New York State Department of Environmental Conservation

Permit Review Report

Permit ID: 8-3205-00041/00013
05/16/2018

Facility Identification Data
Name: GUARDIAN INDUSTRIES CORP
Address: 50 FORGE AVE
GENEVA, NY 14456

Owner/Firm
Name: GUARDIAN INDUSTRIES CORP
Address: 2300 HARMON RD
AUBURN HILLS, MI 48326-1714, USA
Owner Classification: Corporation/Partnership

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Permit Description

Introduction

The Title V operating air permit is intended to be a document containing only enforceable terms and conditions as well as any additional information, such as the identification of emission units, emission points, emission sources and processes, that makes the terms meaningful. 40 CFR Part 70.7(a)(5) requires that each Title V permit have an accompanying "...statement that sets forth the legal and factual basis for the draft permit conditions". The purpose for this permit review report is to satisfy the above requirement by providing pertinent details regarding the permit/application data and permit conditions in a more easily understandable format. This report will also include background narrative and explanations of regulatory decisions made by the reviewer. It should be emphasized that this permit review report, while based on information contained in the permit, is a separate document and is not itself an enforceable term and condition of the permit.

Summary Description of Proposed Project
Add diesel powered emergency water pump

Attainment Status
GUARDIAN INDUSTRIES CORP is located in the town of GENEVA in the county of ONTARIO.

The attainment status for this location is provided below. (Areas classified as attainment are those that meet all ambient air quality standards for a designated criteria air pollutant.)

Criteria Pollutant	Attainment Status
Particulate Matter (PM)	ATTAINMENT
Particulate Matter< 10µ in diameter (PM10)	ATTAINMENT
Sulfur Dioxide (SO2)	ATTAINMENT
Ozone*	TRANSPORT REGION (NON-ATTAINMENT)
Oxides of Nitrogen (NOx)**	ATTAINMENT
Carbon Monoxide (CO)	ATTAINMENT

* Ozone is regulated in terms of the emissions of volatile organic compounds (VOC) and/or oxides of nitrogen (NOx) which are ozone precursors.
** NOx has a separate ambient air quality standard in addition to being an ozone precursor.

Facility Description:
The Guardian Industries Corp. Geneva facility manufactures float glass and flat glass fabricated products. Float glass manufacturing involves several process and production units. The sources at the facility include a natural gas fired furnace (propane backup), material transfer operations, scrubber, dust collectors, generators, diesel powered emergency equipment and miscellaneous small combustion sources

Permit Structure and Description of Operations
The Title V permit for GUARDIAN INDUSTRIES CORP
is structured in terms of the following hierarchy: facility, emission unit, emission point, emission source and process. A facility is defined as all emission sources located at one or more adjacent or contiguous properties owned or operated by the same person or persons under common control. The facility is subdivided into one or more emission units (EU). Emission units are defined as any part or activity of a stationary facility that emits or has the potential to emit any federal or state regulated air pollutant. An emission unit is represented as a grouping of processes (defined as any activity involving one or more emission sources (ES) that emits or has the potential to emit any federal or state regulated air pollutant). An emission source is defined as any apparatus, contrivance or machine capable of causing emissions of any air contaminant to the outdoor atmosphere, including any appurtenant exhaust system or air cleaning device. [NOTE: Indirect sources of air contamination as defined in 6 NYCRR Part 203 (i.e. parking lots) are excluded from this definition]. The applicant is required to identify the principal piece of equipment (i.e., emission source) that directly results in or controls the emission of federal or state regulated air pollutants from an activity (i.e., process). Emission sources are categorized by the following types:
combustion - devices which burn fuel to generate heat, steam or power
incinerator - devices which burn waste material for disposal
control - emission control devices
process - any device or contrivance which may emit air contaminants that is not included in the above categories.

GUARDIAN INDUSTRIES CORP is defined by the following emission unit(s):

Emission unit UCOMBU - This emission unit includes miscellaneous combustion sources including, small space heaters, small diesel engines, small boilers, small flare, and water heaters. All units are either natural gas fired, propane fired, or diesel fired. Emissions

from these sources are subject to facility-wide emission limits for NOx.

Emission unit UCOMBU is associated with the following emission points (EP):
MISC1
Process: DSL is located at Building OUTSIDE - This process represents two small diesel fired water pumps

Process: NAT is located at MAIN, Building MAIN - This process covers miscellaneous natural gas fired combustion sources, including space heaters & hot water heaters.

Process: PRO is located at Building BATCH - This process represents miscellaneous LPG (propane) fired combustion sources, including 2 propane vaporizers and 1 emergency test flare.

Emission unit UFURNC - This emission unit includes the glass melting regenerative furnace with a nominal capacity of 770 tons of glass per day. The furnace is natural gas fired, with propane as the back-up fuel. This emission unit includes the glass annealing lehr and associated SO2 scrubber system.

Emission unit UFURNC is associated with the following emission points (EP):
F0001
Process: FUR is located at Building MAIN - This process represents the manufacturing of flat glass in the float glass melting furnace with a nominal capacity of 770 tons per day. It is natural gas fired, with propane fuel as emergency back-up. This process includes the optional use of three oxy-fuel firing techniques that were previously approved with Operational Flexibility Notification, including oxygen enrichment, oxygen lancing, and oxygen boosting.

Process: SCB is located at Building MAIN - This process provides controlled glass cooling in the electric annealling lehr. SO2 is injected at the lehr's front to improve glass characteristics. Replaces process SCR after DS001 Dry Scrubber is placed on line.
Note: lehr emissions will be directed through, but not controlled by the SCR or ESP.

Emission unit UBATCH - This emission unit includes all materials handling systems and associated dust collection equipment.

Emission unit UBATCH is associated with the following emission points (EP):
BH001, BH002, BH003, C0001, X0001, X0002, X0003
Process: MAT is located at 4/5 & CULLET PAD, Building OUTSIDE - This process represents cullet and raw material unloading, weighing, transfer, and industrial cleaning operations.

Emission unit UPOWER - This emission unit includes the two emergency back-up diesel fired generators. Each generator is limited to 200 hours of operation per year.

Emission unit UPOWER is associated with the following emission points (EP):
G0001, G0002
Process: GEN is located at UTILITY ROOM, Building MAIN - This process represents emergency back-up electrical power generation using two diesel fired generators.

Emission unit USCRUB - This emission unit includes the glass annealing lehr and associated SO2 wet scrubber system. The emission unit will be removed after Dry Scrubber, control ID# DS001, is commissioned. Installation of the Dry Scrubber will eliminate operation of Wet Scrubber ID#L0001.

Emission unit USCRUB is associated with the following emission points (EP):
L0001
Process: SCR is located at MAIN - HOT END, Building OUTSIDE - This process represents the controlled cooling of the glass in an electric annealing lehr. SO2 is injected at the front of the lehr to improve the glass characteristics. This process will be replaced by Process SCB upon installation/commissioning of the Dry Scrubber DS001, with removal of Wet Scrubber L0001 to follow.

Emission unit UCLEAN - This emission unit includes all on-site cold cleaning units subject to Part 226.

Process: DEG is located at MAINT/FAB, Building MAIN - This process represents fugitive emissions from cold cleaning operations.

Emission unit UCUTTG - This emission unit includes the glass cutting areas on the float line and coating line in the fabrication area. VOC emissions result from cutting oil used in the glass cutting areas.

Process: CUT is located at Building MAIN - This process represents the use of cutting oil for scoring and cutting glass at multiple locations.

Title V/Major Source Status
GUARDIAN INDUSTRIES CORP is subject to Title V requirements. This determination is based on the following information:
The Guardian Industries facility in Geneva, NY is considered a major source under Title V due to potential emissions of Nitrogen Oxides (NOx), Particulates, PM-10, Sulfur Dioxide and Carbon Monoxide (CO).

Program Applicability
The following chart summarizes the applicability of GUARDIAN INDUSTRIES CORP with regards to the principal air pollution
regulatory programs:

Regulatory Program	Applicability
PSD	YES
NSR (non-attainment)	NO

NESHAP (40 CFR Part 61)	NO
NESHAP (MACT - 40 CFR Part 63)	YES
NSPS	YES
TITLE IV	NO
TITLE V	YES
TITLE VI	NO
RACT	YES
SIP	YES

NOTES:
PSD Prevention of Significant Deterioration (40 CFR 52, 6 NYCRR 231-7, 231-8) - requirements which pertain to major stationary sources located in areas which are in attainment of National Ambient Air Quality Standards (NAAQS) for specified pollutants.

NSR New Source Review (6 NYCRR 231-5, 231-6) - requirements which pertain to major stationary sources located in areas which are in non-attainment of National Ambient Air Quality Standards (NAAQS) for specified pollutants.

NESHAP National Emission Standards for Hazardous Air Pollutants (40 CFR 61, 6 NYCRR 200.10) - contaminant and source specific emission standards established prior to the Clean Air Act Amendments of 1990 (CAAA) which were developed for 9 air contaminants (inorganic arsenic, radon, benzene, vinyl chloride, asbestos, mercury, beryllium, radionuclides, and volatile HAP's).

MACT Maximum Achievable Control Technology (40 CFR 63, 6 NYCRR 200.10) - contaminant and source specific emission standards established by the 1990 CAAA. Under Section 112 of the CAAA, the US EPA is required to develop and promulgate emissions standards for new and existing sources. The standards are to be based on the best demonstrated control technology and practices in the regulated industry, otherwise known as MACT. The corresponding regulations apply to specific source types and contaminants.

NSPS New Source Performance Standards (40 CFR 60, 6 NYCRR 200.10) - standards of performance for specific stationary source categories developed by the US EPA under Section 111 of the CAAA. The standards apply only to those stationary sources which have been constructed or modified after the regulations have been proposed by publication in the Federal Register and only to the specific contaminant(s) listed in the regulation.

Title IV Acid Rain Control Program (40 CFR 72 thru 78, 6 NYCRR 201-6) - regulations which mandate the implementation of the acid rain control program for large stationary combustion facilities.

Title VI Stratospheric Ozone Protection (40 CFR 82, Subpart A thru G, 6 NYCRR 200.10) - federal requirements that apply to sources which use a minimum quantity of CFC's (chlorofluorocarbons), HCFC's (hydrofluorocarbons) or other ozone depleting substances or regulated substitute substances in equipment such as air conditioners, refrigeration equipment or motor vehicle air conditioners or appliances.

