Commonwealth of Massachusetts
Executive Office of Energy & Environmental Affairs

Department of Environmental Protection
Central Regional Office • 627 Main Street, Worcester MA 01608 • 508-792-7650

DEVAL L. PATRICK
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Secretary

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Commissioner

AIR QUALITY OPERATING PERMIT- with MINOR MODIFICATION

Issued by the Massachusetts Department of Environmental Protection ("MassDEP") pursuant to its authority under M.G.L. c. 111, §142B and §142D, 310 CMR 7.00 et seq., and in accordance with the provisions of 310 CMR 7.00: Appendix C.

ISSUED TO ["the Permittee"]:
Ardagh Glass, Inc.
1509 South Macedonia Avenue
Muncie, Indiana 47302

INFORMATION RELIED UPON:
Tr# W125000 issued 4/16/2010
Tr# X226121 issued 1/13/2010
Tr# W008014 issued 6/23/2000
Minor Mod application Tr# X227639 issued 9/1/10
Administrative Amendment TR# X260680

FACILITY LOCATION:
Ardagh Glass, Inc.
1 National Street
Milford, Massachusetts 01757

FACILITY IDENTIFYING NUMBERS:
AQ ID: 120-0856
FMF FAC NO. 2756
FMF RO NO. 177079

NATURE OF BUSINESS:

Glass Containers Manufacturing

STANDARD INDUSTRIAL CODE (SIC):
SIC Code: 3221

NORTH AMERICAN INDUSTRIAL
Classification **(NAICS)** 327213

RESPONSIBLE OFFICIAL:
Name: Paul DeLaney
Title: Plant Manager
Phone: (508) 634 7219

FACILITY CONTACT PERSON:
Name: Mia DeCelles
Title: EHS Manager
Phone (508) 634 7217

This operating permit shall expire on April 16, 2015.

For MassDEP of Environmental Protection, Bureau of Waste Prevention

This final document copy is being provided to you electronically by the Department of Environmental Protection. A signed copy of this document is on file at the DEP office listed on the letterhead.

Roseanna Stanley
Permit Chief, Bureau of Waste Prevention

Date: May 9, 2014

This information is available in alternate format. Call Michelle Waters-Ekanem, Diversity Director, at 617-292-5751. TDD# 1-866-539-7622 or 1-617-574-6868
MassDEP Website: www.mass.gov/dep

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SPECIAL CONDITIONS FOR OPERATING PERMIT

A Legend to Abbreviated Terms found in the following Tables is located in Section 28 of the Operating Permit.

1. PERMITTED ACTIVITIES

In accordance with the provisions of 310 CMR 7.00:Appendix C and applicable rules and regulations, the Permittee is authorized to operate air emission units as shown in Table 1 and exempt, and insignificant activities as described in 310 CMR 7.00:Appendix C(5)(h) and (i). The units described in Table 1 are subject to the terms and conditions shown in Sections 4, 5, and 6 and to other terms and conditions as specified in this permit. Emissions from the exempt activities shall be included in the total facility emissions for the emission-based portion of the fee calculation described in 310 CMR 4.00 and this permit.

DESCRIPTION OF FACILITY AND OPERATIONS

A. The Permittee operates a glass container manufacturing facility located at 1 National Street in Milford, Massachusetts. The facility consists of equipment for raw material handling and storage, two glass furnaces for making glass and equipment for molding, annealing, coating and packaging glass containers. The raw materials are received at the batch plant by mobile sources. The bulk materials are elevated in a closed system to concrete storage bins in the batch plant. The raw materials are automatically weighed and mixed in the batch plant. The mixed batch is then conveyed to the furnaces in individual batch amounts in an enclosed system. The batch is automatically charged into the furnace at a rate generally directly related to the amount of glass being withdrawn by the forming machines.

B. The facility has two regenerative glass melting furnaces (#15 and #16). Each of the furnaces has two firing ports. The furnaces convert the batch into molten glass at a temperature between approximately 2600°F and 2850°F.

C. At periodic intervals, the firing direction is automatically changed. This reversal consists of shutting off the fire on one side, purging the waste gases, reversing the exhaust and air damper and restarting the fire on the other side.

D. Furnace temperature, pressure, glass level and fuel usage are monitored by instrumentation.

E. The two existing emission control devices (ESP #1 and ESP #2) control the Particulate Matter emissions generated from the two regenerative glass-melting furnaces.

F. Emissions from the two regenerative glass-melting furnaces are emitted to the ambient air through an existing steel stack

G. Furnace #15 will be re-bricked and converted to oxy-fuel technology to reduce emissions of nitrogen oxides (NOx). On January 13, 2010 MassDEP issued air pollution control plan approval Tr# X226121 for the re-bricking and conversion. This re-bricking and conversion will result in lower emissions from the facility. Thus, Items B and C will no longer apply as once this conversion is complete which is estimated to occur by the end of October of 2010.

2. EMISSION UNIT IDENTIFICATION

The following emission units (Table 1) are subject to and regulated by this operating permit:

Table 1			
EMISSION UNIT (EU#)	DESCRIPTION OF EMISSION UNIT	EU DESIGN CAPACITY	POLLUTION CONTROL DEVICE (PCD)
EU #1	Glass Furnace No. 15 Custom design by company	Natural gas: 50 MMBtu/hr[1] Glass pull: 348 tpd[2] (Soda Lime Glass)	Electrostatic Precipitator
EU#2	Glass Furnace No. 16 Custom design by company	Natural gas: 50 MMBtu/hr Glass pull: 290 tpd (Soda Lime Glass)	Electrostatic Precipitator

[1] MMBtu/hr = million British Thermal Units per hour
[2] tpd = tons of glass pulled per day

3. IDENTIFICATION OF EXEMPT ACTIVITIES

The following are considered exempt activities in accordance with the criteria contained in 310 CMR 7.00: Appendix C (5) (h):

Table 2	
Description of Current Exempt Activities	Reason
The list of current exempt activities is contained in the Operating Permit application and shall be updated by the Permittee to reflect changes at the facility over the permit term. An up-to-date copy of exempt activities list shall be kept on-site at the facility and a copy shall be submitted to MassDEP's Regional Office. Emissions from these activities shall be reported on the annual emission statement pursuant to 310 CMR 7.12.	310 CMR 7.00:Appendix C(5)(h)

4. APPLICABLE REQUIREMENTS

A. EMISSION LIMITS AND RESTRICTIONS

The Permittee is subject to the emission limits/restrictions as contained in Table 3, 3A, 3B and 3C.

Table 3 - Emission Unit #1 – Short Term /Long Term Emissions					
EU #	FUEL/RAW MATERIAL	POLLUTANT	EMISSION LIMIT/STANDARD (1)	RESTRICTIONS (1)	APPLICABLE REGULATION AND/OR APPROVAL NO.
EU #1	Recycled Glass, Minerals And Natural Gas (after the September, 2010 rebuild, the limits are those shown in the Alternative Operating Scenario)	PM (filterable)	≤ 2.5 lb/hr and ≤ 11 tpy	na	Tr.# W008014
			≤ 0.2 lb/ton glass produced	na	40 CFR 60, Subpart CC and Tr#W008014
		SO_2	≤ 42.5 lb/hr and ≤ 186 tpy	na	Tr#W008014
		NOx	≤ 65 lb/hr and ≤ 285 tpy ≤ 5.3 lb/ton glass produced (2)	na	310 CMR 7.19(11) and Tr#W008014
		CO	≤ 2.5 lb/hr and ≤ 11 tpy	na	Tr#W008014
		VOC	≤ 2.5 lb/hr and ≤ 11 tpy	na	Tr#W008014

NOTE 1: Emissions in "tons per year" are based on a twelve-month rolling period. Compliance with emission limit(s)/standard(s) shall be based on a three-hour averaging time, unless otherwise specified.
NOTE 2: A calendar day average.

Table 3A - Emission Unit #2 - Short Term/Long Term Emissions					
EU #	FUEL/RAW MATERIAL	POLLUTANT	EMISSION LIMIT/STANDARD (1)	RESTRICTIONS (1)	APPLICABLE REGULATION AND/OR APPROVAL NO.
EU #2	Recycled Glass, Minerals And Natural Gas	PM (filterable)	≤ 2.5 lb/hr and ≤ 11 tpy	na	Tr#W008014
			≤ 0.2 lb/ton glass produced	na	40 CFR 60, Subpart CC and Tr#W008014
		SO_2	≤ 42 lb/hr and ≤ 180 tpy	na	Tr#W008014
		NOx	≤ 64 lb/hr and ≤ 275 tpy ≤ 5.3 lb/ton glass produced (2)	na	Tr#W008014 and 310 CMR 7.19(11)
		CO	≤ 2.5 lb/hr and ≤ 11 tpy	na	Tr#W008014
		VOC	≤ 2.5 lb/hr and ≤ 11 tpy	na	Tr#W008014

NOTE 1: Emissions in "tons per year" are based on a twelve-month rolling period. Compliance with emission limit(s)/standard(s) shall be based on a three-hour averaging time, unless otherwise specified.
NOTE 2: A calendar day average.

Table 3B - Emission Unit #1 and #2 – Combined Long Term Emissions					
EU #	FUEL/RAW MATERIAL	POLLUTANT	EMISSION LIMIT/STANDARD (1)	RESTRICTIONS (1)	APPLICABLE REGULATION AND/OR APPROVAL NO.
EU #1 & EU#2	Recycled Glass, Minerals and Natural gas (after the September, 2010 rebuild, the limits are those shown in the Alternative Operating Scenario)	PM (filterable)	≤ 22 tpy	See Special Conditions Table 8, Item A-H	Tr# W008014
		SO_2	≤ 366 tpy		
		NOx	≤ 560 tpy		
		CO	≤ 22 tpy		
		VOC	≤ 22 tpy		

NOTE 1: Emissions in "tons per year" are based on a twelve-month rolling period. Compliance with emission limit(s)/standard(s) shall be based on a three-hour averaging time, unless otherwise specified.

