

**Iowa Department of Natural Resources  
Title V Operating Permit**

**Name of Permitted Facility: Guardian Industries Corporation**

**Facility Location: 300 South 5<sup>th</sup> Avenue East  
DeWitt, Iowa 52742**

**Air Quality Operating Permit Number: 99-TV-059R1**

**Expiration Date: 4/15/2012**

**Permit Renewal Application Deadline: 10/15/2011**

**EIQ Number: 92-6864**

**Facility File Number: 23-02-013**

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**Responsible Official**

**Name: Patrick A Tuttle**

**Title: Plant Manager**

**Mailing Address: 300 South 5<sup>th</sup> Avenue East  
DeWitt, Iowa 52742**

**Phone #: 563-659-4000**

**Permit Contact Person for the Facility**

**Name: Jim Harden**

**Title: Environmental Coordinator**

**Mailing Address: 300 South 5<sup>th</sup> Avenue East  
DeWitt, Iowa 52742**

**Phone #: 563-659-4000**

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This permit is issued in accordance with 567 Iowa Administrative Code Chapter 22, and is issued subject to the terms and conditions contained in this permit.

**For the Director of the Department of Natural Resources**

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Douglas A. Campbell, Supervisor of Air Operating Permits Section

Date

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## Abbreviations

acfm.....	actual cubic feet per minute
CFR.....	Code of Federal Regulation
CE .....	control equipment
CEM.....	continuous emission monitor
°F.....	degrees Fahrenheit
EIQ.....	emissions inventory questionnaire
EP.....	emission point
EU .....	emission unit
gr./dscf .....	grains per dry standard cubic foot
gr./100 cf.....	grains per one hundred cubic feet
IAC.....	Iowa Administrative Code
IDNR.....	Iowa Department of Natural Resources
MVAC.....	motor vehicle air conditioner
NAICS.....	North American Industry Classification System
NSPS .....	new source performance standard
ppmv .....	parts per million by volume
lb./hr.....	pounds per hour
lb./MMBtu .....	pounds per million British thermal units
SCC .....	Source Classification Codes
scfm.....	standard cubic feet per minute
SIC .....	Standard Industrial Classification
TPY .....	tons per year
USEPA.....	United States Environmental Protection Agency

### Pollutants

PM.....	particulate matter
PM <sub>10</sub> .....	particulate matter ten microns or less in diameter
SO <sub>2</sub> .....	sulfur dioxide
NO <sub>x</sub> .....	nitrogen oxides
VOC .....	volatile organic compound
CO.....	carbon monoxide
HAP.....	hazardous air pollutant

# I. Facility Description and Equipment List

Facility Name: Guardian Industries Corporation

Permit Number: 99-TV-059R1

Facility Description: Float Glass Production (SIC 3211)

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## Equipment List

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<b>Emission Point Number</b>	<b>Emission Unit Number</b>	<b>Emission Unit Description</b>	<b>IDNR Construction Permit Number</b>
BH01	RMS1	Raw Materials Silo	95-A-152
F001	MF1/ CC01	Melt Furnace & Curtain Coating System/ Climaguard Curtain Coater	95-A-154-S2
M001	CC01	Climaguard Curtain Coating Line	05-A-575
L001	AL1	Annealing Lehr	95-A-155
C001	CRS1	Cullet Return System	99-A-299P
A001	AG01	Mirror Line Silver Stack	98-A-395-S1
U001	UV01	Mirror Line UV Stack	98-A-396-S2
E001	DEG01	Diesel Emergency Generator # 1	99-A-300P-S2
E002	DEG02	Diesel Emergency Generator # 2	99-A-301P-S2
P001	PPC01	Pre- Production Coater	03-A-1091
BLDG1	MS01	Building Vents	
DEGFS	DEGFS	Diesel Storage Tank 5000 gallons	99-A-302

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## Insignificant Activities Equipment List

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<b>Insignificant Emission Unit Number</b>	<b>Insignificant Emission Unit Description</b>
E003	Diesel Emergency Water Pump 130 hp
NGINS	Natural Gas Fired Units
BHVM	Batch House Vacuum
MBLFS	Mobile Fuel Storage
MSSTO	Mineral Spirits Storage- 2000 gallons
BHDP	Batch House Dump Pit
INKJT	Inkjet Printer for Marking Glass
TPSO2	Tampering Furnace SO2
MIRLI	Marsh Ink, Mirror Line Logo Ink
TDCS	Transport Dust Collectors
CSDC	Cullet Silo Dust Collector
USDC	Unload Shed Dust Collector

## II. Plant-Wide Conditions

Facility Name: Guardian Industries Corporation  
Permit Number: 99-TV-059R1

Permit conditions are established in accord with 567 Iowa Administrative Code rule 22.108

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### Permit Duration

The term of this permit is: Five (5) Years  
Commencing on: 4/16/2007  
Ending on: 4/15/2012

Amendments, modifications and reopenings of the permit shall be obtained in accordance with 567 Iowa Administrative Code rules 22.110 - 22.114. Permits may be suspended, terminated, or revoked as specified in 567 Iowa Administrative Code Rules 22.115.

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### Emission Limits

*Unless specified otherwise in the Source Specific Conditions, the following limitations and supporting regulations apply to all emission points at this plant:*

Opacity (visible emissions): 40% opacity  
Authority for Requirement: 567 IAC 23.3(2)"d"

Sulfur Dioxide (SO<sub>2</sub>): 500 parts per million by volume  
Authority for Requirement: 567 IAC 23.3(3)"e"

Particulate Matter (state enforceable only)<sup>1</sup>:

No person shall cause or allow the emission of particulate matter from any source in excess of the emission standards specified in this chapter, except as provided in 567 – Chapter 24. For sources constructed, modified or reconstructed after July 21, 1999, the emission of particulate matter from any process shall not exceed an emission standard of 0.1 grain per dry standard cubic foot of exhaust gas, except as provided in 567 – 21.2(455B), 23.1(455B), 23.4(455B) and 567 – Chapter 24.

For sources constructed, modified or reconstructed prior to July 21, 1999, the emission of particulate matter from any process shall not exceed the amount determined from Table I, or amount specified in a permit if based on an emission standard of 0.1 grain per standard cubic foot of exhaust gas or established from standards provided in 23.1(455B) and 23.4(455B).  
Authority for Requirement: 567 IAC 23.3(2)"a" (as revised 7/21/1999)

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<sup>1</sup> Pending approval into Iowa's State Implementation Plan (SIP), paragraph 567 IAC 23.3(2)"a" (as revised 7/21/1999) is considered *state enforceable only*.

### Particulate Matter<sup>2</sup>:

The emission of particulate matter from any process shall not exceed the amount determined from Table I, except as provided in 567 — 21.2(455B), 23.1(455B), 23.4(455B) and 567 — Chapter 24. If the director determines that a process complying with the emission rates specified in Table I is causing or will cause air pollution in a specific area of the state, an emission standard of 0.1 grain per standard cubic foot of exhaust gas may be imposed.

Authority for Requirement: 567 IAC 23.3(2)"a" (prior to 7/21/1999)

Fugitive Dust: Attainment and Unclassified Areas - No person shall allow, cause or permit any materials to be handled, transported or stored; or a building, its appurtenances or a construction haul road to be used, constructed, altered repaired or demolished, with the exception of farming operations or dust generated by ordinary travel on unpaved public roads, without taking reasonable precautions to prevent particulate matter in quantities sufficient to create a nuisance, as defined in Iowa Code section 657.1, from becoming airborne. All persons, with the above exceptions, shall take reasonable precautions to prevent the discharge of visible emissions of fugitive dusts beyond the lot line of the property on which the emissions originate. The highway authority shall be responsible for taking corrective action in those cases where said authority has received complaints of or has actual knowledge of dust conditions which require abatement pursuant to this subrule. Reasonable precautions may include, but not limited to, the following procedures.

1. Use, where practical, of water or chemicals for control of dusts in the demolition of existing buildings or structures, construction operations, the grading of roads or the clearing of land.
2. Application of suitable materials, such as but not limited to asphalt, oil, water or chemicals on unpaved roads, material stockpiles, race tracks and other surfaces which can give rise to airborne dusts.
3. Installation and use of containment or control equipment, to enclose or otherwise limit the emissions resulting from the handling and transfer of dusty materials, such as but not limited to grain, fertilizers or limestone.
4. Covering at all times when in motion, open-bodied vehicles transporting materials likely to give rise to airborne dusts.
5. Prompt removal of earth or other material from paved streets or to which earth or other material has been transported by trucking or earth-moving equipment, erosion by water or other means.

Authority for Requirement: 567 IAC 23.3(2)"c"

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### Compliance Plan

*The owner/operator shall comply with the applicable requirements listed below. The compliance status is based on information provided by the applicant.*

Unless otherwise noted in Section III of this permit, Guardian Industries Corporation is in compliance with all applicable requirements and shall continue to comply with all such

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<sup>2</sup> Paragraph 567 IAC 23.3(2)"a" (prior to 7/21/1999) is the general particulate matter emission standard currently in the Iowa SIP.

requirements. For those applicable requirements which become effective during the permit term, Guardian Industries Corporation shall comply with such requirements in a timely manner.

Authority for Requirement: 567 IAC 22.108(15)

**NSPS 40 CFR 60- Subpart CC** - Standards of Performance for Glass Manufacturing Plants is applicable to Float glass Melting Furnace & Curtain Coating System/ Climaguard Curtain Coater EU CC01 EP F001. Subject to the General Provisions of Subpart A.

### III. Emission Point-Specific Conditions

Facility Name: Guardian Industries Corporation  
Permit Number: **99-TV-059R1**

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#### **Emission Point ID Number: BH01**

##### Associated Equipment

Associated Emission Unit ID Numbers: RMS1  
Emissions Control Equipment ID Number: 703 (9)  
Emissions Control Equipment Description: Baghouse; There are nine identical baghouses, one for each bin. Raw material can only be distributed to one bin at a time. At any one time, only one baghouse is operating.

Continuous Emissions Monitors ID Numbers: 703PG (9)

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Emission Unit vented through this Emission Point: RMS1  
Emission Unit Description: Raw Material Silos  
Raw Material/Fuel: Sand, Limestone, Soda Ash, Salt Cake, Dolomite, Glass Cullet, Rouge and slag  
Rated Capacity: 29.2 tons/hr

#### **Applicable Requirements**

##### **Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity  
Emission Limit(s): 40%  
Authority for Requirement: 567 IAC 23.3(2) "d"

Pollutant: PM<sub>10</sub>  
Emission Limit(s): 0.076 lb/hr  
Authority for Requirement: Iowa DNR PSD Construction Permit 95-A-152

Pollutant: Particulate Matter, PM  
Emission Limit(s): 0.1 gr/dscf  
Authority for Requirement: 567 IAC 23.3(2) "a"

**Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

Work practice standards:

- 1. Arsenic shall not be utilized as a raw material at this facility.