RACT Reasonably Available Control Technology (6 NYCRR Parts 212-3, 226, 227-2, 228, 229, 230, 232, 233, 234, 235, 236) - the lowest emission limit that a specific source is capable of meeting by application of control technology that is reasonably available, considering technological and economic feasibility. RACT is a control strategy used to limit emissions of VOC's and NOx for the purpose of

attaining the air quality standard for ozone. The term as it is used in the above table refers to those state air pollution control regulations which specifically regulate VOC and NOx emissions.

SIP State Implementation Plan (40 CFR 52, Subpart HH, 6 NYCRR 200.10) - as per the CAAA, all states are empowered and required to devise the specific combination of controls that, when implemented, will bring about attainment of ambient air quality standards established by the federal government and the individual state. This specific combination of measures is referred to as the SIP. The term here refers to those state regulations that are approved to be included in the SIP and thus are considered federally enforceable.

Compliance Status
Facility is in compliance with all requirements.

SIC Codes
SIC or Standard Industrial Classification code is an industrial code developed by the federal Office of Management and Budget for use, among other things, in the classification of establishments by the type of activity in which they are engaged. Each operating establishment is assigned an industry code on the basis of its primary activity, which is determined by its principal product or group of products produced or distributed, or services rendered. Larger facilities typically have more than one SIC code.

SIC Code	Description
3211	FLAT GLASS
3231	PRODUCTS OF PURCHASED GLASS

SCC Codes
SCC or Source Classification Code is a code developed and used" by the USEPA to categorize processes which result in air emissions for the purpose of assessing emission factor information.Each SCC represents a unique process or function within a source category logically associated with a point of air pollution emissions. Any operation that causes air pollution can be represented by one or more SCC's.

SCC Code	Description
1-02-010-02	EXTERNAL COMBUSTION BOILERS - INDUSTRIAL INDUSTRIAL BOILER - LIQUEFIED PETROLEUM GAS (LPG) Propane
1-05-001-06	EXTERNAL COMBUSTION BOILERS - SPACE HEATERS INDUSTRIAL SPACE HEATER Natural Gas
2-01-001-02	INTERNAL COMBUSTION ENGINES - ELECTRIC GENERATION ELECTRIC UTILITY INTERNAL COMBUSTION ENGINE - DISTILLATE OIL (DIESEL) Reciprocating
2-02-001-02	INTERNAL COMBUSTION ENGINES - INDUSTRIAL INDUSTRIAL INTERNAL COMBUSTION ENGINE - DISTILLATE OIL(DIESEL) Reciprocating
3-05-014-03	MINERAL PRODUCTS MINERAL PRODUCTS - GLASS MANUFACTURE Flat Glass: Melting Furnace
3-05-014-07	MINERAL PRODUCTS MINERAL PRODUCTS - GLASS MANUFACTURE Flat Glass: Forming/Finishing
3-05-014-10	MINERAL PRODUCTS MINERAL PRODUCTS - GLASS MANUFACTURE

	Raw Material Handling (All Types of Glass)
3-99-999-92	MISCELLANEOUS MANUFACTURING INDUSTRIES MISCELLANEOUS INDUSTRIAL PROCESSES OTHER NOT CLASSIFIED
4-01-003-35	ORGANIC SOLVENT EVAPORATION COLD SOLVENT CLEANING/STRIPPING Entire Unit
4-02-009-20	SURFACE COATING OPERATIONS THINNING SOLVENTS - GENERAL Mineral Spirits

Facility Emissions Summary

In the following table, the CAS No. or Chemical Abstract Service code is an identifier assigned to every chemical compound. [NOTE: Certain CAS No.'s contain a 'NY' designation within them. These are not true CAS No.'s but rather an identification which has been developed by the department to identify groups of contaminants which ordinary CAS No.'s do not do. As an example, volatile organic compounds or VOC's are identified collectively by the NY CAS No. 0NY998-00-0.] The PTE refers to the Potential to Emit. This is defined as the maximum capacity of a facility or air contaminant source to emit any air contaminant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or air contamination source to emit any air contaminant , including air pollution control equipment and/or restrictions on the hours of operation, or on the type or amount or material combusted, stored, or processed, shall be treated as part of the design only if the limitation is contained in federally enforceable permit conditions. The PTE for each contaminant that is displayed represents the facility-wide PTE in tons per year (tpy) or pounds per year (lbs/yr). In some instances the PTE represents a federally enforceable emissions cap or limitation for that contaminant. The term 'HAP' refers to any of the hazardous air pollutants listed in section 112(b) of the Clean Air Act Amendments of 1990. Total emissions of all hazardous air pollutants are listed under the special NY CAS No. 0NY100-00-0. In addition, each individual hazardous air pollutant is also listed under its own specific CAS No. and is identified in the list below by the (HAP) designation.

Cas No.	Contaminant	PTE lbs/yr	PTE tons/yr	Actual lbs/yr	Actual tons/yr
000106-99-0	1,3-BUTADIENE		0.026		
000075-07-0	ACETALDEHYDE		0.51		
000107-02-8	ACROLEIN		0.061		
007440-38-2	ARSENIC		0.000043		
000071-43-2	BENZENE		0.62		
007440-41-7	BERYLLIUM		2.6E-6		
007440-43-9	CADMIUM		0.00023		
000630-08-0	CARBON MONOXIDE	180000			
007440-47-3	CHROMIUM		0.0003		
007440-48-4	COBALT		0.000018		
000050-00-0	FORMALDEHYDE		0.8		
000110-54-3	HEXANE		0.38		
007439-96-5	MANGANESE		0.000081		
007439-97-6	MERCURY		0.000055		
000091-20-3	NAPHTHALENE		0.056		
007440-02-0	NICKEL METAL AND INSOLUBLE COMPOUNDS		0.00045		
0NY210-00-0	OXIDES OF NITROGEN		855.9		
0NY075-00-0	PARTICULATES		173		
0NY075-02-5	PM 2.5		162		
0NY075-00-5	PM-10		173		
007782-49-2	SELENIUM		5.1E-6		
007446-09-5	SULFUR DIOXIDE		169		

007664-93-9	SULFURIC ACID	7.1
000108-88-3	TOLUENE	0.27
0NY100-00-0	TOTAL HAP	3.3
007440-62-2	VANADIUM	0.00049
0NY998-00-0	VOC	66
001330-20-7	XYLENE, M, O & P MIXT.	0.19

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

Item A: **Public Access to Recordkeeping for Title V Facilities - 6 NYCRR 201-1.10(b)**
The Department will make available to the public any permit application, compliance plan, permit, and monitoring and compliance certification report pursuant to Section 503(e) of the Act, except for information entitled to confidential treatment pursuant to 6 NYCRR Part 616 - Public Access to records and Section 114(c) of the Act.

Item B: **Timely Application for the Renewal of Title V Permits -6 NYCRR Part 201-6.2(a)(4)**

Owners and/or operators of facilities having an issued Title V permit shall submit a complete application at least 180 days, but not more than eighteen months, prior to the date of permit expiration for permit renewal purposes.

Item C: **Certification by a Responsible Official - 6 NYCRR Part 201-6.2(d)(12)**
Any application, form, report or compliance certification required to be submitted pursuant to the federally enforceable portions of this permit shall contain a certification of truth, accuracy and completeness by a responsible official.This certification shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

Item D: **Requirement to Comply With All Conditions - 6 NYCRR Part 201-6.4(a)(2)**
The permittee must comply with all conditions of the Title V facility permit. Any permit non-compliance constitutes a violation of the Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

Item E: **Permit Revocation, Modification, Reopening, Reissuance or Termination, and Associated Information Submission Requirements - 6 NYCRR Part 201-6.4(a)(3)**
This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

Item F: **Cessation or Reduction of Permitted Activity Not a Defense - 6 NYCRR 201-6.4(a)(5)**
It shall not be a defense for a permittee in an enforcement action to claim that a cessation or reduction in the permitted activity would have been necessary in order to maintain compliance with the conditions of this permit.

Item G: Property Rights - 6 NYCRR 201-6.4(a)(6)
This permit does not convey any property rights of any sort or any exclusive privilege.

Item H: Severability - 6 NYCRR Part 201-6.4(a)(9)
If any provisions, parts or conditions of this permit are found to be invalid or are the subject of a challenge, the remainder of this permit shall continue to be valid.

Item I: Permit Shield - 6 NYCRR Part 201-6.4(g)
All permittees granted a Title V facility permit shall be covered under the protection of a permit shield, except as provided under 6 NYCRR Subpart 201-6. Compliance with the conditions of the permit shall be deemed compliance with any applicable requirements as of the date of permit issuance, provided that such applicable requirements are included and are specifically identified in the permit, or the Department, in acting on the permit application or revision, determines in writing that other requirements specifically identified are not applicable to the major stationary source, and the permit includes the determination or a concise summary thereof. Nothing herein shall preclude the Department from revising or revoking the permit pursuant to 6 NYCRR Part 621 or from exercising its summary abatement authority. Nothing in this permit shall alter or affect the following:

i. The ability of the Department to seek to bring suit on behalf of the State of New York, or the Administrator to seek to bring suit on behalf of the United States, to immediately restrain any person causing or contributing to pollution presenting an imminent and substantial endangerment to public health, welfare or the environment to stop the emission of air pollutants causing or contributing to such pollution;

ii. The liability of a permittee of the Title V facility for any violation of applicable requirements prior to or at the time of permit issuance;

iii. The applicable requirements of Title IV of the Act;

iv. The ability of the Department or the Administrator to obtain information from the permittee concerning the ability to enter, inspect and monitor the facility.

Item J: Reopening for Cause - 6 NYCRR Part 201-6.4(i)
This Title V permit shall be reopened and revised under any of the following circumstances:

i. If additional applicable requirements under the Act become applicable where this permit's remaining term is three or more years, a reopening shall be completed not later than 18 months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which this permit is due to expire, unless the original permit or any of its terms and conditions has been extended by the Department pursuant to the provisions of Part 2 01-6.7 and Part 621.

ii. The Department or the Administrator determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.

iii. The Department or the Administrator determines that the Title V permit

must be revised or reopened to assure compliance with applicable requirements.

iv. If the permitted facility is an "affected source" subject to the requirements of Title IV of the Act, and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit.

