



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL MODIFICATION  
LICKING COUNTY**

**CERTIFIED MAIL**

Street Address:

50 West Town Street, Suite 700

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:  
Lazarus Gov. Center  
P.O. Box 1049

**Application No: 01-01308**

**Fac ID: 0145000213**

**DATE: 1/30/2007**

G E Quartz Inc  
Bill Daniels  
611 O Neill Drive  
Hebron, OH 43025

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

You are hereby notified that this action of the Director is final and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00 which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission  
309 South Fourth Street, Room 222  
Columbus, OH 43215

Sincerely,

Michael W. Ahern, Manager  
Permit Issuance and Data Management Section  
Division of Air Pollution Control

CC: USEPA

CDO



**Permit To Install  
Terms and Conditions**

**Issue Date: 1/30/2007  
Effective Date: 1/30/2007**

**FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 01-01308**

Application Number: 01-01308  
Facility ID: 0145000213  
Permit Fee: **\$1200**  
Name of Facility: G E Quartz Inc  
Person to Contact: Bill Daniels  
Address: 611 O Neill Drive  
Hebron, OH 43025

Location of proposed air contaminant source(s) [emissions unit(s)]:

**611 O'Neill Drive  
Hebron, Ohio**

Description of proposed emissions unit(s):

**Window grade quartz machines no 1, 2, 3, 4, 5 and 6.**

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described source(s) of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency  


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Laura Powell  
Acting Director

## Part I - GENERAL TERMS AND CONDITIONS

### A. Permit to Install General Terms and Conditions

#### 1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

#### 2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and recordkeeping requirements specified in this permit, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the appropriate Ohio EPA District Office or local air agency. If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted (i.e., postmarked) quarterly by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

#### 3. Records Retention Requirements

Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

#### 4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon

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**PTI Application: 01-01308**  
**Modification Issued: 1/30/2007**

**Facility ID: 014500021**

the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

**5. Scheduled Maintenance/Malfunction Reporting**

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction of any emissions units or any associated air pollution control system(s) shall be reported to the appropriate Ohio EPA District Office or local air agency in accordance with paragraph (B) of OAC rule 3745-15-06. Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s).

**6. Permit Transfers**

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The appropriate Ohio EPA District Office or local air agency must be notified in writing of any transfer of this permit.

**7. Air Pollution Nuisance**

The air contaminants emitted by the emissions units covered by this permit shall not cause a public nuisance, in violation of OAC rule 3745-15-07.

**8. Termination of Permit to Install**

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.

**9. Construction of New Sources(s)**

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The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.

#### **10. Public Disclosure**

The facility is hereby notified that this permit, and all agency records concerning the operation of this permitted source, are subject to public disclosure in accordance with OAC rule 3745-49-03.

#### **11. Applicability**

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

#### **12. Best Available Technology**

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

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**13. Source Operation and Operating Permit Requirements After Completion of Construction**

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

**14. Construction Compliance Certification**

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

**15. Fees**

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable Permit to Install fees within 30 days after the issuance of this Permit to Install.

**B. Permit to Install Summary of Allowable Emissions**

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

**SUMMARY (for informational purposes only)  
 TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS**

<u>Pollutant</u>	<u>Tons Per Year</u>
PM	14.5
NOx	33.6
CO	42.6

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## Part II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

### A. Applicable Emissions Limitations and/or Control Requirements

- The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

#### Operations, Property, and/or Equipment - (P038) - Window Grade Quartz Machine No. 1

Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
OAC rule 3745-31-05(A)(3)	<p>The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1) and 3745-31-05(C).</p> <p>Nitrogen oxides (NO<sub>x</sub>) emissions from this emissions unit shall not exceed 1.28 pounds per hour and 5.6 tons per year.</p> <p>Carbon Monoxide (CO) emissions from this emissions unit shall not exceed 1.62 pounds per hour and 7.10 tons per year.</p> <p>Particulate emissions (PE) for this emissions unit shall not exceed 2.41 tons per year.</p>
OAC rule 3745-17-07(A)	Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
OAC rule 3745-17-11(B)(1)	PE shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II.
OAC rule 3745-23-06(B)	See A.I.2.a below.

