed 1980	Saint-Gobain Containers/ Oxy-fuel

Permit Condition (EP02 and EP03)-001

Production, SO_X, NO_X, H_2SO_4 Mist and Control Device Requirements

10 CSR 10-6.060, Construction Permits Required
Construction Permit No. 092012-004, Issued September 12, 2012
Global Consent Decree (GCD) Civil Action Case No. 2:10-cv-00121-TSZ

Emission Limitation:

1) Production Limitations:
   The permittee shall comply with the following production limitations:
   a) The pull rate for Furnace 20 shall not exceed 332 tons of glass per day.
   b) The pull rate for Furnace 21 shall not exceed 480 tons of glass per day.
2) NO_X Emission Limitations:
   a) Emission Rate 30-day Rolling Average Limit:
      The permittee shall not exceed the Emission Rate 30-day Rolling Average (see Attachment A) of 1.3 pounds of NO_X per ton of glass produced as measured using a NO_X Continuous Emission Monitoring System (CEMS), except during the following periods: Abnormally Low Production Rate Days; Furnace Startup; Malfunction of the Furnace; and Maintenance of the Furnace. A new Emission Rate 30-Day Rolling Average shall be calculated for each new Operating Day. Any Operating Day where the newly calculated Emission Rate 30-Day Rolling Average exceeds the limit is a separate one Day violation.
   b) NO_X Limit during Abnormally Low Production Rate (ALPR) Days:
      APLR days may be excluded from the Emission Rate 30-Day Rolling Average. ALPR is defined as any calendar day during which the glass pull rate falls below 116.2 tons per day (TPD) for Furnace 20 or 168 TPD for Furnace 21 for at least one continuous hour. During ALPR days that are excluded from the Emission Rate 30-Day Rolling Average, a CEMS shall be used to demonstrate compliance on a 24-hour Block Average with the following pound per day limit:

Furnace 20: $NO_{X\_oxy\_Abn\_20} = 1.3 \frac{lb\ NO_X}{ton} \times \left(\frac{P_{20}}{0.35} \right) = 431\ pounds\,(lbs)/day$

Furnace 21: $NO_{X\_oxy\_Abn\_21} = 1.3 \frac{lb\ NO_X}{ton} \times \left(\frac{P_{21}}{0.35} \right) = 624\ pounds\,(lbs)/day$

Where:

$NO_{X\_Oxy\_Abn\_20}$ = NO_X emission limit for Furnace 20 during an Abnormally Low Production Rate Day

$NO_{X\_Oxy\_Abn\_21}$ = NO_X emission limit for Furnace 21 during an Abnormally Low Production Rate Day

P_{20} & P_{21}= Furnace 20 and 21-specific production threshold on ALPR days (i.e., 116.2 tons of glass produced per day for Furnace 20, or 168.0 tons of glass per day for Furnace 21).

c) Limits during Furnace Startup

i) Initial Heating Phase Operational Limit - The shall burn no more than 5 million standard cubic feet (scf) of natural gas in that Furnace during the Initial Heating Phase of the Furnace Startup.

ii) Refractory Soak and Seal Phase Operational Limits – The permittee shall comply with the following operational limits to limit NO_X emissions during the Refractory Soak and Seal Phase of the Furnace Startup:

(1) Burn no more than 60 million standard cubic feet (scf) of natural gas in that Furnace;

(2) Limit excess oxygen below 5% at the Furnace exhaust flue, as determined by a handheld monitor, once per shift;

(3) Limit the Hot Spot Temperature to 2,900 degrees Fahrenheit (˚F), as determined by a handheld measurement device, once per shift; and

(4) Use thermal blankets or similar techniques to minimize air infiltration until expansion joints are sufficiently closed.

iii) Furnace Stabilization Phase Operational Limits – The permittee shall comply with the following operational limits to limit NO_X emissions during the Furnace Stabilization Phase of the Furnace Startup:

(1) Burn no more than 90,000,000 scf of natural gas in that Furnace;

(2) Limit excess oxygen below 5% at the Furnace exhaust flue as determined by a handheld monitor, once per shift; and

(3) Limit the Hot Spot Temperature to 2,900 ˚F, as determined by a handheld measurement device, once per shift.

d) NO_X Limits during Malfunction of the Furnace:

For any Operating Day where a Malfunction of a Furnace occurs for any period of time, the permittee may elect to exclude the emissions generated during that Operating Day (Operating Days if the event covers more than one Operating Day) from the Emission Rate 30-Day Rolling Average. During the Malfunction Days excluded from the Emission Rate 30-Day Rolling Average, a CEMS shall be used to demonstrate compliance on a 24 hour Block Average with the following pound per day limits:

Furnace 20: $NO_{X\_oxy\_Malf\_20} = 4 \times NO_{X\_oxy\_Abn\_20} = 1{,}724\ lbs/day$

Furnace 21: $NO_{X\_oxy\_Malf\_21} = 4 \times NO_{X\_oxy\_Abn\_21} = 2{,}496\ lbs/day$

Where:

$NO_{X\_Oxy\_Malf\_20}$ = NO_X emission limit for Furnace 20 during a Malfunction Day
$NO_{X\_Oxy\_Malf\_21}$ = NO_X emission limit for Furnace 21 during a Malfunction Day
$NO_{X\_Oxy\_Abn\_20}$ = NO_X emission limit for Furnace 20 during an Abnormally Low Production Rate Day = 431 lbs/day
$NO_{X\_Oxy\_Abn\_21}$ = NO_X emission limit for Furnace 21 during an Abnormally Low Production Rate Day = 624 lbs/day

e) NO_X Limits during Maintenance of the Furnace:
For any Operating Day where Maintenance activities on a Furnace are performed, the permittee may elect to exclude the Maintenance Day from the Emission Rate 30-Day Rolling Average. The use of this Maintenance exception shall be limited to 96 hours annually; however, maintenance time accrued while the Furnace is shut down does not count towards this total. For any Maintenance Day which is excluded from the Emission Rate 30-Day Rolling Average, a CEMS shall be used to demonstrate compliance on a 24-hour Block Average with the pound per day limit calculated using the following equations:

Furnace 20: $$NO_{X\_Oxy\_Maint\_20} = \frac{MH \times (4 \times NO_{X\_Abn\_20})}{24} + \frac{NH \times (NO_{X\_Abn\_20})}{24}$$

Furnace 21: $$NO_{X\_Oxy\_Maint\_21} = \frac{MH \times (4 \times NO_{X\_Abn\_21})}{24} + \frac{NH \times (NO_{X\_Abn\_21})}{24}$$

Where:

$NO_{X\_Oxy\_Maint\_20}$ = NO_X emission limit for Furnace 20 during a Maintenance Day, in lbs/day
$NO_{X\_Oxy\_Maint\_21}$ = NO_X emission limit for Furnace 21 during a Maintenance Day, in lbs/day
$NO_{X\_Oxy\_Abn\_20}$ = NO_X emission limit for Furnace 20 during an Abnormally Low Production Rate Day = 431 lb/day
$NO_{X\_Oxy\_Abn\_21}$ = NO_X emission limit for Furnace 21 during an Abnormally Low Production Rate Day = 624 lb/day
MH = Hours of Maintenance during a Maintenance Day (less than or equal to 24 hours per day)
NH = Normal Operating Hours during a Maintenance Day = 24 – MH.

3) SO_2 Emission Limitations:
a) SO_2 30-day Rolling Average Limit:
Commencing on the first Operating Day after completion of the Control Device Startup and CEMS certification, the permittee shall comply with the following limits as measured using a SO_2 CEMS, except during the following periods: Control Device Startup; Furnace Startup; Malfunction of the Scrubber System or ESP; and Maintenance of the Scrubber System or ESP.
i) No dilution air will be intentionally added to the stack gases between the Scrubber System and the CEMS. When determining compliance with all Scrubber System limits, there shall be no oxygen correction, as per vendor guarantee.

ii) The 30-Day Rolling Average limit for the combined exhaust from Furnaces 20 and 21 will be determined based on the measured daily Inlet 24-hour Block Average SO_2 concentrations (see Attachment A).

iii) A new Removal Efficiency 30-Day Rolling Average shall be calculated for each new Operating Day. Any Operating Day where the newly calculated Removal Efficiency 30-Day Rolling Average is less than the Removal Efficiency limit is a separate one Day violation.

iv) If the daily Inlet 24-hour Block Average SO_2 concentration is equal to or greater than 300 parts per million by volume dry (ppmvd), then 24-hour block average SO_2 removal efficiency is calculated and the 30-Day rolling average SO_2 removal efficiency shall be at or above 85%.

v) If the daily Inlet 24-hour Block Average SO_2 concentration is less than 300 ppmvd, then the 24-hour block average outlet concentration is calculated and the 30-Day rolling average outlet concentration shall be less than or equal to 45 ppmvd.

b) SO_2 Limit during Control Device Startup or Up to the First Seven Days of Furnace Startup:
The permittee shall comply with the following operational limit to limit SO_2 emissions during all phases of Control Device Startup or Furnace Startup:

i) During the startup period, the permittee will limit the amount of sulfur added to the batch materials to 2.6 lbs/ton of total batch material (including cullet) or less.

ii) During no more than the first seven days of Furnace Startup, the Furnace exhaust may bypass the semi-dry scrubber control system to avoid having the operating inlet temperature of the control system fall below its operational range. During these bypass days, natural gas combustion is limited to 15.0 million standard cubic feet (mmscf) in that Furnace. During Control Device Startup, this limitation will apply to both Furnaces, or up to the First Seven Days of Furnace Startup are complete.

c) SO_2 Limit during Malfunction of the Scrubber System or ESP:
For any Operating Day where a Malfunction of the control device occurs for any period of time, the permittee may elect to exclude the emissions generated during that Operating Day (or Operating Days if the event covers more than one Operating Day) from the 30-Day Rolling Average SO_2 Removal Efficiency or 30-Day Rolling Average SO_2 outlet concentration limit applicable during the Malfunction. During the Malfunction Days excluded from the 30-Day Rolling Averages, a CEMS shall be used to demonstrate compliance on a 24-Hour Block Average with the following lbs/day limit for the Malfunctioning Control Device calculated as the sum of the following two equations:

Furnace 20: $$SO_{2\_Scrub\_Malf\_20} = 2.5\frac{lb\,SO_2}{ton} \times \left(\frac{P_{20}}{0.35}\right) = 829\ lbs/day$$

Furnace 21: $$SO_{2\_Scrub\_Malf\_21} = 2.5\frac{lb\,SO_2}{ton} \times \left(\frac{P_{21}}{0.35}\right) = 1{,}200\ lbs/day$$

Where:

$SO_{2\_Scrub\_Malf\_20}$ = SO_2 emission limit for Furnace 20 during a Malfunction Day
$SO_{2\_Scrub\_Malf\_21}$ = SO_2 emission limit for Furnace 21 during a Malfunction Day
P_{20} = Furnace 20-specific production threshold on ALPR days (i.e., 116 tons of glass produced per day).

P_{21} = Furnace 21-specific production threshold on ALPR days (i.e., 168 tons of glass produced per day).

d) SO_2 Limit during Maintenance of the Scrubber System or ESP:
For any Operating Day where Maintenance activities on the Control Device are performed, the permittee may elect to exclude the Maintenance Day from the 30-Day Rolling Average Removal Efficiency and the 30-Day Rolling Average Control Device Outlet concentration emission limit applicable for that Maintenance event. The use of this Maintenance exception shall be limited to 144 hours annually, excluding maintenance hours when the Furnaces are shut down. For any Day which is excluded from the 30-Day Rolling Average Emission Rate, a CEMS shall be used to demonstrate compliance on a 24-Hour Block Average with the following pound per day limit for the Control Device undergoing Maintenance calculated as the sum of the two following equations:

Furnace 20: $$SO_{2\_Maint\_20} = \frac{MH \times [SO_{2\_Scrub\_Malf\_20}]}{24} + \frac{NH \times [1/3 \times SO_{2\_Scrub\_Malf\_20}]}{24}$$

Furnace 21: $$SO_{2\_Maint\_21} = \frac{MH \times [SO_{2\_Scrub\_Malf\_21}]}{24} + \frac{NH \times [1/3 \times SO_{2\_Scrub\_Malf\_21}]}{24}$$

Where:

$SO_{2\_Maint\_20}$ = SO_2 emission limit for Furnace 20 with a control device during a Maintenance Day, in lbs/day

$SO_{2\_Maint\_21}$ = SO_2 emission limit for Furnace 21 with a control device during a Maintenance Day, in lbs/day

NH = Normal Hours = 24 – MH during a Maintenance Day.