Proceedings to reopen and issue Title V facility permits shall follow the same procedures as apply to initial permit issuance but shall affect only those parts of the permit for which cause to reopen exists.

Reopenings shall not be initiated before a notice of such intent is provided to the facility by the Department at least thirty days in advance of the date that the permit is to be reopened, except that the Department may provide a shorter time period in the case of an emergency.

Item K: Permit Exclusion - ECL 19-0305

The issuance of this permit by the Department and the receipt thereof by the Applicant does not and shall not be construed as barring, diminishing, adjudicating or in any way affecting any legal, administrative or equitable rights or claims, actions, suits, causes of action or demands whatsoever that the Department may have against the Applicant for violations based on facts and circumstances alleged to have occurred or existed prior to the effective date of this permit, including, but not limited to, any enforcement action authorized pursuant to the provisions of applicable federal law, the Environmental Conservation Law of the State of New York (ECL) and Chapter III of the Official Compilation of the Codes, Rules and Regulations of the State of New York (NYCRR). The issuance of this permit also shall not in any way affect pending or future enforcement actions under the Clean Air Act brought by the United States or any person.

Item L: Federally Enforceable Requirements - 40 CFR 70.6(b)

All terms and conditions in this permit required by the Act or any applicable requirement, including any provisions designed to limit a facility's potential to emit, are enforceable by the Administrator and citizens under the Act. The Department has, in this permit, specifically designated any terms and conditions that are not required under the Act or under any of its applicable requirements as being enforceable under only state regulations.

NOTIFICATION OF GENERAL PERMITTEE OBLIGATIONS

Item A: Emergency Defense - 6 NYCRR 201-1.5

An emergency, as defined by subpart 201-2, constitutes an affirmative defense to penalties sought in an enforcement action brought by the Department for noncompliance with emissions limitations or permit conditions for all facilities in New York State.

(a) The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

(1) An emergency occurred and that the facility owner or

operator can identify the cause(s) of the emergency;
(2) The equipment at the permitted facility causing the emergency was at the time being properly operated and maintained;
(3) During the period of the emergency the facility owner or operator took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and
(4) The facility owner or operator notified the Department within two working days after the event occurred. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

(b) In any enforcement proceeding, the facility owner or operator seeking to establish the occurrence of an emergency has the burden of proof.

(c) This provision is in addition to any emergency or upset provision contained in any applicable requirement. item_02

Item B: General Provisions for State Enforceable Permit Terms and Condition - 6 NYCRR Part 201-5

Any person who owns and/or operates stationary sources shall operate and maintain all emission units and any required emission control devices in compliance with all applicable Parts of this Chapter and existing laws, and shall operate the facility in accordance with all criteria, emission limits, terms, conditions, and standards in this permit. Failure of such person to properly operate and maintain the effectiveness of such emission units and emission control devices may be sufficient reason for the Department to revoke or deny a permit.

The owner or operator of the permitted facility must maintain all required records on-site for a period of five years and make them available to representatives of the Department upon request. Department representatives must be granted access to any facility regulated by this Subpart, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations or law.

Regulatory Analysis

Location Facility/EU/EP/Process/ES	Regulation	Condition	Short Description
FACILITY	ECL 19-0301	69	Powers and Duties of the Department with respect to air pollution control
FACILITY	40CFR 52-A.21	29	Prevention of Significant Deterioration
FACILITY	40CFR 52-A.21(j)	30	Best Available Control Technology
U-BATCH/BH001/MAT	40CFR 52-A.21(j)	37	Best Available Control Technology
U-BATCH/BH002/MAT	40CFR 52-A.21(j)	38	Best Available Control Technology
U-BATCH/BH003/MAT/HIVAC	40CFR 52-A.21(j)	39	Best Available Control Technology

U-BATCH/C0001/MAT	40CFR 52-A.21(j)	40	Best Available Control Technology
U-COMBU	40CFR 52-A.21(j)	43	Best Available Control Technology
U-FURNC/-/FUR	40CFR 52-A.21(j)	1 -14, 1 -15	Best Available Control Technology
U-FURNC/F0001/FUR	40CFR 52-A.21(j)	1 -44	Best Available Control Technology
U-FURNC/F0001/FUR/F0001	40CFR 52-A.21(j)	1 -47, 1 -48, 1 -49, 1 -50, 1 -51, 1 -52	Best Available Control Technology
U-POWER	40CFR 52-A.21(j)	61	Best Available Control Technology
U-POWER/G0001/GEN/G0001	40CFR 52-A.21(j)	63	Best Available Control Technology
U-POWER/G0002/GEN/G0002	40CFR 52-A.21(j)	65	Best Available Control Technology
U-SCRUB/L0001/SCR	40CFR 52-A.21(j)	1 -57, 1 -58	Best Available Control Technology
U-FURNC/-/FUR	40CFR 60-A	48	General provisions
U-FURNC/-/FUR	40CFR 60-A.11(d)	1 -16	General provisions - compliance with standards and maintenance requirements
U-FURNC/F0001/FUR	40CFR 60-CC.292	1 -45	Glass melting furnaces - standards for particulate matter
U-FURNC/-/FUR	40CFR 60-CC.293	1 -17	Glass melting furnaces - standards for particulate matter from glass melting furnace with modified-processes
U-FURNC/F0001/FUR/F0001	40CFR 60-CC.293(b)(1)	1 -53	Glass melting furnaces - standards for particulate matter from glass melting furnace with modified-processes
U-FURNC/-/FUR	40CFR 60-CC.293(c)	1 -18	Glass melting furnaces - standards for particulate matter from glass melting furnace with modified-processes
FACILITY	40CFR 63-ZZZZ	31	Reciprocating Internal Combustion Engine (RICE) NESHAP
FACILITY	40CFR 68	11	Chemical accident prevention provisions
FACILITY	40CFR 82-F	12	Protection of Stratospheric Ozone - recycling and emissions reduction
FACILITY	40CFR 98	32	Mandatory Greenhouse Gas Reporting
FACILITY	6NYCRR 200.6	1	Acceptable ambient air quality.
FACILITY	6NYCRR 200.7	5	Maintenance of equipment.
FACILITY	6NYCRR 201-1.15	3 -3	Requirement to Commence Construction
FACILITY	6NYCRR 201-1.4	70	Unavoidable

			noncompliance and violations
FACILITY	6NYCRR 201-1.7	6	Recycling and Salvage
FACILITY	6NYCRR 201-1.8	7	Prohibition of reintroduction of collected contaminants to the air
FACILITY	6NYCRR 201-3.2(a)	8	Exempt Activities - Proof of eligibility
FACILITY	6NYCRR 201-3.3(a)	9	Trivial Activities - proof of eligibility
FACILITY	6NYCRR 201-6	13, 33, 34	Title V Permits and the Associated Permit Conditions
FACILITY	6NYCRR 201-6.2(d)(8)(ii	1 -2, 1 -3	Compliance Plan - Schedule for Non-compliance
U-FURNC/F0001/FUR	6NYCRR 201-6.2(d)(8)(ii	1 -20, 1 -21, 1 -22, 1 -23, 1 -24, 1 -25, 1 -26, 1 -27, 1 -28, 1 -29, 1 -30, 1 -31, 1 -32, 1 -33, 1 -34, 1 -35, 1 -36, 1 -37, 1 -38	Compliance Plan - Schedule for Non-compliance
FACILITY	6NYCRR 201-6.4(a)(4)	14	General Conditions - Requirement to Provide Information
FACILITY	6NYCRR 201-6.4(a)(7)	15	General Conditions - Fees
FACILITY	6NYCRR 201-6.4(a)(8)	1 -1	General Conditions - Right to Inspect
FACILITY	6NYCRR 201-6.4(c)	17	Recordkeeping and Reporting of Compliance Monitoring
FACILITY	6NYCRR 201-6.4(c)(2)	18	Records of Monitoring, Sampling and Measurement
FACILITY	6NYCRR 201-6.4(c)(3)(ii	19	Reporting Requirements - Deviations and Noncompliance
U-FURNC/F0001/FUR/F0001	6NYCRR 201-6.4(d)(1)	1 -46	Compliance Schedules - Permit Conditions
FACILITY	6NYCRR 201-6.4(d)(4)	20	Compliance Schedules - Progress Reports
FACILITY	6NYCRR 201-6.4(e)	21	Compliance Certification
FACILITY	6NYCRR 201-6.4(f)	1 -4	Operational Flexibility
U-SCRUB	6NYCRR 201-6.4(f)	1 -55	Operational Flexibility
U-FURNC	6NYCRR 201-6.4(f)(2)	1 -12	Operational Flexibility - Protocol
FACILITY	6NYCRR 201-6.4(f)(6)	23	Off Permit Changes
FACILITY	6NYCRR 201-7	24	Federally Enforceable Emissions Caps
FACILITY	6NYCRR 202-1.1	10	Required emissions tests.
FACILITY	6NYCRR 202-1.2	26	Notification.
FACILITY	6NYCRR 202-2.1	2	Emission Statements - Applicability
FACILITY	6NYCRR 202-2.5	3	Emission Statements -