## 2. Additional Terms and Conditions

- 2.a** The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.

On February 15, 2005, OAC rule 3745-23-06 was rescinded and therefore no longer a part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-23-06, the requirement to satisfy "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.b** The PE, CO, and NO<sub>x</sub> pounds per hour and tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit. Therefore, it is not necessary to develop additional monitoring, record keeping, and/or reporting requirements to ensure compliance with these emission limitations.

## B. Operational Restrictions

None

## C. Monitoring and/or Record keeping Requirements

1. The permittee shall perform daily checks, using either certified or non-certified visible emissions observers, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving the emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. The color of the emissions;
  - b. Whether the emissions are representative of normal conditions;
  - c. If the emissions are not representative of normal conditions, the cause(s) of the abnormal emissions;

- d. The total duration of any visible emission incident; and
- e. Any corrective actions taken to eliminate the visible emissions.

Note: The presence of any visible particulate emissions may or may not indicate a violation of the particulate mass emission limitation and/or visible emission limitation. If required, compliance with the particulate mass emission limitation and the visible emission limitation shall be determined by performing concurrent mass emission tests and visible emissions observations, using USEPA approved methods and procedures. The results of any required mass emission tests and visible emissions observations shall be used in determining whether or not the presence of any visible particulate emissions is indicative of a possible violation of the particulate mass emission limitation and/or visible emission limitation.

If the daily checks show visible emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

#### **D. Reporting Requirements**

- 1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to Ohio EPA, CDO by January 31 and July 31 of each year and shall cover the previous 6-month period.

#### **E. Testing Requirements**

- 1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
NO<sub>x</sub> emissions for this emissions unit shall not exceed 1.28 pounds per hour.  
  
Applicable Compliance Method:  
This emission limitation was established by multiplying the maximum hourly

**Emissions Unit ID: P038**

MMBtu demand (0.85) by an emission factor of 1.5 lbs NO<sub>x</sub> /MMBtu (derived from emissions tests performed, April 25, 2006 on the Window Grade Quartz Unit at the GE Quartz Highland Road Plant.

If required by the Ohio EPA and/or U.S. EPA, compliance shall be demonstrated through emission testing in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.

- b. Emission Limitation:  
5.6 tons per year of NO<sub>x</sub>

Applicable Compliance Method:

Compliance with the annual emission limitation for NO<sub>x</sub> shall be assumed provided compliance is maintained with the pound per hour emission limitation for NO<sub>x</sub>. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

- c. Emission Limitation:  
CO emissions for this emissions unit shall not exceed 1.62 pounds per hour.

Applicable Compliance Method:

This emission limitation was established by multiplying the maximum hourly MMBtu demand (0.85) by an emission factor of 1.90 lbs CO /MMBtu (derived from emissions tests performed, April 25, 2006 on the Window Grade Quartz Unit at the GE Quartz Highland Road Plant.

- d. Emission Limitation:  
7.1 tons per year of CO.  
Applicable Compliance Method:  
Compliance with the annual emission limitation for CO shall be assumed provided compliance is maintained with the pound per hour emission limitation for CO. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

- e. Emission Limitation:  
Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation as described in Part II, Section C.1.

- f. Emission Limitation:  
PE shall not exceed 0.551 pound per hour.

**GEQ****PTI A**Emissions Unit ID: **P039****Modification Issued: 1/30/2007**

Applicable Compliance Method:

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 - 5.

- g. Emission Limitation:  
PE for this emissions unit shall not exceed 2.41 tons per year.