Table 3C - Emission Unit #1, #2 and facility wide.				
EU #	Fuel/Raw Material	Pollutant	Emission Limit/Standard	Applicable Regulation and/or Approval No.
EU #1 and EU#2	Recycled Glass, Minerals and Natural Gas	Visible Emissions	< No. 1 of Chart, except No. 1 to < No. 2 of Chart for ≤ 6 minutes during any one hour.	Tr#W008014
Facility Wide	Raw Material	PM	Visible dust emissions from the raw material handling and yard operations shall be kept at less than 10% opacity during operating times.	Tr#W008014

B. COMPLIANCE DEMONSTRATION

The Permittee is subject to the monitoring/testing, record keeping, and reporting requirements as contained in Tables 4, 5, and 6 below and 310 CMR 7.00 Appendix C (9) and (10) and applicable requirements contained in Table 3:

Table 4	
EU#	MONITORING & TESTING REQUIREMENTS
EU #1 & EU #2	In accordance with the provisions of the Final 7.02 Air Quality Plan Approval Tr## W008014 the Permittee is subject to the terms and conditions presented in Table 4 and to other terms and conditions referenced herein. 1. In accordance with 310 CMR 7.19(13) (a) 10, the Permittee shall monitor compliance with the applicable NOx emission standard by performing an annual stack test as specified in 310 CMR 7.19(13) (c) 1. – 6. The stack test shall be performed prior to October 1 of each calendar year. 2. In accordance with Plan Approval Tr# W008014, at least once per calendar year a consultant/firm knowledgeable in the field of electrostatic precipitators shall certify that the ESPs are capable of operating satisfactorily. 3. In order to ensure proper operation of the ESPs, the Permittee shall monitor the parameters indicated in Condition VI.B. (The ESP Operation, Inspection and Maintenance Requirements) of Plan Approval Tr# W008014. These parameters include: a. hourly secondary voltage readings per TR Set b. hourly secondary current reading per TR set c. twice per shift monitor and verify hopper level d. daily inspection requirements indicated in the "Inspection and Maintenance Schedule[1]". e. monthly inspection requirements indicated in the "Inspection and Maintenance Schedule[1]" f. annual internal inspection requirements indicated in the "Inspection and Maintenance Schedule[1]" g. annual electrical inspection requirements indicated in the "Inspection and Maintenance Schedule[1]" 4. In accordance with Plan Approval Tr# W008014, the Permittee shall monitor the furnace temperature (continuously), the tons per day of glass manufactured for each furnace and the maximum combined total, and the air-to-fuel mixture. 5. The Permittee shall maintain a continuous opacity monitor (COM) in an accurate operating condition. The COM shall be certified, calibrated, tested and maintained in accordance with 40 CFR 60 Appendix B (Performance Specification). In the event that the COM is off line more than two hours, a certified opacity observer shall conduct daily opacity observations and maintain a log. Opacity observations shall be in accordance with EPA Reference Method 9. 6. In accordance with 310 CMR 7.13(1), any person owning, leasing, operating, or controlling a facility for which MassDEP has determined that stack testing is necessary to ascertain compliance with MassDEP's regulations shall cause such stack testing: a. to be conducted by a person knowledgeable in stack testing, b. to be conducted in accordance with procedures contained in a test protocol which has been approved by the Department, c. to be in the presence of a representative of MassDEP when such is deemed necessary, and d. to be summarized and submitted to MassDEP with analyses and report within such time as agreed to in the approved test protocol. [1] See Table 8 - Special Terms and Conditions, Item I for Standard Operating Procedures and Standard Maintenance Procedures.

Table 4 continued	
EU#	MONITORING/TESTING REQUIREMENTS
Facility Wide	7. In accordance with Plan Approval Tr# W008014, monitoring equipment or emissions monitoring systems installed for the purpose of documenting compliance shall be installed, maintained, calibrated and operated by the Permittee in sufficient manner to ensure continuous and accurate operations at all times. 8. In accordance with Plan Approval Tr# W008014, the Permittee shall monitor the operations of the entire facility such that necessary information is available for the preparation of the annual Source Registration/Emission Statement form as required by 310 CMR 7.12. 9. In accordance with Tr# W008014, all emission testing shall be conducted in accordance with US EPA reference test methods as specified in the Code of Federal Regulations Title 40 Part 60 Appendix A or methods as approved by MassDEP.

Table 4A - Compliance Assurance Monitoring (CAM) 40CFR 64 - Opacity Instrumentation to Monitor Emissions from Unit #1 and #2		
I	Indicator	Continuous monitoring of Opacity using a continuous emission monitoring system (COMS).
II	Measurement Approach	Opacity will be monitored continuously; 6-minute block averages for the opacity will be recorded. 6-minute block average records will be stored via electronic data acquisition handling software.
III	Indicator Range	< No. 1 of Chart, except No. 1 to < No. 2 of Chart for ≤ 6 minutes during any one hour. Excursions trigger an inspection, corrective action and reporting requirement.
IV	A. Data Representativeness	The Opacity is measured using the existing COMS required by the current Title V operating permit. The present COMS meets 40 CFR 60.13 and Part 60 Appendix B requirements.
	B. QA/QC Practices and Criteria	Confirm the opacity reads 0% when the furnaces are not operating. The COMS will be certified, calibrated, tested, and maintained in accordance with 40 CFR 60 Appendix B and Appendix F. IF the COMS is down for more than 2 hours, a certified opacity observer shall conduct daily opacity observations and maintain a log.
	C. Monitoring Frequency Data Collection Procedures	The Opacity is monitored continuously
		The 6-minute block averages are calculated and recorded.
	Averaging Period	6-minute block average

Table 5	
EU#	RECORD KEEPING REQUIREMENTS
EU #1 & EU #2	In accordance with the provisions of the Final 7.02 Air Quality Plan Approval Tr# W008014 the Permittee is subject to the terms and conditions presented in Table 5 and to other terms and conditions referenced herein. 1. In accordance with 310 CMR 7.00 Appendix C(10)(b), maintain records on-site and in sufficient detail to demonstrate compliance with the applicable averaging time. Records shall be maintained for five (5) years from the date of generation and shall be readily available to MassDEP and EPA personnel. 2. In accordance with Plan Approval Tr# W008014, record the furnace temperature (continuously), the tons per day of glass manufactured for each furnace and the maximum combined total, and the air-to-fuel mixture. 3. Record and verify all parameters indicated in Condition VI.B. (the ESP Operation, Inspection and Maintenance Requirements) of Plan Approval Tr# W008014. These parameters include: a. hourly secondary voltage readings per TR set. b. plotted hourly secondary current readings per TR set. c. twice per shift monitor and verify hopper level d. daily inspection requirements indicated in the “Inspection and Maintenance Schedule” e. monthly inspection requirements indicated in the “Inspection and Maintenance Schedule” f. annual internal inspection requirements indicated in the “Inspection and Maintenance Schedule” g. 7. annual electrical inspection requirements indicated in the “Inspection and Maintenance Schedule”. 4. In accordance with Plan Approval Tr# W008014, in the event that the COMs is off line more than two hours, a certified opacity observer shall conduct opacity observations during daylight hours and maintain a log. The log shall include the name of the observer (the person shall be US EPA Method 9 certified), date, time and opacity reading. 5. In accordance with 310 CMR 7.19(13)(a)10, maintain records in compliance with the requirements of 310 CMR 7.19(13)(d), including the annual stack test records identified in 310 CMR 7.19(13)(c). 6. In accordance with 310 CMR 7.00 Appendix C(10)(b), maintain records of all monitoring data and supporting information on site for a period of at least five (5) years from the date of the monitoring sample, measurement, report or initial operating permit application. Supporting information includes at a minimum, all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, and copies of all reports required by the operating permit, and any other information required to interpret the monitoring data. Records required to be maintained shall include, where applicable: a. The date, place as defined in the permit, and time of sampling or measurements; b. The date(s) 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 7. Maintain sufficient records of its operations and monitoring information for the annual preparation of a Source Registration/Emission Statement Form as required by 310 CMR 7.12. Copies of the submitted forms shall be kept on-site for five years. 8. The Permittee shall, contemporaneously with making a change authorized by this Operating Permit from one alternative operating scenario to another, enter in a log at the facility a record of the scenario under which it is operating. The Permittee shall record changes from one scenario to another contemporaneously with the change, as provided in 310 CMR 7.00: Appendix C(10)(g).

Table 6	
EU#	REPORTING REQUIREMENTS
EU #1 and EU #2	In accordance with the provisions of the Final 7.02 Air Quality Plan Approval Tr# W008014 the Permittee is subject to the terms and conditions presented in Table 6 and to other terms and conditions referenced herein. 1. In accordance with 310 CMR 7.19(13)(a)10, submit the required records/reports in compliance with the requirements of 310 CMR 7.19(13)(d). 2. In accordance with 310 CMR 7.19(13)(c), submit the required annual stack test pre-test protocol and final emission test report in compliance with the requirements of 310 CMR 7.19(13)(c)1. through 6. 3. In accordance with Plan Approval Tr# W008014 and 310 CMR 7.00: Appendix C (10)(a), any records requested by MassDEP, including the COMs data and the quarterly audit reports, shall be submitted to the Department within 30 days of the request by MassDEP or within a longer time period if approved in writing by the Department.
Facility Wide	4. Submit Emission Statements (Source Registration) annually in accordance with 310 CMR 7.12. In accordance with 310 CMR 7.12, detailed emissions for all criteria and hazardous air pollutants emitted at the facility shall be reported on the annual source registration. 5. In accordance with 310 CMR 7.13(1) and 7.13(2), if determined by MassDEP that stack testing is necessary to ascertain compliance with MassDEP's regulations or design approval provisos shall cause such stack testing to be summarized and submitted to MassDEP as prescribed in the agreed to pretest protocol. 6. Upon MassDEP's request, any records required by the applicable requirements identified in Section 4 of the operating permit or to the emissions of any air contaminant from the facility shall be submitted to MassDEP within 30 days of the request by MassDEP or within a longer time period if approved in writing by MassDEP, and shall be transmitted on paper, on computer disk, or electronically at the discretion of MassDEP, pursuant to 310 CMR 7.00 Appendix C(10)(a) incorporated herein by reference. 7. In accordance with 310 CMR 7.00 Appendix C(10)(c), the Permittee shall report a summary of all monitoring data and related supporting information to MassDEP at least every six months per calendar year. The report shall be postmarked by the 30th day following the end of the period. (A report for 1/1 – 6/30 is due by July 30 and the report for 7/1–12/31 is due by January 30 of the following year). The monitoring data summary report is not equivalent to a CEM or audit report. 8. In accordance with 310 CMR 7.00 Appendix C (10), if there are any occurrences of deviations, they shall be summarized and included with the Monitoring Data Summary Report. 9 All required reports must be certified by a responsible official of the Permittee as provided in 310 CMR 7.00: APPENDIX C (10)(H). 10. The Permittee shall comply with the reporting requirements of permit deviations identified in condition 25 of this operating permit.

C. GENERAL APPLICABLE REQUIREMENTS

The Permittee shall comply with all generally applicable requirements contained in 310 CMR 7.00 et. seq. and 310 CMR 8.00 et. seq., when subject.