				record keeping requirements.
FACILITY	6NYCRR 211.1	27		General Prohibitions - air pollution prohibited
FACILITY	6NYCRR 211.2	71		General Prohibitions - visible emissions limited.
U-FURNC/F0001/FUR	6NYCRR 212-1.5(e)(1)	1	-39, 1 -40	Demonstrating compliance with Part 212 through the federal NSPS
U-BATCH/-/MAT	6NYCRR 212-1.6(a)	1	-6	Limiting of Opacity
U-FURNC/-/FUR	6NYCRR 212-1.6(a)	1	-13	Limiting of Opacity
U-FURNC/F0001/FUR	6NYCRR 212-1.6(a)	1	-41	Limiting of Opacity
U-FURNC/F0001/SCB	6NYCRR 212-1.6(a)	1	-54	Limiting of Opacity
U-SCRUB/L0001/SCR	6NYCRR 212-1.6(a)	1	-56	Limiting of Opacity
U-FURNC/F0001	6NYCRR 212-2.1(a)	1	-61, 1 -62	HTACs applicable to Table 212-2.3 Table 4
U-FURNC/F0001	6NYCRR 212-2.1(b)	1	-19	Conditions should be cited under Table 3 or Table 4, 212-2.3 (a) or (b)
U-BATCH/-/MAT	6NYCRR 212-2.4(b)	1	-7	Control of Particulate from New and Modified Process Emission Sources
U-BATCH/X0001/MAT	6NYCRR 212-2.4(b)	1	-8	Control of Particulate from New and Modified Process Emission Sources
U-BATCH/X0002/MAT	6NYCRR 212-2.4(b)	1	-9	Control of Particulate from New and Modified Process Emission Sources
U-BATCH/X0003/MAT	6NYCRR 212-2.4(b)	1	-10	Control of Particulate from New and Modified Process Emission Sources
U-CUTTG/-/CUT	6NYCRR 212-3.1(a)	1	-11	Reasonably Available Control Technology for Major Facilities
FACILITY	6NYCRR 215.2	4		Open Fires - Prohibitions
U-FURNC	6NYCRR 220-2.4(a)	73		Furnace recordkeeping.
U-FURNC	6NYCRR 220-2.4(b)	1	-59	Furnace NOx monitoring.
U-FURNC	6NYCRR 220-2.4(c)	1	-60	NOx Continuous Emissions Monitoring System (CEMS) requirements.
U-FURNC	6NYCRR 220-2.4(d)	76		Submissions to the department.
FACILITY	6NYCRR 221.2	72		Prohibition.
FACILITY	6NYCRR 225-1.2(h)	3	-1	Sulfur-in-Fuel Limitations
U-CLEAN/-/DEG	6NYCRR 226	41		SOLVENT METAL CLEANING PROCESSES
U-COMBU	6NYCRR 227-1.3	42		Smoke Emission Limitations.
U-POWER/G0001/GEN/G0001	6NYCRR 227-1.3	62		Smoke Emission Limitations.
U-POWER/G0002/GEN/G0002	6NYCRR 227-1.3	64		Smoke Emission Limitations.

FACILITY	6NYCRR 227-2.4(d)	3 -2	Small boilers, small combustion turbines, and small stationary internal combustion engines.
FACILITY	6NYCRR 231-2	28	New Source Review in Nonattainment Areas and Ozone Transport Region
U-FURNC/F0001/FUR	6NYCRR 231-2.5	1 -42, 1 -43	Lowest achievable emission rate, LAER

Applicability Discussion:
Mandatory Requirements: The following facility-wide regulations are included in all Title V permits:

ECL 19-0301
This section of the Environmental Conservation Law establishes the powers and duties assigned to the Department with regard to administering the air pollution control program for New York State.

6 NYCRR 200.6
Acceptable ambient air quality - prohibits contravention of ambient air quality standards without mitigating measures

6 NYCRR 200.7
Anyone owning or operating an air contamination source which is equipped with an emission control device must operate the control consistent with ordinary and necessary practices, standards and procedures, as per manufacturer's specifications and keep it in a satisfactory state of maintenance and repair so that it operates effectively

6 NYCRR 201-1.4
This regulation specifies the actions and recordkeeping and reporting requirements for any violation of an applicable state enforceable emission standard that results from a necessary scheduled equipment maintenance, start-up, shutdown, malfunction or upset in the event that these are unavoidable.

6 NYCRR 201-1.7
Requires the recycle and salvage of collected air contaminants where practical

6 NYCRR 201-1.8
Prohibits the reintroduction of collected air contaminants to the outside air

6 NYCRR 201-3.2 (a)
An owner and/or operator of an exempt emission source or unit may be required to certify that it operates within the specific criteria described in this Subpart. All required records must be maintained on-site for a period of 5 years and made available to department representatives upon request. In addition, department representatives must be granted access to any facility which contains exempt emission sources or units, during normal operating hours, for the purpose of determining compliance with this and any other state and federal air pollution control requirements, regulations, or law.

6 NYCRR 201-3.3 (a)
The owner and/or operator of a trivial emission source or unit may be required to certify that it operates within the specific criteria described in this Subpart. All required records must be maintained on-site for a period of 5 years and made available to department representatives upon request. In addition, department representatives must be granted access to any facility which contains trivial emission sources or units subject to this Subpart, during normal operating hours, for the purpose of determining compliance with this

and any other state and federal air pollution control requirements, regulations, or law.

6 NYCRR Subpart 201-6
This regulation applies to those terms and conditions which are subject to Title V permitting. It establishes the applicability criteria for Title V permits, the information to be included in all Title V permit applications as well as the permit content and terms of permit issuance. This rule also specifies the compliance, monitoring, recordkeeping, reporting, fee, and procedural requirements that need to be met to obtain a Title V permit, modify the permit and demonstrate conformity with applicable requirements as listed in the Title V permit. For permitting purposes, this rule specifies the need to identify and describe all emission units, processes and products in the permit application as well as providing the Department the authority to include this and any other information that it deems necessary to determine the compliance status of the facility.

6 NYCRR 201-6.4 (a) (4)
This mandatory requirement applies to all Title V facilities. It requires the permittee to provide information that the Department may request in writing, within a reasonable time, in order to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. The request may include copies of records required to be kept by the permit.

6 NYCRR 201-6.4 (a) (7)
This is a mandatory condition that requires the owner or operator of a facility subject to Title V requirements to pay all applicable fees associated with the emissions from their facility.

6 NYCRR 201-6.4 (a) (8)
This is a mandatory condition for all facilities subject to Title V requirements. It allows the Department to inspect the facility to determine compliance with this permit, including copying records, sampling and monitoring, as necessary.

6 NYCRR 201-6.4 (c)
This requirement specifies, in general terms, what information must be contained in any required compliance monitoring records and reports. This includes the date, time and place of any sampling, measurements and analyses; who performed the analyses; analytical techniques and methods used as well as any required QA/QC procedures; results of the analyses; the operating conditions at the time of sampling or measurement and the identification of any permit deviations. All such reports must also be certified by the designated responsible official of the facility.

6 NYCRR 201-6.4 (c) (2)
This requirement specifies that all compliance monitoring and recordkeeping is to be conducted according to the terms and conditions of the permit and follow all QA requirements found in applicable regulations. It also requires monitoring records and supporting information to be retained for at least 5 years from the time of sampling, measurement, report or application. Support information is defined as including all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

6 NYCRR 201-6.4 (c) (3) (ii)
This regulation specifies any reporting requirements incorporated into the permit must include provisions regarding the notification and reporting of permit deviations and incidences of noncompliance stating the probable cause of such deviations, and any corrective actions or preventive measures taken.

6 NYCRR 201-6.4 (d) (5)
This condition applies to every Title V facility subject to a compliance schedule. It requires that reports, detailing the status of progress on achieving compliance with emission standards, be submitted

semiannually.

6 NYCRR 201-6.4 (e)
Sets forth the general requirements for compliance certification content; specifies an annual submittal frequency; and identifies the EPA and appropriate regional office address where the reports are to be sent.

6 NYCRR 201-6.4 (f) (6)
This condition allows changes to be made at the facility, without modifying the permit, provided the changes do not cause an emission limit contained in this permit to be exceeded. The owner or operator of the facility must notify the Department of the change. It is applicable to all Title V permits which may be subject to an off permit change.

6 NYCRR 202-1.1
This regulation allows the department the discretion to require an emission test for the purpose of determining compliance. Furthermore, the cost of the test, including the preparation of the report are to be borne by the owner/operator of the source.

6 NYCRR 202-2.1
Requires that emission statements shall be submitted on or before April 15th each year for emissions of the previous calENDar year.

6 NYCRR 202-2.5
This rule specifies that each facility required to submit an emission statement must retain a copy of the statement and supporting documentation for at least 5 years and must make the information available to department representatives.

6 NYCRR 211.2
This regulation limits opacity from sources to less than or equal to 20 percent (six minute average) except for one continuous six-minute period per hour of not more than 57 percent opacity.

6 NYCRR 215.2
Except as allowed by section 215.3 of 6 NYCRR Part 215, no person shall burn, cause, suffer, allow or permit the burning of any materials in an open fire.

40 CFR Part 68
This Part lists the regulated substances and there applicability thresholds and sets the requirements for stationary sources concerning the prevention of accidental releases of these substances.

40 CFR Part 82, Subpart F
Subpart F requires the reduction of emissions of class I and class II refrigerants to the lowest achievable level during the service, maintenance, repair, and disposal of appliances in accordance with section 608 of the Clean Air Act AmENDments of 1990. This subpart applies to any person servicing, maintaining, or repairing appliances except for motor vehicle air conditioners. It also applies to persons disposing of appliances, including motor vehicle air conditioners, refrigerant reclaimers, appliance owners, and manufacturers of appliances and recycling and recovery equipment. Those individuals, operations, or activities affected by this rule, may be required to comply with specified disposal, recycling, or recovery practices, leak repair practices, recordkeeping and/or technician certification requirements.

Facility Specific Requirements
In addition to Title V, GUARDIAN INDUSTRIES CORP has been determined to be subject to the

following regulations:
40 CFR 52.21

40 CFR 52.21 (j)
BACT determinations are made on a case-by-case basis and can be no less stringent than any requirement that exists in the current State Implementation Plan (SIP) or 40 CFR 60 and 61. Emission and operational limitations required from a BACT determination will have to be entered into the special permit conditions, separately by the permit reviewer.

40 CFR 60.11 (d)
This regulation specifies the type of opacity monitoring requirements in relation to compliance with the standards and maintenance requirements.

40 CFR 60.292
This condition sets the particulate emissions standard for glass melting furnaces which fire gasseous fuels, liquid fuels, or a combination of both.

40 CFR 60.293
This condition requires the owner or operator of a glass melting furnace with a modified process to install, calibrate, maintain, and operate a continuous opcity monitor

40 CFR 60.293 (b) (1)

40 CFR 60.293 (c)

40 CFR Part 60, Subpart A
This regulation contains the General Provisions of 40 CFR 60. The facility owner is responsible for reviewing these general provisions in detail and complying with all applicable technical, administrative and reporting requirements

40 CFR Part 63, Subpart ZZZZ
The facility must comply with all applicable portions of 40 CFR 63 Subpart ZZZZ for all reciprocating internal combustion engines on site.