Applicable Compliance Method:

Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

**F. Miscellaneous Requirements**

None

**Part II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

**Operations, Property, and/or Equipment - (P039) - Window Grade Quartz Machine No. 2****Applicable****Rules/Requirements**

	<b>Applicable Emissions Limitations/Control Measures</b>
OAC rule 3745-31-05(A)(3)	<p>The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1) and 3745-31-05(C).</p> <p>Nitrogen oxides (NOx) emissions from this emissions unit shall not exceed 1.28 pounds per hour and 5.6 tons per year.</p> <p>Carbon Monoxide (CO) emissions from this emissions unit shall not exceed 1.62 pounds per hour and 7.10 tons per year.</p> <p>Particulate emissions (PE) for this emissions unit shall not exceed 2.41 tons per year.</p>
OAC rule 3745-17-07(A)	Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
OAC rule 3745-17-11(B)(1)	PE shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II.
OAC rule 3745-23-06(B)	See A.I.2.a below.

## 2. Additional Terms and Conditions

- 2.a** The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.

On February 15, 2005, OAC rule 3745-23-06 was rescinded and therefore no longer a part of the State regulations. However, that rule revision has not yet been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-23-06, the requirement to satisfy "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.b** The PE, CO, and NOx pounds per hour and tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit. Therefore, it is not necessary to develop additional monitoring, record keeping, and/or reporting requirements to ensure compliance with these emission limitations.

## B. Operational Restrictions

None

**C. Monitoring and/or Record keeping Requirements**

1. The permittee shall perform daily checks, using either certified or non-certified visible emissions observers, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving the emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. The color of the emissions;
  - b. Whether the emissions are representative of normal conditions;
  - c. If the emissions are not representative of normal conditions, the cause(s) of the abnormal emissions;
  - d. The total duration of any visible emission incident; and
  - e. Any corrective actions taken to eliminate the visible emissions.

Note: The presence of any visible particulate emissions may or may not indicate a violation of the particulate mass emission limitation and/or visible emission limitation. If required, compliance with the particulate mass emission limitation and the visible emission limitation shall be determined by performing concurrent mass emission tests and visible emissions observations, using USEPA approved methods and procedures. The results of any required mass emission tests and visible emissions observations shall be used in determining whether or not the presence of any visible particulate emissions is indicative of a possible violation of the particulate mass emission limitation and/or visible emission limitation.

If the daily checks show visible emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

**D. Reporting Requirements**

1. The permittee shall submit semiannual written reports that (a) identify all days during

which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to Ohio EPA, CDO by January 31 and July 31 of each year and shall cover the previous 6-month period.

## **E. Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:

- a. **Emission Limitation:**  
NOx emissions for this emissions unit shall not exceed 1.28 pounds per hour.

**Applicable Compliance Method:**

This emission limitation was established by multiplying the maximum hourly MMBtu demand (0.85) by an emission factor of 1.5 lbs NOx /MMBtu (derived from emissions tests performed, April 25, 2006 on the Window Grade Quartz Unit at the GE Quartz Highland Road Plant.

If required by the Ohio EPA and/or U.S. EPA, compliance shall be demonstrated through emission testing in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.

- b. **Emission Limitation:**  
5.6 tons per year of NOx

**Applicable Compliance Method:**

Compliance with the annual emission limitation for NOx shall be assumed provided compliance is maintained with the pound per hour emission limitation for NOx. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

- c. **Emission Limitation:**  
CO emissions for this emissions unit shall not exceed 1.62 pounds per hour.

**Applicable Compliance Method:**

This emission limitation was established by multiplying the maximum hourly MMBtu demand (0.85) by an emission factor of 1.90 lbs CO /MMBtu (derived from emissions tests performed, April 25, 2006 on the Window Grade Quartz Unit at the GE Quartz Highland Road Plant.

- d. **Emission Limitation:**  
7.1 tons per year of CO.

**Applicable Compliance Method:**

Compliance with the annual emission limitation for CO shall be assumed

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provided compliance is maintained with the pound per hour emission limitation for CO. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

- e. Emission Limitation:  
Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.

Applicable Compliance Method:

The permittee shall demonstrate compliance with this emission limitation as described in Part II, Section C.1.