Authority for Requirement: Iowa DNR PSD Construction Permit 95-A-152

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required?** Yes  No

**Facility Maintained Operation & Maintenance Plan Required?** Yes  No

**Compliance Assurance Monitoring (CAM) Plan Required?** Yes  No

*Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source’s compliance with the applicable requirements.*

*Facility operation and maintenance plans are to be developed by the facility within six(6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility’s implementation of its obligation to operate according to good air pollution control practice.*

*Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.*

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: F001**

### Associated Equipment

Associated Emission Unit ID Numbers: MF1/ CC01

Emissions Control Equipment ID Number: MF1

Emissions Control Equipment Description: Lo NO<sub>x</sub> Burners for NO<sub>x</sub> emissions of Melt Furnace  
Melting Furnace (Thermal destruction for Curtain  
Coating System VOCs)

Continuous Emissions Monitors ID Numbers: FC-OPM-0001 (Opacity Monitor)

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Emission Unit vented through this Emission Point: MF1

Emission Unit Description: Melt Furnace

Raw Material/Fuel: Glass Cullet, Lime stone,, Soda Ash, Salt Cake, Dolomite, Sand, Slag  
& Rouge

Rated Capacity: 29.2 tons/hr

Emission Unit vented through this Emission Point: CC01

Emission Unit Description: Curtain Coating System/ Climaguard Curtain Coater

Raw Material/Fuel: Paint / Coating

Rated Capacity: 9 gallons/hr

## **Applicable Requirements**

### **Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limit(s): 12%.<sup>(1)</sup>

<sup>(1)</sup>Determine, based on the 6-minute averages, the opacity value corresponding to the 97.5 percent upper confidence level of a normal distribution of average opacity values. This is based upon stack test data of June 1997. Refer to the Continuous Emission Monitoring section below

Authority for Requirement: Iowa DNR PSD Construction Permit 95-A-154P- S2

40 CFR 60.293 (c)(4)- Subpart CC

Pollutant: PM<sub>10</sub>

Emission Limit(s): 150 lb/hr <sup>(2)</sup>

<sup>(2)</sup> Process modifications have been determined to be BACT for emissions of PM<sub>10</sub> from the melting furnace.

Authority for Requirement: Iowa DNR PSD Construction Permit 95-A-154P- S2

40 CFR 60- Subpart CC

567 IAC 23.1(2) "dd"



Pollutant: Particulate Matter, PM

Emission Limit(s): 1 lb/ton (of glass produced)<sup>(3)</sup>, 0.1 gr/dscf

<sup>(3)</sup> If the permittee fails to demonstrate compliance with the particulate emission limit, add-on pollution controls are required. In such case, the particulate emissions from the subject furnace shall not exceed 0.25 pounds per ton of glass nor 7.3 lb./hr.

Authority for Requirement: Iowa DNR PSD Construction Permit 95-A-154P-S2  
40CFR60.293(b)(1)-Subpart CC, 567 IAC 23.1(2) "dd"  
567 IAC 23.3(2) "a"

Pollutant: Sulfur Dioxide, SO<sub>2</sub>

Emission Limit(s): 60 lb./hr

Authority for Requirement: Iowa DNR PSD Construction Permit 95-A-154P-S2

Pollutant: Nitrogen Oxides, NO<sub>x</sub>

Emission Limit(s): 325 lb./hr

Authority for Requirement: Iowa DNR PSD Construction Permit 95-A-154P-S2

Pollutant: Lead, Pb

Emission Limit(s): 1.08 tons/year<sup>(4)</sup>

Authority for Requirement: Iowa DNR PSD Construction Permit 95-A-154P-S2

<sup>(4)</sup> The Pb emission limit for operation of both the melting furnace and the curtain coating system shall not exceed 1.08 tons/year (0.25 lb/year). The Pb operational limit when only melt furnace in operation shall not exceed 0.54 tons/year (0.12 lb/hr)

### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

#### **Process throughput:**

1. Salt cake injected into furnace shall not exceed ten (10) pounds per thousand (1000) pounds of sand nor 324 lb/hr.
2. Arsenic shall not be utilized as a raw material at this facility.

#### **Work practice standards:**

1. Operation of the furnace shall be per the following criteria:
  - a. Furnace temperature shall be minimized to the extent possible.
  - b. Maximize cullet percentage as much as possible and recycle all cullet.
  - c. Install an elaborate flue system for precise control and minimize excess air.
  - d. Properly install, utilize and maintain reduced NO<sub>x</sub> burners.
2. The lead content of the material used in the curtain coating system shall not exceed 0.48 lb./gal.

### Reporting & Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner. The owner/operator shall maintain the following records.

1. The quantity of salt cake (sodium sulfate) and sand introduced to the furnace on a daily basis. Purchases of salt cake and sand shall also be monitored as a crosscheck.
2. Lead content (units of lb./gal) of each material used in the curtain coating system.
3. Quarterly excess emissions reports shall be filed. If no excess emissions occurred during a given quarter, the report would consist of a "no excess emissions" for the particular pollutants involved.

Authority for Requirement: Iowa DNR PSD Construction Permit 95-A-154P-S2

### Emission Point Characteristics

*The emission point shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 298

Stack Opening, (inches, dia.): 102

Exhaust Flow Rate (acfm): 148,444

Exhaust Temperature (°F): 900

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR PSD Construction Permit 95-A-154P- S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

### Monitoring Requirements

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

#### **Stack Testing:**

Pollutant - SO<sub>2</sub>

Demonstration of continued compliance shall be carried out for SO<sub>2</sub> and NO<sub>x</sub> at the following times:

2-year intervals following the 1-year test (conducted in June, 2006).

1<sup>st</sup> Stack Test to be completed by: 2008

2<sup>nd</sup> Stack Test to be completed by: 2010

Test Method - Method 6C, 40 CFR 60, Appendix A or approved alternative

If the permittee fails to demonstrate continued compliance as herein required or the test results indicate significant variability of emissions independent of production rate, continuous stack emission monitoring of the subject pollutant(s) may be required.

Pollutant - NO<sub>x</sub>

Demonstration of continued compliance shall be carried out for SO<sub>2</sub> and NO<sub>x</sub> at the following times:

2-year intervals following the 1-year test (conducted in June, 2006).

1<sup>st</sup> Stack Test to be completed by: 2008

2<sup>nd</sup> Stack Test to be completed by: 2010

Test Method - Method 7E, 40 CFR 60, Appendix A or approved alternative

If the permittee fails to demonstrate continued compliance as herein required or the test results indicate significant variability of emissions independent of production rate, continuous stack emission monitoring of the subject pollutant(s) may be required.

Authority for Requirement: Iowa DNR PSD Construction Permit 95-A-154P- S2

**Continuous Emissions Monitoring:**

Pollutant - Opacity

Date of Initial System Calibration and Quality Assurance - October, 1997

Ongoing System Calibration/Quality Assurance - Automated calibration

Reporting & Record keeping - Records shall be kept and quarterly excess emissions reports shall be filed with the Department. If no excess emissions occurred during a given quarter, the report would consist of a "no excess emissions" for the particular pollutants involved.

1. The permittee must install, calibrate, maintain, and operate a continuous monitoring system for the measurement of opacity of emissions from the furnace.
2. The opacity monitor shall be certified per 40 CFR 60, Appendix B, Performance Specification 1.

The permittee shall:

- a. conduct continuous opacity monitoring during each run during any initial compliance/performance test for particulate matter required.
- b. calculate 6-minute opacity averages from 24 or more data points equally spaced over each 6-minute period during the test runs.
- c. determine, based on the 6-minute opacity average, the opacity value corresponding to the 97.5 percent upper confidence level of a normal distribution of average opacity values.
- d. for the purpose of 60 CFR 60.7, report to the Department as excess emissions all of the 6-minute periods during which the average opacity, as measured by the continuous monitoring system, exceeds the opacity value corresponding to the 97.5 percent upper confidence level.

Authority for Requirement: Iowa DNR Construction Permit 95-A-154P- S2

40CFR60.293(b)(1)-Subpart CC

3. Method 5 shall be used to determine the particulate matter concentration ( $c_s$ ) and volumetric flow rate ( $Q_{sd}$ ) of the effluent gas. The sampling time and sampling volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf). The probe and filter holder heating system may be set to provide a gas temperature no greater than  $177 \pm 14$  °C.

Authority for Requirement: 40CFR60.293(b)(1)-Subpart CC

*The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)*

<b>Agency Approved Operation &amp; Maintenance Plan Required?</b>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Relevant requirements of O&M plan for this equipment: NO <sub>x</sub>	
<b>Facility Maintained Operation &amp; Maintenance Plan Required?</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
<b>Compliance Assurance Monitoring (CAM) Plan Required?</b>	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Authority for Requirement: 567 IAC 22.108(3)

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### **Reduced NO<sub>x</sub> System Agency Operation & Maintenance Plan**

#### **Monitoring Guidelines**

The facility makes a commitment to take timely corrective action during periods of excursion where the indicators are out of range. A corrective action may include an investigation of the reason for the excursion, evaluation of the situation and necessary follow-up action to return operation within the indicator range. An excursion is determined by the averaged discrete data point over a period of time, or the presence of a monitored abnormal condition. An excursion does not necessarily indicate a violation of an applicable requirement. If the corrective action measures fail to return the indicators to the appropriate range, the facility will report the excursion to the department and conduct source testing within 90 days of the excursion to demonstrate compliance with applicable requirements. If the test demonstrates compliance with emission limits then new indicator ranges must be set for monitoring and the new ranges must be incorporated in the operating permit. If the test demonstrates noncompliance with emission limits, then the facility, within 60 days, proposes a schedule to implement corrective action to bring the source into compliance and demonstrate compliance.

#### **Monitoring Methods & Corrective Actions**

##### **General**

- Periodic Monitoring, which to be of value requires the source to be operating, is not required during periods of time greater than one day in which the source does not operate.
- The furnace temperature shall be minimized to the extent possible.

#### **Daily**

- Visually inspect flame shape. Abnormal shape can indicate a buildup of batch dust on the burner tip.
- Monitor air/fuel ratios for conformance to established parameters. The air/fuel ratio shall be maintained in the range between 9.5 to 1 and 11.5 to 1.
- Inspect cooling inserts for hot spots or leaks. If problems are found, the insert should be changed as soon as possible.
- Inspect burner position in the insert to ensure that a good interface is present. A poor interface can lead to overheating of the burner nozzle and a loss of efficiency due to increased cold air induction around the burner.

#### **Monthly**

- Remove batch buildup from front of burner ports.

#### **Annually**

- Calibrate air and fuel flow monitoring devices.

#### **Record Keeping and Reporting**

- Maintenance and inspection records will be kept for five (5) years and will be available upon request.

#### **Quality Control**

- The burners will be operated and maintained according to the manufacturer's recommendations.