40 CFR Part 98
40 CFR Part 98 sets forth the reporting requirements for facilities that are subject to the mandatory reporting of greenhouse gases.

6 NYCRR 201-1.15

The existence of a valid permit shall not be construed as authorizing construction if construction is not commenced within 18 months after the date of permit issuance, if construction is discontinued for a period of 18 months or more, or if construction is not completed within a reasonable time as determined by the department. Up to an 18-month extension may be granted by the department upon a showing of good cause in a written request by the facility owner or operator. The department may suspend, modify or revoke the permit or registration pursuant to Part 621 of this Title if construction or modification has not commenced within 18 months of issuance of such permit or registration, or construction has been discontinued for a period of more than 18 months at any point after issuance of such permit or registration.

6 NYCRR 201-6.2 (d) (8) (iii) ('b')

A compliance plan for all emission source activities subject to applicable requirements may contain the a schedule of compliance for facilities that are not in compliance with all applicable requirements at the time of permit issuance. Such a schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with any applicable requirements for which the facility will be in noncompliance at the time of permit issuance. This compliance schedule shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the source is subject. Any such schedule of compliance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements or standards on which it is based.

6 NYCRR 201-6.4 (a) (4)

This mandatory requirement applies to all Title V facilities. It requires the permittee to provide any information that the Department may request in writing, within a reasonable time, in order to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. The request may include copies of records required to be kept by the permit.

6 NYCRR 201-6.4 (a) (7)

This is a mandatory condition that requires the owner or operator of a facility subject to Title V requirements to pay all applicable fees associated with the emissions from their facility.

6 NYCRR 201-6.4 (a) (8)

This is a mandatory condition for all facilities subject to Title V requirements. It allows the Department to inspect the facility to determine compliance with this permit, including copying records, sampling and monitoring, as necessary.

6 NYCRR 201-6.4 (c)

This requirement specifies, in general terms, what information must be contained in any required compliance monitoring records and reports. This includes the date, time and place of any sampling, measurements and analyses; who performed the analyses; analytical techniques and methods used as well as any required QA/QC procedures; results of the analyses; the operating conditions at the time of sampling or measurement and the identification of any permit deviations. All such reports must also be certified by the designated responsible official of the facility.

6 NYCRR 201-6.4 (c) (2)
This requirement applies to all facilities subject to Title V requirements and specifies that all compliance monitoring and recordkeeping is to be conducted according to the terms and conditions of the permit and follow all QA requirements found in applicable regulations. It also requires monitoring records and supporting information to be retained for at least 5 years from the time of sampling, measurement, report or application. Support information is defined as including all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit.

6 NYCRR 201-6.4 (c) (3) (ii)
This regulation specifies any reporting requirements incorporated into the permit must include provisions regarding the notification and reporting of permit deviations and incidences of noncompliance stating the probable cause of such deviations, and any corrective actions or preventive measures taken.

6 NYCRR 201-6.4 (d) (1)

6 NYCRR 201-6.4 (d) (4)
This condition applies to every Title V facility subject to a compliance schedule. It requires that reports, detailing the status of progress on achieving compliance with emission standards, be submitted semiannually.

6 NYCRR 201-6.4 (f)
This section describes the operational flexibility protocol proposed by the facility. The protocol will allow the facility owner or operator to make certain changes at the facility without the need for a permit modification. Changes made pursuant to the protocol must be approved by the Department, and will be rolled into the permit during the next renewal or modification.

6 NYCRR 201-6.4 (f) (2)

6 NYCRR 201-6.4 (f) (6)
This condition allows changes to be made at the facility, without modifying the permit, provided the changes do not cause an emission limit contained in this permit to be exceeded. The owner or operator of the facility must notify the Department of the change. It is applicable to all Title V permits which may be subject to an off permit change.

6 NYCRR 202-1.2
This regulation specifies that the department is to be notified at least 30 days in advance of any required stack test. The notification is to include a list of the procedures to be used that are acceptable to the department. Finally, free access to observe the stack test is to be provided to the department's representative.

6 NYCRR 211.1
This regulation requires that no person shall cause or allow emissions of air contaminants to the outdoor atmosphere of such quantity, characteristic or duration which are injurious to human, plant or animal life or to property, or which unreasonably interfere with the comfortable enjoyment of life or property.

6 NYCRR 212-1.5 (e) (1)
A process emission source subject to a Federal New Source performance Standard satisfies the requirements of Part 212 for the respective air contaminant regulated by the Federal standard.

6 NYCRR 212-1.6 (a)
This provisions requires that the facility owner or operator not cause or allow emissions having an average opacity during any six consecutive minutes of 20 percent or greater from any process emission source or emission point, except for the emission of uncombined water.

6 NYCRR 212-2.1 (a)
This provision is for an air contaminant listed in Section 212-2.2 Table 2 - High Toxicity Air Contaminant List (HTAC). The facility owner or operator must either limit the actual annual emissions from all process operations at the facility so as to not exceed the mass emission limit listed for the individual HTAC; or demonstrate compliance with the air cleaning requirements for the HTAC as specified in Subdivision 212-2.3(b), Table 4.

6 NYCRR 212-2.1 (b)

This provision applies to any air contaminant not listed on the High Toxicity Air Contaminant List (HTAC) and states the facility owner or operator shall not allow emissions of an air contaminant to violate the requirements specified in Subdivision 212-2.3(a), Table 3 - or Table 4.

6 NYCRR 212-2.4 (b)

Particulate emissions from any process emission source, which received a B or C Environmental Rating, and for which an application was received by the department after July 1, 1973 are restricted to 0.050 grains per cubic foot of exhaust gas, expressed at standard conditions on a dry gas basis.

6 NYCRR 212-3.1 (a)

This provision states that owners and/or operators of facilities which emit volatile organic compounds or nitrogen oxides in amounts greater than the applicability emission rates found in 212-3(a)(1) and (2) must submit a plan to reduce those emissions and be in compliance by a specific date.

6 NYCRR 220-2.4 (a)

The owner or operator of a glass melting furnace located at a glass plant that meets the applicability requirements of section 220-2.1 must maintain a file of daily glass production rates. The production rates must be summarized monthly. Glass production records must be retained for at least five years following the date of such records and must be made available for inspection by the department during normal business hours.

6 NYCRR 220-2.4 (b)

Compliance with the NO_x RACT emission limit(s) established in subdivision 220-2.3(a) shall be demonstrated by measuring NO_x emissions with a CEMS. The CEMS shall comply with the requirements of subdivision 220-2.4(c) or with equivalent requirements approved by the department.

6 NYCRR 220-2.4 (c)

6 NYCRR 220-2.4 (d)

Protocols, reports, summaries, schedules, and any other information required to be submitted to the department under provisions of this Subpart must be sent (in either hardcopy or electronically) as follows:

(1) one copy to the Division of Air Resources, New York State Department of Environmental Conservation, 625 Broadway, Albany, New York 12233; and

(2) one copy to the regional air pollution control engineer at the appropriate regional office of the department.

6 NYCRR 221.2
This rule restricts the use of asbestos-containing surface coatings.

6 NYCRR 225-1.2 (h)
Sulfur-in-fuel limitation for the firing of distillate oil on or after July 1, 2016.

6 NYCRR 227-1.3
This regulation requires a limitation and compliance monitoring for opacity from a stationary combustion installation.

6 NYCRR 227-2.4 (d)
This section includes NOx RACT requirements for small boilers, small combustion turbines, and small stationary internal combustion engines.

6 NYCRR 231-2.5
The provisions of Subpart 231-2 apply to new or modified major facilities. The contaminants of concern state-wide are nitrogen oxides and volatile organic compounds since New York State is located in the ozone transport region and because there are ozone non-attainment areas within the state. In the New York City metropolitan area, carbon monoxide is also a non-attainment contaminant. In addition, particulate matter less than 10 microns in size (PM-10) is a non-attainment contaminant in Manhattan County.

Emission controls equivalent to the lowest achievable emission rate (LAER) must be implemented for each contaminant for which Subpart 231-2 is applicable for a given source project or new major facility. LAER is defined as the most stringent emission limitation achieved in practice or which can be expected to be achieved in practice for a category of emission sources taking into consideration each air contaminant which must be controlled (6 NYCRR 200.1(ak)).

6 NYCRR Part 226

This rule establishes requirements for cold cleaning degreasers.

6 NYCRR Subpart 201-7
This regulation sets forth an emission cap that cannot be exceeded by the facility. In this permit that cap is

6 NYCRR Subpart 231-2
The provisions of Subpart 231-2 apply to new or modified major facilities. The contaminants of concern state-wide are nitrogen oxides and volatile organic compounds since New York State is located in the ozone transport region and because there are ozone non-attainment areas within the state. In addition, particulate matter less than 10 microns in size (PM-10) is a non-attainment contaminant in Manhattan County.