- f. Emission Limitation:  
PE shall not exceed 0.551 pound per hour.

Applicable Compliance Method:

If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 - 5.

- g. Emission Limitation:  
PE for this emissions unit shall not exceed 2.41 tons per year.

Applicable Compliance Method:

Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

**F. Miscellaneous Requirements**

None

G E Q

PTI A

Modification Issued: 1/30/2007

Emissions Unit ID: P040

**Part II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

**Operations, Property, and/or Equipment - (P040) - Window Grade Quartz Machine No. 3**

<b>Applicable Rules/Requirements</b>	<b>Applicable Emissions Limitations/Control Measures</b>
OAC rule 3745-31-05(A)(3)	<p>The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1) and 3745-31-05(C).</p> <p>Nitrogen oxides (NO<sub>x</sub>) emissions from this emissions unit shall not exceed 1.28 pounds per hour and 5.6 tons per year.</p> <p>Carbon Monoxide (CO) emissions from this emissions unit shall not exceed 1.62 pounds per hour and 7.10 tons per year.</p> <p>Particulate emissions (PE) for this emissions unit shall not exceed 2.41 tons per year.</p>
OAC rule 3745-17-07(A)	Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
OAC rule 3745-17-11(B)(1)	PE shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II.
OAC rule 3745-23-06(B)	See A.I.2.a below.

**2. Additional Terms and Conditions**

- 2.a The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.

On February 15, 2005, OAC rule 3745-23-06 was rescinded and therefore no longer a part of the State regulations. However, that rule revision has not yet

**Emissions Unit ID: P040**

been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-23-06, the requirement to satisfy "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.b** The PE, CO, and NOx pounds per hour and tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit. Therefore, it is not necessary to develop additional monitoring, record keeping, and/or reporting requirements to ensure compliance with these emission limitations.

**B. Operational Restrictions**

None

**C. Monitoring and/or Record keeping Requirements**

1. The permittee shall perform daily checks, using either certified or non-certified visible emissions observers, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving the emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. The color of the emissions;
  - b. Whether the emissions are representative of normal conditions;
  - c. If the emissions are not representative of normal conditions, the cause(s) of the abnormal emissions;
  - d. The total duration of any visible emission incident; and
  - e. Any corrective actions taken to eliminate the visible emissions.

Note: The presence of any visible particulate emissions may or may not indicate a violation of the particulate mass emission limitation and/or visible emission limitation. If required, compliance with the particulate mass emission limitation and the visible emission limitation shall be determined by performing concurrent mass emission tests and visible emissions observations, using USEPA approved methods and procedures. The results of any required mass emission tests and visible emissions observations shall be used in determining whether or not the presence of any visible particulate emissions is indicative of a possible violation of the particulate mass emission limitation

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and/or visible emission limitation.

If the daily checks show visible emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

**D. Reporting Requirements**

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to Ohio EPA, CDO by January 31 and July 31 of each year and shall cover the previous 6-month period.

**E. Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
NOx emissions for this emissions unit shall not exceed 1.28 pounds per hour.  
  
Applicable Compliance Method:  
This emission limitation was established by multiplying the maximum hourly MMBtu demand (0.85) by an emission factor of 1.5 lbs NOx /MMBtu (derived from emissions tests performed, April 25, 2006 on the Window Grade Quartz Unit at the GE Quartz Highland Road Plant.  
If required by the Ohio EPA and/or U.S. EPA, compliance shall be demonstrated through emission testing in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.
  - b. Emission Limitation:  
5.6 tons per year of NOx  
  
Applicable Compliance Method:  
Compliance with the annual emission limitation for NOx shall be assumed provided compliance is maintained with the pound per hour emission limitation

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for NOx. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

