John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

2/20/2013

Certified Mail

No	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
No	MACT/GACT
Yes	NSPS
No	NESHAPS
No	NETTING
No	MAJOR NON-ATTAINMENT
No	MODELING SUBMITTED
No	MAJOR GHG
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Timothy Haniford
Chemtrade Refinery Solutions Limited Partnership
!400 Otter Creek
Oregon, OH 43616

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0448020014
Permit Number: P0109874
Permit Type: Administrative Modification
County: Lucas

Dear Permit Holder:

Enclosed please find a final Ohio Environmental Protection Agency (EPA)Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully. Because this permit contains conditions and restrictions, please read it very carefully. In this letter you will find the information on the following topics:

- **How to appeal this permit**
- **How to save money, reduce pollution and reduce energy consumption**
- **How to give us feedback on your permitting experience**
- **How to get an electronic copy of your permit**

How to appeal this permit

The issuance of this PTI is a final action of the Director 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, made payable to “Ohio Treasurer Josh Mandel," 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
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. Additionally, all or a portion of the capital expenditures related to installing air pollution control equipment under this permit may be eligible for financing and State tax exemptions through the Ohio Air Quality Development Authority (OAQDA) under Ohio Revised Code Section 3706. For more information, see the OAQDA website: www.ohioairquality.org/clean_air

How to give us feedback on your permitting experience

Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

How to get an electronic copy of your permit

This permit can be accessed electronically via the eBusiness Center: Air Services in Microsoft Word format or in Adobe PDF on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab.

If you have any questions, please contact Toledo Department of Environmental Services at (419)936-3015 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

Michael W. Ahern

Michael W. Ahern, Manager
Permit Issuance and Data Management Section, DAPC

Cc: U.S. EPA
TDES; Michigan; Indiana; Canada

FINAL

Division of Air Pollution Control
Permit-to-Install
for
Chemtrade Refinery Solutions Limited Partnership

Facility ID:	0448020014
Permit Number:	P0109874
Permit Type:	Administrative Modification
Issued:	2/20/2013
Effective:	2/20/2013

Division of Air Pollution Control
Permit-to-Install
for
Chemtrade Refinery Solutions Limited Partnership

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Authorization

Facility ID:	0448020014
Facility Description:	sulfuric acid plant
Application Number(s):	M0001570
Permit Number:	P0109874
Permit Description:	Administrative modification to PTI P0107428 to correct NOx emission limits for P001 and P002.
Permit Type:	Administrative Modification
Permit Fee:	$2,250.00
Issue Date:	2/20/2013
Effective Date:	2/20/2013

This document constitutes issuance to:

Chemtrade Refinery Solutions Limited Partnership
1400 Otter Creek Road
Oregon, OH 43616-1232

of a Permit-to-Install for the emissions unit(s) identified on the following page.

Ohio Environmental Protection Agency (EPA) District Office or local air agency responsible for processing and administering your permit:

Toledo Department of Environmental Services
348 South Erie Street
Toledo, OH 43604
(419)936-3015

The above named entity is hereby granted a Permit-to-Install for the emissions unit(s) listed in this section pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the emissions unit(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 and specifications, the above described emissions unit(s) of pollutants will be granted the necessary permits to operate (air) or NPDES permits as applicable.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally
Director

Authorization (continued)

Permit Number: P0109874
Permit Description: Administrative modification to PTI P0107428 to correct NOx emission limits for P001 and P002.

Permits for the following Emissions Unit(s) or groups of Emissions Units are in this document as indicated below:

Emissions Unit ID:	**P001**
Company Equipment ID:	A-Plant
Superseded Permit Number:	P0107428
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P002**
Company Equipment ID:	B-Plant
Superseded Permit Number:	P0107428
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:

(1) Standard Term and Condition A.2.a), Severability Clause

(2) Standard Term and Condition A.3.c) through A. 3.e)General Requirements

(3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements

(4) Standard Term and Condition A.9., Reporting Requirements

(5) Standard Term and Condition A.10., Applicability

(6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install

(7) Standard Term and Condition A.14., Public Disclosure

(8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

(9) Standard Term and Condition A.16., Fees

(10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

a) The permittee must comply with all terms and conditions of this permit. Any noncompliance with the federally enforceable terms and conditions of this permit constitutes a violation of the Act, and is grounds for enforcement action or for permit revocation, revocation and re-issuance, or modification.

b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.

c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.

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

e) 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 or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

4. Monitoring and Related Record Keeping and Reporting Requirements

a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:

(1) The date, place (as defined in the permit), and time of sampling or measurements.

(2) The date(s) analyses were performed.

(3) The company or entity that performed the analyses.

(4) The analytical techniques or methods used.

(5) The results of such analyses.

(6) The operating conditions existing at the time of sampling or measurement.

b) 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.

c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:

(1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Toledo Department of Environmental Services.