Compliance Certification
Summary of monitoring activities at GUARDIAN INDUSTRIES CORP:

Location Facility/EU/EP/Process/ES	Cond No.	Type of Monitoring
FACILITY	29	record keeping/maintenance procedures
FACILITY	30	record keeping/maintenance procedures
U-BATCH/BH001/MAT	37	monitoring of process or control device parameters as surrogate
U-BATCH/BH002/MAT	38	monitoring of process or control device parameters as surrogate
U-BATCH/BH003/MAT/HIVAC	39	record keeping/maintenance procedures
U-BATCH/C0001/MAT	40	monitoring of process or control device parameters as surrogate
U-COMBU	43	record keeping/maintenance procedures
U-FURNC/-/FUR	1-14	record keeping/maintenance procedures
U-FURNC/-/FUR	1-15	record keeping/maintenance procedures
U-FURNC/F0001/FUR	1-44	intermittent emission testing
U-FURNC/F0001/FUR/F0001	1-47	record keeping/maintenance procedures
U-FURNC/F0001/FUR/F0001	1-48	record keeping/maintenance procedures
U-FURNC/F0001/FUR/F0001	1-49	continuous emission monitoring (cem)
U-FURNC/F0001/FUR/F0001	1-50	intermittent emission testing
U-FURNC/F0001/FUR/F0001	1-51	intermittent emission testing
U-FURNC/F0001/FUR/F0001	1-52	continuous emission monitoring (cem)
U-POWER	61	record keeping/maintenance procedures
U-POWER/G0001/GEN/G0001	63	work practice involving specific operations
U-POWER/G0002/GEN/G0002	65	work practice involving specific operations
U-SCRUB/L0001/SCR	1-57	monitoring of process or control device parameters as surrogate
U-SCRUB/L0001/SCR	1-58	monitoring of process or control device parameters as surrogate
U-FURNC/-/FUR	1-16	record keeping/maintenance procedures
U-FURNC/F0001/FUR	1-45	intermittent emission testing
U-FURNC/-/FUR	1-17	record keeping/maintenance procedures
U-FURNC/F0001/FUR/F0001	1-53	intermittent emission testing
U-FURNC/-/FUR	1-18	continuous emission monitoring (cem)
FACILITY	1-2	record keeping/maintenance procedures
FACILITY	1-3	record keeping/maintenance procedures
U-FURNC/F0001/FUR	1-20	record keeping/maintenance procedures

U-FURNC/F0001/FUR	1-21	continuous emission monitoring (cem)
U-FURNC/F0001/FUR	1-22	record keeping/maintenance procedures
U-FURNC/F0001/FUR	1-23	record keeping/maintenance procedures
U-FURNC/F0001/FUR	1-24	record keeping/maintenance procedures
U-FURNC/F0001/FUR	1-25	record keeping/maintenance procedures
U-FURNC/F0001/FUR	1-26	continuous emission monitoring (cem)
U-FURNC/F0001/FUR	1-27	continuous emission monitoring (cem)
U-FURNC/F0001/FUR	1-28	monitoring of process or control device parameters as surrogate
U-FURNC/F0001/FUR	1-29	continuous emission monitoring (cem)
U-FURNC/F0001/FUR	1-30	record keeping/maintenance procedures
U-FURNC/F0001/FUR	1-31	record keeping/maintenance procedures
U-FURNC/F0001/FUR	1-32	continuous emission monitoring (cem)
U-FURNC/F0001/FUR	1-33	intermittent emission testing
U-FURNC/F0001/FUR	1-34	monitoring of process or control device parameters as surrogate
U-FURNC/F0001/FUR	1-35	record keeping/maintenance procedures
U-FURNC/F0001/FUR	1-36	continuous emission monitoring (cem)
U-FURNC/F0001/FUR	1-37	record keeping/maintenance procedures
U-FURNC/F0001/FUR	1-38	continuous emission monitoring (cem)
FACILITY	19	record keeping/maintenance procedures
U-FURNC/F0001/FUR/F0001	1-46	record keeping/maintenance procedures
FACILITY	21	record keeping/maintenance procedures
FACILITY	1-4	record keeping/maintenance procedures
U-SCRUB	1-55	record keeping/maintenance procedures
U-FURNC	1-12	record keeping/maintenance procedures
FACILITY	1-5	record keeping/maintenance procedures
FACILITY	2	record keeping/maintenance procedures
U-FURNC/F0001/FUR	1-39	record keeping/maintenance procedures
U-FURNC/F0001/FUR	1-40	record keeping/maintenance procedures
U-BATCH/-/MAT	1-6	monitoring of process or control device parameters as surrogate
U-FURNC/-/FUR	1-13	record keeping/maintenance procedures
U-FURNC/F0001/FUR	1-41	monitoring of process or control device parameters as surrogate
U-FURNC/F0001/SCB	1-54	monitoring of process or control device parameters as surrogate
U-SCRUB/L0001/SCR	1-56	monitoring of process or control device parameters as surrogate
U-FURNC/F0001	1-61	monitoring of process or control device parameters as surrogate
U-FURNC/F0001	1-62	record keeping/maintenance procedures
U-FURNC/F0001	1-19	record keeping/maintenance procedures
U-BATCH/-/MAT	1-7	intermittent emission testing
U-BATCH/X0001/MAT	1-8	monitoring of process or control device parameters as surrogate
U-BATCH/X0002/MAT	1-9	monitoring of process or control device parameters as surrogate
U-BATCH/X0003/MAT	1-10	monitoring of process or control device parameters as surrogate
U-CUTTG/-/CUT	1-11	monitoring of process or control device parameters as surrogate
U-FURNC	73	record keeping/maintenance procedures
U-FURNC	1-59	continuous emission monitoring (cem)
U-FURNC	1-60	continuous emission monitoring (cem)
U-FURNC	76	record keeping/maintenance procedures
FACILITY	3-1	work practice involving specific operations
U-CLEAN/-/DEG	41	record keeping/maintenance procedures
U-COMBU	42	monitoring of process or control device parameters as surrogate
U-POWER/G0001/GEN/G0001	62	monitoring of process or control device parameters as surrogate
U-POWER/G0002/GEN/G0002	64	monitoring of process or control device parameters as surrogate
FACILITY	3-2	record keeping/maintenance procedures

U-FURNC/F0001/FUR	1-42	continuous emission monitoring (cem)
U-FURNC/F0001/FUR	1-43	continuous emission monitoring (cem)

Basis for Monitoring
6NYCRR Part 201 Permits
6NYCRR Part 201-1.7
With regard to the recycling and salvage requirements, Guardian recycles waste glass (cullet) from the process back into the batch. However, cullet dust, collected in the cullet return system, cannot be recycled for technical reasons. The variable chemistry of the dust would unpredictably affect batch chemistry. Also, the dust is too fine and creates particulate carryover problems in the furnace.

6NYCRR Part 201-6
A permit condition is included which establishes a schedule for the installation of PM-10 emission controls on the float glass furnace. Although there has been no process modification or other event to trigger new requirements, Guardian has agreed to install controls during the next cold tank repair (CTR) which will result in BACT equivalent limits and monitoring requirements.

Background
In the initial construction permit, Guardian was given a joint PM/PM10 limit, a typical format for PSD permits where it was assumed that PM10 was a subset of PM. Within the glass industry, there was no precedent for routine testing or permitting the condensable portion of the particulate emissions at that time. Guardian's PM/PM10 emission limit was intended to satisfy the glass furnace New Source Performance Standard (40 CFR 60 Subpart CC) as well as establish a BACT limit under PSD. The permit specified Method 5 test requirements in accordance with Subpart CC to demonstrate compliance with the 29.2 lb/hr PM/PM10 limit.

Once the initial permit was issued, the Department requested that in addition to the prescribed Method 5 test, a separate PM10 test be done using EPA Methods 201A/202 to measure the condensable portion. This testing and subsequent PM10 testing has shown that the condensable portion of the emissions is significant and should be regulated separately from the filterable portion. Guardian's experience with 3R NOx technology indicated that they had higher levels of sulfuric acid and fine particulates as compared to non-3R furnaces. After lengthy review and negotiations, Guardian has agreed to address PM10 controls during the upcoming cold tank repair. A schedule has been developed and included in this permit to ensure on-going cooperation and progress is made toward PM10 emission reductions.

6NYCRR Part 201-6.4(c)(3)(ii)
This permit condition requires submittal of semi-annual reports for deviations of monitoring conditions in the permit and establishes procedures for prompt notification of permit deviations.

6NYCRR Part 201-6.4(e)
This permit condition requires submittal and specifies content of annual compliance certification reports.

6NYCRR Part 201-6.4(f)
This facility-specific condition includes Guardian's “Operational Flexibility Plan” which makes provisions for facilitating "off permit changes" authorized by the Clean Air Act section 502(b)(10) and 40 CFR 70.2. It allows changes to occur at a facility that are not specifically addressed or prohibited by the permit only after they go through a review protocol outlined in the condition. Any federal or state requirements which apply to the change must already exist in the issued Title V permit. Once the appropriate review is completed, the change may be made without making a formal permit revision or modification.

Operational flexibility may not be applied to projects that are defined as "major" under New York State Uniform Procedures (6NYCRR Part 621) or any project that would be considered a "significant permit modification" under 6NYCRR Part 201-6. This prohibition specifically includes modifications under Title I of the Clean Air Act and any change that would exceed the emissions allowable under the permit, whether expressed as a rate or in terms of total emissions.

This facility-specific condition specifies the detailed prohibitions and notification requirements associated with "off-permit" changes which are generally described in the mandatory facility-level condition under 6 NYCRR 201-6.5(f)(6). As the mandatory condition states, "off-permit changes" made pursuant to the Operational Flexibility Plan are not covered by the permit shield described in section 6NYCRR 201-6.6.

6 NYCRR Part 201-7
A condition under this citation establishes a facility-wide emissions cap of Carbon Monoxide (CO) at 99.7 tons per year - below the 100 ton significance threshold for PSD requirements (40 CFR 52.21(b)(23)). The facility has maintained compliance with this cap through the record keeping requirements in their existing permit. These record keeping requirements will remain in the Title V permit and require that CO emissions are quantified daily for each source of CO at the facility, including the furnace, the emergency generators, and all other small combustion sources (space heaters, boilers, propane flare, etc...). To quantify emissions, the furnace is equipped with a certified continuous monitor for CO. For the smaller sources, CO is calculated based on the hours of operations and equipment specific emission factors. Emissions are total over each 24 hour period and included in a 365 day total for comparison to the cap.

6 NYCRR Part 202
6 NYCRR Part 202-2.1
This permit condition sets annual mission statement reporting deadline.

6 NYCRR Part 212 General Process Sources
6 NYCRR Part 212.4(a)
No facility specific monitoring conditions are included in the permit for control of toxics under this citation. Guardian's batch recipe does not include any toxics or HAPs. Minimal amounts of toxics or HAPs may be present in the raw materials, but are not expected in any significant quantity under Part 212 table 2.

The potential rates of NOx and SO2 do warrant controls on the furnace under Part 212 Table 2. However, furnace emissions of NOx and SO2 are both applicable to more stringent requirements under NSR (LAER) and PSD (BACT), respectively. Therefore, for the purpose of streamlining the permit, only the Part 231 NSR and 40 CFR 52.21 PSD requirements are included in the permit.

6 NYCRR Part 212.4(c)
Particulate emissions from the raw material and cullet handling operations are subject a limit of 0.050 grains per dry standard cubic foot. However, they are also subject to BACT (Best Available Control Technology) requirements under PSD (40 CFR 52.21 Prevention of Significant Deterioration). Guardian will satisfy the requirements of both PSD and Part 212.4(c) by maintaining and monitoring baghouses on each of the subject particulate sources. The specific monitoring and record keeping requirements are included in three separate monitoring conditions cited under 40 CFR 52.21(j) in this permit.