4) Sulfuric Acid (H_2SO_4) Mist Limit:
   a) The permittee shall emit less than or equal to 1 pound of H_2SO_4 per ton glass produced for both Furnaces 20 and 21 as emitted from the control device system.
   b) The permittee shall demonstrate compliance with the sulfuric acid mist limit through a stack test performed using Conditional Test Method 13A or 13B once during the life of each Title V permit.

Control Device Requirement – ESP and Semi-dry Scrubber:

1) The permittee shall operate an ESP and semi-dry scrubber control system to control the combined PM and SO_2 emissions from Furnaces 20 and 21. Furnace exhaust gas shall be routed to the ESP and semi-dry scrubber control system at all times, except during periods of Control Device Startup and during Malfunction of the Control Device and Maintenance on the Control Device and up to the first seven days of the Furnace Startup.
2) The ESP and semi-dry scrubber control system and any related instrumentation or equipment shall be operated and maintained in accordance with the manufacturer's specifications.
3) The permittee shall maintain an operating and maintenance log for the ESP and semi-dry scrubber control system which shall include the following:
   a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and
   b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

CEMS Requirements:

1) The permittee shall calibrate, certify, maintain and operate the CEMS for measuring NO_X emissions discharged to the atmosphere. The NO_X CEMS shall be located on each individual exhaust duct from Furnaces 20 and 21.
2) The permittee shall calibrate, maintain and operate the CEMS for measuring SO_2 emissions discharged to the atmosphere. The SO_2 CEMS shall be located on the combined inlet header and exhaust stack of the ESP/semi-dry scrubber control system.
3) The permittee must comply with all monitoring, recordkeeping and reporting requirements in 40 CFR § 60.13 and 40 CFR Part 60 Appendix B (Performance Specifications 2 and 6).
4) The NO_X and SO_2 CEMS shall be calibrated, certified, maintained, and operated in accordance with 40 CFR § 60.13, 40 CFR Part 60 Appendix B (Performance Specifications 2 and 6), and 40 CFR Part 60 Appendix F (Quality Assurance Procedures).
5) The NO_X and SO_2 CEMS shall monitor continuously and record the hourly NO_X and SO_2 emission concentration (parts per million) during each Operating Day from each Furnace. The CEMS shall calculate and record in units of parts per million (ppm) of NO_X and SO_2 emitted.
6) In conjunction with EPA approved flow method calculation or the flow rate monitoring device, the data acquisition and handling system for the CEMS shall convert the ppm values into pound per hour values where the limit is expressed in pounds of pollutant per ton of glass produced. At the end of each Operating Day, the data acquisition and handling system shall divide the total daily emissions in pounds per day for valid CEMS hourly data by the total tons of glass produced during the Operating Day (reduced proportionally based on the valid CEMS data hours) to describe the pounds per ton emission rate for the Operating Day. This number shall be recorded in units of pounds of pollutant per ton of glass produced for the applicable Day.
7) If a CEMS Certification Event occurs, then the requirement to demonstrate compliance continuously with the limit for that Furnace will be suspended until Certification is completed (provided the seven day test required for Certification is commenced the first Operating Day following the conclusion of the CEMS Certification Event). A "CEMS Certification Event" is defined as an event that triggers the requirement to complete the first or subsequent CEMS certification required by 40 CFR § 60.13, 40 CFR Part 60 Appendix B (Performance Specification 2) and 40 CFR Part 60 Appendix F (Quality Assurance Procedures).
8) The Permittee must certify the CEMS in accordance with 40 CFR 60.13, 40 CFR Part 60 Appendix B (Performance Specifications 2 and 6) and 40 CFR Part 60 Appendix F (Quality Assurance Procedures) on the first operating day after each CEMS Certification Event occurs. The CEMS certification cannot occur during periods of ALPR Days, Furnace Startup, Malfunction, Maintenance, or Color Transition. The permittee shall commence a new CEMS Certification on a particular Furnace on the first Operating Day after each CEMS Certification Event concludes on that Furnace.
9) The requirement to demonstrate compliance continuously with each NO_X or SO_2 emission limit for that Furnace will be suspended if a CEMS Certification Event occurs, until the Certification is completed (provided the seven day test required for Certification is commenced the first Operating Day following conclusion of the CEMS Certification Event).

Operation and Maintenance Requirements:

The permittee shall comply with the following operations and maintenance requirements:

1) Scheduled or preventative Furnace Maintenance shall not exceed 96 operating hours annually and shall be conducted only when any downstream control devices required by the Consent Decree are operating. For NO_X 30-Day Rolling Average exclusions, Maintenance Days that the permittee elects to exclude from the 30-Day Rolling Average Emission Rate shall not include more than 96 hours of

maintenance annually for each Furnace. Maintenance shall mean activities necessary to keep the system or equipment working in its normal operating condition.

2) Control system scheduled or preventive Maintenance of the emission control system shall occur when the Furnace is not operating. However, for any Calendar Year which is a Continuous Operating Year, scheduled or preventative maintenance may be conducted while the Furnace is in operation. During these Continuous Operating Years, Maintenance lasting greater than twenty-four (24) consecutive hours shall occur only during ALPR days.
3) Bypass of the control device for Maintenance when the Furnaces are operating shall not exceed 144 hours annually in any Calendar Year. If the ESP is bypassed, the Scrubber System must be bypassed as well. Bypass of the Scrubber system required by the bypass of the ESP shall be included in the 144 hours.

Recordkeeping:

1) For any Operating Day that the permittee is excluding emissions from the relevant 30-Day Rolling Average Emission Rate for NO_X and/or SO_2, the permittee shall record the date, the exception under which it is excluded, a calculation of the applicable limit (lbs/day) according to the equations above, and the recorded emissions according to the CEMS (lbs/day).
   a) For NO_X, the exceptions are Abnormally Low Production Rate Day, Furnace Startup, Control Device Startup, Malfunction, or Maintenance.
   b) For SO_2, The exceptions are Control Device Malfunction, Control Device Maintenance, Control Device Startup and Up to the First Seven Days of Furnace Startup.
2) For any Operating Day excluded for Maintenance, the permittee shall record the total number of hours during which Maintenance occurred (excluding maintenance hours when the Furnace is shut down).
3) During Furnace Startup period phases the permittee must also keep the following records:
   a) Initial Heating Phase:
      i) Total natural gas usage in that Furnace (in million standard cubic feet)).
   b) Refractory Soak and Seal Phase:
      i) Total natural gas usage in that Furnace (in mmcf);
      ii) Excess oxygen percentage at the Furnace exhaust flue (as determined by handheld monitor once per shift);
      iii) Hot Spot Temperature (measured once per shift); and
      iv) A certified statement asserting whether thermal blankets or similar techniques were used during this period.
   c) Furnace Stabilization Phase:
      i) Total natural gas usage in that Furnace (in million standard cubic feet);
      ii) Excess oxygen percentage at the Furnace exhaust flue (as determined by handheld monitor once per shift); and
      iii) Average Hot Spot Temperature (measured once per shift).
   d) During Furnace Startup period phases, the permittee will record the amount of sulfur added to the batch materials, in lbs/ton of total batch material.
4) The permittee shall record the daily glass pull rate for Furnace 20 and 21.
5) The permittee shall maintain all records required by this permit condition for not less than five years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request. These records shall include Safety Data Sheets (SDS) for all materials used.

Reporting:

1) If the permittee violates, or has reason to believe that it may have violated, any requirement of the Consent Decree, the permittee shall notify the Environmental Enforcement Section, Environment and Natural Resources Division, U.S. Department of Justice, P.O. Box 7611, Ben Franklin Station, Washington, DC 20044-7611 and the Missouri Department of Natural Resources, Air Pollution Control Program, Compliances and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102 of such violation and its duration or anticipated likely duration, in writing and by telephone, email or facsimile, within ten (10) business days of the time the permittee first becomes aware of the violation or potential violation. The notice should explain the violation's likely cause and the remedial steps taken, or to be taken, to prevent future violations. If the cause of a violation cannot be fully explained at the time notice is given, the permittee shall so state in the notice. After notice is given, the permittee shall investigate the cause of the violation and shall then submit an amendment to the report, including a full explanation of the cause of the violation, within thirty (30) Days of the Day the permittee becomes aware of the cause of the violation. Nothing in this Paragraph or the following Paragraph relieves the permittee of its obligation to provide the notice required by Section XII of the Consent Decree (Force Majeure).
2) Whenever any violation of this Consent Decree or any other event affecting the permittee's performance under this Decree, or the performance of its glass manufacturing Facility, may pose an immediate threat to the public health or welfare or the environment, the permittee shall notify EPA and the Missouri Department of Natural Resourses, orally or by electronic or facsimile transmission as soon as possible, but no later than twenty-four (24) hours after the permittee first knew of, or should have known of, the violation or event.
3) The permittee shall report any deviations/exceedances of this permit condition using the semi-annual monitoring report and annual compliance certification to the Air Pollution Control Program, Compliance and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by Section V of this permit.

Permit Condition (EP02 and EP03)-002
PM_{10} and Opacity Emission Limitation

10 CSR 10-6.060, Construction Permits Required
Construction Permit No. 0397-006, Issued March 3, 1997
Construction Permit No. 092012-004, Issued September 12, 2012
Global Consent Decree (GCD) Civil Action Case No. 2:10-cv-00121-TSZ
40 CFR Part 60, Subpart CC, Standards of Performance for Glass Manufacturing Plant
10 CSR 10-6.220, Restriction of Emission of Visible Air Contaminants

Emission Limitation:

1) Particulate matter less than 10 microns in diameter (PM_{10}) Emission Limitation:
The permittee shall emit less than or equal to 0.2 pounds of filterable particulate matter (PM) per ton of glass produced and 0.45 pounds of total PM per ton of glass produced for both Furnaces 20 and 21 as emitted from the control device system. [1]

[1] The §60.292 of 40 CFR Part 60 standard for particulate matter from any glass melting furnace fired exclusively with a gaseous fuel is 0.1 gram per kilogram of glass produced. This limit is equivalent to [(0.1g/kg x 0.0022046 lb/g x 907.1847 kg/ton) = 0.2 lb/ton.

2) The permittee shall not cause or permit to be discharged into the atmosphere from any furnace any visible emissions with an opacity greater than 20%.
   Exception: The permittee may discharge into the atmosphere visible emissions of up to 40% for a period not aggregating more than one (1) six (6) minutes period in any 60 minutes.
3) Continuous Opacity Monitoring System (COMS) Requirements:
   a) The permittee must calibrate, certify, maintain, and operate continuously the COMS during each operating Day on the common exhaust stack for the ESP/semi-dry scrubber control system for Furnaces 20 and 21.
   b) The permittee shall operate the COMS in accordance with Performance Specification 1 of 40 CFR 60, Appendix B.

Monitoring/Compliance Demonstration:

1) The permittee shall demonstrate compliance with the filterable and total PM emission limits by annual stack tests performed using EPA Test Method 5 for filterable PM and Test Method 5 and 202 for total PM. This testing will be performed at the common stack from the electrostatic precipitator (ESP) controlling the combined PM emissions from both Furnaces.
2) The permittee shall determine compliance with the limits on each Furnace set forth herein using the following equation:

$$PM\ Emission\ Rate = \frac{(lbs\ PM\ from\ ST)}{Daily\ Production\ (tons)} \times \frac{24\ hours}{Source\ Test\ Length\ (hrs)}$$

Where:

PM Emission Rate = PM emission limit in pounds PM per ton glass produced
lbs of PM from ST = The pounds of PM measured during the entire length of the source test (including all runs).
Daily Production = The amount of glass produced on all Furnaces during the Day of the source test.
Source Test Length = Length of the entire source test (including all runs), in hours.