(2) Quarterly written reports of (i) any deviations from federally enforceable emissionlimitations, operationalrestrictions, andcontroldeviceoperatingparameterlimitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Toledo Department of Environmental Services. The written 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. See A.15. below if no deviations occurred during the quarter.

(3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, andreportingrequirements contained in this permit shall be submitted (i.e., postmarked) to the Toledo Department of Environmental Services every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

(4) This permit is for an emissions unit located at a Title V facility. Each written report shall be signed by a responsible official certifying that, based on information and belief formed after reasonable inquiry, the statements and information in the report are true, accurate, and complete.

d) The permittee shall report actual emissions pursuant to OAC Chapter 3745-78 for the purpose of collecting Air Pollution Control Fees.

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, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Toledo Department of Environmental Services in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to 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 emission unit(s) that is (are) served by such control system(s).

6. Compliance Requirements

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

b) Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

c) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:

(1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.

(2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.

(3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.

(4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.

d) The permittee shall submit progress reports to the Toledo Department of Environmental Services concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:

(1) Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.

(2) An explanation of why any dates in any schedule of compliance were not or will not be met, and any preventive or corrective measures adopted.

7. Best Available Technology

As specified in OAC Rule 3745-31-05, new sources that must employ Best Available Technology (BAT) shall comply with the Applicable Emission Limitations/Control Measures identified as BAT for each subject emissions unit.

8. 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.

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Toledo Department of Environmental Services.

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 state-only required 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 Toledo Department of Environmental Services. 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.)

10. Applicability

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s).

11. Construction of New Sources(s) and Authorization to Install

a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. 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 this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit 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.

b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. 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.

c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as “permanently shut down” in Ohio EPA’s “Air Services” along with the date the emissions unit(s) was permanently

removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

d) The provisions of this permit shall cease to be enforceable for each affected emissions unit after the date on which an emissions unit is permanently shut down (i.e., emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31). All records relating to any permanently shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law. All reports required by this permit must be submitted for any period an affected emissions unit operated prior to permanent shut down. At a minimum, the permit requirements must be evaluated as part of the reporting requirements identified in this permit covering the last period the emissions unit operated.

No emissions unit certified by the authorized official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31.

e) The permittee shall comply with any residual requirements related to this permit, such as the requirement to submit a deviation report, air fee emission report, or other any reporting required by this permit for the period the operating provisions of this permit were enforceable, or as required by regulation or law. All reports shall be submitted in a form and manner prescribed by the Director. All records relating to this permit must be maintained in accordance with law.

12. Permit-To-Operate Application

The permittee is required to apply for a Title V permit pursuant to OAC Chapter 3745-77. The permittee shall submit a complete Title V permit application or a complete Title V permit modification application within twelve (12) months after commencing operation of the emissions units covered by this permit. However, if the proposed new or modified source(s) would be prohibited by the terms and conditions of an existing Title V permit, a Title V permit modification must be obtained before the operation of such new or modified source(s) pursuant to OAC rule 3745-77-04(D) and OAC rule 3745-77-08(C)(3)(d).

13. Construction Compliance Certification

The applicant shall identify the following dates in the online facility profile for each new emissions unit identified in this permit.

a) Completion of initial installation date shall be enteredupon completion of construction and prior to start-up.

b) Commence operation after installation or latest modification date shall be entered within 90 days after commencing operation of the applicable emissions unit.

14. 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.

15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

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 quarterly (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

16. 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 any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

17. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The new owner must update and submit the ownership information via the “Owner/Contact Change” functionality in Air Services once the transfer is legally completed.The change must be submitted through Air Services within thirty days of the ownership transfer date.

18. Risk Management Plans

If the permittee is required to develop and register a risk management plan pursuant to section 112(r) of the Clean Air Act, as amended, 42 U.S.C. 7401 et seq. ("Act"), the permittee shall comply with the requirement to register such a plan.

19. Title IV Provisions

If the permittee is subject to the requirements of 40 CFR Part 72 concerning acid rain, the permittee shall ensure that any affected emissions unit complies with those requirements. Emissions exceeding any allowances that are lawfully held under Title IV of the Act, or any regulations adopted thereunder, are prohibited.

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:

   a) None.

2. The following emissions units contained in this permit are subject to 40 CFR Part 60 Subpart H: P001 and P002. The complete NSPS and MACT requirements, including the MACT General Provisions may be accessed via the internet from the electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the appropriate Ohio EPA district or local air agency.