## **Emission Point ID Number: M001**

### Associated Equipment

Associated Emission Unit ID Numbers: CC01

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Emission Unit vented through this Emission Point: CC01

Emission Unit Description: Curtain Coating System/ Climaguard Curtain Coater

Raw Material/Fuel: Paint/Coatings

Rated Capacity: 9 gallons/hr

### **Applicable Requirements**

#### **Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

Authority for Requirement: Iowa DNR Construction Permit 05-A-575

567 IAC 23.3(2)"d"

<sup>(1)</sup> An exceedance of the indicator opacity of 10% will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: PM<sub>10</sub>

Emission Limit(s): 0.13 lb/hr

Authority for Requirement: Iowa DNR Construction Permit 05-A-575

Pollutant: Particulate Matter, PM

Emission Limit(s): 0.13 lb/hr, 0.01 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 05-A-575

567 IAC 23.4 (13)

#### **Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 58

Stack Opening, (inches, dia.): 16

Exhaust Flow Rate (scfm): 1500

Exhaust Temperature (°F): 130

Discharge Style: Vertical with unobstructed rain cap

Authority for Requirement: Iowa DNR Construction Permit 05-A-575

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required?**      Yes  No

**Facility Maintained Operation & Maintenance Plan Required?**      Yes  No

**Compliance Assurance Monitoring (CAM) Plan Required?**      Yes  No

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Number: L001**

Associated Equipment

Associated Emission Unit ID Numbers: AL1  
Emissions Control Equipment ID Number: LASCR  
Emissions Control Equipment Description: Wet Scrubber- Packed Bed  
Continuous Emissions Monitors ID Numbers: LS-PH-0001

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Emission Unit vented through this Emission Point: AL1  
Emission Unit Description: Annealing Lehr  
Raw Material/Fuel: Glass  
Rated Capacity: 29.2 tons/hr

**Applicable Requirements**

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity  
Emission Limit(s): 40%  
Authority for Requirement: 567 IAC 23.3(2) "d"

Pollutant: Particulate Matter, PM  
Emission Limit(s): 0.1 gr/dscf  
Authority for Requirement: 567 IAC 23.3(2) "a"

Pollutant: Sulfur Dioxide, SO<sub>2</sub>  
Emission Limit(s): 0.42 lb/hr, 500 ppmv  
Authority for Requirement: Iowa DNR PSD Construction Permit 95-A-155  
567 IAC 23.3 (3) "e"

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required?**      Yes  No

**Facility Maintained Operation & Maintenance Plan Required?**      Yes  No

**Compliance Assurance Monitoring (CAM) Plan Required?**      Yes  No

*Facility operation and maintenance plans must be sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the applicable requirements.*

*Facility operation and maintenance plans are to be developed by the facility within six(6) months of the issuance date of this permit and the data pertaining to the plan maintained on site for at least 5 years. The plan and associated recordkeeping provides documentation of this facility's implementation of its obligation to operate according to good air pollution control practice.*

*Good air pollution control practice is achieved by adoption of quality control standards in the operation and maintenance procedures for air pollution control that are comparable to industry quality control standards for the production processes associated with this emission point.*

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: C001**

### Associated Equipment

Associated Emission Unit ID Numbers: CRS1

Emissions Control Equipment ID Number: CRDC1

Emissions Control Equipment Description: Baghouse- reverse jet fabric filter

Continuous Emissions Monitors ID Numbers: CRSPG1

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Emission Unit vented through this Emission Point: CRS1

Emission Unit Description: Cullet Return System

Raw Material/Fuel: Glass

Rated Capacity: 29.2 tons/hr

### **Applicable Requirements**

#### **Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limit(s): 0% <sup>(1)</sup>

Authority for Requirement: Iowa DNR PSD Construction Permit 99-A-299P

<sup>(1)</sup> Determined to be Best Available Control Technology (BACT)

Pollutant: PM<sub>10</sub>

Emission Limit(s): 1.43 lb/hr

Authority for Requirement: Iowa DNR PSD Construction Permit 99-A-299P

Pollutant: Particulate Matter, PM

Emission Limit(s): 1.43 lb/hr, 0.1 gr/dscf

Authority for Requirement: Iowa DNR PSD Construction Permit 99-A-299P

567 IAC 23.3 (2) "a"

#### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

#### Work practice standards:

1. The baghouse shall be operated and maintained according to manufacturer's instructions.
2. The permittee shall perform monthly operational status inspections of process and control equipment that is important to the performance of the capture and control system, and promptly remediate any deficiencies noted.

Reporting & Record keeping:

1. The source shall be physically labeled after the issuance of construction permit 99-A-299P with its name and source number as identified in this permit.
2. A record shall be kept of all inspections and maintenance performed on the source.

Authority for Requirement: Iowa DNR PSD Construction Permit 99-A-299P

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 20

Stack Opening, (inches, dia.): 24

Exhaust Flow Rate (acfm): 14,065

Exhaust Temperature (°F): Ambient

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR PSD Construction Permit 99-A-299P

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

Stack Testing:

Pollutant- Particulate Matter, PM

Stack Test to be completed by- 4/15/2009

Test Method- Iowa Compliance Sampling Manual Method 5

Authority for Requirements- 567 IAC 22.108(3)

Pollutant- PM<sub>10</sub>

Stack Test to be completed by- 4/15/2009

Test Method- 40 CFR 51, Appendix M, 201A with 202

Authority for Requirements- 567 IAC 22.108(3)

*The owner of this equipment or the owner's authorized agent shall provide written notice to the Director, not less than 30 days before a required stack test or performance evaluation of a continuous emission monitor. Results of the test shall be submitted in writing to the Director in the form of a comprehensive report within 6 weeks of the completion of the testing. 567 IAC 25.1(7)*

Visible emissions shall be observed on a weekly basis to ensure that none when the emission unit on this emission point is at or near full capacity. If visible emissions are observed corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If corrective action does not return the observation to no visible emissions, then a Method 9 observation will be required. If an opacity (> 0 %) is observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from observation of the violation.

If weather conditions prevent the observer from conducting an observation, the observer shall note such conditions on the data observation sheet. At least three attempts shall be made to retake readings at approximately 2-hour intervals throughout the day. If all observation attempts for a week have been unsuccessful due to weather, an observation shall be made the next operating day where weather permits.

Maintain a written record of the observation and any action resulting from the observation for a minimum of five years.

Authority for Requirement: 567 IAC 22.108(14)

**Agency Approved Operation & Maintenance Plan Required?** Yes  No

**Facility Maintained Operation & Maintenance Plan Required?** Yes  No

**Compliance Assurance Monitoring (CAM) Plan Required?** Yes  No

Authority for Requirement: 567 IAC 22.108(3)

## CAM Plan for EP- C001 Baghouse

### I. Background

#### A. Emissions Unit

Description: Cullet Return System  
Identification: CRS1  
Facility: Guardian Industries Corp.  
300 South 5<sup>th</sup> Ave East  
DeWitt, IA 52742

#### B. Applicable Regulation, Emission Limit, and Monitoring Requirements

Regulation No.: Permit 99-A-299P  
Particulate emission limit: 1.43 lb/hr PM/PM-10  
Opacity emission limit: 0%  
Current Monitoring requirements: Initial Stack Testing, weekly visible emission readings, daily pressure gauge readings

#### C. Control Technology

Fabric Filter

### II. Monitoring Approach

#### A. Indicator

Daily pressure drop checks will be used as an indicator.

#### B. Measurement Approach

Pressure gauges will be checked daily to ensure that the operating range is within a differential pressure of 3-5 inches of water.

#### C. Indicator Range

Differential pressure should not be below 3 inches of water  
Differential pressure should not exceed 5 inches of water

#### E. Performance Criteria

Data interpretation: Differential pressure below 3 inches of water or greater than 5 inches of water would indicate a decrease in the performance of the baghouse and potentially indicate increase of particulate emissions.

Verification of operational status: Records of differential pressure readings will be maintained for five years.

QA/QC practices and criteria:

The facility shall check the differential pressure daily when the emission unit on this emission point is in operation. If a differential pressure of less than 3 inches of water or a greater than 5 inches of water is observed, corrective action will be taken as soon as possible

Monitoring frequency and data  
Collection procedure:

Differential Pressure readings shall be conducted daily during a period when the emission unit on this emission point is in operation. Records of the readings shall be maintained for five years.

### III. Justification

#### A. Background

This facility manufactures glass through float process. The pollutant specific emission unit is the baghouse that controls emissions from the cullet return conveyor system. The controlled exhaust flow rate is approximately 14,065 acfm.

#### B. Rationale for Selection of Performance Indicator

The daily differential pressure drop readings were selected as the performance indicator because it is indicative of operation of the baghouse in a manner necessary to comply with the particulate emission standard. A differential pressure of less than 3 inches of water or above 5 inches of water would indicate a reduced performance of this baghouse.

#### C. Rationale for Selection of Indicator Level

The changes in differential pressure noted above were selected as indicator ranges because a differential pressure greater than these values are indicative of a potential increase in particulate emissions due to a decrease in the performance of this baghouse. If the baghouse is operating properly, the differential pressure will be between 3-5 inches of water.

**Emission Point ID Number: A001**

Associated Equipment

Associated Emission Unit ID Numbers: AG01

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Emission Unit vented through this Emission Point: AG01  
Emission Unit Description: Mirror Line Silver Application  
Raw Material/Fuel: Glass, Silver, Palladium and Tin  
Rated Capacity: 6000 ft<sup>2</sup>/hr

**Applicable Requirements**

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limit(s): No Visible Emissions

Authority for Requirement: Iowa DNR Construction Permit 98-A-395-S1  
567 IAC 23.3(2) "d"

Pollutant: Particulate Matter, PM

Emission Limit(s): 0.01 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 98-A-395-S1  
567 IAC 23.4 (13)

**Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

Process throughput:

1. This source is limited to using a material that applies a silver surface coating to glass.
2. The solids content of the coating material used shall not exceed 4.0 pounds per gallon.

Reporting & Record keeping:

All records, as required below, shall be satisfactory for demonstrating compliance with all applicable operating limits.

1. Solids content (units in lb./gal) of each material used at this source.

Authority for Requirement: Iowa DNR Construction Permit 98-A-395-S1

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 42

Stack Opening, (inches, dia.): 24

Exhaust Flow Rate (acfm): 2805

Exhaust Temperature (°F): 75

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 98-A-395-S1

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

Visible emissions shall be observed on a weekly basis to ensure none occur when the emission unit on this emission point is at or near full capacity. If visible emissions are observed, this would be a violation and corrective action will be taken as soon as possible, but no later than eight hours from the observation of visible emissions. If weather conditions prevent the observer from conducting an opacity observation, the observer shall note such conditions on the data observation sheet. At least three attempts shall be made to retake visible emissions readings at approximately 2-hour intervals throughout the day. If all observation attempts for a week have been unsuccessful due to weather, an observation shall be made the next operating day where weather permits.

Maintain a written record of the observation and any action resulting from the observation for a minimum of five years.