3) If the resulting PM Emission Rate is below the limit set forth on each Furnace individually, then all included Furnaces are in compliance. If the resulting PM Emission Rate is above the limits set forth on each Furnace individually, then all included Furnaces are in noncompliance.
4) Control Device Monitoring Requirement:
   a) The permittee shall comply with all monitoring, recordkeeping and reporting requirements in 40 CFR 60.13 and 40 CFR 60, Appendix B (Performance Specification 1) for the COMS.
   b) The COMS certification cannot occur during periods of ALPR Days, Furnace Startup, Control Device Startup, Malfunction, or Maintenance.
   c) The permittee shall operate and maintain the ESP and semi-dry scrubber control system and any related instrumentation or equipment in accordance with the manufacturer's specifications. The operating parameters shall be maintained within the design conditions specified by the manufacturer's performance warranty.

Recordkeeping:

1) The permittee shall maintain an operating and maintenance log for the ESP and semi-dry scrubber control system which shall include the following:
   a) Incidents of malfunction, with impact on emissions, duration of event, probable cause, and corrective actions; and

b) Maintenance activities, with inspection schedule, repair actions, and replacements, etc.

2) The permittee shall maintain all monitoring information, data and test results for five years from the date of sample, measurement or report. [Construction Permit #0397-006, Special Condition #8]
3) The permittee shall maintain for five years any compliance test reports or quality assurance checks for the monitoring system. [Construction Permit #0397-006, Special Condition #9]

Reporting:

1) The permittee shall submit quarterly opacity excess emission reports within 30 days following the end of each quarter to the Air Pollution Control Program Enforcement Section, P.O. Box 176, Jefferson City, MO 65102. The report will include, but not limited to, the following information:
   a) The date and time of commencement and completion of each period of excess emissions (Opacity excess emissions are defined to be all six-minute averages of opacity greater than the limits established in Emission Limitation 2);
   b) The magnitude of the excess emissions, which is determined by arithmetically averaging a minimum of 36 equally spaced instantaneous opacity measurements per six-minute period;
   c) The nature and cause of the excessive emissions (if known) and the corrective action taken or preventative measures adopted; and
   d) The date and time of commencement and completion of any period in which the opacity monitoring system was inoperative except for zero and span checks. The report shall identify the repairs or adjustments made to the system.
2) 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 emission report shall be filed stating such information. [Construction Permit #0397-006, Special Condition #7]

Permit Condition (EP02 and EP03)-003

10 CSR 10-6.075, Maximum Achievable Technology Regulations
40 CFR Part 63, Subpart SSSSSS, National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources

Emission Limitation:

As required in §63.11451, the permittee must comply with the following emission limit in the following table, Table 1 to Subpart SSSSSS of Part 63 - Emission Limits:

For each.	**The permittee must meet one of the following emission limits.**
Glass melting furnace that produces glass at an annual rate of at least 45 Mg/yr (50 tpy) AND is charged with compounds of arsenic, cadmium, chromium, manganese, lead, or nickel as raw materials	a. The 3-hour block average production-based PM mass emission rate must not exceed 0.1 gram per kilogram (g/kg) (0.2 pound per ton (lb/ton)) of glass produced; OR b. The 3-hour block average production-based metal HAP mass emission rate must not exceed 0.01 g/kg (0.02 lb/ton) of glass produced.

Continuous Compliance Requirements:

For each affected furnace that is subject to the emission limit specified in Table 1 to Subpart SSSSSS of Part 63 (listed above in) and can meet the applicable emission limit without the use of a control device, the permittee must demonstrate continuous compliance by satisfying the applicable recordkeeping requirements specified in §63.11457. [§63.11455(e)]

Recordkeeping:

1) The permittee must keep the records specified in §6.1145 (a)(1) through (4) (listed below). [§63.11457(a)]
   a) A copy of any Initial Notification and Notification of Compliance Status that the permittee submitted and all documentation supporting those notifications, according to the requirements in §63.10(b)(2)(xiv). [§63.11457(a)(1)]
   b) The records specified in §63.10(b)(2). [§63.11457(a)(2)]
   c) The records required to show continuous compliance with each emission. [§63.11457(a)(3)]
   d) For each furnace, records of production rate on a process throughput basis (either feed rate to the process unit or discharge rate from the process unit). The production data must include the amount (weight or weight percent) of each ingredient in the batch formulation, including all glass manufacturing metal HAP compounds. [§63.11457(a)(4)]
2) The permittee's records must be in a form suitable and readily available for expeditious review, according to §63.10(b)(1). [§63.11457(b)]
3) The permittee must record the results of each inspection and maintenance action in a logbook (written or electronic format). The permittee must keep the logbook onsite and make the logbook available to the Missouri Department of Natural Resources' Personnel upon request. [§63.11457(c)]
4) As specified in §63.10(b)(1), the permittee must keep each record for a minimum of 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record. The permittee must keep each record onsite for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record, according to §63.10(b)(1). You may keep the records offsite for the remaining three years. [§63.11457(d)]

Notification:

The permittee must submit a Notification of Compliance Status in accordance with §63.9(h), including the performance test results, before the close of business on the 60th day following the completion of the performance test, according to §60.8 or §63.10(d)(2). [§63.11456(b)]

EP06 – Raw Material Handling		
Emission Unit	Description	Manufacturer/ Model #
EP06	Rail Car Unloading (Screw), Constructed 1980. MHDR = 131 TPH (Baghouse #12)	AAF International/ Serial #01-3556
	Rail Car Unloading (Conveyor), Constructed 1980. MHDR = 260 TPH (Baghouse #13)	FlexKleen/ Model #58BVB
	Truck Unloading (Screw), Constructed 1980. MHDR = 180 TPH	Not Available

Permit Condition (EP06) - 001

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

Emission Limitation:

1) The permittee shall not emit particulate matter in excess of:
   - 54.03 lbs/hr from Rail Car Unloading (Screw);
   - 61.39 lbs/hr from Rail Car Unloading (Conveyor); and
   - 57.37 lbs/hr from Truck Unloading (Screw).
2) The permittee shall not cause, allow or permit the emission of particulate matter from the Raw Material Handling System in a concentration in excess of 0.30 grain per standard cubic foot of exhaust gases.

Monitoring/Recordkeeping/Reporting:

Not required (See Statement of Basis).

EP27, EP29 and EP37 – Cooling Water Towers	
Emission Unit	Description
EP27	1,100 gallons per minute (GPM) Cooling Water Tower, Model #3294-24
EP29	1,078 GPM Cooling Water Tower (Mold Shop), Model #3204C-JM
EP37	1,078 GPM Cooling Water Tower, Model #3204C-JM

Permit Condition (EP27, EP29 and EP37) - 001

10 CSR 10-6.060, Construction Permits Required
Construction Permit No. 092012-004C, Amendment to Permit No. 092012-004

Operational Limitation:

1) The permittee shall operate and maintain the cooling tower(s) in accordance with the manufacturer's specifications. Manufacturer's specifications shall be kept on site and made readily available to Department of Natural Resources' employees.
2) Each tower shall be equipped with a gauge or meter, which indicates the flowrate. These gauges or meters shall be located such that the Department of Natural Resources' employees may easily observe them.
3) The total dissolved solids (TDS) concentration in the circulated cooling water shall not exceed a TDS concentration of 5,000 parts per million (ppm). A TDS sample shall be collected at the blow-down at each tower and the results recorded monthly to verify the TDS concentration.

Monitoring/Testing:

1) The permittee shall conduct monthly testing using an Air Pollution Control Program preapproved method.
2) A TDS concentration above the limit will be considered an exceedance and the permittee shall implement corrective actions within 48 hours. An exceedance does not necessarily indicate a violation of the limit.
3) When the number of exceedances exceeds three percent of the total number of tests in a six month period and corrective actions fail to return the emission units to level below the limit, then the permittee shall submit a complete Application for Authority to Construct to the Air Pollution Control Program within 90 days of the last exceedance.

Recordkeeping:

The permittee shall keep records of the monthly and 12-month rolling averages of the amount of water circulated.

Reporting:

The permittee shall report any deviations/exceedances of this permit condition using the semi-annual monitoring report and annual compliance certification to the Missouri Department of Natural Resources Air Pollution Control Program, Compliances and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by Section V of this permit.

EP32 and EP33 – Haul Roads	
Emission Unit	Description
EP32	Paved Haul Road
EP33	Unpaved Haul Road (Sand and Gravel)

Permit Condition (EP32 and EP33)-001

10 CSR 10-6.060, Construction Permits Required
Construction Permit No. 092012-004, Issued September 12, 2012

Haul Road Watering: [Construction Permit 092012-004, Special Condition 6]

1) The permittee shall water haul roads whenever conditions exist which would cause visible fugitive emissions to enter the ambient air beyond the property boundary.
2) Watering may be suspended when the ground is frozen, during periods of freezing conditions when watering would be inadvisable for traffic safety reasons, or when there will be no traffic on the roads.

Reporting:

The permittee shall report any deviations of this permit condition using the semi-annual monitoring report and annual compliance certification to the Missouri Department of Natural Resources Air Pollution Control Program, Compliances and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by Section V of this permit.

EP34 – Emergency Generator		
Emission Unit	Description	Manufacturer/ Model #
EP34	500 kW (750 HP) Diesel-Fired Emergency Generator Put into Service in 2013	MTU Onsite Energy/ Engine Model #MTU 10V1600G80S Serial #355129-1-1-1212

Permit Condition (EP34)-001

10 CSR 10-6.070 New Source Performance Regulations
40 CFR Part 60, Subpart IIII Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Emission Limitation/Standards:

2007 model year and later emergency CI ICE - with a displacement of less than 30 liters per cylinder

1) The Permittee must comply with the emission standards for new nonroad CI engines in §60.4202, for all pollutants, for the same model year and maximum engine power for their 2007 model year and later emergency stationary CI ICE. [§60.4205(b)]
2) The General Provisions of 40 CFR 60.1 through 19 apply as indicated in Table 8 of 40 CFR 60, Subpart IIII except that the permittee is not required to submit initial notification. [§60.4218 & §60.4214(b)]

3) The permittee must operate and maintain the emergency stationary CI ICE that achieve the emission standards as required in §60.4205(b) over the entire life of the engines. [§60.4206]

Operational Limitation:

The permittee must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel, except that any existing diesel fuel purchased (or otherwise obtained) prior to October 1, 2010, may be used until depleted: [§60.4207(b)]

1) Sulfur content. 15 parts per million (ppm) maximum. [§80.510(b)(1)(i)]
2) Cetane index or aromatic content, as follows: [§80.510(b)(2)]
   a) A minimum cetane index of 40; or [§80.510(b)(2)(i)]
   b) A maximum aromatic content of 35 volume percent. [§80.510(b)(2)(ii)]

Monitoring/Compliance Requirements:

1) Prior to the startup of each engine, the permittee must install a non-resettable hour meter on each engine that does not meet the applicable emission standards for non-emergency engines. [§60.4209(a)]
2) The permittee must do all of the following, except as permitted under §60.4211(g): [§60.4211(a)]
   a) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions; [§60.4211(a)(1)]
   b) Change only those emission-related settings that are permitted by the manufacturer; and [§60.4211(a)(2)]
   c) Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you. [§60.4211(a)(3)]
3) The permittee must comply with the emission standards specified in §60.4205(b), the permittee must comply by purchasing an engine certified to the emission standards in §60.4205(b), for the same model year and maximum engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in §60.4211(g). [§60.4211(c)]
4) The permittee must operate the emergency stationary ICE according to the requirements in §60.4211(f)(1), (f)(2)(i) and (f)(3). In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in §60.4211(f)(1), (f)(2)(i) and (f)(3), is prohibited. If the permittee does not operate the engine according to the requirements in §60.4211(f)(1), (f)(2)(i) and (f)(3), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. [§60.4211(f)]
   a) There is no time limit on the use of emergency stationary ICE in emergency situations. [§60.4211(f)(1)
   b) The permittee may operate the emergency stationary ICE for any combination of the purposes specified in paragraphs §60.4211 (f)(2)(i) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by §60.4211(f)(3) counts as part of the 100 hours per calendar year allowed by this paragraph §60.4211 (f)(2)(i). [§60.4211(f)(2)]
      i) Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or

operator maintains records indicating that federal, state, or local standards require maintenance and testing of emergency ICE beyond 100 hours per calendar year. [§60.4211(f)(2)(i)]

c) Emergency stationary ICE may be operated for up to 50 hours per calendar year in non-emergency situations. The 50 hours of operation in non-emergency situations are counted as part of the 100 hours per calendar year for maintenance and testing and emergency demand response provided in §60.4211(f)(2). Except as provided in §60.4211(f)(3)(i), the 50 hours per calendar year for non-emergency situations cannot be used for peak shaving or non-emergency demand response, or to generate income for a facility to an electric grid or otherwise supply power as part of a financial arrangement with another entity. [§60.4211(f)(3)]

i) The 50 hours per year for non-emergency situations can be used to supply power as part of a financial arrangement with another entity if all of the following conditions are met: [§60.4211(f)(3)(i)]