C. Emissions Unit Terms and Conditions

1. P001, A-Plant

Operations, Property and/or Equipment Description:

Sulfuric Acid regeneration : A Plant with dual absorption and oxygen enrichment controlled by a wet scrubber

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Emissions of carbon monoxide (CO) from this emissions unit shall not exceed 7.41 pounds per hour and 32.46 tons per year. Emissions of nitrogen oxides (NO_x) from this emissions unit shall not exceed 5.90 pounds per hour and 25.85 tons per year Emissions of sulfur dioxide (SO_2) from this emissions unit shall not exceed a rolling, 3-hour average of 90.5 pounds per hour and 271.8 tons as a rolling, 365-day summation. Emissions of sulfuric acid mist from this emissions unit shall not exceed 3.88 pounds per hour and 17.0 tons per year. See b)(2)a. and b)(2)b.
b.	OAC rule 3745-31-05(D)	Pursuant to the provisions established in Consent Decree case 3:09-cv-00067-JGC filed on 04/02/2009 and as amended 02/10/2010, Sections V.A.18. and V.C.23., the emissions from this emissions unit shall not exceed:

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		a rolling, 3-hour average of 3.5 pounds of SO_2 per ton of 100% sulfuric acid produced (short-term limit); a rolling, 365-day average of 2.40 pounds of SO_2 per ton of 100% sulfuric acid produced (long-term limit); and, 0.15 pound of acid mist, expressed as H_2SO_4, per ton of 100% sulfuric acid produced. See b)(2)c. through b)(2)f.
c.	OAC rule 3745-17-07(A)(1)	See b)(2)g.
d.	OAC rule 3745-17-11(B)(1)	See b)(2)g. and b)(2)h.
e.	OAC rule 3745-18-54(X)	See b)(2)g.
f.	40 CFR Part 60, Subpart A (60.1 through 60.19)	40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are applicable to this emissions unit. See b)(2)i. through b)(2)l.
g.	40 CFR Part 60, Subpart H (40 CFR 60.80-85) [In accordance with 40 CFR 60.82(a) and 60.83(a), this emissions unit is a sulfuric acid production facility subject to the emission limitation/control measures specified in this section.]	See b)(2)m.

(2) Additional Terms and Conditions

a. The hourly and annual emission limitations for CO and NO_x were established for PTI purposes to reflect the potential to emit for this emissions unit while combusting natural gas. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with these limitations.

b. The hourly and annual emission limitations for SO_2 and sulfuric acid mist were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with these limitations.

c. Pursuant to the provisions established in the federal consent decree, Section III.8., the following definitions shall apply to the terms and conditions of this emissions unit:

i. "Long-term limit" shall mean a rolling, 365-day average SO_2 emissions limit expressed as pounds of SO_2 emitted per ton of 100% H_2SO_4 produced. Compliance with the long-term limit shall be calculated in accordance the requirements of this permit. The long-term limit shall apply at all times, including during periods of startup, shutdown, or malfunction.

ii. "Short-term limit" shall mean a rolling, 3-hour average SO_2 emissions limit expressed as pounds of SO_2 emitted per ton of 100% H_2SO_4 produced. Compliance with the short-term limit shall be calculated in accordance the requirements of this permit. The short-term limit does not apply during periods of startup, shutdown, or malfunction.

iii. "Startup" means the period of time beginning when the feed of sulfur-bearing compounds to the furnace commences and lasting for no more than 24 hours.

iv. "Sulfur-bearing compounds" means elemental sulfur, alkylation or other spent sulfuric acids, hydrogen sulfide, organic sulfides, mercaptans, or acid sludge, but they exclude hydrocarbon and conventional fossil fuels such as natural gas or fuel oil.

v. "Shutdown" means the cessation of operation of a sulfuric acid plant for any reason. Shutdown begins at the time the feed of sulfur-bearing compounds to the furnace ceases and ends at the earlier of three hours later or when the flow rate on the stack volumetric flow rate analyzer falls below 10% span.

vi. "Malfunction" means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused by poor maintenance or careless operation are not malfunctions.

d. Pursuant to the provisions established in the federal consent decree, Amended Appendix G, page 6 - Analyzer Specifications, dated February 10, 2010:

i. the permittee shall maintain and operate a volumetric flow rate analyzer which meets the applicable requirements of 40 CFR Part 60, Appendix B, Performance specification 6 and the Quality Assurance and Quality Control Procedures in 40 CFR Part 60, Appendix F, Procedure 1;

ii. the permittee shall maintain and operate a converter inlet SO_2 analyzer which meets the applicable requirements of Performance Specification 2 of 40 CFR Part 60, Appendix B and the Quality Assurance and Quality Control Procedures in 40 CFR Part 60, Appendix F, Procedure 1; and

iii. the permittee shall maintain and operate a discharge stack SO_2 analyzer which meets the applicable requirements of 40 CFR Part 60.11, 60.13, Performance Specification 2 of 40 CFR Part 60, Appendix B, and the Quality Assurance and Quality Control Procedures in 40 CFR Part 60, Appendix F, Procedure 1.

e. Pursuant to the provisions established in the federal consent decree, Section VI.48., SO_2 and acid mist emissions limitations of section b)(1)e. shall not be relaxed.

f. Pursuant to 40 CFR Part 60, Subpart H, the following provisions will be an approved alternate as established in the February 10, 2010 amendment to Appendix G of the federal consent decree, "Analyzer Specifications" and "Compliance with the NSPS 40 CFR Part 60, Subpart H":

i. The optimum location to obtain SO_2 readings may differ from the requirements of Performance Specification 2, Section 8.1.