D. REQUIREMENTS NOT CURRENTLY APPLICABLE

The Permittee is currently not subject to the following requirements:

Table 7	
REGULATION	DESCRIPTION/REASON
40 CFR 61, Subpart N	National Emission Standards for Inorganic Arsenic Emissions from Glass Manufacturing Plants
40 CFR 63, Subpart T	National Emission Standards for Halogenated Solvent Cleaning
310 CMR 7.07	Open Burning
310 CMR 7.15	Asbestos
310 CMR 7.16	Reduction of Single Occupant Commuter Vehicle Use
310 CMR 7.25	Consumer and Commercial Products
42 U.S.C. 7401, §112(r)(7)	Accidental Release Prevention Requirements: Risk Management under Clean Air Act 112(r)(7)
42 U.S.C. 7401 Section 112	Metal HAPs

5. SPECIAL TERMS AND CONDITIONS

The Permittee is subject to the following special provisions that are not contained in Table 3, 4, 5, and 6:

Table 8	
EU #	SPECIAL TERMS AND CONDITIONS
EU #1 & EU #2	GLASS FURNACES A. In accordance with Plan Approval Tr# W008014, the use of the by-pass stack during all modes of glass production is prohibited. B. In accordance with Plan Approval Tr# W008014, the Permittee shall operate both furnaces on natural gas unless primary and secondary natural gas supplies are unavailable due to a force majeure situation. During this event #2 or #4 fuel oil with a sulfur content not in excess of 0.5% by weight, or propane may be utilized. C. In accordance with Plan Approval No. W008014, Particulate Matter emissions from Glass Furnaces #15 and #16 shall be vented to two electrostatic precipitators (ESP#1 and ESP#2) with the following design (see Table below):

	Table 8 continued
EU #	SPECIAL TERMS AND CONDITIONS

EU #1 & EU #2

Equipment Description	Electrostatic Precipitator 1 (ESP #1)	Electrostatic Precipitator 2 (ESP #2)
Manufacturer Model	Precipitator Pollution Control #18-1331-2	United McGill #3-300
No. of Fields	Three	Three
Total collection area	22,134 square feet	15,823 square feet
Total plates	45	60
Installation Date	Prior to 1987	1989
Initial Approval	CM-87-IF-045 dated 12/3/87	C-P-89-021 dated 11/27/89
Other Approvals	Tr# W008014 dated 6/23/00	Tr# W008014 dated 6/23/00
Stack Exit Velocity (Ft/Sec)	47	
Stack Height (FT)	75	
Stack Diameter (FT)	5	

D. In accordance with Plan Approval Tr# W008014, emissions from both furnaces will be vented to a common duct. A damper will divert approximately 50% of the total airflow into each ESP. During routine maintenance or shutdown of one of the ESPs, the total airflow will be directed into the other operating ESP.

E. In accordance with Plan Approval Tr# W008014, in the event that two fields are off-line in one of the ESPs, the total airflow shall be adjusted accordingly to ensure compliance with the emission limits identified for EU#1 and for EU#2 in Operating Permit Tr# W125000, Table 3, 3A, 3B, and 3C and also identified in Plan Approval Tr# W008014, Table II.

F. In accordance with Plan Approval Tr# W008014, if for any reason the ESPs become inoperable due to a malfunction (two fields in each ESP are inoperable) during material processing, the material processing shall be reduced to idle conditions as soon as practicable, but in no event longer than 24 hours thereafter in order to minimize release of uncontrolled emissions to the ambient air.

G. In accordance with Plan Approval Tr# W008014, all operators shall be trained initially in the operation of the electrostatic precipitators, and all maintenance personnel shall be trained initially in the inspection and maintenance of the electrostatic precipitators.

H. In accordance with Plan Approval Tr# W008014, operation, inspection and maintenance of the electrostatic precipitators shall include the items indicated in Table 4, item 3 and Table 5, item 3 of this permit.

Table 8 Continued
SPECIAL TERMS & CONDITONS

I. Standard Operating Procedures and Standard Maintenance Procedures

-

The Permittee shall monitor and record all parameters listed below:

1. Hourly secondary voltage readings per TR set
2. Hourly secondary current readings per TR set
3. Record the results of the following internal inspection requirements once per calendar month.
    a. Visually inspect all collector and discharge rapping gear.
    b. Insulator compartment (air purge) temperature.
    c. Visually inspect purge air blower heater operation.
    d. Check precipitator doors and other areas of the ESP for possible leaks. Implement corrective action to minimize leaks discovered because of the inspection.
4. Record the results of the following internal inspection requirements once per calendar year.
    a. Visually inspect the transformer/rectifier liquid level, thermometer and vacuum/pressure gauges.
    b. Open the precipitator for internal inspection and remove all dust build-up on collector plate electrode, discharge electrodes, hoppers and insulators.
    c. Inspect top discharge of the discharge electrode system for loose connections and for evidence of arching.
    d. Check discharge electrode system for correct alignment. Inspect carefully for sign of arching and perform maintenance as required.
    e. Inspect suspension bolts for correct tension and dimension.
    f. Any build-up of dust on the sitters, distributors, or gas passages at the inlet is to be cleared away.
    g. Inspect interior walls of casing panels and ducts for signs of corrosion.
5. Record the results of the following electrical inspection requirements once per calendar year.
    a. Make visual inspection, particularly noting all wiring, terminal blocks, loose ground connection, arching, and physical damage or burning.
    b. Physically check all power feed lugs and connections and tighten.
    c. Check mechanical linkage on all electrical equipment to ensure proper orientation.
    d. Check and replace inoperative lamps.
    e. Inspect cabinets for dust and moisture: clean with moisture fee low pressure air
    f. Check the precipitator ground
    g. Inspect linear reactors for accumulated dust: remove any accumulations with moisture fee low-pressure air.
    h. Inspect all electrical connections of the linear reactors to ensure security.
    i. Clean transformer rectifier bushings and remove accumulation of dust.
    j. Inspect electrical feeds for security and spark erosion.
    k. Sample and test the transformer rectifier insulating liquid.

6. ALTERNATIVE OPERATING SCENARIOS

Upon completion of the conversion of furnace #15 to oxy-fuel the facility shall operate in accordance with MassDEP plan approval Tr# X226121 dated January 13, 2010 including the following:

I. PROJECT DESCRIPTION

A. The current project will consist of redesign and re-bricking of Furnace #15, and conversion to oxy-fuel firing technology. Because almost all of the nitrogen is removed from the combustion environment, the emissions of nitrogen oxides ("NOx") will be considerably reduced. The project includes adding enhanced insulation, low-NOx burners, and changes to associated equipment. The project will also entail the addition of Continuous Emission Monitoring systems ("CEMS") for NOx and Sulfur Dioxide ("SO2").

B. The gas that provides the oxidant for combustion of the fuel supplied to Furnace 15 shall be at least 90 percent oxygen.

C. The glass pull rate for Furnace #15, currently 300 tons per day, will not change. No changes will be made to Furnace #16 or other equipment associated with that furnace.

II. EMISSIONS

Emissions from the furnaces include Nitrogen Oxides (NOx), Particulate Matter (PM), Sulfur Dioxide (SO_2), Volatile Organic Compounds (VOC's), Carbon Monoxide (CO), and Sulfuric Acid Mist (H_2SO_4). Emissions of PM from the furnaces are controlled by two electrostatic precipitators (ESP), and the combined exhausts are emitted through a single stack. Emissions of SO2 and NOx are currently limited by restrictions on the type and amount of fuel that can burned in the furnaces. NOx will be further reduced by the use of oxy-fuel firing in Furnace #15, and other operating and design improvements made to the furnace.

III. EMISSION UNIT IDENTIFICATION

The principle sources of emissions to the ambient air from the facility are identified as Emission Units in Table 1.

Table 1- Emission Unit Identification

Emission Unit Number	Description of Emission Unit	Design Capacity
EU #1	Furnace #15 and associated equipment*	348 ton per day glass pull rate
EU #2	Furnace #16 and associated equipment*	290 ton per day glass pull rate

Note * = Associated equipment includes distributors, forehearths, lehrs, mold swabbing, and hot end coating.

IV. EU #1 (Furnace #15) EMISSION LIMITS

The Permittee shall comply with the emission limits and restrictions for EU #1 (Furnace #15) as contained in Table 2, Table 4, and as specified in section VI.B and VI.C for operations during Abnormally Low Production Rate, Furnace Startup, Malfunction of the Furnace, Maintenance of the Furnace, and Color Transition.

Table 2-EU #1 General Emission Limits (Furnace only)		
Pollutant	Emission Limit and/or Standard	Restrictions
PM	0.2 pounds (filterable) per ton of glass pulled and 0.45 pounds (total) per ton of glass pulled	1. Not to exceed 300 tons of glass pulled per day. 2. Natural Gas shall be the only fuel of use except as otherwise allowed in this plan approval.
SO_2*	2.5 pounds per ton of glass pulled 30-day rolling average (for EU#1 and EU#2 collectively) except during periods of Abnormally Low Production Rate, Furnace Startup, Malfunction of the Furnace, Maintenance of the Furnace, and Color Transition	
NOx*	1.3 pounds per ton of glass pulled 30-day rolling average except during periods of Abnormally Low Production Rate, Furnace Startup, Malfunction of the Furnace, and Maintenance of the Furnace	
CO	2.5 pounds per hour and 11 tons per 12 month rolling total	
VOC	2.5 pounds per hour and 11 tons per 12 month rolling total	

Note * = See Section VI.B and VI.C for NOx and SO2 emission limits during Abnormally Low Production Rate, Furnace Startup, Malfunction of the Furnace, Maintenance of the Furnace, and Color Transition

"Emission Rate 30-day Rolling Average" shall be expressed as pounds of pollutant per ton of glass produced calculated at the Furnace in question in accordance with the following formula:

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

Where:

30-day average (lb E/ton) = The Emission Rate 30-day Rolling Average

E = Emissions of the pollutant in question (NOx or SO_2)

COD = Current Operating Day where the relevant Emission Rate 30-day Rolling Average is the applicable limit.

COD_E = The daily Emissions as measured by a CEMS on the COD, in pounds.

COD_{PROD} = Daily glass production on the COD, in tons of glass.

P29D = The Previous 29 Operating Days where the relevant Emission Rate 30-day Rolling Average is the applicable limit.

$P29D_E$ = The sum of the daily NOx or SO_2 Emissions as measured by a CEMS during the P29D, in pounds.

$P29D_{PROD}$ = The sum of the daily glass production during the P29D, in tons of glass.

A new Emission Rate 30-day Rolling Average shall be calculated for each new Operating Day where the Emission Rate 30-day Rolling Average is the applicable standard. Any Operating Day where the newly calculated Emission Rate 30-day Rolling Average exceeds the limit is a separate one-Day violation.

Some Operating Days will be excluded from the Emission Rate 30-day Rolling Average as set forth in this Permit.

V. EU #2 (Furnace #16) EMISSION LIMITS

The Permittee shall comply with the emission limits and restrictions for EU #2 (Furnace #16) as contained in Table 3, Table 4, and as specified in section VI.B and VI.C for operations during Abnormally Low Production Rate, Furnace Startup, Malfunction of the Furnace, Maintenance of the Furnace, and Color Transition.