(A) The engine is dispatched by the local balancing authority or local transmission and distribution system operator; [§60.4211(f)(3)(i)(A)]

(B) The dispatch is intended to mitigate local transmission and/or distribution limitations so as to avert potential voltage collapse or line overloads that could lead to the interruption of power supply in a local area or region. [§60.4211(f)(3)(i)(B)]

(C) The dispatch follows reliability, emergency operation or similar protocols that follow specific NERC, regional, state, public utility commission or local standards or guidelines. [§60.4211(f)(3)(i)(C)]

(D) The power is provided only to the facility itself or to support the local transmission and distribution system. [§60.4211(f)(3)(i)(D)]

(E) The permittee identifies and records the entity that dispatches the engine and the specific North American Electric Reliability Corporation (NERC), regional, state, public utility commission or local standards or guidelines that are being followed for dispatching the engine. The local balancing authority or local transmission and distribution system operator may keep these records on behalf of the permittee. [§60.4211(f)(3)(i)(E)]

Recordkeeping/Reporting:

1) Notification, Reports, and Records: [§60.4214]
According to §60.4214(b), the permittee is not required to submit an initial notification.
2) The Permittee shall keep records of the operation of the engine, including the length of each operation (in hours and minutes) and reason the engine was in operation (emergency, maintenance, or testing).

EP35 – ESP Precipitator Silo EP36 – Scrubber Soda Ash Silo		
Emission Unit	Description	Manufacturer/ Model #
EP35	ESP Precipitator Silo –Storage Bin Vent Filter, Constructed in 2014	GEA Bischoff
EP36	Scrubber Soda Ash Silo – Storage Bin Vent Filter, Constructed in 2014	GEA Bischoff

Permit Condition (EP35 and EP36)-001

10 CSR 10-6.060, Construction Permits Required
Construction Permit No. 092012-00BC, Issued January 23, 2014

Control Device Requirement – Storage Bin Vent Filter

1) The permittee shall control emissions from the ESP Silo (EP-35) and the Scrubber Silo (EP-36), using storage bin vent filters as specified in the application.
2) The permittee shall operate and maintain the storage bin vent filters in accordance with the manufacturer's specifications.
3) Replacement filters for the storage bin vent filters shall be kept on hand at all times. The filters shall be made of fibers appropriate for operating conditions expected to occur (i.e. temperature limits, acidic and alkali resistance, and abrasion resistance).

Reporting:

The permittee shall report any deviations of this permit condition using the semi-annual monitoring report and annual compliance certification to the Missouri Department of Natural Resources Air Pollution Control Program, Compliances and Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as required by Section V of this permit.

EP39 - Gasoline Storage Tank	
Emission Unit	Description
EP39	300 Gallon Above-Ground Gasoline Storage Tank; with monthly throughput of less than 10,000 gallons of gasoline

Permit Condition (EP39) - 001

10 CSR 10-6.075 Maximum Achievable Control Technology Regulations
40 CFR Part 63, Subpart CCCCCC National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities

Emission Limitation:

§63.11116 Requirements for facilities with monthly throughput of less than 10,000 gallons of gasoline.

1) The permittee must not allow gasoline to be handled in a manner that would result in vapor releases to the atmosphere for extended periods of time. Measures to be taken include, but are not limited to, the following: [§63.11116(a)]
   a) Minimize gasoline spills; [§63.11116(a)(1)]
   b) Clean up spills as expeditiously as practicable; [§63.11116(a)(2)]

c) Cover all open gasoline containers and all gasoline storage tank fill-pipes with a gasketed seal when not in use; [§63.11116(a)(3)]
d) Minimize gasoline sent to open waste collection systems that collect and transport gasoline to reclamation and recycling devices, such as oil/water separators. [§63.11116(a)(4)]

2) The permittee is not required to submit notifications or reports as specified in §63.11125, §63.11126, or Subpart A of 40 CFR Part 63, but the permittee must have records available within 24 hours of a request by the Administrator to document the permittee's gasoline throughput. [§63.11116(b)]
3) Portable gasoline containers that meet the requirements of 40 CFR part 59, Subpart F, *Control of Evaporative Emissions From New and In-Use Portable Fuel Containers*, are considered acceptable for compliance with §63.11116(a)(3). [§63.11116(d)]

EP40 – Emergency Fire Pump		
Emission Unit	Description	Manufacturer/ Model #/Serial #
EP40	142 HP Diesel-Fired Emergency Fire Pump – 1,000 GPM fire pump with 200 gallon day tank. USEPA Certified Engine Manufacture/Installation Date: 2015	John Deere/ Model #6068HFC28 Serial #PE6068226L26906

Permit Condition (EP40)-001

10 CSR 10-6.070 New Source Performance Regulations
40 CFR Part 60, Subpart IIII Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Emission Limitation/Standards:

Model year 2010 and later fire pump engine - with a displacement of less than 30 liters per cylinder:

1) As stated in 60.4205(c), for the fire pump engine with a maximum engine power greater than or equal to 75 kilowatt (KW) (130 horsepower (HP) and less than or equal to 130 KW (175 HP) for model year 2010 and later, the permittee must comply with the following emission standards: [Table 4 of 40 CFR 60, Subpart IIII].
   - 4.0 grams per kilowatt-hour (g/KW-hr) (3grams per horsepower-hr(g/HP-hr) of nonmethane hydrocarbon NMHC) and oxides of nitrogen (NO_X); and
   - 0.30 g/KW-hr (0.22 g/HP-hr) of PM.
2) The General provisions of 40 CFR 60.1 through 19 apply as indicated in Table 8 of 40 CFR 60, Subpart IIII except that the permittee is not required to submit initial notification. [§60.4218 & §60.4214(b)]
3) The permittee must operate and maintain the emergency fire pump that achieve the emission standards as required in §60.4205(c) over the entire life of the engines. [§60.4206]

Operational Limitation:

The permittee must use diesel fuel that meets the requirements of 40 CFR 80.510(b) for nonroad diesel fuel: [§60.4207(b)]

1) Sulfur content. 15 parts per million (ppm) maximum. [§80.510(b)(1)(i)]
2) Cetane index or aromatic content, as follows: [§80.510(b)(2)]
   a) A minimum cetane index of 40; or [§80.510(b)(2)(i)]
   b) A maximum aromatic content of 35 volume percent. [§80.510(b)(2)(ii)]

Monitoring/Compliance Requirements:

1) The permittee must install a non-resettable hour meter on the fire pump engine prior to startup of the engine. [§60.4209(a)]
2) The permittee must do all of the following, except as permitted under §60.4211(g): [§60.4211(a)]
   a) Operate and maintain the stationary CI internal combustion engine and control device according to the manufacturer's emission-related written instructions; [§60.4211(a)(1)]
   b) Change only those emission-related settings that are permitted by the manufacturer; and [§60.4211(a)(2)]
   c) Meet the requirements of 40 CFR parts 89, 94 and/or 1068, as they apply to you. [§60.4211(a)(3)]
3) The permittee must comply by purchasing an engine certified to the emission standards in §60.4205(c), for the same model year and maximum (or in the case of fire pumps, NFPA nameplate) engine power. The engine must be installed and configured according to the manufacturer's emission-related specifications, except as permitted in §60.4211(g). [§60.4211(c)]
4) The permittee may operate the emergency fire pump engine for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by Federal, State, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the permittee maintains records indicating that Federal, State, or local standards require maintenance and testing of emergency ICE beyond 100 hours per year. For emergency engines meeting standards under §60.4205, any operation other than emergency operation, and maintenance and testing as permitted in this section, is prohibited. [§60.4211(e)]
5) The permittee must operate the emergency stationary ICE according to the requirements in §60.4211(f)(1), (f)(2)(i) and (f)(3). In order for the engine to be considered an emergency stationary ICE under this subpart, any operation other than emergency operation, maintenance and testing, emergency demand response, and operation in non-emergency situations for 50 hours per year, as described in §60.4211(f)(1), (f)(2)(i) and (f)(3), is prohibited. If the permittee does not operate the engine according to the requirements in §60.4211(f)(1), (f)(2)(i) and (f)(3), the engine will not be considered an emergency engine under this subpart and must meet all requirements for non-emergency engines. [§60.4211(f)]
   a) There is no time limit on the use of emergency stationary ICE in emergency situations. [§60.4211(f)(1)
   b) The permittee may operate the emergency stationary ICE for any combination of the purposes specified in paragraphs §60.4211 (f)(2)(i) for a maximum of 100 hours per calendar year. Any operation for non-emergency situations as allowed by §60.4211(f)(3) counts as part of the 100 hours per calendar year allowed by this paragraph §60.4211 (f)(2)(i). [§60.4211(f)(2)]
      i) Emergency stationary ICE may be operated for the purpose of maintenance checks and readiness testing, provided that the tests are recommended by federal, state, or local government, the manufacturer, the vendor, or the insurance company associated with the engine. Maintenance checks and readiness testing of such units is limited to 100 hours per year. There is no time limit on the use of emergency stationary ICE in emergency situations. The permittee may petition the Administrator for approval of additional hours to be used for maintenance checks and readiness testing, but a petition is not required if the owner or operator maintains records indicating that federal, state, or local standards require

maintenance and testing of emergency ICE beyond 100 hours per calendar year. [§60.4211(f)(2)(i)]

Recordkeeping/Reporting:

1) Notification, Reports, and Records for Owners and Operators: [§60.4214]
   According to §60.4214(b), the permittee is not required to submit an initial notification.
2) The Permittee shall keep records of the operation of the engine, including the length of each operation (in hours and minutes) and reason the engine was in operation (emergency, maintenance, or testing).

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 are only excerpts from the regulation or code, and are 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.

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) 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 to the director in writing at least ten days prior to any maintenance, start-up or shutdown activity 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, notice shall be given as soon as practicable prior to the activity.
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. The permittee shall retain the most current operating permit issued to this installation on-site. The permittee shall immediately make such permit available to any Missouri Department of Natural Resources personnel upon request.

10 CSR 10-6.080 Emission Standards for Hazardous Air Pollutants and 40 CFR Part 61 Subpart M National Emission Standard for Asbestos
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.

10 CSR 10-6.100 Alternate Emission Limits
Proposals for alternate emission limitations shall be submitted on Alternate Emission Limits Permit forms provided by the department. An installation owner or operator must obtain an Alternate Emission Limits Permit in accordance with 10 CSR 10-6.100 before alternate emission limits may become effective.

10 CSR 10-6.110 Reporting of Emission Data, Emission Fees and Process Information
1) The permittee shall submit a 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) 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.
3) 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.

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 10-6.165 Restriction of Emission of Odors

This requirement is a State Only permit requirement.

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 10-6.170

Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin

Emission Limitation:

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 10-6.220 Restriction of Emission of Visible Air Contaminants

Note: The monitoring and recordkeeping requirements do not apply to the glass melting furnaces (EP-02 and EP03) equipped with continuous opacity monitoring system (COMS)

Emission Limitation:

The permittee shall not cause or permit to be discharged into the atmosphere from any source not exempted under 10 CSR 10-6.220 any visible emissions in excess of the limits specified by this rule. This permit will contain the opacity limits identified (10, 20 or 40 percent) for the specific emission units.

Monitoring:

1) The permittee shall conduct visible emission observations on each emission unit using the procedures contained in USEPA Test Method 22. The permittee is only required to make observations when the emission unit is operating and when the weather conditions allow. If the permittee observes no visible or other significant emissions using these procedures, then no further observations are 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 permittee must maintain the following monitoring schedule:
   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.