ii. The permittee shall conduct quarterly cylinder gas audits on the converter SO2 analyzer in lieu of the annual RATA described in Appendix F, Section 5.1.1.

iii. The required 40 CFR 60.84(a) stack SO_2 analyzer span value shall become a dual range of 0 to 500 ppm (normal) and 0 to 3,600 ppm (during startup, shutdown and/or malfunction).

iv. The required 40 CFR 60.84(b) procedure for converting monitoring data shall become the procedures stated in this permit for calculating compliance the NSPS 3-hour average emissions limitation

g. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

h. All particulate emissions from this emissions unit are emitted in the form of sulfuric acid mist.

i. In compliance with the requirements of 40 CFR 60.2: the continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

j. In compliance with the requirements of 40 CFR 60.8(c): emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction shall not be considered a violation of the applicable emission limit.

k. In compliance with the requirements of 40 CFR 60.11(d): at all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate any affected emissions unit including associated air pollution control equipment in a manner consistent with good air

pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used shall be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

l. In compliance with the requirements of 40 CFR 60.13 and 40 CFR Part 60, Appendix F: the permittee shall maintain a written quality assurance/quality control plan for the continuous SO_2 monitoring system, designed to ensure continuous valid and representative readings of SO_2 emissions from the continuous monitor(s), in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous SO_2 monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

m. In compliance with the requirements of 40 CFR 60.82 and 60.83: at all times except for periods of startup, shutdown, and malfunction, the permittee shall not cause to be discharged into the atmosphere any gases which:

i. contain sulfur dioxide in excess of 2 kilograms per metric ton of acid produced (4 pounds per ton), the production being expressed as 100 percent H_2SO_4;

ii. contain acid mist, expressed as H_2SO_4, in excess of 0.075 kilograms per metric ton of acid produced (0.15 pound per ton), the production being expressed as 100 percent H_2SO_4; and

iii. exhibit 10 percent opacity or greater.

c) Operational Restrictions

(1) The permittee shall burn only natural gas as fuel in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

(2) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this 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 operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to eliminate the visible emissions.

(3) In compliance with the requirements of 40 CFR 60.13 and 40 CFR Part 60, Appendix B: the permittee shall maintain on-site, the document of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous SO_2 monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2. The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

(4) Pursuant to the provisions established in the federal consent decree in the February 10, 2010 amendment to Appendix G, "Emissions Calculations", for purposes of compliance with OAC rule 3745-31-05(D), permittee shall comply with the following requirements:

a. SO_2 emissions will be monitored using an SO_2 analyzer at the converter inlet, an SO_2 analyzer at the exit stack, and a stack flow rate analyzer. Except for any analyzer malfunctions, associated repairs, and required quality assurance or control activities (including calibration checks and required zero and span adjustments), the permittee will conduct monitoring during all operating periods and during shutdown. The combination of SO_2 emission monitors and flow monitor will be identified in this permit as the SO_2 continuous emission monitoring system (CEMS).

b. Once every five (5) minutes, the analyzers will measure the stack SO_2 concentration (fraction, dry basis), the converter inlet SO_2 concentration (fraction, dry basis) and the volumetric flow rate (dry standard cubic feet per minute).

c. For purposes of calculating a rolling, 3-hour average the system will maintain an array of the 36 most recent measurements for each of the three monitored parameters. Every five minutes, the system will add the most recent readings to the array and exclude the oldest readings. The rolling, 3-hour average pound of SO_2 per ton of 100% H_2SO_4 emissions rate shall be calculated as follows:

$$E_{3\text{-hr ave}} = (1306.33 \text{ lb } SO_2/\text{ton acid}) \sum_{i=1}^{36} [(Q_{\text{stack } i})(B_i)(1-1.5A_i) \div (A_i - B_i)]$$

where:

A_i = converter inlet SO_2 concentration as a decimal fraction on a dry basis at measurement "i"

B_i = stack inlet concentration as a decimal fraction on a dry basis at measurement "i"

$E_{3\text{-hr ave}}$ = the 3-hour average SO_2 emission rate in units of pounds of SO_2 per ton of 100% H_2SO_4

Q_{stacki} = volumetric flow rate of stack gas in units of dry standard cubic feet per minute (dscfm) at measurement "i"

d. For purposes of calculating a rolling, 365-day average the system will maintain an array of all of the measurements for each of the three monitored parameters for 365 days. Every day, the system will add the readings from that day to the array and exclude the readings from the oldest day. The rolling, 365-day average pound of SO_2 per ton of 100% H_2SO_4 emissions rate shall be calculated as follows:

$$E_{365\text{-day ave}} = (1306.33 \text{ lb } SO_2/\text{ton}) \sum_{j=1}^{n} [(\text{Qstack j})(\text{Bj})(1 - 1.5\text{Aj}) \div (\text{Aj} - \text{Bj})]$$

where:

Aj = converter inlet SO_2 concentration as a decimal fraction on a dry basis at measurement "j"

Bj = stack inlet concentration as a decimal fraction on a dry basis at measurement "j"

$E_{365\text{-day ave}}$ = the rolling, 365-day average SO_2 emission rate in units of pounds of SO_2 per ton of 100% H_2SO_4

n = the number of measurements taken at 5-minute intervals over the 365 day period.