Table 3-EU #2 Emission Limits (Furnace only)		
Pollutant	Emission Limit and/or Standard	Restrictions
PM	0.2 pounds (filterable) per ton of glass pulled and 0.45 pounds (total) per ton of glass pulled	1. Natural Gas shall be the only fuel of use except as otherwise allowed in this approval.
SO_2*	2.5 pounds per ton of glass pulled 30-day rolling average (for EU#1 and EU#2 collectively) except during periods of Abnormally Low Production Rate, Furnace Startup, Malfunction of the Furnace, Maintenance of the Furnace, and Color Transition	
NOx[1]	5.3 pounds per ton of glass pulled while firing natural gas based on a calendar day average. 64 pounds per hour and 275 tons per 12 month rolling total	
CO	2.5 pounds per hour and 11 tons per 12 month rolling total	
VOC	2.5 pounds per hour and 11 tons per 12 month rolling total	

Note 1 = The NOx emission limit for EU #2 is based upon 310 CMR 7.19 RACT for oxides of nitrogen.
Note * = See Section VI.C for SO2 emission limits during Abnormally Low Production Rate, Furnace Startup, Malfunction of the Furnace, Maintenance of the Furnace, and Color Transition

VI. 12 Month Rolling Total and Abnormal Operation Emission limits for EU #1 and EU #2

A. 12 Month Rolling Total Emission Limits

Table 4 - EU #1 & EU #2 12 Month Rolling Total Emission Limits			
Pollutant	EU #1	EU #2	Total emissions from EU #1 plus EU #2
PM(filterable)	15 TPY	15 TPY	30 TPY
PM (total)	25 TPY	25 TPY	50 TPY
SO_X	137 TPY	180 TPY	317 TPY
NO_X	79TPY	281 TPY	360 TPY
CO	17 TPY	16 TPY	33 TPY
VOC	11 TPY	11 TPY	22 TPY
Visible Emissions			1. Opacity from the furnaces shall not exceed 20% for more than two minutes in any one hour and shall not exceed 40% at any time. 2. Visible dust emissions from the raw material handling, yard operations, and material storage shall be kept less than 10% opacity at all times.

TPY = Tons per 12 month rolling total

B. NOx Emission Limits

The below limits cover the exceptions to the rolling 30-day average emission rate, for the abnormal episodes.

1. <u>NOx Limit During Abnormally Low Production Rate Days</u>

All Abnormally Low Production Rate ("ALPR") Days may be excluded from the Emission Rate 30-day Rolling Average. ALPR is defined as any calendar day during which the glass pull rate falls below 35% of the maximum permitted pull rate of the furnace for one or more continuous hours. The ALPR for Furnace 15 is 4.4 TPH (which is equivalent to 105 TPD). The ALPR for Furnace 16 is 4.2 TPH (which is equivalent to a daily pull rate of 102 TPD). During ALPR days that are excluded from the Emission Rate 30-day Rolling Average, a CEMS shall be used to demonstrate compliance on a 24-hour Block Average with the following pound per day limit:

- Furnace 15: $NO_{X_Oxy_Abn_15}$ = NOx emission limit for Furnace 15 during an Abnormally Low Production Rate Day = 390 pounds per day
- Furnace 16: $NO_{X_Regen_Abn_16}$ = NOx emission limit for Furnace 16 during an Abnormally Low Production Rate Day = 1,545 pounds per day

These limits were calculated using the following equations:

Furnace 15: $$NO_{X_Oxy_Abn_15} = 1.3\frac{lbNOx}{ton} \times \frac{P_{15}}{0.35}$$

Furnace 16: $$NO_{X_Oxy_Abn_16} = 5.3\frac{lbNOx}{ton} \times \frac{P_{16}}{0.35}$$

Where: P_{15} = Furnace 15 ALPR threshold (i.e., 105 tons of glass produced per day).
P_{16} = Furnace 16 ALPR threshold (i.e., 102 tons of glass produced per day).

2. <u>NOx Limit During Malfunction of a Furnace</u>

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

- Furnace 15: $NO_{X_Oxy_Malf_15}$ = NOx emission limit for Furnace 15 during a Malfunction Day = 1,560 pounds per day
- Furnace 16: $NO_{X_Regen_Malf_16}$ = NOx emission limit for Furnace 16 during a Malfunction Day = 6,180 pounds per day

These limits were calculated using the following equations:

Furnace 15: $$NO_{X_Oxy_Malf_15} = 4 \times NO_{X_Oxy_Abn_15}$$

Furnace 16: $$NO_{X_Regen_Malf_16} = 4 \times NO_{X_Regen_Abn_16}$$

Where: $NO_{X_Oxy_Abn_15}$ = NOx emission limit for Furnace 15 during an Abnormally Low Production Rate Day = 390 lb/ day (see Section VI.B.1)
$NO_{X_Regen_Abn_16}$ = NOx emission limit for Furnace 16 during an Abnormally Low Production Rate Day = 1,545 lb/day (see Section VI.B.1)

3. <u>NOx Limit During Maintenance of a Furnace</u>

For any Operating Day where Maintenance activities on a Furnace are performed, SGCI may elect to exclude the Maintenance Day from the Emission Rate 30-day Rolling Average. The use of this Maintenance exception shall be limited to 144 hours annually. For any day that is excluded from the Emission Rate 30-day Rolling Average, a CEMS shall be used to demonstrate compliance on a 24-hour Block Average with the following pound per day limit:

Furnace 15: $$NO_{X_Oxy_Maint_15} = \frac{MH \times [4 \times NO_{X_Oxy_Abn_15}]}{24} + \frac{NH \times [NO_{X_Oxy_Abn_15}]}{24}$$

Furnace 16: $$NO_{X_Regen_Maint_16} = \frac{MH \times [4 \times NO_{X_Regen_Abn_16}]}{24} + \frac{NH \times [NO_{X_Regen_Abn_16}]}{24}$$

Where: $NO_{X\text{-}_Oxy_Maint_15}$ = NOx emission limit for Furnace 15 during a Maintenance Day, in pounds per day
$NO_{X_Regen_Maint_16}$ = NOx emission limit for Furnace 16 during a Maintenance Day, in pounds per day
$NO_{X_Oxy_Abn_15}$ = NOx emission limit for Furnace 15 during an Abnormally Low Production Rate Day = 390 lb/day (see Section VI.B.1)
$NO_{X_Regen_Abn_15}$ = NOx emission limit for Furnace 16 during an Abnormally Low Production Rate Day = 1,545 lb/day (see Section VI.B.1)
MH = Hours of Maintenance during a Maintenance Day (less than or equal to 24 hours per day)
NH = Normal Operating Hours during a Maintenance Day = 24 - MH

4. <u>Furnace Operational Restrictions During a Furnace Startup</u>

The Furnace Startup Period is comprised of three phases:

- Initial Heating Phase, which typically lasts no longer than 4 days and ends when the main Furnace burners commence operation;
- Refractory Soak and Seal Phase (follows the Initial Heating Phase when the Furnace is filled with molten glass and the temperature of the Furnace reaches operating conditions), which typically lasts 21 days (ending when the refractory joints are sealed and the Furnace is closed to the atmosphere); and
- Furnace Stabilization Phase, which will end no later than 70 days after the beginning of the Initial Heating Phase.

All Furnace Startup periods shall be excluded from the Emission Rate 30-day Rolling Average.

Initial Heating Phase Operational Restriction

SGCI shall burn no more than 5.0 million standard cubic feet of natural gas in that Furnace during the Initial Heating Phase of the Furnace Startup.

Refractory Soak and Seal Phase Operational Restrictions

SGCI shall comply with the following operational restrictions to limit NOx emissions during the Refractory Soak and Seal Phase of the Furnace Startup:

a. Burn no more than sixty million standard cubic feet of natural gas in that Furnace;

b. Limit excess oxygen below 5 percent at the Furnace exhaust flue, as determined by a handheld monitor, once per shift;

c. Limit the Hot Spot Temperature to 2,900 degrees F, as determined by a handheld measurement device, once per shift; and

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

Furnace Stabilization Phase Operational Restrictions

SGCI shall comply with the following operational restrictions to limit NOx emissions during the Furnace Stabilization Phase of the Furnace Startup:

a. Burn no more than ninety million standard cubic feet of natural gas in that Furnace;

b. Limit excess oxygen below 5 percent at the Furnace exhaust flue as determined by a handheld monitor, once per shift; and

c. Limit the Hot Spot Temperature to 2,900 degrees F, as determined by a handheld measurement device, once per shift.

C. SO_2 Emission Limits

The below limits cover the exceptions to the rolling 30-day average emission rate, for the abnormal episodes.

1. <u>SO_2 Limit During Abnormally Low Production Rate Days</u>

All Abnormally Low Production Rate ("ALPR") Days may be excluded from the Emission Rate 30-day Rolling Average. ALPR is defined as any calendar day during which the glass pull rate falls below 35% of the maximum capacity permitted pull rate of the furnace for one or more continuous hours. The ALPR for Furnace 15 is 4.4 TPH (which is equivalent to 105 TPD). The ALPR for Furnace 16 is 4.2 TPH (which is equivalent to a daily pull rate of 102 TPD). During ALPR days that are excluded from the Emission Rate 30-day Rolling Average, a CEMS shall be used to demonstrate compliance on a 24-hour Block Average with the following pound per day limit for the Furnace(s) operating at Abnormally Low Production Rate:

- Furnace 15: $SO_{2_Abn_15}$ = SO_2 emission limit for Furnace 15 during an Abnormally Low Production Rate Day = 750 pounds per day
- Furnace 16: $SO_{2_Abn_16}$ = SO_2 emission limit for Furnace 16 during an Abnormally Low Production Rate Day = 729 pounds per day

These limits were calculated using the following equations:

Furnace 15: $$SO_{2_Abn_15} = 2.5\frac{lbSO_2}{ton} \times \frac{P_{15}}{0.35}$$

Furnace 16: $$SO_{2_Abn_16} = 2.5\frac{lbSO_2}{ton} \times \frac{P_{16}}{0.35}$$

Where: P_{15} = Furnace 15 ALPR threshold (i.e., 105 tons of glass produced per day).
P_{16} = Furnace 16 ALPR threshold (i.e., 102 tons of glass produced per day).