Recordkeeping:

The permittee shall maintain records of all observation results using Attachments C and D (or equivalents), noting:

1) Whether any air emissions (except for water vapor) were visible from the emission units;
2) All emission units from which visible emissions occurred;
3) Whether the visible emissions were normal for the process;
4) The permittee shall maintain records of any equipment malfunctions, which may contribute to visible emissions; and,
5) The permittee shall maintain records of all USEPA Method 9 opacity tests performed.

10 CSR 10-6.250 Asbestos Abatement Projects – Certification, Accreditation, and Business Exemption Requirements

This is a State Only permit requirement.

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.

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 at an installation:
   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.

10 CSR 10-5.040 Use of Fuel in Hand-Fired Equipment Prohibited

No owner or operator shall operate applicable hand-fired fuel burning equipment unless the owner or operator meets the conditions set forth in 10 CSR 10-5.040. This regulation shall apply to all hand-fired fuel-burning equipment at commercial facilities including, but not limited to, furnaces, heating and cooking stoves and hot water furnaces. It shall not apply to wood-burning fireplaces and wood-burning stoves in dwellings, nor to fires used for recreational purpose, nor to fires used solely for the preparation of food by barbecuing or to other equipment exempted under 10 CSR 10-5.040. Hand-fired fuel-burning equipment is any stove, furnace, or other fuel-burning device in which fuel is manually introduced directly into the combustion chamber.

10 CSR 10-5.060 Refuse Not to be Burned in Fuel Burning Installations (Rescinded on February 11, 1979, Contained in State Implementation Plan)

No person shall burn or cause or permit the burning of refuse in any installation which is designed for the primary purpose of burning fuel.

40 CFR Part 82 Protection of Stratospheric Ozone (Title VI)

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 40 CFR §82.106.

b) The placement of the required warning statement must comply with the requirements of 40 CFR §82.108.
c) The form of the label bearing the required warning statement must comply with the requirements of 40 CFR §82.110.
d) No person may modify, remove, or interfere with the required warning statement except as described in 40 CFR §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 of 40 CFR Part 82:
a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices described in 40 CFR §82.156.
b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment described in 40 CFR §82.158.
c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR §82.161.
d) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with the record keeping requirements of 40 CFR §82.166. ("MVAC-like" appliance as defined at 40 CFR §82.152).
e) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to 40 CFR §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 40 CFR §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 contained 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.*

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
10 CSR 10-6.065(6)(E)3.C Extension of Expired Permits
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. If a timely and complete application for a permit renewal is submitted, but the Air Pollution Control Program fails to take final action to issue or deny the renewal permit before the end of the term of this permit, this permit shall not expire until the renewal permit is issued or denied.

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, Compliance and 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.
   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. 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)
If the installation is required to develop and register a risk management plan pursuant to Section 112(R) of the Act, the permittee will verify that it has complied with the requirement to register the plan.

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, Compliance and 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, Compliance and 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, Compliance and 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 permit, 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, Compliance and 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)34 Responsible Official

The application utilized in the preparation of this permit was signed by Vernie A. Dodson, Plant Manager. 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 shall be reopened for cause if:

1) The Missouri Department of Natural Resources (MoDNR) 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) MoDNR 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; or
5) MoDNR 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 - Reference Equations for NO_X and SO_2 Limits

Permit Condition (EP02 and EP03)-001: NO_X Limits

- For NO_X:

$$30-day\ average\ \frac{lb\ E}{ton} = \frac{COD_E(lbs) + P29D_E(lbs)}{COD_{PROD}(tons) + P29D_{PROD}(tons)}$$

Where:

30-day average (lb E/ton) = The Emission Rate 30-Day Rolling Average
E = Emissions of NO_X
COD = Current Operating Day where the relevant Emission Rate 30-Day Rolling Average is the applicable limit.
COD_E = the daily Emissions as measured by a CEMS on the COD, in pounds.
COD_{PROD} = Daily glass production on the COD, in tons of glass.
P29D = The Previous 29 Operating Days where the relevant Emission Rate 30-Day Rolling Average is the applicable limit.
$P29D_E$ = the sum of the daily NO_X Emissions as measured by a CEMS during the P29D, in pounds.
$P29D_{PROD}$ = the sum of the daily glass production during the P29D, in tons of glass.

Permit Condition (EP02 and EP03)-001: SO_2 Limits

- For SO_2, when daily Inlet 24-hour Block Average concentration < 300 ppmvd:

$$30-day\ average\ C(ppmvd) = \frac{COD_C(ppmvd) + P29D_C(ppmvd)}{30}$$

Where:

30-day average C (ppmvd) = The Scrubber Outlet 30-Day Rolling Average Concentration
C = Scrubber outlet concentration of SO_2
COD = Current Operating Day where the relevant Outlet 30-Day Rolling Average is the applicable limit.
COD_C = the Outlet 24-hour Block Average concentration as measured by a CEMS on the COD, in ppmvd.
P29D = The Previous 29 Operating Days where the relevant Outlet 30-Day Rolling Average is the applicable limit.
$P29D_C$ = the sum of the Outlet 24-hour Block Average SO_2 concentrations as measured by a CEMS during the P29D, in ppmvd.

- For SO_2, when daily Inlet 24-hour Block Average ≥300 ppmvd:

$$30-day\ average\ \eta(\%) = \frac{COD_\eta(\%) + P29D_\eta(\%)}{30}$$

Where:

30-day average η(%) = The Scrubber Removal Efficiency 30-Day Rolling Average.
η = Scrubber removal efficiency of SO_2.
COD = Current Operating Day where the relevant Removal Efficiency 30-Day Rolling Average is the applicable limit.
COD_η = the removal efficiency 24-hour Block Average on the COD as measured by the two

CEMS, in %.
P29D = The Previous 29 Operating Days where the relevant Removal Efficiency 30-Day Rolling Average is the applicable limit.
$P29D_{\eta}$ = the sum of the SO_2 removal efficiency 24-hour Block Averages as measured by a CEMS during the P29D, in %

Attachment B – GCD List of Definitions

For both Furnaces 20 and 21, the following definitions have been incorporated into this operating permit as stated in the Global Consent Decree (GCD):

"**24-hour Block Average**" shall be calculated by averaging the 24 one-hour relevant data outputs (concentration or pounds) for a given day and using the daily glass production rates (tons) on that Operating Day where applicable. [GCD Citation III.6.a]

"**Abnormally Low Production Rate**" shall mean a glass production rate at or below the production rate (P) set forth below, unless production capacity is increased through a permit modification. [GCD Citation III.6.c and IV.10]:

For Furnace 20: 116 tons per day (tpd)
For Furnace 21: 168 tpd

Note: Per GCD IV.10, when production is increased by a permit, the Abnormally Low Production Rate Day Threshold is reset at 35 percent of the new permitted production rate. The production rates shown here have been revised to reflect the revised capacity limit for each furnace as described in this application.

"**Abnormally Low Production Rate Day**" shall mean any Operating Day where production falls into the range of Abnormally Low Production Rate for the Furnace, for at least one continuous hour. [GCD Citation III.6.d]

"**CEMS Certification Event**" shall mean an event that triggers the requirement to complete a subsequent CEMS Certification. Events that will trigger subsequent CEMS Certification include a Furnace startup. SGCI shall commence such recertification no later than 30 Days after the Furnace startup period concludes (but not later than 70 days after Furnace startup commences). [GCD Citation III.6.h]

"**Control Device Startup**" shall mean the period of time from commencement of operation of an SCR, Scrubber System, ESP, CCSS, or similar add-on control device until the operation of the device has been stabilized and the device has achieved normal operating conditions. Such period shall not exceed thirty (30) days. [GCD Citation III.6.o]

"**Day**" shall mean a calendar day unless expressly stated to be a working day or unless a State rule requires that CEMS data be reported on Standard time (with no change for Daylight Savings Time). [GCD Citation III.6.r]

"**Emission Rate 30-day Rolling Average**" shall be expressed for NOX as emission rate (pounds of NOX per ton of glass produced). It shall be calculated at the Furnace in question in accordance with the following formulas and paragraphs 1 and 2 below:

For NO_X:

$$30-day\ average\ \frac{lb\ E}{ton} = \frac{COD_E(lbs) + P29D_E(lbs)}{COD_{PROD}(tons) + P29D_{PROD}(tons)}$$

Where:

30-day average (lb E/ton) = The Emission Rate 30-Day Rolling Average
E = Emissions of NO_X
COD = Current Operating Day where the relevant Emission Rate 30-Day Rolling Average is the applicable limit.

COD_E = the daily Emissions as measured by a CEMS on the COD, in pounds.
COD_{PROD} = Daily glass production on the COD, in tons of glass.
P29D = The Previous 29 Operating Days where the relevant Emission Rate 30-Day Rolling Average is the applicable limit.
$P29D_E$ = the sum of the daily NOX Emissions as measured by a CEMS during the P29D, in pounds.
$P29D_{PROD}$ = the sum of the daily glass production during the P29D, in tons of glass.

"Furnace" means, for the purposes of NSPS only, a refractory vessel in which raw materials are charged, melted at high temperature, refined, and conditioned to produce molten glass which includes foundations, superstructure and retaining walls, raw material charger system, heat exchanger, melter cooling system, exhaust system, refractory brick work, fuel supply and electrical boosting equipment, integral control systems and instrumentation, and appendages for conditioning and distributing molten glass to forming apparatuses. For all other purposes, "Furnace" means a unit comprised of a refractory-lined vessel in which raw materials are charged and melted at high temperature to produce molten glass. [GCD Citation III.6.x]

"Furnace Startup" means the period of time while a Furnace's refractory is being heated up from ambient temperature and includes the Initial Heating Phase, Refractory Soak and Seal Phase, and Furnace Stabilization. [GCD Citation III.6.y]

"Initial Heating Phase" means the slow heating of the Furnace refractory using portable natural-gas burners placed in the opening of the Furnace. This phase typically lasts no longer than four days and ends when the main Furnace burners commence operation. [GCD Citation III.6.y.i]

"Refractory Soak and Seal Phase" means the phase of the Furnace Startup following the Initial Heating Phase when the Furnace is filled with molten glass, the temperature of the Furnace reaches operating conditions, and the refractory components reach thermal equilibrium. This phase typically lasts no longer than 21 days and ends when the joints between the refractory components are sealed and the Furnace is closed to the atmosphere. [GCD Citation III.6.y.ii]

"Furnace Stabilization Phase" means the phase of Furnace Startup following the Refractory Soak and Seal Phase when the Furnace operation is being stabilized. This phase will end no later than 70 days after the beginning of the Initial Heating Phase. [GCD Citation III.6.y.iii]

"**Hot Spot Temperature**" shall mean the highest temperature of the Furnace breastwall refractory. Breastwall refractory is the refractory sidewall between the tuck stone (about 18 inches above the glass line) and the crown skew (where the Furnace crown meets the Furnace sidewall). [GCD Citation III.6.z]

"**Inlet**" shall be the emission concentration (in parts per million by volume dry) measured prior to the control device. [GCD Citation III.6.aa]

"**Maintenance**" shall mean activities necessary to keep the system or equipment working in its normal operating condition. [GCD Citation III.6.cc]

"**Malfunction**" shall mean, consistent with 40 CFR 60.2, any sudden, infrequent, and not reasonably preventable failure of the air pollution control equipment, process equipment, or a process to operate in a normal or usual manner, but shall not include failures that are caused in part by poor maintenance or careless operation. [GCD Citation III.6.ee]

"**Operating Day**" shall mean any Day where any fuel is fired into the Furnace. The Day starts at 12:00 a.m. and ends at 11:59 p.m. [GCD Citation III.6.kk]

"**Outlet**" shall mean the emission concentration (in parts per million by volume dry) measured after a control device. [GCD Citation III.6.ll]

"**Oxyfuel Furnace**" shall mean a Furnace in which the gas that provides the oxidant for combustion of the fuel is composed of greater than or equal to 90% oxygen. [GCD Citation III.6.nn]

Attachment C - Visible Emission Observations

Date	Time	Emission Source	Visible Emissions		Excess Emissions		
			No	Yes[1]	Cause	Corrective Action	Initial

[1]If there are visible emissions, the permittee shall complete the excess emissions columns.