Qstack j = volumetric flow rate of stack gas in units of dry standard cubic feet per minute (dscfm) at measurement "j"

e. During routine calibration checks and adjustments of any of the analyzers, the pre-calibration will be used to fill in any analyzer gaps that occur pending completion of the calibration checks and adjustments.

f. If any one or more than one analyzer is/are not operating for a period of 24 hours or greater, data gaps in the array involving the non-operational analyzer(s) will be filled in as follows:

i. Exit stack gas will be sampled and analyzed for SO_2 at least once per hour, during all operating periods. Sampling will be conducted by Reich test or other established method (e.g. portable analyzer). The most recent hourly reading will be substituted for the twelve (12) five-minute readings that would otherwise have been taken if the analyzer had been operating normally.

ii. Converter inlet gas either will be sampled and analyzed for SO_2 using a Reich test or other established method, or the concentration will be estimated using engineering judgment, at least once every four (4) hours during all operating periods. The most recent four-hour measurement/estimate will be substituted for the 48 five-minute readings that would otherwise have been taken if the system had been operating normally.

iii. Stack volumetric flow rate will be estimated using engineering judgment.

g. If any one or more than one analyzer is/are not operating for a period of less than 24 hours, one of the following must be done: (i) the requirements set forth for a 24-hour or greater period of downtime must be used to fill in the data gaps; or (ii) the data recorded for the five minute reading immediately preceding the affected analyzer's(s') stoppage must be used to fill in the data gap.

h. In order to secure data on a "dry basis", the permittee may either:

i. directly measure the moisture content using a moisture analyzer,

ii. assume the moisture content is the greater of 3% or the highest measured moisture content in any Relative Accuracy Test Audit ("RATA"); or

iii. for saturated gas streams only, measure the stack temperature using a stack temperature sensor at the time of each SO_2 measurement and determine the moisture content using a psychometric chart or standard text water vapor pressure correlation.

(5) The permittee shall comply with the applicable monitoring and recordkeeping requirements required under 40 CFR Part 60, Subparts A and H, and Appendices B and F.

(6) Pursuant to under 40 CFR Part 60.13 and Appendices B and F, the permittee shall maintain records of all data obtained by the continuous SO2 monitoring system including, but not limited to:

a. emissions of SO2 in parts per million for each cycle time of the analyzer;

b. emissions of SO2 in units of the applicable standard(s) in the appropriate averaging period;

c. results of quarterly cylinder gas audits;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. hours of operation of the emissions unit, continuous SO2 monitoring system, and control equipment;

g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous SO2 monitoring system;

h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous SO2 monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

(2) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

(3) Pursuant to the provisions established in the federal consent decree, Section VI.48., for purposes of compliance with OAC rule 3745-31-05(D), The permittee shall submit quarterly deviation (excursion) reports that identify all deviations (excursions) of:

a. the rolling, 3-hour average of 3.5 pounds per ton of 100% sulfuric acid produced (short-term limit); and

b. the rolling, 365-day average of 2.40 pounds per ton of 100% sulfuric acid produced (long-term limit.

(4) The permittee shall comply with the applicable reporting requirements for the emissions unit and its continuous SO_2 monitoring system pursuant to the provisions established in 40 CFR Part 60, Subparts A and H.

(5) Pursuant to 40 CFR 60.7, the permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous SO_2 monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports

within 30 days following the end of each calendar quarter, documenting all instances of SO_2 emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-18, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous SO_2 and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total operating time (hours) of the emissions unit;

vi. the total operating time of the continuous SO_2 monitoring system while the emissions unit was in operation;

vii. results and dates of quarterly cylinder gas audits;

viii. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

ix. unless previously submitted, the results of any relative accuracy test audit showing the continuous SO_2 monitor out-of-control and the compliant results following any corrective actions;

x. the date, time, and duration of any/each malfunction** of the continuous SO_2 monitoring system, emissions unit, and/or control equipment;

xi. the date, time, and duration of any downtime** of the continuous SO_2 monitoring system and/or control equipment while the emissions unit was in operation; and

xii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(x) and (xi).

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit

(6) These deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

(7) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

(1) Pursuant to 40 CFR 60.13 and 40 CFR Part 60, Appendices B and F, ongoing compliance with the SO_2 emission limitations contained in this permit shall be demonstrated through the data collected as required in the monitoring and record keeping section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.

(2) The permittee shall comply with the Quality Assurance Requirements of 40 CFR Part 60, Appendix F.