- c. Emission Limitation:  
CO emissions for this emissions unit shall not exceed 1.62 pounds per hour.
- Applicable Compliance Method:  
This emission limitation was established by multiplying the maximum hourly MMBtu demand (0.85) by an emission factor of 1.90 lbs CO /MMBtu (derived from emissions tests performed, April 25, 2006 on the Window Grade Quartz Unit at the GE Quartz Highland Road Plant.
- d. Emission Limitation:  
7.1 tons per year of CO.
- Applicable Compliance Method:  
Compliance with the annual emission limitation for CO shall be assumed provided compliance is maintained with the pound per hour emission limitation for CO. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.
- e. Emission Limitation:  
Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
- Applicable Compliance Method:  
The permittee shall demonstrate compliance with this emission limitation as described in Part II, Section C.1.
- f. Emission Limitation:  
PE shall not exceed 0.551 pound per hour.
- Applicable Compliance Method:  
If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 - 5.
- g. Emission Limitation:  
PE for this emissions unit shall not exceed 2.41 tons per year.
- Applicable Compliance Method:  
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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**F. Miscellaneous Requirements**

None

**Part II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

**Operations, Property, and/or Equipment - (P041) - Window Grade Quartz Machine No. 4**

<b>Applicable Rules/Requirements</b>	<b>Applicable Emissions Limitations/Control Measures</b>
OAC rule 3745-31-05(A)(3)	<p>The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1) and 3745-31-05(C).</p> <p>Nitrogen oxides (NO<sub>x</sub>) emissions from this emissions unit shall not exceed 1.28 pounds per hour and 5.6 tons per year.</p> <p>Carbon Monoxide (CO) emissions from this emissions unit shall not exceed 1.62 pounds per hour and 7.10 tons per year.</p> <p>Particulate emissions (PE) for this emissions unit shall not exceed 2.41 tons per year.</p>
OAC rule 3745-17-07(A)	Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
OAC rule 3745-17-11(B)(1)	PE shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II.
OAC rule 3745-23-06(B)	See A.I.2.a below.

**2. Additional Terms and Conditions**

- 2.a The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.

On February 15, 2005, OAC rule 3745-23-06 was rescinded and therefore no longer a part of the State regulations. However, that rule revision has not yet

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been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-23-06, the requirement to satisfy "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.b** The PE, CO, and NO<sub>x</sub> pounds per hour and tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit. Therefore, it is not necessary to develop additional monitoring, record keeping, and/or reporting requirements to ensure compliance with these emission limitations.

**B. Operational Restrictions**

None

**C. Monitoring and/or Record keeping Requirements**

1. The permittee shall perform daily checks, using either certified or non-certified visible emissions observers, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving the emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. The color of the emissions;
  - b. Whether the emissions are representative of normal conditions;
  - c. If the emissions are not representative of normal conditions, the cause(s) of the abnormal emissions;
  - d. The total duration of any visible emission incident; and
  - e. Any corrective actions taken to eliminate the visible emissions.

Note: The presence of any visible particulate emissions may or may not indicate a violation of the particulate mass emission limitation and/or visible emission limitation. If required, compliance with the particulate mass emission limitation and the visible emission limitation shall be determined by performing concurrent mass emission tests and visible emissions observations, using USEPA approved methods and procedures. The results of any required mass emission tests and visible emissions observations shall be used in determining whether or not the presence of any visible particulate emissions is indicative of a possible violation of the particulate mass emission limitation

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and/or visible emission limitation.

If the daily checks show visible emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

**D. Reporting Requirements**

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to Ohio EPA, CDO by January 31 and July 31 of each year and shall cover the previous 6-month period.

**E. Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
NOx emissions for this emissions unit shall not exceed 1.28 pounds per hour.  
  