Attachment D - Method 9 Opacity Emissions Observations

Method 9 Opacity Emissions Observations	
Company	Observer
Location	Observer Certification Date
Date	Emission Unit
Time	Control Device

Hour	Minute	Seconds				Steam Plume (check if applicable)		Comments
		0	15	30	45	Attached	Detached	
	0							
	1							
	2							
	3							
	4							
	5							
	6							
	7							
	8							
	9							
	10							
	11							
	12							
	13							
	14							
	15							
	16							
	17							
	18							

SUMMARY OF AVERAGE OPACITY

Set Number	Time		Opacity	
	Start	End	Sum	Average

Readings ranged from _____ to _____ % opacity.

Was the emission unit in compliance at the time of evaluation? _____ _____ _____
YES NO Signature of Observer

Attachment E - Inspection/Maintenance/Repair/Malfunction Log

Emission Unit # _____

Date/Time	Inspection/ Maintenance Activities	Malfunction Activities					
		Malfunction	Impact	Duration	Cause	Action	Initials

STATEMENT OF BASIS

INSTALLATION DESCRIPTION

Ardagh Glass Inc. (formerly Saint-Gobain Containers, Inc.) owns and operates a soda-lime glass container manufacturing installation in Pevely, Missouri. This installation is on the List of Named Installations found in 10 CSR 10-6.020(3)(B), Table 2, Number 27, any other stationary source category which as of August 7, 1980 is being regulated under section 111 or 112 of the Act. The installation is a major source of nitrogen oxides.

Soda-lime glass consists of sand, limestone, soda ash, and cullet (broken glass). The manufacture of such glass is in four phases: (1) preparation of raw material, (2) melting in a furnace, (3) forming, and (4) finishing. The products of this plant are container glass, used for beverages. Container glass uses pressing, blowing, or pressing and blowing, to form the desired product bottles.

Sand, limestone, soda ash, and cullet are received, unloaded, and stored in separate elevated bins. Minor raw materials are added in the batch house. These materials and cullet are then transferred through a gravity feed system to a scale and mixer, to ensure homogeneous melting. The mixture is conveyed to a batch storage bin where it is held until dropped into the charger to the melting furnace. All equipment used in handling and preparing the raw material is housed separately from the furnaces and is referred to as the batch plant.

As material enters the melting furnace through the charger, it floats on the top of the molten glass already in the furnace. As it melts, it passes to the front of the melter and eventually flows through a throat leading to the distributor. In the distributor, the molten glass is heat conditioned for delivery to the forming process.

The molten glass then passes through forehearths and goes to be shaped by pressing, blowing, or pressing and blowing to produce the desired product. Pressing and blowing are performed mechanically, using molds and glass cut into sections (gobs) by a set of shears. The formed containers undergo annealing (removing unwanted stress areas in the glass) as required, and are then inspected and prepared for shipment to market. Any damaged or undesirable glass are transferred back to the batch plant to be recycled as cullet.

Energy for melting and refining the glass is through natural gas-fired burners, with additional energy coming from electricity passing through electrode mounted in the sidewalls and immersed in the molten glass. There are two furnaces at the Pevely plant that are oxy-fuel fired. The natural gas and oxygen (O_2) are mixed in the burner. The proper proportion of gas and O_2 is controlled by a computer (a programmable logic controller (PLC)) system. The total fuel used is monitored and adjusted by the furnace operator to maintain the proper temperature in the melter. Both furnaces exhaust gases into a common exhaust duct. Upstream of the point where the Furnace No. 20 and Furnace No. 21 emissions converge into the common duct, continuous emission monitoring system (CEMS)/ continuous emission rate monitoring system (CERMS) are located to measure wet-basis concentrations of nitrogen oxides (NO_x) and volumetric flow rates. The dilution systems also calculate and report mass emission rates of NO_x.

The common duct flue gas is directed into a semi-dry scrubber/electrostatic precipitator (ESP) to remove oxides of sulfur (SO_x) and particulate matter. Upon exit of the ESP, the flue gas is vented to atmosphere through a vertical cylindrical exhaust stack. Sulfur dioxide analyzers and moisture content monitors are located upstream of the scrubber and downstream of the ESP. A volumetric flow rate monitor is located downstream of the ESP.

Updated Potential to Emit for the Installation and Reported Air Pollutant Emissions, tons per year

Pollutants	Potential to Emit[1]	2016	2015	2014	2013	2012
Particulate Matter ≤ Ten Microns (PM_{10})	88.88	29.18	25.22	17.77	90.93	114.90
Particulate Matter ≤ 2.5 Microns ($PM_{2.5}$)	43.95	28.94	24.98	17.57	87.54	110.40
Sulfur Oxides (SO_x)	52.91	43.44	43.81	42.25	136.18	131.37
Nitrogen Oxides (NO_x)	189.32	140.18	137.36	114.14	125.63	105.08
Volatile Organic Compounds(VOC)	35.52	25.89	26.16	22.20	26.77	26.92
Carbon Monoxide (CO)	53.45	4.59	2.10	4.32	9.08	9.23
Lead (Pb)	0.24	0.02	0.01	0.02	0.26	0.72
Hazardous Air Pollutants (HAP's)	4.55	2.52	2.20	2.67	2.04	2.52

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

- Construction Permit 092012-004 glass production limits were used to evaluate potential emissions (PTE) from the glass melting furnaces.
- PM_{10}, $PM_{2.5}$ and SO_X PTE are less than the reported emissions for 2013 and 2012 years due to the Global Consent Decree Civil Action Case No. 2:10-cv-00121-TSZ control device requirements, i.e., the PTE for PM_{10}, $PM_{2.5}$ and SO_X were evaluated considering the application of the control devices as stated in Permit Condition (EP02 and EP03)-001.
- Emissions from generators are evaluated at 500 hours of operation based on the emergency use of the generators.

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 April 25, 2011; revised September 9, 2014 and February 3, 2017;
2) Global Consent Decree Civil Action Case No. 2:10-cv-00121-TSZ. Dated May 7, 2010;
3) 2016 Emissions Inventory Questionnaire, received April 4, 2017;
4) U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition.
5) Air Pollution Control Program Construction and Operating Permits:

Permit Number	Description
0680-014 to 0680-017	Construction of a glass bottle manufacturing plant (no special conditions).
0397-006	Convert Furnace #20 to oxy-fire
OP2000-076	Initial Part 70 Operating Permit.
042000-008	Section (5) permit for the reconfiguration of Furnace 20 (testing special condition)
OP2007-035	Part 70 Operating Permit renewal
062009-010	Section (5) permit for the debottlenecking of Furnace 20 and its forming lines by increasing the rate of cooling (no special conditions).
062010-006	Temporary permit to test a new combustion technology in the glass
092012-004	Re-bricking of Furnace 20, de-limiting the electric boost capacity for both Furnaces 20 and 21, addition of an emergency generator, and installation of air pollution control equipment as required by a Global Consent Decree.
092012-004A	An amendment to permit number 092012-004 to include the installation of two closed-loop air cooling units that will reduce the air temperature of the existing Furnace 20 mold cooling fans and Furnace 21 mold cooling fans. 092012-004A does not contain special conditions.
092012-004B	An amendment to construction permit number 092012-004 to allow the operation of storage bin vent filters, which controls particulate matter emissions from the loading of the electrostatic precipitator (EP-35) (ESP) and the Scrubber Silo (EP-36), instead of baghouses, as required in permit 092012-004. The conditions of this permit supersedes Special Condition 9 found in the previously issued construction permit 092012-004.
092012-004C	An amendment to construction permit number 092012-004. This amendment corrects the design flow rate information for the three cooling tower systems and increases the total dissolved solids (TDS) limit to conserve water. The conditions of this permit supersedes Special Condition 15 found in the previously issued construction permit 092012-004.
022014-006	Section 5 permit for the addition of chromium compounds to the glass melting process in order to produce green glass containers.

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

There are no applicable requirements included in this operating permit that were not also indicated by the applicant in its permit application as applicable requirements.

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 10-5.330, *Control of Emissions From Industrial Surface Coating Operations*
   This rule is not applicable to this installation, as the Laser Jet Code Daters emit less than two and

one-half (2.5) tons in any calendar year of volatile organic compounds (VOCs) from surface coating operations covered under this rule. Therefore, the rule is not included in this permit.

2) 10 CSR 10-6.405, *Restriction of Particulate Matter Emissions from Fuel Burning Equipment Used for Indirect Heating.*
This regulation does not apply to the installation. 10 CSR 10-6.405(1)(E) exempts installations which exclusively combust natural gas. And also Per 10 CSR 10-6.405(1)(C), the boilers are exempt from this rule because they are subject to the provisions of 10 CSR 10-6.070.

3) 10 CSR 10-5.220, *Control of Petroleum Liquid Storage, Loading and Transfer;*
10 CSR 10-5.443, *Control of Gasoline Reid Vapor Pressure*;
10 CSR 10-5.500, *Control of Emissions from Emissions from Volatile Organic Liquid Storage.*
These rules do not apply to the diesel/no. 2 fuel oil tank or gasoline refueling operations because tank sizes are less than 40,000 gallons.

4) 10 CSR 10-5.520, *Control of VOC Emissions from Existing Major Sources.*
This rule is not applicable to this installation, as it is not a major source of VOC emissions.

Construction Permit History

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

1) Special Conditions No. 10 and No. 11 of Construction Permit No. 0397-006
Two special conditions exist concerning the emissions of odor and the presence of PM_{10} in the ambient air. These special conditions of permit #0397-006 are covered in the core permit requirements under 10 CSR 10-6.170 and 10 CSR 10-5.160 even though this permit does not contain the verbiage of the construction permit.

2) Net emissions calculations requirement of Construction Permit No. 0397-006:
Special Condition No. 1 in the construction permit states that "the source's net emissions increases of PM_{10}, NO_x or SO_2 as determined as follows, due to the modifications of furnaces #20 and #21 shall be less than the de minimis levels for these pollutants." Special Condition #1 then establishes equations for each of the three pollutants with fixed baseline emissions (77.94 tons per year for PM_{10}, 235.38 tons per year for NO_x and 236.64 tons per year for SO_2) that are to be subtracted from the calculated new emission rates for the two furnaces.

Special Condition No. 2 in the construction permit states that "if the net emission increase for PM_{10}, NO_x, or SO_2 as determined above is 75% or greater of its respective de minimis level, then records…shall be kept on site for the most recent 60 month period of operation that show the net emissions increase is not significant for each of the above pollutants that meets this criteria." Further Special Condition No. 3 states that, "if recordkeeping is required per Condition Number 2., then the source shall report to the Air Pollution Control Enforcement …no later than ten days after the end of each month, if the 12-month cumulative total (Condition Number 2) records show that the source exceeded the limitation of Condition Number 1."

The post-modification emission factors were established through performance testing that was conducted as required by Special Condition No. 4 of the construction permit. Following the stack testing, Saint-Gobain performed the net emissions increase calculations as required and demonstrated that the net emissions increases were below the de minimis thresholds and thus

confirmed that the project did not trigger new source review (NSR) permitting requirements. Also, since the calculated net emissions increases were below 75% of the de minimis level for all three pollutants the recordkeeping and reporting requirements of the construction permit were not triggered.

These conditions are not incorporated in this operating permit because the conditions are considered as one-time requirements.

3) Construction Permit No. 042000-008
This permit allowed the permittee to modify glass melting Furnace 20. The only special condition, Special Condition No. 1, requires the installation to conduct performance testing. The performance test has been conducted for this furnace that satisfies the only special condition of this permit. Therefore, Special Condition No 1 is not included in the operating permit and the construction permit is not incorporated by reference into this operating permit.

4) Construction Permit No. 022014-006
This permit allowed the permittee to modify glass melting process by adding chromium compounds in order to produce green glass containers. The construction permit requires the installation to conduct performance testing. The performance test has been conducted for this furnace that satisfies the special conditions of this permit. Therefore, the testing requirements of this permit are not included in the operating permit and the construction permit is not incorporated by reference into this operating permit.

New Source Performance Standards (NSPS) Applicability
10 CSR 10-6.070, *New Source Performance Regulations.*
The installation is potentially subject to several NSPS rules. Below is a summary of the potentially applicable subparts and the facilities applicability and compliance status to those subparts.