(3) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

7.41 pounds per hour of CO

Applicable Compliance Method:

This emission limitation was developed based on calculations using emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98, as follows: divide the emission factor for natural gas combustion (84 pounds of CO per million standard cubic feet of natural gas) by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum installed burner heat input capacity (90 mmBtu per hour).

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A. Alternate, equivalent methods may be used upon approval by the Toledo Division of Environmental Services.

b. Emission Limitation:

32.46 tons per year of CO

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the hourly allowable emission limitation (7.41 pounds per hour) by a maximum operating schedule of 8760 hours per year, and then dividing by 2000 pounds per ton. Therefore, provided compliance is shown with the hourly emissions limitation, compliance shall also be shown with the annual emission limitation.

c. Emission Limitation:

5.90 pounds per hour of NO_x

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by using a worst case operating scenario of a company supplied maximum exhaust gas flow rate of 27,000 scfm with a concentration of 30 ppmv of NO_x (as NO_2 at 46 lb/lb-mole) and a mole volume of 1 lb-mole = 379 scf.

If required, compliance shall be demonstrated by Methods 1 through 4 and Method 7 of 40 CFR Part 60, Appendix A. Alternate, equivalent methods may be used upon approval by the Toledo Division of Environmental Services.

The most recent stack testing for this emission unit, as performed on December 6, 2011, determined an emissions rate of 4.27 pounds as NO_2 per hour.

d. Emission Limitation:

25.85 tons per year of NO_x

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the hourly allowable emission limitation (5.90 pounds per hour) by a maximum operating schedule of 8760 hours per year, and then dividing by 2000 pounds per ton. Therefore, provided compliance is shown with the hourly emissions limitation, compliance shall also be shown with the annual emission limitation.

e. Emission Limitation:

3.5 pounds of SO_2 per ton of 100% sulfuric acid produced as a 3-hour rolling average

4.0 pounds of SO_2 per ton of 100% sulfuric acid produced as a rolling, 3-hour average

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring and record keeping requirements specified in d).

If required, compliance shall be demonstrated by Methods 1 through 4 and Method 8 of 40 CFR Part 60 Appendix A and the procedures specified in 40 CFR 60.85(b). Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

f. Emission Limitation:

2.40 pound of SO_2 per ton of 100% sulfuric acid produced as a rolling 365-day average

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring and record keeping requirements specified in d).

g. Emission Limitation:

90.5 pounds per hour of SO_2 as a rolling, 3-hour average

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the rolling, 3-hour average hourly SO_2 emission limitation (3.5 pound SO_2 per ton H_2SO_4) by the maximum hourly production rate (in tons of H_2SO_4 per hour).

If required, compliance shall be demonstrated by Methods 1 though 4 and Method 8 of 40 CFR Part 60 Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

h. Emission Limitation:

271.8 tons per year of SO_2 as a rolling, 365-day summation

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring and record keeping requirements specified in d).

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the rolling, 365-day average hourly SO_2 emission limitation of 2.40 pounds of SO_2/ton of H_2SO_4 by the maximum hourly production rate (in tons of H_2SO_4 per hour) and by a maximum operating schedule of 8760 hours per year, and then dividing by 2000 pounds per ton. Therefore, provided compliance is shown with the rolling, 365-

day average hourly SO_2 emission limitation, compliance shall also be shown with the annual emission limitation.

i. Emission Limitation:

3.88 pounds per hour of sulfuric acid mist

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the 0.15 pound of acid mist per ton of 100% sulfuric acid produced emission limitation by the maximum hourly production rate (in tons of H_2SO_4 per hour).

If required, compliance shall be demonstrated by Methods 1 through 4 and Method 8 of 40 CFR Part 60, Appendix A and the procedures specified in 40 CFR 60.85(b). Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

j. Emission Limitation:

17.0 tons per year of sulfuric acid mist

Applicable Compliance Method:

The annual sulfuric acid mist emission limitation was developed by multiplying the hourly allowable emission limitation of 3.88 pounds per hour by a maximum operating schedule of 8760 hours per year, and then dividing by 2000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

k. Emission Limitation:

0.075 kg H_2SO_4 per metric ton of 100 percent sulfuric acid produced (0.15 pound per ton)

Applicable Compliance Method:

If required, compliance shall be demonstrated by the procedures specified in 40 CFR 60.85(b).

The most recent stack testing for this emissions unit, as performed on June 9, 2011, determined an emission rate of 0.091 pound of H_2SO_4 per ton of 100 percent sulfuric acid produced

l. Emission Limitation:

10 percent opacity

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing methods and procedures specified in Method 9 of 40 CFR Part 60, Appendix A and the procedures of 40 CFR 60.85(b).

The most recent stack testing for this emissions unit, as performed on June 18, 2012, determined an opacity of 0.0%.

(4) The permittee shall conduct emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted approximately every 2.5 years (the most recent stack testing for this emissions unit was performed on June 8, 2011)

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for SO_2 and acid mist, in pounds per ton of 100 percent sulfuric acid produced,

c. The following test methods shall be employed to demonstrate compliance with the allowable emission rates:

Methods 1 through 4 and Method 8 of 40 CFR Part 60, Appendix A and the procedures identified under 40 CFR 60.85(b). This test shall consist of at least three method test runs.