2. <u>SO_2 Limit During Malfunction of a Furnace</u>

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

- Furnace 15: $SO_{2_Malf_15}$ = SO_2 emission limit for Furnace 15 during a Malfunction Day = 2,250 pounds per day
- Furnace 16: $SO_{2_Malf_16}$ = SO_2 emission limit for Furnace 16 during a Malfunction Day = 2,187 pounds per day

These limits were calculated using the following equations:

Furnace 15: $$SO_{2_Malf_15} = 3 \times SO_{2_Abn_15}$$
Furnace 16: $$SO_{2_Malf_16} = 3 \times SO_{2_Abn_16}$$

Where: $SO_{2_Abn_15}$ = SO_2 emission limit for Furnace 15 during an Abnormally Low Production Rate Day = 750 pounds per day (see Section VI.C.1)
$SO_{2_Abn_16}$ = SO_2 emission limit for Furnace 16 during an Abnormally Low Production Rate Day = 729 pounds per day (see Section VI.C.1)

3. <u>SO_2 Limit During Maintenance of a Furnace</u>

For any Operating Day where Maintenance activities on a Furnace are performed, SGCI may elect to exclude the Maintenance Day from the Emission Rate 30-day Rolling Average. The use of this Maintenance exception shall be limited to 144 hours annually. For any Day that is excluded from the Emission Rate 30-day Rolling Average, a CEMS shall be used to demonstrate compliance on a 24-hour Block Average with the following pound per day limit for the Furnace(s) undergoing Maintenance:

Furnace 15:
$$SO_{2_Maint_15} = \frac{MH \times [3 \times SO_{2_Abn_15}]}{24} + \frac{NH \times [SO_{2_Abn_15}]}{24}$$
Furnace 16:
$$SO_{2_Maint_16} = \frac{MH \times [3 \times SO_{2_Abn_16}]}{24} + \frac{NH \times [SO_{2_Abn_16}]}{24}$$

Where:
$SO_{2_Maint_15}$ = SO_2 emission limit for Furnace 15 during a Maintenance Day, in pounds per day
$SO_{2_Maint_16}$ = SO_2 emission limit for Furnace 16 during a Maintenance Day, in pounds per day
$SO_{2_Abn_15}$ = SO_2 emission limit for Furnace 15 during an Abnormally Low Production Rate Day = 750 lb/day (see Section VI.C.1)
$SO_{2_Abn_16}$ = SO_2 emission limit for Furnace 16 during an Abnormally Low Production Rate Day = 729 lb/day (see Section VI.C.1)
MH = Hours of Maintenance during a Maintenance Day (less than or equal to 24 hours per day)
NH = Normal Hours = 24 – MH during a Maintenance Day

4. <u>SO_2 Limit During a Color Transition</u>

Operating Days during which a Color Transition is occurring shall be excluded from the Emission Rate 30-day Rolling Average. "Color Transition" is defined as the period of not more than seven Days from the time when a glass color of an oxidation state different from that previously melted in the Furnace, is introduced to the Furnace, to the time when saleable glass bottles are being produced in the new color. During these days, a CEMS shall be used to demonstrate compliance on a 24-hour Block Average with the following pound per day limit for the Furnace(s) having a Color Transition:

- Furnace 15: $SO_{2_Col_Tran_15}$ = SO_2 emission limit for Furnace 15 during a Color Transition = 1,500 pounds per day
- Furnace 16: $SO_{2_Col_Tran_16}$ = SO_2 emission limit for Furnace 16 during a Color Transition = 1,458 pounds per day

These limits were calculated using the following equations:

Furnace 15: $SO_{2_Col_Tran_15} = 2 \times SO_{2_Abn_15}$

Furnace 16: $SO_{2_Col_Tran_16} = 2 \times SO_{2_Abn_16}$

Where:

$SO_{2_Abn_15}$ = SO_2 emission limit for Furnace 15 during an Abnormally Low Production Rate Day = 750 pounds per day (see Section VI.C.1)

$SO_{2_Abn_16}$ = SO_2 emission limit for Furnace 16 during an Abnormally Low Production Rate Day = 729 pounds per day (see Section VI.C.1)

5. <u>SO_2 Emission Limit for the combined ESP stack (Abnormal Episode-Single Furnace)-</u>
[with a Normally Operating Furnace during a day where the other furnace is experiencing an Abnormal Episode, except Furnace Startup (see Section VI.C.7. for that case)]

When one Furnace is operating under normal conditions and the other Furnace is operating at an Abnormally Low Production Rate, has a Malfunction, undergoes Maintenance, or has a Color Transition, the combined daily emission limit for the Furnaces shall be the sum of the following $SO_{2_Normal_lb/day}$ limit for the normally Operating Furnace and the relevant limit for the Abnormal Episode for the other Furnace, as described in Sections VI.C.1 through VI.C.4:

$$SO_{2_Normal_lb/day} = 2.5 \frac{lbSO_2}{ton} \times ADP$$

where:

$SO_{2_Normal_lb/day}$ = SO_2 interim emission limit for a Normally Operating Furnace during a day where a commonly ducted furnace is experiencing an Abnormal Episode

ADP = Actual Daily Production for the normally Operating Furnace

6. <u>SO_2 Emission Limit (Abnormal Episode-Both Furnaces)</u>
(during a day where both Furnaces are experiencing an Abnormal Episode, except Furnace Startup (see Section VI.C.7 for that case)

When both Furnaces are operating at an Abnormally Low Production Rate, have a Malfunction, undergo Maintenance, or have a Color Transition, the combined daily emission limit for the Furnaces shall be the sum of the relevant limits for the Abnormal Episode for each Furnace as described in Sections VI.C.1 through VI.C.4.

7. <u>Batch Sulfur Restriction During a Furnace Startup</u>

All Furnace Startup periods shall be excluded from the Emission Rate 30-day Rolling Average. During a Furnace Startup period, SGCI will limit the amount of sulfur added to the batch materials to 2.6 pounds per ton of total batch material or less. This limitation will apply to both furnaces, until the Furnace Startup is complete (see Section VI.B.4 for timelines); then, the procedures in Sections VI.C.2 through VI.C.6 will become applicable again.

D. Sulfuric Acid Mist Emission Limit

Compliance with a Sulfuric Acid Mist emission limit of 1.0 pounds per ton of glass produced shall be demonstrated by a stack test performed using Conditional Test Method 13A or B on all Furnaces on or before December 31, 2011. Stack testing shall be required to be performed after this initial test only once during the life of each Title V permit.

Noise Requirements

A. The Permittee shall not operate any equipment at the facility that causes a condition of air pollution by excessive noise. Department Policy 90-001 provides that an increase in sound by more than 10 dBA over the existing L_{90} ambient level, unless otherwise specified, will be considered a violation of the air pollution control regulations at 310 CMR 7.01 and 310 CMR 7.10. Additionally, pure tone sounds, defined as any octave band level, which exceeds the levels in adjacent octave bands by 3dBA or more, are considered a violation of the regulations.

B. The Permittee shall routinely evaluate and monitor all plant equipment that may cause a noise condition. Sources of noise to evaluate shall include but is not limited to the operation of the batch furnace sets, system components, on site natural gas pipelines and the gas compressor building and equipment. The evaluation shall be made by plant personnel observing potential excess noise as part of routine plant maintenance practices. Equipment found to be causing noise that could cause a condition of air pollution shall be further evaluated and if necessary repaired as quickly as possible.

VII. OPERATING CONDITIONS

The Permittee shall comply with the following specific and general conditions.

A. Specific Conditions

1. The Permittee shall operate Furnaces #15 and #16 on natural gas at all times except as noted herein. In the event that both the primary and secondary natural gas supply line is unavailable due to an interruption in the gas supply that is out of the control of the Permittee, distillate grade #2 fuel oil with a sulfur content not in excess of 0.5% by weight may be utilized. The use of fuel oil shall cease as soon as either the primary or secondary natural gas supplies have been restored.

2. Emissions from Furnace #15 and Furnace #16 will be vented to a common duct. A damper in the common duct will divert approximately 50% of the total airflow into each ESP. During routine maintenance or shutdown of one of the ESP's the total airflow will be directed into the other operating ESP.

3. The particulate matter generated from Furnace #15 and Furnace #16 shall be controlled by two existing air pollution control devices, (ESP#1 and ESP#2). ESP#1 manufactured by Precipitator Pollution Control, Model #18-1331-2 is a single stage unit consisting of three fields with 45 plates and a total collection surface area of 22,134 square feet. ESP#2 manufactured by United McGill, Model #3-300 is a single stage unit consisting of three fields with 60 plates and a total collection surface area of 15,823 square feet.

4. In the event two fields are off line in ESP#1 or two fields are off line in ESP#2, the Permittee shall ensure that the total air flow is adjusted accordingly to insure compliance with the emission limits presented in Tables 2, 3, and 4.

5. If for any reason both ESP#1 and ESP#2 become inoperable due to a malfunction of the ESPs (that is, two or more fields in each ESP are inoperable) while both Furnace #15 and Furnace #16 are in operation, the Permittee shall ensure that the material processing is reduced to idle conditions as soon as practicable, but in no event longer than 24 hours thereafter in order to minimize release of uncontrolled emissions to the ambient air.

6. The emissions from the two glass melting furnaces will be emitted to the ambient air through an existing steel stack, the top of which is 75 feet above ground level and has an inside exit diameter of 5 feet which provides for an exit velocity of approximately 47 feet per second at a temperature of 400°F.

7. The use of a stack to by-pass the ESP's ("by-pass stack") and exhaust emissions from Furnace #15 and/or Furnace #16 directly to the ambient is prohibited during all modes of glass production.

8. At least once a year a consultant/firm knowledgeable in the field of ESP performance and maintenance shall certify that the ESP#1 and ESP#2 are operating in accordance with available ESP manufacturer's specifications and with the provisions of this plan approval.

B. General Conditions

General Training

The Permittee shall be responsible to train operators on the operation, inspection, and maintenance of the electrostatic precipitators. They include:

a) Control Room

Voltage and Current Panel Meters (TR sets, ESP control panel):
Monitor panel meters, plot and record their values hourly. The voltage and current plots are used to detect long-term trends as a diagnostic tool. If excessive arcing is observed, the operator should take initial action to correct and review operation of other precipitator systems for possible cause.

Hopper Level Indicators:
Monitor build up of material in hopper two times per shift and take action to clear any bridging in the hopper. Continuing buildup of material in hoppers may cause damage to the ESP unit.

ID Fan Panel Meter (ESP panel):
Monitor and record ID fan rpm's hourly, in order to detect long term operating trends, and potentially increased pressure drop across the ESP.

Stack Opacity Monitor:
Monitor COMS stack opacity for compliance and ESP performance.

Housing Blower Fault Indicator:
Acknowledge visual/audible furnace pressure alarm, which is a surrogate parameter for the blower fault, and take initial action to insure pressurization of housings. Gas and dust in-leakage may result in deposits, which can lead to electrical failure.

b) ESP Unit Inspection (twice/shift):

Solids Removal System (under ESP):
Observe and verify operation of solids removal system, feed screw, rotary valve, and dust removal. Record hopper level.

Rappers (top of ESP):
Audibly verify that the rappers are functioning. Failure of the rappers to remove built up material from collection plates may result in arcing and damage to the ESP internal components.

Vibrators (ESP unit):
Audibly verify that the vibrators are operating.

Inspection and Maintenance Schedules

a) Daily Inspection

Make external visual inspection of all collector and discharge rapping gear to ensure seals are tight and there is no evidence of leakage

Enter the following into daily/shift log:

- Primary voltage and current for each T/R set.
- Secondary KV and MA for each T/R
- Process Load
- Insulator Compartment (Air Purge) Temperature

Visually inspect the transformer/rectifier liquid level, thermometer and vacuum/pressure gauges.