1) 40 CFR Part 60 - Subpart A, *General Provisions.*
The installation becomes subject to Subpart A - General Provisions upon becoming subject to an NSPS standard. If the installation is subject to various NSPS Standards; therefore, they are also subject to Subpart A.

2) 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. The two glass melting furnaces (#20 and #21), constructed after June 15, 1979, are subject to 40 CFR Part 60, Subpart CC as the furnaces are natural gas/oxy fueled melters designed to produce more than 5 tons of glass per day.

3) 40 CFR Part 60, Subpart Ka, *Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification commenced After May 18, 1978, and Prior to July 23, 1984.*
40 CFR Part 60, Subpart Kb, *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984.*

The following storage tanks are below the level of reporting significance (Subpart Ka – 40,000 gallons and Subpart Kb – 19,812.9 gallons) and therefore are not subject to 40 CFR Part 60 Subpart Ka or Kb:

Description	Capacity	Date Placed in Service
Hydraulic oil storage tank	10,800 gallons	1980
Used oil storage tank	2,500 gallons	1980
Diesel fuel oil storage tank	300 gallons	2004
Gasoline storage tank	300 gallons	2004

4) 40 CFR Part 60 – Subpart IIII. *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.*
This subpart is applicable to owners and operators of stationary compression ignition (CI) internal combustion engines (ICE) and other persons who construct, reconstruct, or modify an engine after July 11, 2005. A compression ignition is a type of stationary internal combustion engine that is not a spark ignition engine.

The installation has compression ignition internal combustion engines, EP34 - emergency generator and EP40 – emergency fire pump. The engines were constructed after July 11, 2005. Therefore, this subpart does apply to the engines.

5) 40 CFR Part 60 – Subpart JJJJ. *Standards of Performance for Stationary Spark Ignition Internal Combustion Engines.*
This subpart is applicable to owners and operators of stationary spark ignition (SI) internal combustion engines (ICE) who construct, reconstruct, or modify an engine after July 12, 2006. A stationary internal combustion engine is any internal combustion engine, except combustion turbines, that converts heat energy into mechanical work and is not mobile. Stationary ICE include reciprocating ICE, rotary ICE, and other ICE, except combustion turbines.

The Facility does not operate a spark ignition internal combustion engines. Therefore, this subpart does not apply.

6) NSPS Applicability Summary
Based upon a comparison of the installations operations to each NSPS Standard, the installation is subject to the following NSPS Standards:
- 40 CFR Part 60, *Subpart CC, Standards of Performance for Glass Manufacturing Plants; and*
- 40 CFR Part 60, Subpart IIII. *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines.*

Maximum Achievable Control Technology (MACT) Applicability
10 CSR 10-6.075, *Maximum Achievable Control Technology Regulations.*
National Emission Standards for Hazardous Air Pollutants (NESHAPS) promulgated after the 1990 Clean Air Act Amendments are found in 40 CFR Part 63. The 1990 Clean Air Act Amendments, significantly expanded EPA's authority to regulate hazardous air pollutants. These standards require application of technology based emissions standards referred to as Maximum Achievable Control

Technology (MACT). Consequently, these post-1990 NESHAPs are also referred to as MACT standards. MACT is a technology-based standard, as opposed to the original conception of NESHAPs as a risk-based standard.

Section 112 of the Clean Air Act lists 187 hazardous air pollutants to be regulated by source category. EPA has identified "source categories" that must meet technology requirements to control HAP emissions and is required to develop standards for all industries that emit one or more of the HAPs in significant quantities. The standards are based on emissions levels already achieved by best- performing similar facilities.

Industries subject to MACT standards are classified as either major sources or area sources.

- Major sources are sources that emit 10 tons per year of any of the listed HAPs, or 25 tons per year of a mixture of HAPs.
- Area sources are sources that emit less than 10 tons per year of a single HAP or less than 25 tons per year of a combination of HAPs. Area sources must employ Generally Available Control Technology (GACT) which is based on appropriate practices/ techniques commercially available and taking into account economic and technical considerations.

MACT standards are applicable to major sources, while GACT standards are applicable to area sources. The installation has the potential to emit various HAPs.

Based upon a comparison of the installation operations to each area source MACT/GACT Standard, the installation is potentially subject to the following MACT/GACT standards: (NOTE: This is not an analysis of every MACT/GACT standard, it is an analysis of the MACT/GACT standards that are potentially applicable to the installation).

1) 40 CFR Part 63, Subpart T - *National Emission Standards for Halogenated Solvent Cleaning.*
This subpart applies to individual batch vapor, in-line vapor, in-line cold, and batch cold solvent cleaning machines that use any solvent containing methylene chloride (CAS No. 75- 09-2), perchloroethylene (CAS No. 127-18-4), trichloroethylene (CAS No. 79-01-6), 1,1,1- trichloroethane (CAS No. 71-55-6), carbon tetrachloride (CAS No. 56-23-5) or chloroform (CAS No. 67-66-3), or any combination of these halogenated HAP solvents, in a total concentration greater than five percent (5%) by weight, as a cleaning and/or drying agent. [§ 63.460(a)]

   The installation does not operate any solvent cleaning machines as defined within §63.461. Therefore, this subpart does not apply.

2) 40 CFR Part 63, Subpart Q, *National Emission Standards for Hazardous Air Pollutants for Industrial Process Cooling Towers*
The provisions of this subpart apply to all new and existing industrial process cooling towers that are operated with chromium-based water treatment chemicals on or after September 8, 1994, and are either major sources or are integral parts of facilities that are major sources as defined in 40 CFR 63.401.

   The installation is not a major source of HAPs nor the cooling towers located at this installation use chromium-based water treatment chemicals, therefore, this rule does not apply.

3) 40 CFR Part 63, Subpart ZZZZ - *National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines (RICE).*
The Subpart ZZZZ standards are applicable to Reciprocating Internal Combustion Engines (RICE) located at both major and/or area sources of hazardous air pollutants (HAPs) and RICE with a site rating of less than or equal to 500 brake horsepower (bhp). In addition, the standards for existing non-emergency compression ignition (CI) engines with a site rating of greater than 500 bhp at major sources and revised provisions related to Startup, Shutdown, and Malfunction (SSM) events for engines previously regulated under the rule. Finally, emergency RICE with a rating greater than 500 bhp located at a major source are subject to this rule, but with limited requirements.

The emergency generator (EP34) and emergency fire pump (EP40) that are subject to the 40 CFR Part 60, Subpart IIII are automatically compliant with the requirements of 40 CFR Part 63, Subpart ZZZZ and according to §63.6590(c)(1) of Subpart ZZZZ of 40 CFR Part 63, no further requirements apply for such engines under this part for "new" compression ignition engines..

4) 40 CFR Part 63, Subpart CCCCCC - *National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities.*
The purpose of this subpart is to establish national emission limitations and management practices for hazardous air pollutants (HAP) emitted from the loading of gasoline storage tanks at gasoline dispensing facilities (GDF). The affected source to which this subpart applies is each GDF that is located at an area source.

A gasoline dispensing facility (GDF) is any stationary facility which dispenses gasoline into the fuel tank of a motor vehicle, motor vehicle engine, nonroad vehicle, or nonroad engine, including a nonroad vehicle or nonroad engine used solely for competition. These facilities include, but are not limited to, facilities that dispense gasoline into on- and off-road, street, or highway motor vehicles, lawn equipment, boats, test engines, landscaping equipment, generators, pumps, and other gasoline-fueled engines and equipment.

The installation receives gasoline, stores it in a tank, and dispenses it into motor vehicles and/ or nonroad engines. Therefore, the installation is subject to this rule.

5) 40 CFR Part 63, Subpart SSSSSS, *National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources.*
This subpart applies to glass manufacturing facility that is an area source of hazardous air pollutant (HAP) emissions and uses one or more continuous furnaces to produce glass that contains compounds of one or more glass manufacturing metal HAP, as defined in §63.11459, as raw materials in a glass manufacturing batch formulation.

Glass manufacturing metal HAP means an oxide or other compound of any of the following metals included in the list of urban HAP for the Integrated Urban Air Toxics Strategy and for which Glass Manufacturing was listed as an area source category: arsenic, cadmium, chromium, lead, manganese, and nickel.

The installation is an area source of HAP emissions and uses chromium compounds to their glass melting process in order to produce green glass containers. Therefore, the installation is subject to this rule.

According to 40 CFR 63.11455(e), Ardagh Glass Inc. is only required to demonstrate continuous compliance with the emission limit of 0.02 lb/ton by satisfying the applicable recordkeeping requirements specified in§63.11457 because it demonstrated compliance with the metal HAP emission limit without controls. The March 2014 test results of 0.004 lb/ton were well below the limit of 0.02 lb/ton. Ardagh has already submitted the initial notification and notice of compliance status report.

6) MACT Applicability Summary:
Ardagh is an area source HAPs. Based upon a comparison of the installations operations to each MACT Standard (area and major standards), the installation is subject to the following GACT/MACT Standards:
- 40 CFR Part 63, Subpart CCCCCC - *National Emission Standards for Hazardous Air Pollutants for Source Category: Gasoline Dispensing Facilities; and.*
- 40 CFR Part 63, Subpart SSSSSS, *National Emission Standards for Hazardous Air Pollutants for Glass Manufacturing Area Sources.*

National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability
10 CSR 10-6.080, *Emission Standards for Hazardous Air Pollutants.*
National Emission Standards for Hazardous Air Pollutants (NESHAPS) are stationary source standards for hazardous air pollutants. NESHAPS were originally required by the 1970 Clean Air Act (CAA). These standards were developed for sources and source categories that were determined to pose adverse risk to human health by the emission of HAPs. The Part 61 NESHAPs regulate only 7 hazardous air pollutants - Asbestos, Beryllium, Mercury, Vinyl Chloride, Benzene, Arsenic, Radon/Radionuclides. Prior to 1990, the Clean Air Act required EPA to set standards for each toxic air pollutant individually, based on its particular health risks. Thus, NESHAPs are risk based standards that apply to all existing and new/ modified sources regardless if they are a minor or major HAP Facility. (NOTE: This is not an analysis of every NESHAP standard; it is an analysis of the NESHAP standard that is potentially applicable to the installation).

1) 40 CFR Part 61 Subpart M – *National Emission Standard for Asbestos.*
The installation is not subject to any NESHAP standard with the exception of Subpart M - National Emission Standard for Asbestos. The installation is potentially subject to Subpart M. If the installation conducts any demolition or renovation projects to a building(s) containing asbestos, they must determine applicability with the following NESHAP regulations:
- Demolition and Renovation - 40 CFR 61.145
- Waste Disposal for Manufacturing, Fabricating, Demolition, Renovation, and Spraying - 40 CFR 61.150

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. Neither Furnace 20 or Furnace 21 are subject to 40 CFR Part 64 because (1) the potential pre-control emissions of PM for each furnace are below the major source threshold, and (2) the furnaces are equipped with a CEMS for NO_X and SO_2, which qualifies as a continuous compliance method pursuant to 40 CFR 64.2(b)(1)(vi).