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the TES. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the TES's refusal to accept the results of the emission test(s).

Personnel from the TES shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the TES within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the TES.

g) Miscellaneous Requirements

(1) None.

2. P002, B-Plant

Operations, Property and/or Equipment Description:

Sulfuric Acid regeneration: B-plant with dual absorption and oxygen enrichment controlled by a wet scrubber

a) The following emissions unit terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only.

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	Emissions of carbon monoxide (CO) from this emissions unit shall not exceed 4.12 pounds per hour and 18.05 tons per year. Emissions of nitrogen oxides (NO_x) from this emissions unit shall not exceed 3.72 pounds per hour and 16.27 tons per year Emissions of sulfur dioxide (SO_2) from this emissions unit shall not exceed a rolling, 3-hour average of 55.5 pounds per hour and 173.6 tons as a rolling, 365-day summation. Emissions of sulfuric acid mist from this emissions unit shall not exceed 2.38 pounds per hour and 10.5 tons per year. See b)(2)a. and b)(2)b.
b.	OAC rule 3745-31-05(D)	Pursuant to the provisions established in Consent Decree case 3:09-cv-00067-JGC filed on 04/02/2009 and as amended 02/10/2010, Sections V.A.18. and V.C.23., the emissions from this emissions unit shall not exceed:

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		a rolling, 3-hour average of 3.5 pounds of SO_2 per ton of 100% sulfuric acid produced (short-term limit); a rolling, 365-day average of 2.50 pounds of SO_2 per ton of 100% sulfuric acid produced (long-term limit); and, 0.15 pound of acid mist, expressed as H_2SO_4, per ton of 100% sulfuric acid produced. See b)(2)c. through b)(2)f.
c.	OAC rule 3745-17-07(A)(1)	See b)(2)g.
d.	OAC rule 3745-17-11(B)(1)	See b)(2)g. and b)(2)h.
e.	OAC rule 3745-18-54(X)	See b)(2)g.
f.	40 CFR Part 60, Subpart A (60.1 through 60.19)	40 CFR Part 60, Subpart A provides applicability provisions, definitions, and other general provisions that are applicable to this emissions unit. See b)(2)i. through b)(2)l.
g.	40 CFR Part 60, Subpart H (40 CFR 60.80-85) [In accordance with 40 CFR 60.82(a) and 60.83(a), this emissions unit is a sulfuric acid production facility subject to the emission limitation and control measures specified in these sections.]	See b)(2)m.

(2) Additional Terms and Conditions

a. The hourly and annual emission limitations for CO and NO_x were established for PTI purposes to reflect the potential to emit for this emissions unit while combusting natural gas. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with these limitations.

b. The hourly and annual emission limitations for SO_2 and sulfuric acid mist were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop monitoring, record keeping and/or reporting requirements to ensure compliance with these limitations.

c. Pursuant to the provisions established in the federal consent decree, Section III.8., the following definitions shall apply to the terms and conditions of this emissions unit:

i. "Long-term limit" shall mean a rolling, 365-day average SO_2 emissions limit expressed as pounds of SO_2 emitted per ton of 100% H_2SO_4 produced. Compliance with the long-term limit shall be calculated in accordance the requirements of this permit. The long-term limit shall apply at all times, including during periods of startup, shutdown, or malfunction.

ii. "Short-term limit" shall mean a rolling, 3-hour average SO_2 emissions limit expressed as pounds of SO_2 emitted per ton of 100% H_2SO_4 produced. Compliance with the short-term limit shall be calculated in accordance the requirements of this permit. The short-term limit does not apply during periods of startup, shutdown, or malfunction.

iii. "Startup" means the period of time beginning when the feed of sulfur-bearing compounds to the furnace commences and lasting for no more than 24 hours.

iv. "Sulfur-bearing compounds" means elemental sulfur, alkylation or other spent sulfuric acids, hydrogen sulfide, organic sulfides, mercaptans, or acid sludge, but they exclude hydrocarbon and conventional fossil fuels such as natural gas or fuel oil.

v. "Shutdown" means the cessation of operation of a sulfuric acid plant for any reason. Shutdown begins at the time the feed of sulfur-bearing compounds to the furnace ceases and ends at the earlier of three hours later or when the flow rate on the stack volumetric flow rate analyzer falls below 10% span.

vi. "Malfunction" means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner. Failures that are caused by poor maintenance or careless operation are not malfunctions.