Applicable Compliance Method:  
This emission limitation was established by multiplying the maximum hourly MMBtu demand (0.85) by an emission factor of 1.5 lbs NOx /MMBtu (derived from emissions tests performed, April 25, 2006 on the Window Grade Quartz Unit at the GE Quartz Highland Road Plant.  
If required by the Ohio EPA and/or U.S. EPA, compliance shall be demonstrated through emission testing in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.
  - b. Emission Limitation:  
5.6 tons per year of NOx  
  
Applicable Compliance Method:  
Compliance with the annual emission limitation for NOx shall be assumed provided compliance is maintained with the pound per hour emission limitation

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for NOx. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

- c. Emission Limitation:  
CO emissions for this emissions unit shall not exceed 1.62 pounds per hour.
- Applicable Compliance Method:  
This emission limitation was established by multiplying the maximum hourly MMBtu demand (0.85) by an emission factor of 1.90 lbs CO /MMBtu (derived from emissions tests performed, April 25, 2006 on the Window Grade Quartz Unit at the GE Quartz Highland Road Plant.
- d. Emission Limitation:  
7.1 tons per year of CO.
- Applicable Compliance Method:  
Compliance with the annual emission limitation for CO shall be assumed provided compliance is maintained with the pound per hour emission limitation for CO. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.
- e. Emission Limitation:  
Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
- Applicable Compliance Method:  
The permittee shall demonstrate compliance with this emission limitation as described in Part II, Section C.1.
- f. Emission Limitation:  
PE shall not exceed 0.551 pound per hour.
- Applicable Compliance Method:  
If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 - 5.
- g. Emission Limitation:  
PE for this emissions unit shall not exceed 2.41 tons per year.
- Applicable Compliance Method:  
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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**F. Miscellaneous Requirements**

None

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Emissions Unit ID: P042

**Part II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

**Operations, Property, and/or Equipment - (P042) - Window Grade Quartz Machine No. 5**

<b>Applicable Rules/Requirements</b>	<b>Applicable Emissions Limitations/Control Measures</b>
OAC rule 3745-31-05(A)(3)	<p>The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1) and 3745-31-05(C).</p> <p>Nitrogen oxides (NO<sub>x</sub>) emissions from this emissions unit shall not exceed 1.28 pounds per hour and 5.6 tons per year.</p> <p>Carbon Monoxide (CO) emissions from this emissions unit shall not exceed 1.62 pounds per hour and 7.10 tons per year.</p> <p>Particulate emissions (PE) for this emissions unit shall not exceed 2.41 tons per year.</p>
OAC rule 3745-17-07(A)	Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
OAC rule 3745-17-11(B)(1)	PE shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II.
OAC rule 3745-23-06(B)	See A.I.2.a below.

**2. Additional Terms and Conditions**

- 2.a The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.

On February 15, 2005, OAC rule 3745-23-06 was rescinded and therefore no longer a part of the State regulations. However, that rule revision has not yet

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been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-23-06, the requirement to satisfy "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.b** The PE, CO, and NO<sub>x</sub> pounds per hour and tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit. Therefore, it is not necessary to develop additional monitoring, record keeping, and/or reporting requirements to ensure compliance with these emission limitations.

**B. Operational Restrictions**

None

**C. Monitoring and/or Record keeping Requirements**

1. The permittee shall perform daily checks, using either certified or non-certified visible emissions observers, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving the emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. The color of the emissions;
  - b. Whether the emissions are representative of normal conditions;
  - c. If the emissions are not representative of normal conditions, the cause(s) of the abnormal emissions;
  - d. The total duration of any visible emission incident; and
  - e. Any corrective actions taken to eliminate the visible emissions.

Note: The presence of any visible particulate emissions may or may not indicate a violation of the particulate mass emission limitation and/or visible emission limitation. If required, compliance with the particulate mass emission limitation and the visible emission limitation shall be determined by performing concurrent mass emission tests and visible emissions observations, using USEPA approved methods and procedures. The results of any required mass emission tests and visible emissions observations shall be used in determining whether or not the presence of any visible particulate emissions is indicative of a possible violation of the particulate mass emission limitation

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and/or visible emission limitation.

If the daily checks show visible emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

**D. Reporting Requirements**

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to Ohio EPA, CDO by January 31 and July 31 of each year and shall cover the previous 6-month period.

**E. Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
NOx emissions for this emissions unit shall not exceed 1.28 pounds per hour.  
  