Visually inspect penthouse blower/heater operation.

b) Monthly Inspection

Check precipitator doors to insure tight fit.
Check other areas for air ingress resulting from possible leaks.

c) Annual (or as required) Internal Inspection and Maintenance

- Open the precipitator for internal inspection and remove all dust build-up on collector plate electrodes, discharge electrodes, hoppers and insulators. In general, dust coating is to be removed if it exceeds 1/8". If the coating is soft, the electrodes are cleaned by rapping each electrode gently at the top, dislodging the coating. EXERCISE CARE to ensure that rapping is not heavy enough to cause bowing or fracture of the electrodes. If coating is too hard to remove in this manner, then other more direct and aggressive physical means of cleaning must be undertaken.
- Inspect top discharge frame of the discharge electrode system for loose connections and for evidence of arcing.
- Check discharge electrode system for correct alignment. Inspect carefully for signs of arcing and perform maintenance as required.
- Inspect collector suspension bolts and collector electrode channels for loose bolts.
- Inspect suspension bolts for correct tension and dimension.
- Inspect rapping rods, and anvils for cracked welds and loose bolts and nuts.
- Any build-up of dust on the slitters, distributors, or gas passages at the inlet, is to be cleared away. Such build-up interferes with gas distribution and lowers precipitator efficiency.
- Inspect interior walls of casing panels and ducts for signs of corrosion.
- Upon completion of inspection/maintenance, the Permittee shall ensure that no tools or other materials are left inside the precipitator box.

d) Annual (or as required) Electrical Inspection and Maintenance

- Make visual inspection, particularly noting all wiring, terminal blocks, loose ground connections, arcing, and physical damage or burning.
- Physically check all power feeder lugs and connections and tighten.
- Check mechanical linkage on all electrical equipment to ensure proper operation.
- Check and replace inoperative lamps.
- Inspect cabinets for dust and moisture; clean with moisture-free low-pressure air.
- Check ground loop impedance to plant ground.
- Inspect linear reactors for accumulated dust; remove any accumulations with low-pressure moisture-free air
- Inspect all electrical connections on the linear reactors to ensure security.
- Clean transformer/rectifier bushings and remove accumulation of dust.
- Inspect HT lines and cables for security and spark erosion.
- Check HT lines for proper electrical clearance inside the penthouse.
- Sample and test the transformer/rectifier insulating liquid.

VIII. MONITORING REQUIREMENTS

Opacity

The Permittee shall maintain a Continuous Opacity Monitoring System ("COMS") to continuously monitor opacity. The COMS shall be kept in an accurate operating condition and shall be certified, calibrated, tested, and maintained in accordance with EPA 40 CFR 60 Appendix B (Performance Specifications) and EPA 40 CFR 60 Appendix F (Quality Control Procedures). In the event the COM is off line more than two hours, a certified opacity observer shall conduct daily opacity observations and maintain a log. The log shall include the date, time and opacity

reading and the name of person making the observations ("the observer"). Opacity observations shall be in accordance with EPA reference Method 9.

SGCI does not have to report as a deviation the down time of the monitoring equipment during passing calibration procedures. SGCI must keep records of the calibration events.

Sulfur Dioxide

1. The Permittee shall maintain a Continuous Emission Monitoring System ("CEMS") in an accurate operating condition to continuously monitor Sulfur Dioxide emissions from Furnace #15 and Furnace #16 combined. The CEMS shall be certified, calibrated, tested, and maintained in accordance with 40 CFR 60 Appendix B (Performance Specifications) and 40 CFR 60 Appendix F (Quality Control Procedures).

2. Prior to SO2 CEMS installation and Certification, compliance with the SO2 emission limit shall be demonstrated by conducting an EPA Method 6C (40 C.F.R. Part 60 Appendix A) source test. Testing shall be conducted initially no later than 12 months after permit issuance and once each Calendar Year thereafter until SO2 CEMS are installed and certified. A source test is not required the year that an SO2 CEMS is installed.

3. The Permittee shall comply with all monitoring, recordkeeping and reporting requirements in 40 C.F.R. § 60.13 and 40 C.F.R. Part 60 Appendix B (Performance Specification 6).

4. In conjunction with EPA approved flow method calculation or the flow rate-monitoring device, the data acquisition and handling system for the CEMS shall convert the ppm values into pound per hour values where the limit is expressed in pounds of pollutant per ton of glass produced. At the end of each Operating Day, the data acquisition and handling system shall divide the total daily emissions in pounds per day for valid CEMS hourly data by the total tons of glass produced during the Operating Day (reduced proportionally based on the valid CEMS data hours) to describe the pound per ton emission rate for the Operating Day. This number shall be recorded in units of pounds of pollutant per ton of glass produced for the applicable Day.

Nitrogen Oxides

1. The Permittee shall maintain a CEMS in an accurate operating condition to continuously monitor Nitrogen Oxide emissions from Furnace #15. The CEMS shall be certified, calibrated, tested, and maintained in accordance with 40 CFR 60 Appendix B (Performance Specifications) and 40 CFR 60 Appendix F (Quality Control Procedures).

2. Prior to NOx CEMS installation and Certification, compliance with the NOx emission limit shall be demonstrated by conducting an EPA Method 7E (40 C.F.R. Part 60 Appendix A) source test. Testing shall be conducted initially no later than 12 months after permit issuance and once each Calendar Year thereafter until NOx CEMS are installed and certified. A source test is not required the year that a NOx CEMS is installed

3. The Permittee shall comply with all monitoring, recordkeeping and reporting requirements in 40 C.F.R. § 60.13 and 40 C.F.R. Part 60 Appendix B (Performance Specification 6).

4. In conjunction with EPA approved flow method calculation or the flow rate-monitoring device, the data acquisition and handling system for the CEMS shall convert the ppm values into pound per hour values where the limit is expressed in pounds of pollutant per ton of glass produced. At the end of each Operating Day, the data acquisition and handling system shall divide the total daily emissions in pounds per day for valid CEMS hourly data by the total tons of glass produced during the Operating Day (reduced proportionally based on the valid CEMS data hours) to describe the pound per ton emission rate for the Operating Day. This number shall be recorded in units of pounds of pollutant per ton of glass produced for the applicable Day.

Recording Devices

1. The Permittee shall maintain the following recording devices in an accurate operating condition:

   Furnace temperature for Furnace #15 and Furnace #16
   Air flow rate and fuel rate for Furnace #16 only
   Sulfur Dioxide measurements made by the CEMS For Furnaces #15 & #16 combined
   Nitrogen Oxide measurements made by the CEMS for Furnace #15 only

2. The Permittee shall monitor the operations of the entire facility to ensure that information necessary to accurately complete the annual Source Registration/Emission Statement Form, as required by 310 CMR 7.12, is available.

3. Monitoring equipment or emission monitoring systems installed for the purpose of documenting compliance with this approval shall be installed, calibrated, maintained, and operated by the Permittee in sufficient manner to ensure data is sufficient to demonstrate continuous and accurate compliance with the limits and restrictions contained in this approval.

4. The Permittee shall monitor the hoppers associated with the ESPs two (2) times per shift to verify the hoppers are not over-filled.

5. The facility shall maintain records of Tons per day of glass manufactured for each furnace and combined total, for Furnaces #15 and #16

6. Records shall be maintained on site.

Inspection and Maintenance

The Permittee shall inspect and maintain the emission units in accordance with Good Operating Practices and, where applicable, the manufacturer's recommendations and tested for efficient operation at least once each calendar year in accordance with 310 CMR 7.04(4)(a). The results of said inspection, maintenance and testing, and the date upon which it was performed shall be recorded and posted conspicuously on or near the permitted equipment.

IX. EMISSION TESTING REQUIREMENTS

A. The facility shall be constructed to accommodate emission-testing requirements contained herein. All stack testing shall be conducted in accordance with MassDEP's "Guidelines for Source Emission Testing" and in accordance with the Environmental Protection Agency tests as specified in the Code of Federal Regulations Title 40, Part 60 and 61, Appendix A, (Standards of Performance for New Stationary Sources) or by another method which has been correlated to the above method to the satisfaction of MassDEP.

B. Emission testing to demonstrate compliance with the Emission Limits specified in this approval shall be in accordance with EPA approved reference test methods unless otherwise approved by EPA and MassDEP or unless otherwise specified.

C. The Permittee must obtain approval of the emission test protocol. A detailed description of sampling port locations, sampling equipment, sampling and analytical procedures, and operating conditions for such tests must be submitted to the Department of Environmental Protection, Central Region, Bureau of Waste Prevention, Permitting Section, sixty (60) days prior to testing of the facility.

D. A final emission test report must be submitted within sixty (60) days of completion to the Department of Environmental Protection, Bureau of Waste Prevention, Permitting Section, 627 Main Street, Worcester, Massachusetts.

E. Within one hundred and eighty (180) days of start up of the re-bricked Furnace #15 the Permittee shall conduct emission testing to demonstrate compliance with the emission limits presented in Table 2. However, no stack test is required for NOx and SO2 if a CEMS is installed the year of the re-bricking.

F. In accordance with 310 CMR 7.19 the Permittee shall conduct an annual NOx emission test on EU #2 to demonstrate compliance with the NOx emission limit while burning natural gas.

G. The Permittee shall conduct an annual NOx and SO2 relative accuracy test ("RATA") on the CEMS units to demonstrate the accuracy of the continuous emission monitors.

H. In accordance with 310 CMR 7.13, MassDEP may require testing for any pollutants if deemed necessary to ascertain the mass emission rates and relationship to equipment design and operation.

X. RECORD KEEPING REQUIREMENTS

A. This condition includes the records listed in Sections X.B through X.E. The Permittee shall maintain the records on site for a period of five years. These records shall be made readily available for inspection by MassDEP and/or EPA personnel.

B. The Permittee shall keep copies of the annual Source Registration/Emission Statement forms as required by regulation 310 CMR 7.12(1)(d).

C. Records of emissions testing conducted to demonstrate compliance with the applicable requirements in Table 2 shall be in accordance with 310 CMR 7.13(1)(d).

D. Inspection, maintenance, and testing results of the emission units and the date upon which it was performed in accordance with 310 CMR 7.04(4)(a).

E. The Permittee shall maintain records of the hoppers, including date, time inspected and hopper capacity.

F. For any Operating Day that the Permittee is excluding emissions from the relevant Emission Rate 30-day Rolling Average for NOx, it shall record the date, the exception (Abnormally Low Production Rate Day, Furnace Startup, Control Device Startup, Malfunction, or Maintenance) under which it is excluded, a calculation of the applicable limit (pounds per day) according to the equations above, and the recorded emissions according to the CEMS (pounds per day).

G. For any Operating Day excluded for Maintenance, the Permittee shall record the total number of hours during which Maintenance occurred.

H. During Furnace Startup period phases, the Permittee shall record the amount of sulfur added to the batch materials in pounds per ton of total batch material.