Authority for Requirement: 567 IAC 22.108(14)

**Agency Approved Operation & Maintenance Plan Required?**      Yes  No

**Facility Maintained Operation & Maintenance Plan Required?**      Yes  No

**Compliance Assurance Monitoring (CAM) Plan Required?**      Yes  No

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: U001**

### Associated Equipment

Associated Emission Unit ID Numbers: UV01

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Emission Unit vented through this Emission Point: UV01  
Emission Unit Description: Application of top coat to silvered glass  
Raw Material/Fuel: Glass, UV Paint  
Rated Capacity: 6000 ft<sup>2</sup>/ hr

### **Applicable Requirements**

#### **Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

Authority for Requirement: Iowa DNR Construction Permit 98-A-396- S2  
567 IAC 23.3 (2) "d"

<sup>(1)</sup> An exceedance of the indicator opacity of 'no visible emissions' will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter, PM

Emission Limit(s): 0.01 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 98-A-396-S2  
567 IAC 23.4 (13)

#### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

#### Process throughput:

1. This source is limited to using a material that applies an ultraviolet (UV) coating to glass.
2. The solids content of the coating material used shall not exceed 11.0 pounds per gallon.

Reporting & Record keeping:

All records, as required by this permit shall be kept on-site for a minimum of 5 (five) years and shall be available for inspection by the DNR. These records shall demonstrate compliance with all applicable operating limits. Records shall be legible and maintained in an orderly manner.

1. Solids content (units in lb./gal) of each material used at UV coater.

Authority for Requirement: Iowa DNR Construction Permit 98-A-396-S2

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 42

Stack Opening, (inches, dia.): 40

Exhaust Flow Rate (scfm): 16,976

Exhaust Temperature (°F): 85

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 98-A-396-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required?**      Yes  No

**Facility Maintained Operation & Maintenance Plan Required?**      Yes  No

**Compliance Assurance Monitoring (CAM) Plan Required?**      Yes  No

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: E001**

### Associated Equipment

Associated Emission Unit ID Numbers: DEG01

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Emission Unit vented through this Emission Point: DEG01  
Emission Unit Description: Diesel Emergency Generator # 1  
Raw Material/Fuel: Diesel Fuel  
Rated Capacity: 120.6 gal/hr (22.59 MMBtu/hr, 1750 kw/hr)

### **Applicable Requirements**

#### **Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limit(s): 20%

Authority for Requirement: Iowa DNR Construction Permit 99-A-300P-S2

Pollutant: PM<sub>10</sub>

Emission Limit: 2.82 lb./hr

Authority for Requirement: Iowa DNR Construction Permit 99-A-300P-S2

Pollutant: Particulate Matter, PM

Emission Limit: 2.82 lb./hr, 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 99-A-300P-S2  
567 IAC 23.3 (2) "a"

Pollutant: Sulfur Dioxide, SO<sub>2</sub>

Emission Limit: 2.5 lb/MMBtu for liquid fuel

Authority for Requirement: 567 IAC 23.3(3) "b"

Pollutant: Nitrogen Oxides, NO<sub>x</sub>

Emission Limit: 56.4 lb./hr

Authority for Requirement: Iowa DNR Construction Permit 99-A-300P-S2

#### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

#### Hours of operation:

1. The diesel generators DEG01 and DEG02 (under IDNR Construction Permits 99-A-300P-S2 and 99-A-301P-S2) shall be operated no more than 1,460 hours total for both generators per twelve-month rolling period.

Work practice standards:

1. The fuel oil used at this source shall be limited to a maximum sulfur content of 0.05% by weight.
2. The diesel generator shall be operated with 4 degrees of retarded timing.

Reporting & Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

1. The source shall be physically labeled after construction with its name and source number as identified in this permit.
2. The owner or operator shall record the date and hours of operation of the unit. The twelve month rolling total hours of operation for the generators (under IDNR Construction Permits 99-A-300PS2 and 99-A-301PS2) shall be updated on a monthly basis.
3. The owner or operator shall keep a record of the sulfur content of the fuel oil combusted at this source, either through using an ASTM approved method to test each time the fuel oil tank is refilled, or through fuel oil vendor certification.

Authority for Requirement: Iowa DNR Construction Permit 99-A-300P-S2

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 62

Stack Opening, (inches, dia.): 16

Exhaust Flow Rate (scfm): 5430

Exhaust Temperature (°F): 940

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 99-A-300P-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required?**      Yes  No

**Facility Maintained Operation & Maintenance Plan Required?**      Yes  No

**Compliance Assurance Monitoring (CAM) Plan Required?**      Yes  No

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: E002**

### Associated Equipment

Associated Emission Unit ID Numbers: DEG02

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Emission Unit vented through this Emission Point: DEG02  
Emission Unit Description: Diesel Emergency Generator # 2  
Raw Material/Fuel: Diesel Fuel  
Rated Capacity: 120.6 gal/hr (22.59 MMBtu/hr, 1750 kw/hr)

### **Applicable Requirements**

#### **Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limit(s): 20%

Authority for Requirement: Iowa DNR Construction Permit 99-A-301P-S2

Pollutant: PM<sub>10</sub>

Emission Limit: 2.82 lb./hr

Authority for Requirement: Iowa DNR Construction Permit 99-A-301P-S2

Pollutant: Particulate Matter, PM

Emission Limit: 2.82 lb./hr, 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 99-A-301P-S2  
567 IAC 23.3 (2) "a"

Pollutant: Sulfur Dioxide, SO<sub>2</sub>

Emission Limit: 2.5 lb/MMBtu for liquid fuel

Authority for Requirement: 567 IAC 23.3(3) "b"

Pollutant: Nitrogen Oxides, NO<sub>x</sub>

Emission Limit: 56.4 lb./hr

Authority for Requirement: Iowa DNR Construction Permit 99-A-301P-S2

### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

#### Hours of operation:

1. The diesel generators DEG01 and DEG02 (under IDNR Construction Permits 99-A-300P-S2 and 99-A-301P-S2) shall be operated no more than 1,460 hours total for both generators per twelve-month rolling period.

#### Work practice standards:

1. The fuel oil used at this source shall be limited to a maximum sulfur content of 0.05% by weight.
2. The diesel generator shall be operated with 4 degrees of retarded timing.

#### Reporting & Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

1. The source shall be physically labeled after construction with its name and source number as identified in this permit.
2. The owner or operator shall record the date and hours of operation of the unit. The twelve month rolling total hours of operation for the generators (under IDNR Construction Permits 99-A-300PS2 and 99-A-301PS2) shall be updated on a monthly basis.
3. The owner or operator shall keep a record of the sulfur content of the fuel oil combusted at this source, either through using an ASTM approved method to test each time the fuel oil tank is refilled, or through fuel oil vendor certification.

Authority for Requirement: Iowa DNR Construction Permit 99-A-301P-S2

### **Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 62

Stack Opening, (inches, dia.): 16

Exhaust Flow Rate (scfm): 5430

Exhaust Temperature (°F): 940

Discharge Style: Vertical Unobstructed

Authority for Requirement: Iowa DNR Construction Permit 99-A-301P-S2

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required?**      Yes  No

**Facility Maintained Operation & Maintenance Plan Required?**      Yes  No

**Compliance Assurance Monitoring (CAM) Plan Required?**      Yes  No

Authority for Requirement: 567 IAC 22.108(3)

## **Emission Point ID Number: P001**

### Associated Equipment

Associated Emission Unit ID Numbers: PPC01

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Emission Unit vented through this Emission Point: PPC01

Emission Unit Description: Pre Production Coater (Application of Coatings on glass)

Raw Material/Fuel: Glass, Toluene, Acetylene & C-Hexane

Rated Capacity: 3600 ft<sup>2</sup>/ Hr

### **Applicable Requirements**

#### **Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

Pollutant: Opacity

Emission Limit(s): 40% <sup>(1)</sup>

Authority for Requirement: Iowa DNR Construction Permit 03-A-1091

567 IAC 23.3(2) "d"

<sup>(1)</sup> An exceedance of the indicator opacity of (25%) will require the owner/operator to promptly investigate the emission unit and make corrections to operations or equipment associated with the exceedance. If exceedances continue after the corrections, the DNR may require additional proof to demonstrate compliance (e.g., stack testing).

Pollutant: Particulate Matter, PM

Emission Limit: 0.1 gr/dscf

Authority for Requirement: Iowa DNR Construction Permit 03-A-1091

567 IAC 23.3 (2) "a"

#### **Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

#### Operating Limits:

1. Pre Production Coater- PPC01, shall not use more than 2,492 gallons of HAP- containing materials per twelve month rolling period.
2. The maximum HAP content of any HAP- containing material used in the Pre-Production Coater shall be 7.5 pounds per gallon.

#### Reporting & Record keeping:

All records as required by this permit shall be kept on-site for a minimum of five (5) years and shall be available for inspection by the DNR. Records shall be legible and maintained in an orderly manner.

1. The facility shall record the monthly material usage (units of gal/month) of HAP-containing materials used in the Pre-Production Coater (PPC01). During the initial 12 month of operation, cumulative material usage shall be determined for each month of operation. After the initial 12 months of operation, annual material usage shall be determined on a 12 month rolling basis, for each month of operation.
2. The facility shall record the HAP content of all HAP-containing materials used in the Pre-Production Coater (PPC01)
3. The MSDS of all HAP-containing materials used in the Pre-Production Coater (PPC01) shall be kept on-site and available for inspection by the DNR.

Authority for Requirement: Iowa DNR Construction Permit 03-A-1091

**Emission Point Characteristics**

*The emission point shall conform to the specifications listed below.*

Stack Height, (ft, from the ground): 20

Stack Opening, (inches, dia.): 10

Exhaust Flow Rate (scfm): 623

Exhaust Temperature (°F): Ambient

Discharge Style: Downward Discharge

Authority for Requirement: Iowa DNR Construction Permit 03-A-1091

The temperature and flow rate are intended to be representative and characteristic of the design of the permitted emission point. The Department recognizes that the temperature and flow rate may vary with changes in the process and ambient conditions. If it is determined that any of the emission point design characteristics are different than the values stated above, the owner/operator must notify the Department and obtain a permit amendment, if required.

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required?**      Yes  No

**Facility Maintained Operation & Maintenance Plan Required?**      Yes  No

**Compliance Assurance Monitoring (CAM) Plan Required?**      Yes  No

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Number: BLDG 1**

Associated Equipment

Associated Emission Unit ID Numbers: MS01

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Emission Unit vented through this Emission Point: MS01  
Emission Unit Description: Application of mineral spirits to glass  
Raw Material/Fuel: Mineral Spirits  
Rated Capacity: 29.2 tons/hr

**Applicable Requirements**

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

No Applicable Requirements at this time

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required?**      Yes  No

**Facility Maintained Operation & Maintenance Plan Required?**      Yes  No

**Compliance Assurance Monitoring (CAM) Plan Required?**      Yes  No

Authority for Requirement: 567 IAC 22.108(3)

**Emission Point ID Number: DEGFS**

Associated Equipment

Associated Emission Unit ID Numbers: DEGFS

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Emission Unit vented through this Emission Point: DEGFS  
Emission Unit Description: Diesel Storage Tank  
Raw Material/Fuel: Diesel Fuel  
Rated Capacity: 5,000 gallons

**Applicable Requirements**

**Emission Limits (lb./hr, gr./dscf, lb./MMBtu, % opacity, etc.)**

*The emissions from this emission point shall not exceed the levels specified below.*

No Applicable Requirements at this time

**Operational Limits & Requirements**

*The owner/operator of this equipment shall comply with the operational limits and requirements listed below.*

Process throughput:

- 1. This tank shall be used only to store diesel oil

Authority for Requirement: Iowa DNR Construction Permit 99-A-302

**Monitoring Requirements**

*The owner/operator of this equipment shall comply with the monitoring requirements listed below.*

**Agency Approved Operation & Maintenance Plan Required?** Yes  No

**Facility Maintained Operation & Maintenance Plan Required?** Yes  No

**Compliance Assurance Monitoring (CAM) Plan Required?** Yes  No

Authority for Requirement: 567 IAC 22.108(3)

## **IV. General Conditions**

This permit is issued under the authority of the Iowa Code subsection 455B.133(8) and in accordance with 567 Iowa Administrative Code chapter 22.