Applicable Compliance Method:  
This emission limitation was established by multiplying the maximum hourly MMBtu demand (0.85) by an emission factor of 1.5 lbs NOx /MMBtu (derived from emissions tests performed, April 25, 2006 on the Window Grade Quartz Unit at the GE Quartz Highland Road Plant.  
If required by the Ohio EPA and/or U.S. EPA, compliance shall be demonstrated through emission testing in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.
  - b. Emission Limitation:  
5.6 tons per year of NOx  
  
Applicable Compliance Method:  
Compliance with the annual emission limitation for NOx shall be assumed provided compliance is maintained with the pound per hour emission limitation

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for NOx. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

- c. Emission Limitation:  
CO emissions for this emissions unit shall not exceed 1.62 pounds per hour.
- Applicable Compliance Method:  
This emission limitation was established by multiplying the maximum hourly MMBtu demand (0.85) by an emission factor of 1.90 lbs CO /MMBtu (derived from emissions tests performed, April 25, 2006 on the Window Grade Quartz Unit at the GE Quartz Highland Road Plant.
- d. Emission Limitation:  
7.1 tons per year of CO.
- Applicable Compliance Method:  
Compliance with the annual emission limitation for CO shall be assumed provided compliance is maintained with the pound per hour emission limitation for CO. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.
- e. Emission Limitation:  
Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
- Applicable Compliance Method:  
The permittee shall demonstrate compliance with this emission limitation as described in Part II, Section C.1.
- f. Emission Limitation:  
PE shall not exceed 0.551 pound per hour.
- Applicable Compliance Method:  
If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 - 5.
- g. Emission Limitation:  
PE for this emissions unit shall not exceed 2.41 tons per year.
- Applicable Compliance Method:  
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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**F. Miscellaneous Requirements**

None

**Part II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)****A. Applicable Emissions Limitations and/or Control Requirements**

1. The specific operations(s), property, and/or equipment which constitute this emissions unit are listed in the following table along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures. Emissions from this unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

**Operations, Property, and/or Equipment - (P043) - Window Grade Quartz Machine No. 6**

<b>Applicable Rules/Requirements</b>	<b>Applicable Emissions Limitations/Control Measures</b>
OAC rule 3745-31-05(A)(3)	<p>The requirements of this rule also include compliance with the requirements of OAC rules 3745-17-07(A), 3745-17-11(B)(1) and 3745-31-05(C).</p> <p>Nitrogen oxides (NO<sub>x</sub>) emissions from this emissions unit shall not exceed 1.28 pounds per hour and 5.6 tons per year.</p> <p>Carbon Monoxide (CO) emissions from this emissions unit shall not exceed 1.62 pounds per hour and 7.10 tons per year.</p> <p>Particulate emissions (PE) for this emissions unit shall not exceed 2.41 tons per year.</p>
OAC rule 3745-17-07(A)	Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
OAC rule 3745-17-11(B)(1)	PE shall not exceed 0.551 pound per hour based on Table I which is more stringent than the allowable PE rate from Figure II.
OAC rule 3745-23-06(B)	See A.I.2.a below.

**2. Additional Terms and Conditions**

- 2.a The design of the emissions unit and the technology associated with the current operating practices will satisfy the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06.

On February 15, 2005, OAC rule 3745-23-06 was rescinded and therefore no longer a part of the State regulations. However, that rule revision has not yet

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been submitted to the U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-23-06, the requirement to satisfy "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.b** The PE, CO, and NO<sub>x</sub> pounds per hour and tons per year emission limitations for this emissions unit were established to reflect the potentials to emit for this emissions unit. Therefore, it is not necessary to develop additional monitoring, record keeping, and/or reporting requirements to ensure compliance with these emission limitations.