I. During Furnace Startup period phases, the Permittee shall also keep the following records:

a. Initial Heating Phase
    i. Total natural gas usage in that Furnace (in million standard cubic feet)
b. Refractory Soak and Seal Phase
    i. Total natural gas usage in that Furnace (in million standard cubic feet);
    ii. Excess oxygen percentage at the Furnace exhaust flue (as determined by handheld monitor once per shift);
    iii. Hot Spot Temperature (measured once per shift); and
    iv. A certified statement asserting whether thermal blankets or similar techniques were used during this period.
c. Furnace Stabilization Phase
    i. Total natural gas usage in that Furnace (in million 5 standard cubic feet);

ii. Excess oxygen percentage at the Furnace exhaust flue (as determined by handheld monitor once per shift); and
iii. Average Hot Spot Temperature (measured once per shift).

XI. REPORTING REQUIREMENTS

A. The Permittee shall report to the Department of Environmental Protection, Bureau of Waste Prevention, Central Regional Office, Compliance and Enforcement Section as soon as reasonably practicable by telephone or fax and in writing within two (2) business days of any UPSETS or MALFUNCTIONS to the facility equipment, air pollution control equipment, or monitoring equipment which result in an excess emission to the air and /or a condition of air pollution.

B. The Permittee shall summarize and submit to MassDEP the results of stack testing as prescribed in MassDEP's approved pretest protocol, stack testing that was determined by MassDEP to be necessary to ascertain compliance with Department's regulations or design approval provisos in accordance with 310 CMR 7.13(1) and 310 CMR 7.13(2).

C. The Permittee shall submit a Source Registration/Emission Statement form to MassDEP on an annual basis as required by 310 CMR 7.12(7).

D. In accordance with 310 CMR 7.12(7), the facility shall register on a form obtained from MassDEP such information as MassDEP may specify including:

1. The nature and amounts of emissions from the facility.
2. Information that may be needed to determine the nature and amounts of emissions from the facility.
3. Any other information pertaining to the facility which MassDEP requires.
4. Information required by 310 CMR 7.12(1)(a) shall be submitted annually.

E. The Permittee shall provide upon MassDEP's request, any records required by the applicable requirements identified in this approval, or the emissions of any air contaminant from the facility records, shall be submitted to MassDEP within 30 days of the request by MassDEP, or within a longer period if approved in writing by MassDEP. Said response shall be transmitted on paper, on computer disk, or electronically at the discretion of MassDEP.

XII. SPECIAL CONDITIONS

Whenever SGCI is required to obtain an Air Plan Approval or Permit from EPA or an Affected State for the purpose of compliance with Section IV of the Consent Decree noted in Section I (History) of this Air Plan Approval, EPA or the Affected State shall include in the Air Plan Approval or Permit for the installation of control devices, monitoring devices and the contemporaneous Furnace rebuild project the emission controls, emission limits, averaging periods, monitoring requirements, compliance determination, and compliance schedule set forth in this Decree. In issuing such Air Plan Approval or Permit neither EPA nor the Affected State may make material changes to the emission controls, emission limits, averaging periods, monitoring requirements, compliance determination, and compliance schedule specified in Section IV of this Decree. However, notwithstanding the preceding sentence, nothing in this Consent Decree shall prevent EPA or an Affected State from issuing, amending, or revising an Air Plan Approval or Permit for emission controls, emission limits, averaging periods, monitoring requirements, compliance determination, or compliance schedules only if such requirements are mandated by an existing Consent Decree, SIP, rule, regulation, State law, or local law. Unless expressly stated otherwise in this Consent Decree, in any instance where otherwise applicable law or this Consent Decree requires SGCI to secure an Air Plan Approval or Permit to authorize construction or operation of any device, including all preconstruction, construction, and operating permits required under State law, SGCI shall make such application in a timely manner. EPA and/or the Affected States will use reasonable efforts to expeditiously review all air pollution control plan applications submitted by SGCI in order to meet the requirements of this Consent Decree.

7. EMISSIONS TRADING

(a) Intra-facility emission trading

The facility did not request intra-facility emissions trading in its operating permit application.

Pursuant to 310 CMR 7.00: Appendix C(7)(b), emission trades, provided for in this permit, may be implemented provided the Permittee notifies The United States Environmental Protection Agency (EPA) and MassDEP at least fifteen (15) days in advance of the proposed changes and the Permittee provides the information required in 310 CMR 7.00: Appendix C(7)(b)3.

Any intra-facility change that does not qualify pursuant to 310 CMR 7.00: Appendix C(7)(b)2 is required to be submitted to MassDEP pursuant to 310 CMR 7.00: Appendix B.

(b) Inter-facility emission trading

The Permittee did not request inter-facility emissions trading in its operating permit application.

All increases in emissions due to emission trading, must be authorized under the applicable requirements of 310 CMR 7.00: Appendix B (the "Emissions Trading Program") and the 42 U.S.C. §7401 et seq. (the "Act"), and provided for in this permit.

8. COMPLIANCE SCHEDULE

There have been MassDEP and EPA enforcement actions because of non-compliance with both Federal and State air pollution control regulations. As of the date of this approval the facility is in compliance with all air pollution control regulations or on an approved compliance schedule.

On or about November 13, 2009, Saint-Gobain Containers, Inc., the Commonwealth of Massachusetts (acting by and through the Office of the Massachusetts Attorney General), and other parties executed a Consent Decree in the matter of United States of America, and Commonwealth of Massachusetts, et al. Plaintiff-Intervenors v. Saint-Gobain Containers, Inc. (United States District Court for the Western District of Washington, at Seattle), relating to certain alleged violations of the Federal Clean Air Act, M.G.L. c. 111, §§ 142A-142O, and 310 C.M.R. 7.00 et seq. at the Milford plant. The federal and state complaints in this matter were filed in the United States District Court for the Western District of Washington at Seattle - Case 2:10-cv-00121-TSZ Document 53-3 Filed 04/22/2010 Page 1 of 88 United States of America Plaintiff, and Commonwealth of Massachusetts, ET AL. Plaintiffs-Intervenors, v. Saint-Gobain Containers, Inc. Defendant. Civil Action No **2:10-cv-00121-TSZ**

As it pertains to Saint Gobain Containers, Inc. Milford facility, the Permittee shall comply with the compliance schedule as required under Civil action No **2:10-cv-00121-TSZ** Consent Degree Between Plaintiff United States of America and Defendant Saint-Gobain Containers, Inc. as dated filed 04/22/2010.

GENERAL CONDITIONS FOR OPERATING PERMIT

9. FEES

The Permittee has paid the permit application processing fee and shall pay the annual compliance fee in accordance with the fee schedule pursuant to 310 CMR 4.00.

10. COMPLIANCE CERTIFICATION

All documents submitted to MassDEP shall contain certification by the responsible official of truth, accuracy, and completeness. Such certification shall comply with 310 CMR 7.01(2) and contain the following language:

"I certify that I have personally examined the foregoing and am familiar with the information contained in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including possible fines and imprisonment."

The "Operating Permit Reporting Kit" contains instructions and the Annual Compliance Report and Certification and the Semi-Annual Monitoring Summary Report and Certification. The "Operating Permit Reporting Kit" is available to the Permittee via MassDEP's web site, http://www.mass.gov/dep/air/approvals/aqforms.htm#op.

(a) Annual Compliance Report and Certification

The Responsible Official shall certify, annually for the calendar year, that the facility complies with the requirements of this permit. The report shall be postmarked or delivered by January 30 to MassDEP and to the Regional Administrator, U.S. Environmental Protection Agency - New England Region. The report shall be submitted in compliance with the submission requirements below.

The compliance certification and report shall describe:

i. the terms and conditions of the permit that are the basis of the certification;
ii. the current compliance status and whether compliance was continuous or intermittent during the reporting period;
iii. the methods used for determining compliance, including a description of the monitoring, record keeping, and reporting requirements and test methods; and
iv. any additional information required by MassDEP to determine the compliance status of the source.

(b) Semi-Annual Monitoring Summary Report and Certification

The Responsible Official shall certify, semi-annually on the calendar year, that the facility complies with the requirements of this permit. The report shall be postmarked or delivered by January 30 and July 30 to MassDEP. The report shall be submitted in compliance with the submission requirements below.

The compliance certification and report shall describe:

i. the terms and conditions of the permit that are the basis of the certification;
ii. the current compliance status during the reporting period;
iii. the methods used for determining compliance, including a description of the monitoring, record keeping, and reporting requirements and test methods;
iv. whether there were any deviations during the reporting period;
v. if there are any outstanding deviations at the time of reporting, and the Corrective Action Plan to remedy said deviation;
vi. whether deviations in the reporting period were previously reported;
vii. if there are any outstanding deviations at the time of reporting, the proposed date of return to compliance;
viii. if the deviations in the reporting period have returned to compliance and date of such return to compliance; and
ix. any additional information required by MassDEP to determine the compliance status of the

source.

11. NONCOMPLIANCE

Any noncompliance with a permit condition constitutes a violation of 310 CMR 7.00: Appendix C and the Clean Air Act, and is grounds for enforcement action, for permit termination or revocation, or for denial of an operating permit renewal application by MassDEP and/or EPA. Noncompliance may also be grounds for assessment of administrative or civil penalties under M.G.L. c.21A, §16 and 310 CMR 5.00; and civil penalties under M.G.L. c.111, §142A and 142B.

This permit does not relieve the permittee from the obligation to comply with any other provisions of 310 CMR 7.00 or the Act, or to obtain any other necessary authorizations from other governmental agencies, or to comply with all other applicable Federal, State, or Local rules and regulations, not addressed in this permit.

12. PERMIT SHIELD

(a) This facility has a permit shield provided that it operates in compliance with the terms and conditions of this permit. Compliance with the terms and conditions of this permit shall be deemed compliance with all applicable requirements specifically identified in Sections 4, 5, 6, and 7, for the emission units as described in the permittee's application and as identified in this permit.

Where there is a conflict between the terms and conditions of this permit and any earlier approval or permit, the terms and conditions of this permit control.

(b) MassDEP has determined that the Permittee is not currently subject to the requirements listed in Section 4, Table 7.

(c) Nothing in this permit shall alter or affect the following:

(i) the liability of the source for any violation of applicable requirements prior to or at the time of permit issuance.
(ii) the applicable requirements of the Acid Rain Program, consistent with 42 U.S.C. §7401, §408(a); or
(iii) the ability of EPA to obtain information under 42 U.S.C. §7401, §114 or §303 of the Act.

13. ENFORCEMENT

The following regulations found at 310 CMR 7.02(8)(h) Table 6 for wood fuel, 7.04(9), 7.05(8), 7.09 (odor), 7.10 (noise), 7.18(1)(b), 7.21, 7.22, 7.70 and any condition(s) designated as "state only" are not federally enforceable because they are not required under the Act or under any of its applicable requirements. These regulations and conditions are not enforceable by the EPA. Citizens may seek equitable or declaratory relief to enforce these regulations and conditions pursuant to Massachusetts General Law Chapter 214, Section 7A.

All other terms and conditions contained in this permit, including any provisions designed to limit a facility's potential to emit, are enforceable by MassDEP, EPA and citizens as defined under the Act.

A Permittee shall not claim as a defense 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 this permit.

14. PERMIT TERM

This permit shall expire on the date specified on the cover page of this permit, which shall not be later than the date 5 years after issuance of this permit.