### **G1. Duty to Comply**

1. The permittee must comply with all conditions of the Title V permit. Any permit noncompliance constitutes a violation of the Act and is grounds for enforcement action; for a permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application. *567 IAC 22.108(9)"a"*
2. Any compliance schedule shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based. *567 IAC 22.105 (2)"h"(3)*
3. Where an applicable requirement of the Act is more stringent than an applicable requirement of regulations promulgated under Title IV of the Act, both provisions shall be enforceable by the administrator and are incorporated into this permit. *567 IAC 22.108 (1)"b"*
4. Unless specified as either "state enforceable only" or "local program enforceable only", all terms and conditions in the permit, including provisions to limit a source's potential to emit, are enforceable by the administrator and citizens under the Act. *567 IAC 22.108 (14)*
5. It shall not be a defense for a permittee, in an enforcement action, that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit. *567 IAC 22.108 (9)"b"*

### **G2. Permit Expiration**

1. Except as provided in 567 IAC 22.104, the expiration of this permit terminates the permittee's right to operate unless a timely and complete application has been submitted for renewal. Any testing required for renewal shall be completed before the application is submitted. *567 IAC 22.116(2)*
2. To be considered timely, the owner, operator, or designated representative (where applicable) of each source required to obtain a Title V permit shall present or mail the Air Quality Bureau, Iowa Department of Natural Resources, Air Quality Bureau, 7900 Hickman Rd, Suite #1, Urbandale, Iowa 50322, two copies (three if your facility is located in Linn or Polk county) of a complete permit application, at least 6 months but not more than 18 months prior to the date of permit expiration. An additional copy must also be sent to EPA Region VII, Attention: Chief of Air Permits, 901 N. 5th St., Kansas City, KS 66101. The application must include all emission points, emission units, air pollution control equipment, and monitoring devices at the facility. All emissions generating activities, including fugitive emissions, must be included. The definition of a complete application is as indicated in 567 IAC 22.105(2). *567 IAC 22.105*

### **G3. Certification Requirement for Title V Related Documents**

Any application, report, compliance certification or other document submitted pursuant to this permit shall contain certification by a responsible official of truth, accuracy, and completeness. All certifications shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete. *567 IAC 22.107 (4)*

### **G4. Annual Compliance Certification**

By March 31 of each year, the permittee shall submit compliance certifications for the previous calendar year. The certifications shall include descriptions of means to monitor the compliance status of all emissions sources including emissions limitations, standards, and work practices in accordance with applicable requirements. The certification for a source shall include the identification of each term or condition of the permit that is the basis of the certification; the

compliance status; whether compliance was continuous or intermittent; the method(s) used for determining the compliance status of the source, currently and over the reporting period consistent with all applicable department rules. For sources determined not to be in compliance at the time of compliance certification, a compliance schedule shall be submitted which provides for periodic progress reports, dates for achieving activities, milestones, and an explanation of why any dates were missed and preventive or corrective measures. The compliance certification shall be submitted to the administrator, director, and the appropriate DNR Field office. *567 IAC 22.108 (15)"e"*

#### **G5. Semi-Annual Monitoring Report**

By March 31 and September 30 of each year, the permittee shall submit a report of any monitoring required under this permit for the 6 month periods of July 1 to December 31 and January 1 to June 30, respectively. All instances of deviations from permit requirements must be clearly identified in these reports, and the report must be signed by a responsible official, consistent with 567 IAC 22.107(4). The semi-annual monitoring report shall be submitted to the director and the appropriate DNR Field office. *567 IAC 22.108 (5)*

#### **G6. Annual Fee**

1. The permittee is required under subrule 567 IAC 22.106 to pay an annual fee based on the total tons of actual emissions of each regulated air pollutant. Beginning July 1, 1996, Title V operating permit fees will be paid on July 1 of each year. The fee shall be based on emissions for the previous calendar year.
2. The fee amount shall be calculated based on the first 4,000 tons of each regulated air pollutant emitted each year. The fee to be charged per ton of pollutant will be available from the department by June 1 of each year. The Responsible Official will be advised of any change in the annual fee per ton of pollutant.
3. The following forms shall be submitted annually by March 31 documenting actual emissions for the previous calendar year.
  - a. Form 1.0 "Facility Identification";
  - b. Form 4.0 "Emissions unit-actual operations and emissions" for each emission unit;
  - c. Form 5.0 "Title V annual emissions summary/fee"; and
  - d. Part 3 "Application certification."
4. The fee shall be submitted annually by July 1. The fee shall be submitted with the following forms:
  - a. Form 1.0 "Facility Identification";
  - b. Form 5.0 "Title V annual emissions summary/fee";
  - c. Part 3 "Application certification."
5. If there are any changes to the emission calculation form, the department shall make revised forms available to the public by January 1. If revised forms are not available by January 1, forms from the previous year may be used and the year of emissions documented changed. The department shall calculate the total statewide Title V emissions for the prior calendar year and make this information available to the public no later than April 30 of each year.
6. Phase I acid rain affected units under section 404 of the Act shall not be required to pay a fee for emissions which occur during the years 1993 through 1999 inclusive.
7. The fee for a portable emissions unit or stationary source which operates both in Iowa and out of state shall be calculated only for emissions from the source while operating in Iowa.
8. Failure to pay the appropriate Title V fee represents cause for revocation of the Title V permit as indicated in 567 IAC 22.115(1)"d".

### **G7. Inspection of Premises, Records, Equipment, Methods and Discharges**

Upon presentation of proper credentials and any other documents as may be required by law, the permittee shall allow the director or the director's authorized representative to:

1. Enter upon the permittee's premises where a Title V source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
3. Inspect, at reasonable times, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
4. Sample or monitor, at reasonable times, substances or parameters for the purpose of ensuring compliance with the permit or other applicable requirements. *567 IAC 22.108 (15)"b"*

### **G8. Duty to Provide Information**

The permittee shall furnish to the director, within a reasonable time, any information that the director may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the director copies of records required to be kept by the permit, or for information claimed to be confidential, the permittee shall furnish such records directly to the administrator of EPA along with a claim of confidentiality. *567 IAC 22.108 (9)"e"*

### **G9. General Maintenance and Repair Duties**

The owner or operator of any air emission source or control equipment shall:

1. Maintain and operate the equipment or control equipment at all times in a manner consistent with good practice for minimizing emissions.
2. Remedy any cause of excess emissions in an expeditious manner.
3. Minimize the amount and duration of any excess emission to the maximum extent possible during periods of such emissions. These measures may include but not be limited to the use of clean fuels, production cutbacks, or the use of alternate process units or, in the case of utilities, purchase of electrical power until repairs are completed.
4. Schedule, at a minimum, routine maintenance of equipment or control equipment during periods of process shutdowns to the maximum extent possible. *567 IAC 24.2(1)*

### **G10. Recordkeeping Requirements for Compliance Monitoring**

1. In addition to any source specific recordkeeping requirements contained in this permit, the permittee shall maintain the following compliance monitoring records, where applicable:

- a. The date, place and time of sampling or measurements
- b. The date the analyses were performed.
- c. The company or entity that performed the analyses.
- d. The analytical techniques or methods used.
- e. The results of such analyses; and
- f. The operating conditions as existing at the time of sampling or measurement.
- g. The records of quality assurance for continuous compliance monitoring systems (including but not limited to quality control activities, audits and calibration drifts.)

2. The permittee shall retain records of all required compliance monitoring data and support information for a period of at least 5 years from the date of compliance monitoring sample, measurement report or application. Support information includes all calibration and maintenance records and all original strip chart recordings for continuous compliance monitoring, and copies of all reports required by the permit.

3. For any source which in its application identified reasonably anticipated alternative operating scenarios, the permittee shall:
  - a. Comply with all terms and conditions of this permit specific to each alternative scenario.
  - b. Maintain a log at the permitted facility of the scenario under which it is operating.
  - c. Consider the permit shield, if provided in this permit, to extend to all terms and conditions under each operating scenario. *567 IAC 22.108(4), 567 IAC 22.108(12)*

**G11. Evidence used in establishing that a violation has or is occurring.**

Notwithstanding any other provisions of these rules, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any provisions herein.

1. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred at a source:

- a. A monitoring method approved for the source and incorporated in an operating permit pursuant to *567 Chapter 22*;
- b. Compliance test methods specified in *567 Chapter 25*; or
- c. Testing or monitoring methods approved for the source in a construction permit issued pursuant to *567 Chapter 22*.

2. The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:

- a. Any monitoring or testing methods provided in these rules; or
- b. Other testing, monitoring, or information gathering methods that produce information comparable to that produced by any method in subrule 21.5(1) or this subrule. *567 IAC 21.5(1)-567 IAC 21.5(2)*

**G12. Prevention of Accidental Release: Risk Management Plan Notification and Compliance Certification**

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Act, the permittee shall notify the department of this requirement. The plan shall be filed with all appropriate authorities by the deadline specified by EPA. A certification that this risk management plan is being properly implemented shall be included in the annual compliance certification of this permit. *567 IAC 22.108(6)*

**G13. Hazardous Release**

The permittee must report any situation involving the actual, imminent, or probable release of a hazardous substance into the atmosphere which, because of the quantity, strength and toxicity of the substance, creates an immediate or potential danger to the public health, safety or to the environment. A verbal report shall be made to the department at (515) 281-8694 and to the local police department or the office of the sheriff of the affected county as soon as possible but not later than six hours after the discovery or onset of the condition. This verbal report must be followed up with a written report as indicated in *567 IAC 131.2(2)*. *567 IAC Chapter 131-State Only*

**G14. Excess Emissions and Excess Emissions Reporting Requirements**

1. Excess Emissions. Excess emission during a period of startup, shutdown, or cleaning of control equipment is not a violation of the emission standard if the startup, shutdown or cleaning is accomplished expeditiously and in a manner consistent with good practice for minimizing emissions. Cleaning of control equipment which does not require the shutdown of the process

equipment shall be limited to one six-minute period per one-hour period. An incident of excess emission (other than an incident during startup, shutdown or cleaning of control equipment) is a violation. If the owner or operator of a source maintains that the incident of excess emission was due to a malfunction, the owner or operator must show that the conditions which caused the incident of excess emission were not preventable by reasonable maintenance and control measures. Determination of any subsequent enforcement action will be made following review of this report. If excess emissions are occurring, either the control equipment causing the excess emission shall be repaired in an expeditious manner or the process generating the emissions shall be shutdown within a reasonable period of time. An expeditious manner is the time necessary to determine the cause of the excess emissions and to correct it within a reasonable period of time. A reasonable period of time is eight hours plus the period of time required to shut down the process without damaging the process equipment or control equipment. In the case of an electric utility, a reasonable period of time is eight hours plus the period of time until comparable generating capacity is available to meet consumer demand with the affected unit out of service, unless, the director shall, upon investigation, reasonably determine that continued operation constitutes an unjustifiable environmental hazard and issue an order that such operation is not in the public interest and require a process shutdown to commence immediately.