Although the glass melting furnace is one of the Part 212 Table 5 listed processes for which the permissible particulate emission rate is based on process weight, paragraph 215.5(e) states that process emission source subject to and compliant with a federal new source performance standard (NSPS) in 40 CFR 60 satisfies the requirements of Part 212 for the contaminant regulated by the federal rule. Guardian's furnace is subject to particulate requirements under 40 CFR 60 Subpart CC. Therefore, the more stringent NSPS limit applies to the furnace instead of Part 212.

6NYCRR Part 212.6(a)
The regulation of opacity (visible emissions) at 6 NYCRR Part 212.6(a) does not specify periodic monitoring. Therefore, the permit must contain periodic monitoring to demonstrate compliance with the 20% opacity limit. Generally, all Part 212 applicable sources at which have the potential to emit particulate emissions are subject to this opacity limit. Opacity in excess of 20% may indicate a particulate control problem but there is not always a correlation between mass emissions and opacity. Compliance with the particulate standards themselves is regulated separately under Part 212.4(c) and 40 CFR 60 Subpart CC.

For the glass furnace, Guardian is subject to an opacity limit prescribed by the NSPS (40 CFR 60 Subpart CC) and is required to operate a certified continuous opacity monitor (COM) to assure compliance. Generally, requirements under Part 212.6(a) would be superceded by the more stringent NSPS limit and so the 20% limit has not been included in this permit.

However, a monitoring condition has been included under the 212.6(a) citaion to implement a Maintenanc Plan aimed at minimizing opacity from the furnace. It was decided during the enforcement proceedings for Order R8-20120512-36, which addresses Part 212 opacity violations, that a Maintenance Plan be included as Schedule A of the Order. By incorporating this same plan into the draft Title V Permit, obligations under the Order may be closed out upon issuance of the Title V Permit. Furthermore, the provisions of 212.5(e) imply that it is appropriate to continue monitoring compliance under the State rule in cases where the source owner has not consistently demonstrated compliance with the respective Federal regulation.

The raw material handling operations and lehr scrubber are not required to have COMs. For these sources, Guardian is required by other monitoring conditions in the permit to conduct routine parametric monitoring to assure adequate emissions control. These sources are not likely to cause visible emissions except during a process upset or malfunction of a control device. The permit requires a visible observation of these stacks be conducted on a semi-annual frequency while the source is operating. The permit condition also requires that any instance where there is cause to believe that visible emissions have the potential to exceed the standard must be investigated and followed-up with EPA Method 9 assessment if not corrected within one operating day. If there is still a doubt as to whether the standard is being met, the Department may conduct, or require, a Method 9 assessment for compliance at any time.

6 NYCRR Part 212.10 Reasonably Available Control Technologies for Major Facilities
Volatile Organic Compounds (VOC) are emitted from the use of cutting oil (mineral spirits) at the facility's glass cutting stations, permitted as Process CUT. To limit VOCemissions to less than 50 tons per year major facility threshold subject to RACT requirements, a condition has been included in the permit which limits the use of mineral spirits to less than 15,000 gallons per year. This limit is based on the VOC content of the mineral spirits (6.334 lb VOC/gal) and the assumption that all of the mineral spirits used as emitted as VOC: [(6.344 lb/gal x 15,000 gal/year)/2000 lbs/ton = 47.5 tons/year.

6 NYCRR Part 220-2 NOx RACT for Glass Plants
6 NYCRR Part 220-2.4(a)
This condition reiterates the requirement at this citation that Guardian must maintain records of their daily glass production rate to be summarized monthly.

6 NYCRR Part 220-2.4(b)
This condition establishes the NOx limit of 199 lb/hr according to the approved Reasonably Available Control Technology (RACT) analysis, dated November 29, 2010. This limit is based on Guardian's demonstrated use of the furnace's existing NOx reduction technologies. To minimize their NOx emissions while also controlling Carbon Monoxide and the damaging effects of 3R NOx technolgoy to their furnace, they combine and optimize the use of use of low NOx burners, oxy-firing, and/or type 1 or type 2 3R NOx reduction technologies.

The condition also specifies that Guardian shall measure NOx with a Continuous Emissions Monitor (CEMs) to demonstrate continuous compliance with the NOx RACT emission limit.

6 NYCRR Part 220-2.4(c)
The monitoring condition under this citation more specifically spells out the requirements for operating and maintaining the NOx CEMs, and for data collection and record keeping. As stated in the rule, NOx data must be summarized and submitted to the Department semiannually.

6NYCRR Part 226 Solvent Metal Cleaning Processes
This condition establishes equipment specifications, operating requirements, and work practice standards for cold cleaning degreasers. These work practice requirements must be adhered to on a continuous basis whenever the sources are in use, rather than periodic inspection. The proper operating procedures must be posted conspicuously.

As specified by the rule, cold cleaning degreasers must be equipped with 1) a cover that operates easily, 2) an internal (under cover) drainage facility, if practical, and 3) a control system. The log kept for purposes described above will also be used to indicate whether the cleaner is equipped with an internal drainage facility. According to the rule-making guidance, "internal drainage facility" refers to the rack or basket for dripping parts to minimize solvent carry-out. Parts must be allowed to drain until dripping stops (at least 15 seconds). Although the rule doesn't specify the conditions under which internal drainage is or is not practical, presumably there may be situations when the size or shape of the part in relation to the cleaner make it impractical to drain the part under cover. In this situation, the facility will take steps to minimize emissions of VOC.

6 NYCRR Part 227 Stationary Combustion Installations
6 NYCRR Part 227-1.3
For the generators and small combustion sources a condition is included at this citation which requires compliance with regulatory opacity limits, allowing for the Department to require Method 9 assessment when necessary.

6 NYCRR Part 231 New Source Review
6 NYCRR Part 231-2 NOx ERCs
As established in the previous permit, this condition lists the 1009.3 tons of NOx Emission Reduction Credits (ERCs) designated to offset the emissions of NOx from the facility. In addition to implementing Lowest Achievable Emission Reductions (LAER), the rule requires that NOx emissions are offset by ERCs at a 1 to 1.15 ratio. Therefore, the list of certified ERCs is sufficient to offset up to 877.6 tons of annual NOx emissions.

6 NYCRR Part 231-2.5 NOx limits on Furnace
Guardian will maintain the lowest achievable emission rate (LAER) for Nitrogen Oxides (NOx) for this furnace by operating NOx reduction technologies including low NOx burners, oxy-firing, and/or type 1 or type 2 3R control. A NOx emission limit of 199 lb/hr on a rolling 30 day average basis has been included in this permit - increased from the previously permitted 190 lb/hr limit in the construction permit. The increased limit is necessary because problems in the furnace caused by the 3R NOx reduction technology make it infeasible to operate all of the 3R burners as envisioned in the original permit. The 199 lb/hr limit is based on operating data and is consistent with the interim limit established by Consent Order R8-20030606-18. See “Background” information below for further details.

Additionally, the permit includes a condition to limit NOx on a heat input basis, which is a typical unit of measurement in the glass industry. Guardian will operate the furnace and NOx controls to limit NOx at or

below 1.23 lb/mmbtu on a 30 day basis. The averaging time of this limit has been changed from a 24 hour basis in the previous permit to a 30 day rolling average basis. Guardian's experience has shown that the inverse relationship between NOx and CO is especially pronounced with the use of 3R. The 30 day average allows for the short term fluctuations in NOx while maintaining compliance with CO limits and adjusting the 3R and other NOx controls to minimize damage to the furnace.

In order to demonstrate compliance with both the 199 lb/hr and the 1.23 lb/mmbtu limits, NOx will be continuously monitored with a certified Continuous Monitoring System (CEMS). Fuel data and other necessary record keeping requirements are also specified.

NOx LAER limits and requirements for the emergency generators and miscellaneous combustion sources are addressed in combination with BACT requirements under the 40 CFR 52.21(j) citation.

Background
During the initial permitting process, Guardian objected to the requirement of 3R NOx reduction technology, arguing that it was not a proven technology over the course of an entire float glass furnace campaign. There was no guarantee from the manufacturer of performance or information on the effects on other pollutants. Despite these objections, USEPA required the use of 3R technology, resulting in the 190 lb/hr (6.5 lb/ton glass) LAER limit.

Guardian's operating experience and data showed that emissions of Carbon Monoxide increase with increasing use of the 3R technology. For some time after the initial construction permit was issued, Guardian experienced problems balancing the NOx and CO to remain compliant with both. The 3R burners were used as designed to maintain NOx below the 190 lb/hr limit until April 2003 when the furnace regenerators experienced a partial collapse in one of the regenerators where 3R was used, causing significant process upset and excess emissions. This premature structural failure was found to be caused by the 3R burners.

Following this first collapse, Guardian shut off the 3R burners and entered into a Consent Order agreement with the Department to allow continued operation under interim limits while the process was stabilized and alternative NOx control options were considered. During the years since, Guardian has learned to operate the furnace using a combination of NOx reduction methods in conjunction with more limited use of the 3R burners to comply with the increased 199 lb/hr limit provided for in the Consent Order. The proposed 199 lb/hr (6.8 lb NOx/ton of glass) limit is comparable to their competitors' NOx limits. Guardian will continue to use some 3R despite chronic, costly problems with premature checker packing collapses in the regenerators. The cost and benefits of 3R as compared to other NOx control options will be re-evaluated during the upcoming first cold tank repair.

The Consent Order provided less stringent interim limits and averaging times for Carbon Monoxide as well. As described in more detail below, some of these interim limits have been adopted into this permit and others will be discontinued upon issuance of this permit.

40 CFR 52.21 Prevention of Significant Deterioration
40 CFR 52.21(j) BACT
Nitrogen Oxides
A condition under this citation establishes Guardian's facility-wide NOx limit. The limit in this permit is set at 855.9 tons per year (tpy), increased from the previously permitted facility wide limit of 842 tpy. The increased limit does not reflect a change in the operation or revision to the applicability or compliance approach, but is warranted to better reflect the facility operations.