Permit expiration terminates the Permittee's right to operate the facility's emission units, control equipment or associated equipment covered by this permit, unless a timely and complete renewal application is submitted at least 6 months before the expiration date.

15. PERMIT RENEWAL

Upon MassDEP's receipt of a complete and timely application for renewal, this facility may continue to operate subject to final action by MassDEP on the renewal application.

In the event MassDEP has not taken final action on the operating permit renewal application prior to this permit's expiration date, this permit shall remain in effect until MassDEP takes final action on the renewal application, provided that a timely and complete renewal application has been submitted in accordance with 310 CMR 7.00: Appendix C(13).

16. REOPENING FOR CAUSE

This permit may be modified, revoked, reopened, and reissued, or terminated for cause by MassDEP and/or EPA. The responsible official of the facility may request that MassDEP terminate the facility's operating permit for cause. MassDEP will reopen and amend this permit in accordance with the conditions and procedures under 310 CMR 7.00: Appendix C(14).

The filing of a request by the Permittee for an operating permit revision, revocation and reissuance, or termination, or a notification of a planned change or anticipated noncompliance does not stay any operating permit condition.

17. DUTY TO PROVIDE INFORMATION

Upon MassDEP's written request, the permittee shall furnish, within a reasonable time, any information necessary for determining whether cause exists for modifying, revoking and reissuing, or terminating the permit, or to determine compliance with the permit. Upon request, the Permittee shall furnish to MassDEP copies of records that the permittee is required to retain by this permit.

18. DUTY TO SUPPLEMENT

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information. The Permittee shall also provide additional information as necessary to address any requirements that become applicable to the facility after the date a complete renewal application was submitted but prior to release of a draft permit.

The Permittee shall promptly, on discovery, report to MassDEP a material error or omission in any records, reports, plans, or other documents previously provided to MassDEP.

19. TRANSFER OF OWNERSHIP OR OPERATION

This permit is not transferable by the Permittee unless done in accordance with 310 CMR 7.00: Appendix C(8)(a). A change in ownership or operation control is considered an administrative permit amendment if no other change in the permit is necessary and provided that a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between current and new Permittee, has been

submitted to MassDEP.

20. PROPERTY RIGHTS

This permit does not convey any property rights of any sort, or any exclusive privilege.

21. INSPECTION AND ENTRY

Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow authorized representatives of MassDEP, and EPA to perform the following:

(a) enter upon the Permittee's premises where an operating permit source activity is located or emissions-related activity is conducted, or where records must be kept under the conditions of this permit;

(b) have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;

(c) inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and

(d) Sample or monitor at reasonable times any substances or parameters for the purpose of assuring compliance with the operating permit or applicable requirements as per 310 CMR 7.00 Appendix C(3)(g)(12).

22. PERMIT AVAILABILITY

The Permittee shall have available at the facility, at all times, a copy of the materials listed under 310 CMR 7.00: Appendix C(10)(e) and shall provide a copy of the permit, including any amendments or attachments thereto, upon request by MassDEP or EPA.

23. SEVERABILITY CLAUSE

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstances, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

24. EMERGENCY CONDITIONS

The Permittee shall be shielded from enforcement action brought for noncompliance with technology based[1] emission limitations specified in this permit because of an emergency[2]. In order to use emergency as an affirmative defense to an action brought for noncompliance, the Permittee shall demonstrate the affirmative defense 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 permitted facility was at the time being properly operated;

[1] Technology based emission limits are those established based on emission reductions achievable with various control measures or process changes (e.g., a new source performance standard) rather than those established to attain health based air quality standards.

[2] An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation would require immediate corrective action to restore normal operation, and that causes the source to exceed a technology based limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operations, operator error or decision to keep operating despite knowledge of any of these things.

(c) during the period of the emergency, the permittee took all reasonable steps as expeditiously as possible, to minimize levels of emissions that exceeded the emissions standards, or other requirements in this permit; and

(d) the Permittee submitted notice of the emergency to MassDEP within two (2) business days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emission, and corrective actions taken.

If an emergency episode requires immediate notification to the Bureau of Waste Site Cleanup/Emergency Response immediate notification to the appropriate parties should be made as required by law.

25. PERMIT DEVIATION

Deviations are instances where any permit condition is violated and not reported as an emergency pursuant to section 24 of this permit. Reporting a permit deviation is not an affirmative defense for action brought for noncompliance. Any reporting requirements listed in Table 6. of this Operating Permit shall supercede the following deviation reporting requirements, if applicable.

The Permittee shall report to MassDEP's Regional Bureau of Waste Prevention the following deviations from permit requirements, by telephone or fax, within three (3) days of discovery of such deviation:

- Unpermitted pollutant releases, excess emissions or opacity exceedances measured directly by CEMS/COMS, by EPA reference methods or by other credible evidence, which are ten percent (10%) or more above the emission limit.
- Exceedances of parameter limits established by your Operating Permit or other approvals, where the parameter limit is identified by the permit or approval as surrogate for an emission limit.
- Exceedances of permit operational limitations directly correlated to excess emissions.
- Failure to capture valid emissions or opacity monitoring data or to maintain monitoring equipment as required by statutes, regulations, your Operating Permit, or other approvals.
- Failure to perform QA/QC measures as required by your Operating Permit or other approvals for instruments that directly monitor compliance.

For all other deviations, three (3) day notification is waived and is satisfied by the documentation required in the subsequent Semi-Annual Monitoring Summary and Certification. Instructions and forms for reporting deviations are found in the MassDEP, Bureau of Waste Prevention Air Operating Permit Reporting Kit, which is available to the Permittee via MassDEP's web site,
http://www.mass.gov/dep/air/approvals/aqforms.htm#op.
This report shall include the deviation, including those attributable to upset conditions as defined in the permit, the probable cause of such deviations, and the corrective actions or preventative measures taken.

Deviations that were reported by telephone or fax within 3 days of discovery, said deviations shall also be submitted in writing via the Operating Permit Deviation Report to the regional Bureau of Waste Prevention within ten (10) days of discovery. For deviations, which do not require 3-day verbal notification, follow-up reporting requirements are satisfied by the documentation required in the aforementioned Semi-Annual Monitoring Summary and Certification.

26. OPERATIONAL FLEXIBILITY

The Permittee is allowed to make changes at the facility consistent with 42 U.S.C. §7401, §502(b)(10) not specifically prohibited by the permit and in compliance with all applicable requirements provided the permittee gives the EPA and MassDEP written notice fifteen days prior to said change; notification is not required for exempt activities listed at 310 CMR 7.00: Appendix C(5)(h) and (i). The notice shall comply with the requirements stated at 310 CMR 7.00: Appendix C(7)(a) and will be appended to the facility's permit. The permit shield allowed for at 310 CMR 7.00: Appendix C(12) shall not apply to these changes.

27. MODIFICATIONS

(a) Administrative Amendments - The Permittee may make changes at the facility that are considered administrative amendments pursuant to 310 CMR 7.00: Appendix C(8)(a)1., provided they comply with the requirements established at 310 CMR 7.00: Appendix C(8)(b).

(b) Minor Modifications - The Permittee may make changes at the facility that are considered minor modifications pursuant to 310 CMR 7.00: Appendix C(8)(a)2.,provided they comply with the requirements established at 310 CMR 7.00: Appendix C(8)(d).

(c) Significant Modifications - The Permittee may make changes at the facility which are considered significant modifications pursuant to 310 CMR 7.00: Appendix C(8)(a)3., provided they comply with the requirements established at 310 CMR 7.00: Appendix C(8)(c).

(d) No permit revision shall be required, under any approved economic incentives program, marketable permits program, emission trading program and other similar programs or processes, for changes that are provided in this operating permit. A revision to the permit is not required for increases in emissions that are authorized by allowances acquired pursuant to the Acid Rain Program under Title IV of the Act, provided that such increases do not require an operating permit revision under any other applicable requirement.

APPEAL CONDITIONS FOR OPERATING PERMIT

This permit is an action of MassDEP. If you are aggrieved by this action, you may request an adjudicatory hearing within 21 days of issuance of this permit. In addition, any person who participates in any public participation process required by the Federal Clean Air Act, 42 U.S.C. §7401, §502(b)(6) or under 310 CMR 7.00: Appendix C(6), with respect to MassDEP's final action on operating permits governing air emissions, and who has standing to sue with respect to the matter pursuant to federal constitutional law, may initiate an adjudicatory hearing pursuant to Chapter 30A, and may obtain judicial review, pursuant to Chapter 30A, of a final decision therein.

If an adjudicatory hearing is requested, the facility must continue to comply with all existing federal and state applicable requirements to which the facility is currently subject, until a final decision is issued in the case or the appeal is withdrawn. During this period, the application shield shall remain in effect, and the facility shall not be in violation of the Act for operating without a permit.

Under 310 CMR 1.01(6)(b), the request must state clearly and concisely the facts which are the grounds for the request, and the relief sought. Additionally, the request must state why the permit is not consistent with applicable laws and regulations. The hearing request along with a valid check payable to The Commonwealth of Massachusetts in the amount of one hundred dollars ($100.00) must be mailed to: The Commonwealth of Massachusetts, Department of Environmental Protection, P.O. Box 4062, Boston, MA 02211.

The request will be dismissed if the filing fee is not paid unless the appellant is exempt or granted a waiver as described below. The filing fee is not required if the appellant is a city or town (or municipal agency) county, or district of the Commonwealth of Massachusetts, or a municipal housing authority. MassDEP may waive the adjudicatory hearing filing fee for a person who shows that paying the fee will create an undue financial hardship. A person seeking a waiver must file, together with the hearing request as provided above, an affidavit setting forth the facts believed to support the claim of undue financial hardship.

28. LEGEND OF ABBREVIATED TERMS IN OPERATING PERMIT

*Not all abbreviations are present in every Operating Permit

< - Less Than
> - Greater Than
#/hr - Pounds Per Hour
10^6 BTU/hr - 1,000,000 BTU Per Hour
AOS – Alternative Operating Scenario
AQCR - Air Quality Control Region
CEM - Continuous Emission Monitor
CO - Carbon Monoxide
EPA - Environmental Protection Agency
FMF FAC. NO. - Facility Master File Number
FMF RO NO. - Facility Master File Regulated Object Number
Ft^3/day - Cubic Feet Per Day
HHV - Higher Heating Value
ISO - Represent 59□F, 60% Relative Humidity, 29.92 Inches Mercury At Sea Level
MADEP - Massachusetts Department of Environmental Protection
MMBTU/hr - Million British Thermal Units Per Hour
NH3 - Ammonia
NO_x - Nitrogen Oxides
Pb - Lead
Plt ID - Plant Identification
PM - Particulate Matter
PPM - Parts Per Million
PTE - Potential to Emit
SO_2 - Sulfur Dioxide
SSEIS - Stationary Source Emission Inventory System
TPY - Tons Per Year
VOC - Volatile Organic Compound