## 2. Excess Emissions Reporting

a. Oral Reporting of Excess Emissions. An incident of excess emission (other than an incident of excess emission during a period of startup, shutdown, or cleaning) shall be reported to the appropriate field office of the department within eight hours of, or at the start of the first working day following the onset of the incident. The reporting exemption for an incident of excess emission during startup, shutdown or cleaning does not relieve the owner or operator of a source with continuous monitoring equipment of the obligation of submitting reports required in 567-subrule 25.1(6). An oral report of excess emission is not required for a source with operational continuous monitoring equipment (as specified in 567-subrule 25.1(1) ) if the incident of excess emission continues for less than 30 minutes and does not exceed the applicable emission standard by more than 10 percent or the applicable visible emission standard by more than 10 percent opacity. The oral report may be made in person or by telephone and shall include as a minimum the following:

- i. The identity of the equipment or source operation from which the excess emission originated and the associated stack or emission point.
- ii. The estimated quantity of the excess emission.
- iii. The time and expected duration of the excess emission.
- iv. The cause of the excess emission.
- v. The steps being taken to remedy the excess emission.
- vi. The steps being taken to limit the excess emission in the interim period.

b. Written Reporting of Excess Emissions. A written report of an incident of excess emission shall be submitted as a follow-up to all required oral reports to the department within seven days of the onset of the upset condition, and shall include as a minimum the following:

- i. The identity of the equipment or source operation point from which the excess emission originated and the associated stack or emission point.
- ii. The estimated quantity of the excess emission.
- iii. The time and duration of the excess emission.

- iv. The cause of the excess emission.
- v. The steps that were taken to remedy and to prevent the recurrence of the incident of excess emission.
- vi. The steps that were taken to limit the excess emission.
- vii. If the owner claims that the excess emission was due to malfunction, documentation to support this claim. *567 IAC 24.1(1)-567 IAC 24.1(4)*

3. Emergency Defense for Excess Emissions. For the purposes of this permit, an “emergency” means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include non-compliance, to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation or operator error. An emergency constitutes an affirmative defense to an action brought for non-compliance with technology based limitations if it can be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that:

- a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
- b. The facility at the time was being properly operated;
- c. During the period of the emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements of the permit; and
- d. The permittee submitted notice of the emergency to the director by certified mail within two working days of the time when the emissions limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken. *567 IAC 22.108(16)*

**G15. Permit Deviation Reporting Requirements**

A deviation is any failure to meet a term, condition or applicable requirement in the permit. Reporting requirements for deviations that result in a hazardous release or excess emissions have been indicated above (see G13 and G14). Unless more frequent deviation reporting is specified in the permit, any other deviation shall be documented in the semi-annual monitoring report and the annual compliance certification (see G4 and G5). *567 IAC 22.108(5)"b"*

**G16. Notification Requirements for Sources That Become Subject to NSPS and NESHAP Regulations**

During the term of this permit, the permittee must notify the department of any source that becomes subject to a standard or other requirement under 567-subrule 23.1(2) (standards of performance of new stationary sources) or section 111 of the Act; or 567-subrule 23.1(3) (emissions standards for hazardous air pollutants), 567-subrule 23.1(4) (emission standards for hazardous air pollutants for source categories) or section 112 of the Act. This notification shall be submitted in writing to the department pursuant to the notification requirements in 40 CFR Section 60.7, 40 CFR Section 61.07, and/or 40 CFR Section 63.9. *567 IAC 23.1(2), 567 IAC 23.1(3), 567 IAC 23.1(4)*

**G17. Requirements for Making Changes to Emission Sources That Do Not Require Title V Permit Modification**

1. Off Permit Changes to a Source. Pursuant to section 502(b)(10) of the CAAA, the permittee may make changes to this installation/facility without revising this permit if:

- a. The changes are not major modifications under any provision of any program required by section 110 of the Act, modifications under section 111 of the act, modifications under section 112 of the act, or major modifications as defined in 567 IAC Chapter 22.
- b. The changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or in terms of total emissions);
- c. The changes are not modifications under any provisions of Title I of the Act and the changes do not exceed the emissions allowable under the permit (whether expressed therein as a rate of emissions or as total emissions);
- d. The changes are not subject to any requirement under Title IV of the Act.
- e. The changes comply with all applicable requirements.
- f. For such a change, the permitted source provides to the department and the administrator by certified mail, at least 30 days in advance of the proposed change, a written notification, including the following, which must be attached to the permit by the source, the department and the administrator:
  - i. A brief description of the change within the permitted facility,
  - ii. The date on which the change will occur,
  - iii. Any change in emission as a result of that change,
  - iv. The pollutants emitted subject to the emissions trade
  - v. If the emissions trading provisions of the state implementation plan are invoked, then Title V permit requirements with which the source shall comply; a description of how the emissions increases and decreases will comply with the terms and conditions of the Title V permit.
  - vi. A description of the trading of emissions increases and decreases for the purpose of complying with a federally enforceable emissions cap as specified in and in compliance with the Title V permit; and
  - vii. Any permit term or condition no longer applicable as a result of the change.

*567 IAC 22.110(1)*

- 2. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), record keeping, reporting, or compliance certification requirements. *567 IAC 22.110(2)*
- 3. Notwithstanding any other part of this rule, the director may, upon review of a notice, require a stationary source to apply for a Title V permit if the change does not meet the requirements of subrule 22.110(1). *567 IAC 22.110(3)*
- 4. The permit shield provided in subrule 22.108(18) shall not apply to any change made pursuant to this rule. Compliance with the permit requirements that the source will meet using the emissions trade shall be determined according to requirements of the state implementation plan authorizing the emissions trade. *567 IAC 22.110(4)*
- 5. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading and other similar programs or processes, for changes that are provided for in this permit. *567 IAC 22.108(11)*

**G18. Duty to Modify a Title V Permit**

1. Administrative Amendment.

- a. An administrative permit amendment is a permit revision that is required to do any of the following:

- i. Correct typographical errors
    - ii. Identify a change in the name, address, or telephone number of any person identified in the permit, or provides a similar minor administrative change at the source;
    - iii. Require more frequent monitoring or reporting by the permittee; or
    - iv. Allow for a change in ownership or operational control of a source where the director determines that no other change in the permit is necessary, provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new permittee has been submitted to the director.
  - b. The permittee may implement the changes addressed in the request for an administrative amendment immediately upon submittal of the request. The request shall be submitted to the director.
  - c. Administrative amendments to portions of permits containing provisions pursuant to Title IV of the Act shall be governed by regulations promulgated by the administrator under Title IV of the Act.
- 2. Minor Permit Modification.
  - a. Minor permit modification procedures may be used only for those permit modifications that do any of the following:
    - i. Do not violate any applicable requirements
    - ii. Do not involve significant changes to existing monitoring, reporting or recordkeeping requirements in the Title V permit.
    - iii. Do not require or change a case by case determination of an emission limitation or other standard, or increment analysis.
    - iv. Do not seek to establish or change a permit term or condition for which there is no corresponding underlying applicable requirement and that the source has assumed in order to avoid an applicable requirement to which the source would otherwise be subject. Such terms and conditions include any federally enforceable emissions caps which the source would assume to avoid classification as a modification under any provision under Title I of the Act; and an alternative emissions limit approved pursuant to regulations promulgated under section 112(i)(5) of the Act.;
    - v. Are not modifications under any provision of Title I of the Act; and
    - vi. Are not required to be processed as significant modification.
  - b. An application for minor permit revision shall be on the minor Title V modification application form and shall include at least the following:
    - i. A description of the change, the emissions resulting from the change, and any new applicable requirements that will apply if the change occurs.
    - ii. The permittee's suggested draft permit
    - iii. Certification by a responsible official, pursuant to 567 IAC 22.107(4), that the proposed modification meets the criteria for use of a minor permit modification procedures and a request that such procedures be used; and
    - iv. Completed forms to enable the department to notify the administrator and the affected states as required by 567 IAC 22.107(7).
  - c. The permittee may make the change proposed in its minor permit modification application immediately after it files the application. After the permittee makes this

change and until the director takes any of the actions specified in 567 IAC 22.112(4) "a" to "c", the permittee must comply with both the applicable requirements governing the change and the proposed permit terms and conditions. During this time, the permittee need not comply with the existing permit terms and conditions it seeks to modify. However, if the permittee fails to comply with its proposed permit terms and conditions during this time period, existing permit term terms and conditions it seeks to modify may subject the facility to enforcement action.