Other Regulatory Determinations

1) 10 CSR 10-6.400, Restriction of Emission of Particulate Matter From Industrial Processes.
10 CSR 10-6.400 limits the amount of particulate matter that is allowed from an emission unit, and is dependent on the process weight rate material processed. The emission units to which this rule applies are listed below. The following calculations provide the allowable particulate emission rate based on 10 CSR 10-6.400 and the potential (maximum) emission rate including particulate emission control equipment. Potentials to emit presented below were calculated based on sources Maximum Hourly Design Rate (MHDR). If the emissions from these emission units can not violate the limits of this rule then evidence of this is demonstrated in the following calculations.
One of the following equations from 10 CSR 10-6.400 is used to calculate the PM allowable limit:
$E = 4.10P^{0.67}$ for process weight rates up to 30 tons (60,000 lbs) per hour, and
$E = 55.0P^{0.11} - 40$ for process weight rates greater than 30 tons (60,000 lbs) per hour
Where: E = rate of emission in lb/hr; and
P = process weight rate in tons/hr (maximum hourly design rate

a) <u>EP06 - Rail Car Unloading - Screw</u>
Process weight rate (P) = 131 ton/hr
Emission limit (lb/hr) = $55.0P^{0.11} - 40 = (55.0 \times 131^{0.11}) - 40 = 54.03$ lb PM/hr
PM emission factor = 0.0507 lb PM/ton (AP-42, Section 13.24, Equation 1)
Control device (Fabric Filter) Efficiency = 99%
Capture Efficiency = 50% (the rail car enclosure can achieve 100% but 50% is conservatively used here)
Overall Control Efficiency = (50 x 99) ÷ 100 = 49.5%
PM uncontrolled emission = 131 ton/ hr × 0.0507 lb/ton = 6.68 lb/hr
PM controlled emission = 6.68 lb/hr × (1 - 0.495) = 0.37 lb/hr

At the maximum hourly design rate (131 tons/hr), the potential PM emission rate based on the AP 42 factor is approximately eight times less than the allowable PM emission rate. It is highly unlikely that the allowable emission rate will be exceeded; therefore there are no recordkeeping or monitoring requirements.

b) <u>EP06- - Rail Car Unloading - Conveyor</u>
Process weight rate (P) = 260 ton/hr
Emission limit (lb/hr) = $55.0P^{0.11} - 40 = (55.0 \times 260^{0.11}) - 40 = 61.39$ lb PM/hr
PM emission factor = 0.0507 lb PM/ton (AP-42, Section 13.24, Equation 1)
Control device (Fabric Filter) Efficiency = 99%
Capture Efficiency = 100%
PM uncontrolled emission = 260 ton/ hr × 0.0507 lb/ton = 13.18 lb/hr
PM controlled emission = 780 lb/hr × (1 - 0.99) = 0.13 lb/hr

At the maximum hourly design rate (260 tons/hr), the uncontrolled emission rate (13.18 lbs/hr)

is approximately four and seven tenth (4.7) times less than the allowable emission rate (61.39 lbs/hr). It is highly unlikely that the allowable emission rate will be exceeded, therefore there are no recordkeeping or monitoring requirements.

c) EP06- Truck Unloading - Screw
Process weight rate (P) = 180 ton/hr
Emission limit (lb/hr) = $55.0P^{0.11} - 40 = (55.0 \times 180^{0.11}) - 40 = 57.37$ lb PM/hr
PM emission factor = 0.0507 lb PM/ton (AP-42, Section 13.24, Equation 1)
PM uncontrolled emission = 180 ton/ hr × 0.0507 lb/ton = 9.10 lb/hr

At the maximum hourly design rate (180 tons/hr), the potential PM emission rate is approximately six and three tenth (6.3) times less than the allowable PM emission rate. It is highly unlikely that the allowable emission rate will be exceeded, therefore there are no recordkeeping or monitoring requirements.

d) EU0020 – Raw Material Batching (EIQ Ref. #EP01)
Process weight rate (P) = 35.6 ton/hr
Emission limit (lb/hr) = $55.0P^{0.11} - 40 = (55.0 \times 35.6^{0.11}) - 40 = 41.47$ lb PM/hr
PM emission factor = 0.0021 lb PM/ton (AP-42, Section 11.12, Table 11.12-2)
Control device (Fabric Filter) Efficiency = 99%
PM uncontrolled emission = 35.6 ton/ hr × 0.0021 lb/ton = 0.07 lb/hr
PM controlled emission = 0.07 lb/hr × (1 – 0.99) = 0.0007 lb/hr

At the maximum hourly design rate (35.6 tons/hr), the uncontrolled emission rate (0.07 lb/hr) is less than the allowed exemption level of 10 CSR 10-6.400(1)(B)11. (i.e., 0.5 lbs/hr), therefore this unit is not subject to the provisions of this rule.

e) EP02 - Glass Melting Furnace #20
EP03 – Glass Melting Furnace #21

Since the glass melting furnaces are subject to NSPS (40 CFR Part 60, Subpart CC), the melting furnaces are exempt from the requirements of this rule.

f) EP08 – Cullet Crushing System
Process weight rate (P) = 3.41 ton/hr
Emission limit (lb/hr) = $4.1P^{0.67} = 4.1 \times 3.14^{0.67} = 9.33$ lb PM/hr
PM emission factor = 0.039 lb PM/ton (AP-42, Section 11.19, Table 11.19, 1-1)
PM uncontrolled emission = 3.14 ton/ hr × 0.039 lb/ton = 0.13 lb/hr

At the maximum hourly design rate (3.41 tons/hr), the uncontrolled emission rate (0.13 lb/hr) is less than the allowed exemption level of 10 CSR 10-6.400(1)(B)11. (i.e., 0.5 lbs/hr), therefore this unit is not subject to the provisions of this rule.

2) 10 CSR 10-6.260, *Restriction of Emissions of Sulfur Compounds* and
10 CSR 10-6.261, *Control of Sulfur Dioxide Emissions.*
10 CSR 10-6.260 was rescinded on November 30, 2015 and replaced by 10 CSR 10-6.261; however, the provisions of 10 CSR 10-6.260 currently remain in State Implementation Plan. The provisions of

10 CSR 10-6.260 will expire, once 10 CSR 10-6.261 is incorporated into the federally-approved SIP as a final EPA action.

These rules are not applicable to the installation for the following reasons:

a) The following units use pipeline grade natural gas. According to 10 CSR 10-6.260(1)(A)(2) and 10 CSR 10-6.261(1)(A), natural gas and liquefied petroleum gas (propane) fired sources are exempt from the requirements of these rules, the following units are exempt from the requirements this rule:
   - Glass Melting Furnaces (EP02 and EP03);
   - Glass Annealing Lehrs (EP04 and EPEP05);
   - Eleven Space Heaters (EP13);
   - Three Mold Preheat Ovens (EP15);
   - Distributer number 20 (EP17) and Distributer number 21 (EP18);
   - Forehearths number 20 (EP21) and Forehearths number 21 (EP22); and
   - Small Clean Units (EP38)

b) 10 CSR 10-6.260(1)(A)1 states that emission sources subject to an applicable sulfur compound emission limit under 10 CSR 10-6.070 are not subject to this rule. The Emergency Generator (EP34) and Emergency Fire Pump (EP40) are subject to NSPS Subpart IIII; therefore are exempt from this rule.

c) According to 10 CSR 10-6.261(1)(C), emission units subject to a more restrictive SO_2 emission limit or more restrictive fuel sulfur content limit under any federally enforceable are exempt from the requirements of these rules. The Emergency Generator (EP34) and Emergency Fire Pump (EP40) are limited to burn fuel oil with sulfur content of 15 parts per million (ppm) maximum [§80.510(b)(1)(i)], these units are exempt from the requirements of this rule.

3) 10 CSR 10-6.220, *Restriction of Emission of Visible Air Contaminants* is applicable to the installation, but has not been applied within this permit for the following emission units. Applicability of this regulation to the installation's visible emissions sources is discussed in the following table:

Emission Unit	Description	10 CSR 10-6.220 Applicability
EP 34 and EP40	Internal Combustion Engines (Diesel Fuel)	10 CSR 10-6.220(1)(A) exempts stationary internal combustion engines operated in the St. Louis metropolitan area.
EP04, EP05, EP13, EP15, EP17, EP18, EP21, EP22 and EP38	Miscellaneous Natural Gas Fired Combustion Equipment.	These sources are subject to this regulation. However, emission units combusting natural gas are assumed to be in compliance with this regulation without any monitoring.
EP27, EP29 and EP37	Facility-Wide Cooling Towers	The regulation is applicable to the cooling towers, but was not applied within this permit. The cooling towers during normal operation emit little or no visible emissions. The cooling towers can emit large amounts of water vapor which make it difficult to determine if/how much visible contaminant is being

Emission Unit	Description	10 CSR 10-6.220 Applicability
		emitted. The Air Pollution Control Program is not requiring any monitoring, record keeping, or reporting for the cooling towers at this time; but, should visible emissions become an issue, these requirements may be added in the future.
EP28 and EP39	Above Ground Storage Tanks	These units do not emit particulate matter or other condensable which would reduce the transmission of light or obscure the view of an object in the background. Since these units are VOC/HAP emitting sources, we have elected not to require the permittee to conduct monitoring of opacity.

4) 10 CSR 10-5.510, *Control of Emissions of Nitrogen Oxide.*
This rule applies to the two glass furnaces (EP02 and EP03) with the NO_X emission limit of 5.5 pounds of NO_X per ton of glass pulled; whereas Construction Permit No. 092012-004 and the Global Consent Decree (GCD) Civil Action Case No. 2:10-cv-00121-TSZ limited the installation to 1.3 pounds of NO_X per ton of glass produced. The installation complying with the more restrictive emission limit will also be in compliace with 10 CSR 10-5.510. Therefore, this rule is not included in this operating permit.

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).

Response to Public Comments

The draft P70 Operating Permit, Project 2011-12-011, for Ardagh Glass Inc. (099-0068) was placed on public notice as of October 20, 2017, for a 30-day comment period. The public notice was published on the Department of Natural Resources' Air Pollution Control Program's web page at: http://dnr.mo.gov/env/apcp/permit-public-notices.htm. on Friday, October 20, 2017. On November 8, 2017, the Air Pollution Control Program received comments from Leslye E. Werner, Air Permitting and Compliance Branch Acting Chief for EPA Region VII. The comments are addressed in the order in which they appear within the letter.

Comment #1: In the Other Regulatory Determinations section of the Statement of Basis (page SB-12) it is indicated in 10 CSR 10-6.261-Control of Sulfur Dioxide Emissions; that this rule is not applicable to the installation and goes on to provide the qualified exemptions. However, the Other Regulatory Determinations section in the Statement of Basis, does not explain the absence of potentially applicable requirements as found in 10 CSR 10-6.260-Restriction of Emission of Sulfur Compounds. 10 CSR 10-6.065(6)(C)l says every operating permit issued shall contain all requirements applicable to the installation at the time of issuance. 10 CSR 10-6.020(A)54.A. defines applicable requirements to include any standard or requirement provided for in the implementation plan approved and promulgated by the United States Environmental Protection Agency. 10 CSR 10-6.260 is included in the EPA approved Missouri State Implementation Plan (SIP) and therefore is an applicable requirement to be included in this operating permit. EPA recognizes that Ardagh Glass may be exempt from the requirements of 10 CSR 10-6.260; much like the exemptions described in 10 CSR 10-6.261. However, EPA encourages MDNR to recognize the applicability of 10 CSR 10-6.260 in either the Statement of Basis or as an applicable permit condition.

Response to Comment: *Ardagh Glass is exempt from the requirements of 10 CSR 10-6.260. A statement to this effect has been added to the Statement of Basis under Other Regulatory Determinations, Item 2).*

Comment #2: Section IV: Core Permit Requirements includes 10 CSR 10-6.250: Asbestos Abatement Projects-Certification, Accreditation, and Business Exemption Requirements incorporating the Asbestos Hazard Emergency Response Act (AHERA) and its regulations for school districts and personnel working on asbestos activities in schools. The requirements associated with 10 CSR 10-6.250 have not been adopted into the EPA approved Missouri State Implementation Plan (SIP) and is therefore a "State Only Requirement," and EPA recommends MDNR consider adding a "State Only Requirement" designation to 10 CSR 10-6.250.

Response to Comment: *The draft permit has been revised as requested.*

Missouri Department of NATURAL RESOURCES
dnr.mo.gov
Michael L. Parson, Governor
Carol S. Comer, Director

JUN 0 5 2018

Mr. Vernie A. Dodson
Ardagh Glass Inc.
1500 Ardagh Group Drive
Pevely, MO 63070

Re: Part 70 Operating Permit Renewal
Installation ID: 099-0068, Permit Number: OP2018-049

Dear Mr. Dodson:

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.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to understand and satisfy the requirements contained in this permit, an appointment referred to as a Compliance Assistance Visit (CAV) can be set up with you. To request a CAV, please contact your local regional office or fill out an online request. The regional office contact information can be found at http://dnr.mo.gov/regions/. The online CAV request can be found at http://dnr.mo.gov/cav/compliance.htm.

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) 416-2451. 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. Thank you for your time and attention to this matter.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

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

MJS:msj

Enclosures

c: PAMS File: 2011-12-011