**B. Operational Restrictions**

None

**C. Monitoring and/or Record keeping Requirements**

1. The permittee shall perform daily checks, using either certified or non-certified visible emissions observers, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving the emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:
  - a. The color of the emissions;
  - b. Whether the emissions are representative of normal conditions;
  - c. If the emissions are not representative of normal conditions, the cause(s) of the abnormal emissions;
  - d. The total duration of any visible emission incident; and
  - e. Any corrective actions taken to eliminate the visible emissions.

Note: The presence of any visible particulate emissions may or may not indicate a violation of the particulate mass emission limitation and/or visible emission limitation. If required, compliance with the particulate mass emission limitation and the visible emission limitation shall be determined by performing concurrent mass emission tests and visible emissions observations, using USEPA approved methods and procedures. The results of any required mass emission tests and visible emissions observations shall be used in determining whether or not the presence of any visible particulate emissions is indicative of a possible violation of the particulate mass emission limitation

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and/or visible emission limitation.

If the daily checks show visible emissions that are representative of normal operation for 30 consecutive operating days, the required frequency of visible emissions checks may be reduced to weekly (once per week, when the emissions unit is in operation). If a subsequent check indicates abnormal visible emissions, the frequency of emissions checks shall revert to daily until such time as there are 30 consecutive operating days of normal visible emissions.

**D. Reporting Requirements**

1. The permittee shall submit semiannual written reports that (a) identify all days during which any visible particulate emissions were observed from the stack serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to Ohio EPA, CDO by January 31 and July 31 of each year and shall cover the previous 6-month period.

**E. Testing Requirements**

1. Compliance with the emission limitations in Section A.I.1 of these terms and conditions shall be determined in accordance with the following methods:
  - a. Emission Limitation:  
NOx emissions for this emissions unit shall not exceed 1.28 pounds per hour.  
  
Applicable Compliance Method:  
This emission limitation was established by multiplying the maximum hourly MMBtu demand (0.85) by an emission factor of 1.5 lbs NOx /MMBtu (derived from emissions tests performed, April 25, 2006 on the Window Grade Quartz Unit at the GE Quartz Highland Road Plant.  
If required by the Ohio EPA and/or U.S. EPA, compliance shall be demonstrated through emission testing in accordance with 40 CFR Part 60, Appendix A, Methods 1-4 and 7E.
  - b. Emission Limitation:  
5.6 tons per year of NOx  
  
Applicable Compliance Method:  
Compliance with the annual emission limitation for NOx shall be assumed provided compliance is maintained with the pound per hour emission limitation

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for NOx. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

- c. Emission Limitation:  
CO emissions for this emissions unit shall not exceed 1.62 pounds per hour.
- Applicable Compliance Method:  
This emission limitation was established by multiplying the maximum hourly MMBtu demand (0.85) by an emission factor of 1.90 lbs CO /MMBtu (derived from emissions tests performed, April 25, 2006 on the Window Grade Quartz Unit at the GE Quartz Highland Road Plant.
- d. Emission Limitation:  
7.1 tons per year of CO.
- Applicable Compliance Method:  
Compliance with the annual emission limitation for CO shall be assumed provided compliance is maintained with the pound per hour emission limitation for CO. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.
- e. Emission Limitation:  
Visible PE shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
- Applicable Compliance Method:  
The permittee shall demonstrate compliance with this emission limitation as described in Part II, Section C.1.
- f. Emission Limitation:  
PE shall not exceed 0.551 pound per hour.
- Applicable Compliance Method:  
If required by the Ohio EPA and/or U.S. EPA, the permittee shall demonstrate compliance with this emission limitation through emission testing in accordance with 40 CFR Part 60, Appendix A, Methods 1 - 5.
- g. Emission Limitation:  
PE for this emissions unit shall not exceed 2.41 tons per year.
- Applicable Compliance Method:  
Compliance with the annual emission limitation for PE shall be assumed provided compliance is maintained with the pound per hour emission limitation for PE. The annual emission limitation was established by multiplying the hourly limitation by 8760 hours per year and dividing by 2000 pounds per ton.

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**F. Miscellaneous Requirements**

None