3. Significant Permit Modification. Significant Title V modification procedures shall be used for applications requesting Title V permit modifications that do not qualify as minor Title V modifications or as administrative amendments. These include but are not limited to all significant changes in monitoring permit terms, every relaxation of reporting or recordkeeping permit terms, and any change in the method of measuring compliance with existing requirements. Significant Title V modifications shall meet all requirements of 567 IAC Chapter 22, including those for applications, public participation, review by affected states, and review by the administrator, and those requirements that apply to Title V issuance and renewal. *567 IAC 22.111-567 IAC 22.113* The permittee shall submit an application for a significant permit modification not later than three months after commencing operation of the changed source unless the existing Title V permit would prohibit such construction or change in operation, in which event the operation of the changed source may not commence until the department revises the permit. *567 IAC 22.105(1)"a"(4)*

#### **G19. Duty to Obtain Construction Permits**

Unless exempted under 567 IAC 22.1(2), the permittee must not construct, install, reconstruct, or alter any equipment, control equipment or anaerobic lagoon without first obtaining a construction permit, conditional permit, or permit pursuant to 567 IAC 22.8, or permits required pursuant to 567 IAC 22.4 and 567 IAC 22.5. Such permits shall be obtained prior to the initiation of construction, installation or alteration of any portion of the stationary source. *567 IAC 22.1(1)*

#### **G20. Asbestos**

The permittee shall comply with 567 IAC 23.1(3)"a", and 567 IAC 23.2(3)"g" when activities involve asbestos mills, surfacing of roadways, manufacturing operations, fabricating, insulating, waste disposal, spraying applications, demolition and renovation operations, training fires and controlled burning of a demolished building. *567 IAC 23.1(3)"a", and 567 IAC 23.2*

#### **G21. Open Burning**

The permittee is prohibited from conducting open burning, except as may be allowed by 567 IAC 23.2. *567 IAC 23.2 except 23.2(3)"h"; 567 IAC 23.2(3)"h" - State Only*

#### **G22. Acid Rain (Title IV) Emissions Allowances**

The permittee shall not exceed any allowances that it holds under Title IV of the Act or the regulations promulgated there under. Annual emissions of sulfur dioxide in excess of the number of allowances to emit sulfur dioxide held by the owners and operators of the unit or the designated representative of the owners and operators is prohibited. Exceedences of applicable emission rates are prohibited. "Held" in this context refers to both those allowances assigned to the owners and operators by USEPA, and those allowances supplementally acquired by the owners and operators. The use of any allowance prior to the year for which it was allocated is prohibited. Contravention of any other provision of the permit is prohibited. *567 IAC 22.108(7)*

#### **G23. Stratospheric Ozone and Climate Protection (Title VI) Requirements**

1. The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
  - a. All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to § 82.106.
  - b. The placement of the required warning statement must comply with the requirements pursuant to § 82.108.
  - c. The form of the label bearing the required warning statement must comply with the requirements pursuant to § 82.110.
  - d. No person may modify, remove, or interfere with the required warning statement except as described in § 82.112.
2. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for MVACs in Subpart B:
  - a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156.
  - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to § 82.158.
  - c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161.
  - d. Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with reporting and recordkeeping requirements pursuant to § 82.166. ("MVAC-like appliance" as defined at § 82.152)
  - e. Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to § 82.156.
  - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to § 82.166.
3. If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.
4. If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air Conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant.
5. The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *40 CFR part 82*

#### **G24. Permit Reopenings**

1. This permit may be modified, revoked, reopened, and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or

termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition. *567 IAC 22.108(9)"c"*

2. Additional applicable requirements under the Act become applicable to a major part 70 source with a remaining permit term of 3 or more years. Revisions shall be made as expeditiously as practicable, but not later than 18 months after the promulgation of such standards and regulations.

a. Reopening and revision on this ground is not required if the permit has a remaining term of less than three years;

b. Reopening and revision on this ground is not required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions have been extended pursuant to 40 CFR 70.4(b)(10)(i) or (ii) as amended to June 25, 1993.

c. Reopening and revision on this ground is not required if the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. *567 IAC 22.108(17)"a"*, *567 IAC 22.108(17)"b"*

3. A permit shall be reopened and revised under any of the following circumstances:

a. The department receives notice that the administrator has granted a petition for disapproval of a permit pursuant to 40 CFR 70.8(d) as amended to June 25, 1993, provided that the reopening may be stayed pending judicial review of that determination;

b. The department or the administrator determines that the Title V permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the Title V permit;

c. Additional applicable requirements under the Act become applicable to a Title V source, provided that the reopening on this ground is not required if the permit has a remaining term of less than three years, the effective date of the requirement is later than the date on which the permit is due to expire, or the additional applicable requirements are implemented in a general permit that is applicable to the source and the source receives approval for coverage under that general permit. Such a reopening shall be complete not later than 18 months after promulgation of the applicable requirement.

d. Additional requirements, including excess emissions requirements, become applicable to a Title IV affected source under the acid rain program. Upon approval by the administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.

e. The department or the administrator determines that the permit must be revised or revoked to ensure compliance by the source with the applicable requirements. *567 IAC 22.114(1)*

4. Proceedings to reopen and reissue a Title V permit shall follow the procedures applicable to initial permit issuance and shall effect only those parts of the permit for which cause to reopen exists. *567 IAC 22.114(2)*

## **G25. Permit Shield**

1. The director may expressly include in a Title V permit a provision stating that compliance

with the conditions of the permit shall be deemed compliance with any applicable requirements

as of the date of permit issuance, provided that:

- a. Such applicable requirements are included and are specifically identified in the permit; or
  - b. The director, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the source, and the permit includes the determination or a concise summary thereof.
2. A Title V permit that does not expressly state that a permit shield exists shall be presumed not to provide such a shield.
3. A permit shield shall not alter or affect the following:
  - a. The provisions of Section 303 of the Act (emergency orders), including the authority of the administrator under that section;
  - b. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance;
  - c. The applicable requirements of the acid rain program, consistent with Section 408(a) of the Act;
  - d. The ability of the department or the administrator to obtain information from the facility pursuant to Section 114 of the Act. *567 IAC 22.108 (18)*

#### **G26. Severability**

The provisions of this permit are severable and if any provision or application of any provision is found to be invalid by this department or a court of law, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected by such finding. *567 IAC 22.108 (8)*

#### **G27. Property Rights**

The permit does not convey any property rights of any sort, or any exclusive privilege. *567 IAC 22.108 (9)"d"*

#### **G28. Transferability**

This permit is not transferable from one source to another. If title to the facility or any part of it is transferred, an administrative amendment to the permit must be sought to determine transferability of the permit. *567 IAC 22.111 (1)"d"*

#### **G29. Disclaimer**

No review has been undertaken on the engineering aspects of the equipment or control equipment other than the potential of that equipment for reducing air contaminant emissions. *567 IAC 22.3(3)"c"*

#### **G30. Notification and Reporting Requirements for Stack Tests or Monitor Certification**

The permittee shall notify the department's stack test contact in writing not less than 30 days before a required test or performance evaluation of a continuous emission monitor is performed to determine compliance with an applicable requirement. For the department to consider test results a valid demonstration of compliance with applicable rules or a permit condition, such notice shall be given. Such notice shall include the time, the place, the name of the person who will conduct the test and other information as required by the department. Unless specifically waived by the department's stack test contact, a pretest meeting shall be held not later than 15 days prior to conducting the compliance demonstration. The department may accept a testing protocol in lieu of a pretest meeting. A representative of the department shall be permitted to witness the tests. Results of the tests shall be submitted in writing to the department's stack test contact in the form of a comprehensive report within six weeks of the completion of the testing. Compliance tests conducted pursuant to this permit shall be conducted with the source operating in a normal manner at its maximum continuous output as rated by the equipment manufacturer, or the rate specified by the owner as the maximum production rate at which the source shall be

operated. In cases where compliance is to be demonstrated at less than the maximum continuous output as rated by the equipment manufacturer, and it is the owner's intent to limit the capacity to that rating, the owner may submit evidence to the department that the source has been physically altered so that capacity cannot be exceeded, or the department may require additional testing, continuous monitoring, reports of operating levels, or any other information deemed necessary by the department to determine whether such source is in compliance.

Stack test notifications, reports and correspondence shall be sent to:

Stack Test Review Coordinator  
Iowa DNR, Air Quality Bureau  
7900 Hickman Road, Suite #1  
Urbandale, IA 50322  
(515) 242-6001

Within Polk and Linn Counties, stack test notifications, reports and correspondence shall also be directed to the supervisor of the respective county air pollution program.

*567 IAC 25.1(7)"a", 567 IAC 25.1(9)*

### **G31. Prevention of Air Pollution Emergency Episodes**

The permittee shall comply with the provisions of 567 IAC Chapter 26 in the prevention of excessive build-up of air contaminants during air pollution episodes, thereby preventing the occurrence of an emergency due to the effects of these contaminants on the health of persons.

*567 IAC 26.1(1)*

### **G32. Contacts List**

The current address and phone number for reports and notifications to the EPA administrator is:

Chief of Air Permits  
EPA Region 7  
Air Permits and Compliance Branch  
901 N. 5<sup>th</sup> Street  
Kansas City, KS 66101  
(913) 551-7020

The current address and phone number for reports and notifications to the department or the Director is:

Chief, Air Quality Bureau  
Iowa Department of Natural Resources  
7900 Hickman Road, Suite #1  
Urbandale, IA 50322  
(515) 242-5100

Reports or notifications to the DNR Field Offices or local programs shall be directed to the supervisor at the appropriate field office or local program. Current addresses and phone numbers are:

**Field Office 1**

909 West Main – Suite 4  
Manchester, IA 52057  
(563) 927-2640

**Field Office 2**

P.O. Box 1443  
2300-15th St., SW  
Mason City, IA 50401  
(641) 424-4073

**Field Office 3**

1900 N. Grand Ave.  
Spencer, IA 51301  
(712) 262-4177

**Field Office 4**

1401 Sunnyside Lane  
Atlantic, IA 50022  
(712) 243-1934

**Field Office 5**

401 SW 7<sup>th</sup> Street, Suite I  
Des Moines, IA 50309  
(515) 725-0268

**Field Office 6**

1023 West Madison Street  
Washington, IA 52353-1623  
(319) 653-2135

**Polk County Public Works Dept.**

Air Quality Division  
5885 NE 14th St.  
Des Moines, IA 50313  
(515) 286-3351

**Linn County Public Health Dept.**

Air Pollution Control Division  
501 13th St., NW  
Cedar Rapids, IA 52405  
(319) 892-6000

## Appendix A

[Last Updated: 2/7/02]

{Source: Federal Register dated 7/1/98. revised to reflect 2/12/99 revision, revised 2/7/02 to reflect FR 10/17/00}

## Subpart CC—Standards of Performance for Glass Manufacturing Plants

### § 60.290 Applicability and designation of affected facility.

- (a) Each glass melting furnace is an affected facility to which the provisions of this subpart apply.
- (b) Any facility under paragraph (a) of this section that commences construction or modification after June 15, 1979, is subject to the requirements of this subpart.
- (c) 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.

### § 60.291 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part, unless otherwise required by the context.

*All-electric melter* means a glass melting furnace in which all the heat required for melting is provided by electric current from electrodes submerged in the molten glass, although some fossil fuel may be charged to the furnace as raw material only.

*Borosilicate recipe* means glass product composition of the following approximate ranges of weight proportions:

60 to 80 percent silicon dioxide, 4 to 10 percent total  $R_2O$  (e.g.,  $Na_2O$  and  $K_2O$ ), 5 to 35 percent boric oxides, and 0 to 13 percent other oxides.

*Container glass* means glass made of soda-lime recipe, clear or colored, which is pressed and/or blown into bottles, jars, ampoules, and other products listed in Standard Industrial Classification 3221 (SIC 3221).

*Experimental furnace* means a glass melting furnace with the sole purpose of operating to evaluate glass melting processes, technologies, or glass products. An experimental furnace does not produce glass that is sold (except for further research and development purposes) or that is used as a raw material for nonexperimental furnaces.

*Flat glass* means glass made of soda-lime recipe and produced into continuous flat sheets and other products listed in SIC 3211.

*Flow channels* means appendages used for conditioning and distributing molten glass to forming apparatuses and are a permanently separate source of emissions such that no mixing of emissions occurs with emissions from the melter cooling system prior to their being vented to the atmosphere.