The previously permitted facility-wide NOx limit, 842 tons/yr, was based on 832.2 tpy attributed to the furnace (190 lb/hr at 700 ton/day pull rate) and 9.8 tpy attributed to the emeragency generators. NOx

emissions from the small combustion sources were not accounted for when the 842 tpy limit was established. Data provided on these sources indicates an additional contribution of NOx emissions up to 13.9 tons per year. Despite this oversight, Guardian has been quantifying the emissions from the small miscellaneous combustion sources and included them in the facility-wide totals for the purpose of compliance with the previously permitted 842 tpy limit.

Furthermore, the increased cap is warranted on the basis of NOx increases at the furnace related to the reduced usage of 3R NOx controls. The Department has agreed to a higher hourly emission limit for NOx from the furnace since 3R has been shown to be problematic for the furnace integrity. Guardian has operated the furnace with the 199 lb/hr limit under the Consent Order R8-20030606-18 since 2004 and has demonstrated that they can maintain compliance with the facility limit at 855.9 tpy and has not requested further increases to the facility-wide limit.

Under 40 CFR 52.21, the furnace was subject to a BACT evaluation for emissions of NOx. Prior to construction, an evaluation of LAER was done as required under New Source Review requirements of 6 NYCRR Part 231 which resulted in the most stringent NOx controls available for a flat glass furnace. The LAER determination focused on the “top” option without consideration of cost, thereby satisfying the BACT requirements as well.

Another condition included under the PSD citation requires a NOx Continuous Emission Monitoring system (CEMs) on the furnace for monitoring and compliance assurance for NOx limits on the furnace and for quantifying emissions to be incorporated into facility-wide NOx totals. The condition specifies the operating, Q/A, and record keeping requirements for the CEMs.

Also under this citation are conditions for each of the two emergency generators to satisfy the LAER and BACT requirements as they were established in the preconstruction permit. Each generator has NOx limits of 2.7 lb/mmbtu and 52.45 lb/hr. Each generator must operate with ignition timing retard with a turbo charger and aftercooler. Also, each generator is limited to 200 hours of operation a year. Emissions from the generators are tracked and added into the total NOx emissions from the facility in order to demonstrate compliance with the facility wide limit discussed above.

Carbon Monoxide
The limit for Carbon Monoxide emissions from the furnace (21.9 lb/hr) has been changed in this Title V Permit to a 30 day rolling basis rather than a 24-hour average basis as it was in the previous version of the permit. The 30 day averaging time for CO was previously agreed upon (See December 13, 1999 letter to Steven Riva, EPA from Bernette Schilling) and has been in affect under the interim limit for CO in the Consent Order since 2004. That interim limit, 44.7 lb/hr on a 30 day average basis, will not remain in affect once this permit is issued and will be replaced with 21.9 lb/hr.

The permit also includes a limit for Carbon Monoxide from the furnace on a heat input basis. The 0.1 lb/mmbtu (30 day rolling average basis) is the same as in the preconstruction permit but replaces the interim Consent Order limit of 0.2 lb/mmbtu. The averaging time of this limit has been changed from a 24 hour basis in the previous permit to a 30 day rolling average basis. Guardians experience has shown the inverse relationship between NOx and CO is especially pronounced with the use of 3R. CO levels are very sensitive to the furnace operation and 3R adjustments. The 30-day averaging time was warranted to allow for short term fluctuations while operating the furance in such as way to balance NOx controls with CO emissions and minimize damage to the furnace caused by the 3R technology.

Another condition included under the PSD citation requires a CO Continuous Emission Monitoring system (CEMs) on the furnace for monitoring compliance with the 21.9 lb/hr and 0.1 lb/mmbtu CO limits on the furnace and for quantifying emissions to be incorporated into the facility-wide cap. The condition specifies fuel data as well as the operating, Q/A, and record keeping requirements for the CEMs.

The conditions under this citation for each of the two emergency generators specify BACT requirements as they were established in the preconstruction permit. Each generator has CO limits of 0.26 lb/mmbtu and 5.09 lb/hr. Each generator must operate with ignition timing retard with a turbo charger and aftercooler. Also, each generator is limited to 200 hours of operation a year. Emissions from the generators are tracked and added into the total CO emissions from the facility in order to demonstrate compliance with the facility wide cap under 6 NYCRR 201-7.

Particulates, Sulfur Dioxide and Sulfuric Acid
Float Glass Furnace (U-FURNC)
Emissions of sulfur dioxide, sulfuric acid, and particulate from the furnace are limited in the permit as follows:
Sulfur Dioxide: 2.07 lb/ton and 60 lb/hr
Sulfuric Acid: 0.17 lb/ton and 5 lb/hr
Particulate: 0.5 gr/kg (1 lb/ton) and 29.2 lb/hr

These BACT limits remain unchanged from the existing permit and were based on the BACT determination done during the initial PSD pre-construction review. Compliance with the limits is demonstrated on a daily basis through the use of a predictive model ("Sulfur Balance Model") which uses raw material input, process data, and sulfur analysis of the glass produced.

Also under this citation are conditions which require annual stack testing using approved EPA Methods to verify compliance with the limits for Sulfur Dioxide and Sulfuric Acid mist. Annual testing for Particulates is required under the citation for the New Source Performance Standard (see 40 CFR 60 Subpart CC conditions).

Another monitoring condition under this citation establishes process limits related to cullet use and salt cake to sand ratio, which are important for minimizing emissions while producing quality glass. The condition also clarifies how the sulfur retain data, obtained through analysis of the glass, is to be incorporated into the Sulfur Balance Model.

Raw Material Handling (U-BATCH)
Monitoring requirements have been included in the permit for each of the nine raw material handling silo dust collectors (EP BH001), the cullet silos dust collector (EP BH002) and the cullet return system dust collector (EP C0001). Conditions have been established to ensure BACT controls for particulate - at least 90% removal efficiency during the unloading/loading of these silos. Based on historic monitoring and stack test data, each dust collector must be operated with a minimum pressure drop of 1.0 inches of water column. The pressure differential varies by material and throughout the unloading process. A minimum differential of 1" wc ensures that the bags are intact and operating as designed. The permit conditions require that the pressure drop be recorded weekly while operational. This frequency was based on the unloading schedules.

A monitoring condition for particulate emission from the Hi-Vac Industrial Vacuum System (BH003) requires the operation of the associated filter system whenever the vacuum is in use. This system is automatically cleaned when the pressure differential reaches a set point.

Annealing Lehr (U-SCRUB)
The permit specifies a BACT limit of 0.42 lb/hr of SO2 emissions from the annealing lehr and requires that SO2 emissions be controlled by a scrubber to provide 95% removal efficiency. One monitoring condition requires that the pressure drop across the scrubber is maintained between 0.3 and 3.0 "wc and monitored and recorded on a daily basis. Another monitoring condition requires that the ph level of the scrubbing solution must be maintained between 9.0 and 11.0 and monitored and recorded on a daily basis. These

operating parameter limits are based on a combination of the manufacturer's recommendations, operating experience and test data.

Miscellaneous Combustion Sources (U-COMBU)
A condition is included in the permit to ensure that the numerous small combustion sources around the facility are operated as they were designed by the manufacturer. When diesel is used it is limited to a maximum sulfur content of 0.05% by weight. Generally these are off-the-shelf devices are the most efficient available for their purpose at the time of construction and do not lend themselves to modifications or add-on controls. NOx and CO emissions from these miscellaneous small combustion sources are calculated and added into facility wide totals for purposes the NOx limit and CO cap discussed above.

Generators (U-POWER)
Conditions for the two generators include the BACT requirements as they were established in the preconstruction permit. The generators shall be operated with the use of ignition timing retard with a turbo charger and aftercooler. Each generator is limited to 200 hours of operation per year.
Emissions of SO2 and particulate are limited as follows:
SO2: 0.06 lb/mmbtu and 1.16 lb/hr
PM/PM10: 0.04 lb/mmbtu and 0.75 lb/hr

For control of SO2, another condition under this citation limits the generators to burning diesel fuel with a maximum sulfur content of 0.05% by weight.

40 CFR Part 60, Subpart CC Glass Furnaces New Source Performance Standard (NSPS)
40 CFR 60.293
A condition is included to specify that for the purpose of Subpart CC requirements, Guardian's glass furnace is regulated as a glass furnace "with modified process" as defined in the rule.

40 CFR 60.293(b)(1)
The particulate limit for the furnace is unchanged from the original preconstruction permit. The condition under this citations states that particulate emissions from the furnace are limited to 0.5 grams per kilogram of glass produced (1 lb/ton) and 29.2 lb/hr. Annual stack testing to demonstrate compliance with these particulate limits is required in addition to the daily compliance checks using a predictive emissions model (Sulfur Balance Model) described above with the 40 CFR 52.21(j).

40 CFR 60.293(c)
A monitoring condition is included under this citation which specifies an 11% opacity limit for the furnace stack. This limit was established through testing done in November 1998 in accordance with the NSPS requirements. In order to monitor compliance with this limit, Guardian must operate a continuous opacity monitoring system (COMS) and report any exceedances of the 6 minute average limit.

40 CFR 60.296(a)
This condition states the notification requirements in the case that Guardian were to modify their glass melting furnace so that it would no longer be considered a "glass melting furnace with modified-processes" pursuant to section 60.293.

40 CFR 63 Subpart SSSSSS Glass Furnace Area Source MACT
Guardian does not currently manufacture any colored glass or conduct any other processes which are applicable to the Subpart SSSSSS requirements. Therefore, no conditions pertaining to this regulation are included in the permit. If the facility were modified to accommodate an applicable process, the facility would submit an initial notification as required under section 63.11456.

40 CFR 64 Continuous Assurance Monitoring (CAM)

Guardian does not have emission sources subject to CAM requirements at this time. Each of the emission sources which are equipped with control devices (Lehr SO2 scrubber, batch house silo dust collectors, cullet return system ,and the HIVAC system) have uncontrolled emission rate potentials (ERPs) for the controlled contaminant which are well below Title V major source thresholds.

The NOx control technologies used on the float glass furnace (3R, low NOx burners) are not considered control devices pursuant to CAM.

40 CFR 98 Greenhouse Gas Reporting

Guardian is subject to greenhouse gas (GHG) reporting requirements. Specifically, Guardian must report in accordance with 40 CFR 98 Subparts A (general), Subpart C (for emissions attributed to combustion sources) and Subpart N (emissions attributed to raw materials including limestone, dolomite and soda ash).