*Glass melting furnace* means a unit comprising a refractory vessel in which raw materials are charged, melted at high temperature, refined, and conditioned to produce molten glass. The unit includes foundations, super-structure and retaining walls, raw material charger systems, heat exchangers, 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. The forming apparatuses, including the float bath used in flat glass manufacturing and flow channels in wool fiberglass and textile fiberglass manufacturing, are not considered part of the glass melting furnace.

*Glass produced* means the weight of the glass pulled from the glass melting furnace.

*Hand glass melting furnace* means a glass melting furnace where the molten glass is removed from the furnace by a glassworker using a blowpipe or a pontil.

*Lead recipe* means glass product composition of the following ranges of weight proportions: 50 to 60 percent silicon dioxide, 18 to 35 percent lead oxides, 5 to 20 percent total R<sub>2</sub>O (e.g., Na<sub>2</sub>O and K<sub>2</sub>O), 0 to 8 percent total R<sub>2</sub>O<sub>3</sub> (e.g., Al<sub>2</sub>O<sub>3</sub>), 0 to 15 percent total RO (e.g., CaO, MgO), other than lead oxide, and 5 to 10 percent other oxides.

*Pressed and blown glass* means glass which is pressed, blown, or both, including textile fiberglass, noncontinuous flat glass, noncontainer glass, and other products listed in SIC 3229. It is separated into:

- (1) Glass of borosilicate recipe.
- (2) Glass of soda-lime and lead recipes.
- (3) Glass of opal, fluoride, and other recipes.

*Rebricking* means cold replacement of damaged or worn refractory parts of the glass melting furnace.

Rebricking includes replacement of the refractories comprising the bottom, side-walls, or roof of the melting vessel; replacement of refractory work in the heat exchanger; replacement of refractory portions of the glass conditioning and distribution system.

*Soda-lime recipe* means glass product composition of the following ranges of weight proportions: 60 to 75 percent silicon dioxide, 10 to 17 percent total R<sub>2</sub>O (e.g., Na<sub>2</sub>O and K<sub>2</sub>O), 8 to 20 percent total RO but not to include any PbO (e.g., CaO, and MgO), 0 to 8 percent total R<sub>2</sub>O<sub>3</sub> (e.g., Al<sub>2</sub>O<sub>3</sub>), and 1 to 5 percent other oxides.

*Textile fiberglass* means fibrous glass in the form of continuous strands having uniform thickness.

*With modified-processes* means using any technique designed to minimize emissions without the use of add-on pollution controls.

*Wool fiberglass* means fibrous glass of random texture, including fiberglass insulation, and other products listed in SIC 3296.

[45 FR 66751, Oct. 7, 1980, as amended at 49 FR 41035, Oct. 19, 1984]

#### **§ 60.292 Standards for particulate matter.**

(a) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no

owner or operator of a glass melting furnace subject to the provisions of this subpart shall cause to be discharged into the atmosphere—

(1) From any glass melting furnace fired exclusively with either a gaseous fuel or a liquid fuel, particulate matter at emission rates exceeding those specified in Table CC–1, Column 2 and Column 3, respectively, or

(2) From any glass melting furnace, fired simultaneously with gaseous and liquid fuels, particulate matter at emission rates exceeding STD as specified by the following equation:

$$\text{STD} = X [1.3(Y) + (Z)]$$

Where:

STD = Particulate matter emission limit, g of particulate/kg (lb of particulate/ton) of glass produced.

X = Emission rate specified in Table CC–1 for furnaces fired with gaseous fuel (Column 2).

Y = Decimal fraction of liquid fuel heating value to total (gaseous and liquid) fuel heating value fired in the glass melting furnaces as determined in § 60.296(b). (joules/joules).

Z = (1–Y).

(b) Conversion of a glass melting furnace to the use of liquid fuel is not considered a modification for the purposes of § 60.14.

- (c) Rebricking and the cost of rebricking is not considered a reconstruction for the purposes of § 60.15.
- (d) An owner or operator of an experimental furnace is not subject to the requirements of this section.
- (e) During routine maintenance of add-on pollution controls, an owner or operator of a glass melting furnace subject to the provisions of paragraph (a) of this section is exempt from the provisions of paragraph (a) of this section if:
  - (1) Routine maintenance in each calendar year does not exceed 6 days;
  - (2) Routine maintenance is conducted in a manner consistent with good air pollution control practices for minimizing emissions; and
  - (3) A report is submitted to the Administrator 10 days before the start of the routine maintenance (if 10 days cannot be provided, the report must be submitted as soon as practicable) and the report contains an explanation of the schedule of the maintenance.

**TABLE CC-1— Emission Rates**  
**[g of particulate/kg of glass produced]**

Col. 1—Glass manufacturing plant industry segment with	Col. 2— Furnace fired with gaseous fuel	Col. 3-Furnace fired with liquid
Container glass .....	0.1	0.13
Pressed and blown glass		
(a) Borosilicate Recipes .....	0.5	0.65
(b) Soda-Lime and Lead Recipes ..	0.1	0.13
(c) Other-Than Borosilicate, Soda-Lime, and Lead Recipes (including opal, fluoride, and other recipes).....	0.25	0.325
Wool fiberglass .....	0.25	0.325
Flat glass .....	0.225	0.225

**§ 60.293 Standards for particulate matter from glass melting furnace with modified-processes.**

- (a) An owner or operator of a glass melting furnaces with modified-processes is not subject to the provisions of § 60.292 if the affected facility complies with the provisions of this section.
- (b) On and after the date on which the performance test required to be conducted by § 60.8 is completed, no owner or operator of a glass melting furnace with modified-processes subject to the provisions of this subpart shall cause to be discharged into the atmosphere from the affected facility:
  - (1) Particulate matter at emission rates exceeding 0.5 gram of particulate per kilogram of glass produced (g/kg) as measured according to paragraph (e) of this section for container glass, flat glass, and pressed and blown glass with a soda-lime recipe melting furnaces.
  - (2) Particulate matter at emission rates exceeding 1.0 g/kg as measured according to paragraph (e) of this section for pressed and blown glass with a borosilicate recipe melting furnace.
  - (3) Particulate matter at emission rates exceeding 0.5 g/kg as measured according to paragraph (e) of this section for textile fiberglass and wool fiberglass melting furnaces.

(c) The owner or operator of an affected facility that is subject to emission limits specified under paragraph (b) of this section shall:

(1) Install, calibrate, maintain, and operate a continuous monitoring system for the measurement of the opacity of emissions discharged into the atmosphere from the affected facility.

(2) During the performance test required to be conducted by § 60.8, conduct continuous opacity monitoring during each test run.

(3) Calculate 6-minute opacity averages from 24 or more data points equally spaced over each 6 minute period during the test runs.

(4) Determine, based on the 6-minute opacity averages, the opacity value corresponding to the 99 percent upper confidence level of a normal distribution of average opacity values.

(5) For the purposes of § 60.7, report to the Administrator as excess emissions all of the 6-minute periods during which the average opacity, as measured by the continuous monitoring system installed under paragraph (c)(1) of this section, exceeds the opacity value corresponding to the 99 percent upper confidence level determined under paragraph (c)(4) of this section.

(d) (1) After receipt and consideration of written application, the Administrator may approve alternative continuous monitoring systems for the measurement of one or more process or operating parameters that is or are demonstrated to enable accurate and representative monitoring of an emission limit specified in paragraph (b) of this section.

(2) After the Administrator approves an alternative continuous monitoring system for an affected facility, the requirements of paragraphs (c) (1) through (5) of this section will not apply for that affected facility.

(e) An owner or operator may redetermine the opacity value corresponding to the 99 percent upper confidence level as described in paragraph (c)(4) of this section if the owner or operator:

(1) Conducts continuous opacity monitoring during each test run of a performance test that demonstrates compliance with an emission limit of paragraph (b) of this section,

(2) Recalculates the 6-minute opacity averages as described in paragraph (c)(3) of this section, and

(3) Uses the redetermined opacity value corresponding to the 99 percent upper confidence level for the purposes of paragraph (c)(5) of this section.

(f) Test methods and procedures as specified in § 60.296 shall be used to determine compliance with this section except that to determine compliance for any glass melting furnace using modified processes and fired with either a gaseous fuel or a liquid fuel containing less than 0.50 weight percent sulfur, Method 5 shall be used with the probe and filter holder heating system in the sampling train set to provide a gas temperature of  $120 \pm 14$  °C ( $248 \pm 25$  °F).

#### **§§ 60.294–60.295 [Reserved]**

#### **§ 60.296 Test methods and procedures.**

(a) If a glass melting furnace with modified processes is changed to one without modified processes or if a glass melting furnace without modified processes is changed to one with modified processes, the owner or operator shall notify the Administrator at least 60 days before the change is scheduled to occur.

(b) When gaseous and liquid fuels are fired simultaneously in a glass melting furnace, the owner or operator shall determine the applicable standard under § 60.292(a)(2) as follows:

(1) The ratio (Y) of liquid fuel heating value to total (gaseous and liquid) fuel heating value fired in the glass melting furnaces shall be computed for each run using the following equation:

$$Y = (H_l L)/(H_l L + H_g G)$$

where:

Y = decimal fraction of liquid fuel heating value to total fuel heating value.

H<sub>l</sub> = gross calorific value of liquid fuel, J/kg.

H<sub>g</sub> = gross calorific value of gaseous fuel, J/kg.

L = liquid flow rate, kg/hr.

G = gaseous flow rate, kg/hr.

(2) Suitable methods shall be used to determine the rates (L and G) of fuels burned during each test period and a material balance over the glass melting furnace shall be used to confirm the rates.

(3) ASTM Method D 240-76 or 92 (liquid fuels) and D 1826-77 or 94 (gaseous fuels) (incorporated by reference—see § 60.17), as applicable, shall be used to determine the gross calorific values.

(c) In conducting the performance tests required in § 60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in § 60.8(b).

(d) The owner or operator shall determine compliance with the particulate matter standards in §§ 60.292 and 60.293 as follows:

(1) The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$$E = (c_s Q_{sd} - A) / P$$

where:

E = emission rate of particulate matter, g/kg.

c<sub>s</sub> = concentration of particulate matter, g/dsm.

Q<sub>sd</sub> = volumetric flow rate, dscm/hr.

A = zero production rate correction

= 227 g/hr for container glass, pressed and blown (soda-lime and lead) glass, and pressed and blown (other than borosilicate, soda-lime, and lead) glass.

= 454 g/hr for pressed and blown (borosilicate) glass, wool fiberglass, and flat glass.

P = glass production rate, kg/hr.

(2) Method 5 shall be used to determine the particulate matter concentration (c<sub>s</sub>) and volumetric flow rate (Q<sub>sd</sub>) of the effluent gas. The sampling time and sample volume for each run shall be at least 60 minutes and 0.90 dscm (31.8 dscf). The probe and filter holder heating system may be set to provide a gas temperature no greater than 177 ± 14 °C (350 ± 25 °F), except under the conditions specified in § 60.293(e).

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

(4) Method 9 and the procedures in § 60.11 shall be used to determine opacity.  
[54 FR 6674, Feb. 14, 1989; 54 FR 21344, May 17, 1989]