d. Pursuant to the provisions established in the federal consent decree, Amended Appendix G, page 6 - Analyzer Specifications, dated February 10, 2010:

i. the permittee shall maintain and operate a volumetric flow rate analyzer which meets the applicable requirements of 40 CFR Part 60, Appendix B, Performance specification 6 and the Quality Assurance and Quality Control Procedures in 40 CFR Part 60, Appendix F, Procedure 1;

ii. the permittee shall maintain and operate a converter inlet SO_2 analyzer which meets the applicable requirements of Performance Specification 2 of 40 CFR Part 60, Appendix B and the Quality Assurance and Quality Control Procedures in 40 CFR Part 60, Appendix F, Procedure 1; and

iii. the permittee shall maintain and operate a discharge stack SO_2 analyzer which meets the applicable requirements of 40 CFR Part 60.11, 60.13, Performance Specification 2 of 40 CFR Part 60, Appendix B, and the Quality Assurance and Quality Control Procedures in 40 CFR Part 60, Appendix F, Procedure 1.

e. Pursuant to the provisions established in the federal consent decree, Section VI.48., SO_2 and acid mist emissions limitations of section b)(1)e. shall not be relaxed.

f. Pursuant to 40 CFR Part 60, Subpart H, the following provisions will be an approved alternate as established in the February 10, 2010 amendment to Appendix G of the federal consent decree, "Analyzer Specifications" and "Compliance with the NSPS 40 CFR Part 60, Subpart H":

i. The optimum location to obtain SO_2 readings may differ from the requirements of Performance Specification 2, Section 8.1.

ii. The permittee shall conduct quarterly cylinder gas audits on the converter SO2 analyzer in lieu of the annual RATA described in Appendix F, Section 5.1.1.

iii. The required 40 CFR 60.84(a) stack SO_2 analyzer span value shall become a dual range of 0 to 500 ppm (normal) and 0 to 3,600 ppm (during startup, shutdown and/or malfunction).

iv. The required 40 CFR 60.84(b) procedure for converting monitoring data shall become the procedures stated in this permit for calculating compliance the NSPS 3-hour average emissions limitation

g. The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3).

h. All particulate emissions from this emissions unit are emitted in the form of sulfuric acid mist.

i. In compliance with the requirements of 40 CFR 60.2: the continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

j. In compliance with the requirements of 40 CFR 60.8(c): emissions in excess of the level of the applicable emission limit during periods of startup, shutdown, and malfunction shall not be considered a violation of the applicable emission limit.

k. In compliance with the requirements of 40 CFR 60.11(d): at all times, including periods of startup, shutdown, and malfunction, the permittee shall, to the extent practicable, maintain and operate any affected emissions unit including associated air pollution control equipment in a manner consistent with good air

pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used shall be based on information available to the Director which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

l. In compliance with the requirements of 40 CFR 60.13 and 40 CFR Part 60, Appendix F: the permittee shall maintain a written quality assurance/quality control plan for the continuous SO_2 monitoring system, designed to ensure continuous valid and representative readings of SO_2 emissions from the continuous monitor(s), in units of the applicable standard(s). The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous SO_2 monitoring system must be kept on site and available for inspection during regular office hours.

The plan shall include the requirement to conduct quarterly cylinder gas audits or relative accuracy audits as required in 40 CFR Part 60; and to conduct relative accuracy test audits in units of the standard(s), in accordance with and at the frequencies required per 40 CFR Part 60.

m. In compliance with the requirements of 40 CFR 60.82 and 60.83: at all times except for periods of startup, shutdown, and malfunction, the permittee shall not cause to be discharged into the atmosphere any gases which:

i. contain sulfur dioxide in excess of 2 kilograms per metric ton of acid produced (4 pounds per ton), the production being expressed as 100 percent H_2SO_4;

ii. contain acid mist, expressed as H_2SO_4, in excess of 0.075 kilograms per metric ton of acid produced (0.15 pound per ton), the production being expressed as 100 percent H_2SO_4; and

iii. exhibit 10 percent opacity or greater.

c) Operational Restrictions

(1) The permittee shall burn only natural gas as fuel in this emissions unit.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas, the permittee shall maintain a record of the type and quantity of fuel burned in this emissions unit.

(2) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the stack serving this 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 operations;

c. if the emissions are not representative of normal operations, the cause of the abnormal emissions;

d. the total duration of any visible emission incident; and

e. any corrective actions taken to eliminate the visible emissions.

(3) In compliance with the requirements of 40 CFR 60.13 and 40 CFR Part 60, Appendix B: the permittee shall maintain on-site, the document of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous SO_2 monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specification 2. The letter/document of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

(4) Pursuant to the provisions established in the federal consent decree in the February 10, 2010 amendment to Appendix G, "Emissions Calculations", for purposes of compliance with OAC rule 3745-31-05(D), permittee shall comply with the following requirements:

a. SO_2 emissions will be monitored using an SO_2 analyzer at the converter inlet, an SO_2 analyzer at the exit stack, and a stack flow rate analyzer. Except for any analyzer malfunctions, associated repairs, and required quality assurance or control activities (including calibration checks and required zero and span adjustments), the permittee will conduct monitoring during all operating periods and during shutdown. The combination of SO_2 emission monitors and flow monitor will be identified in this permit as the SO_2 continuous emission monitoring system (CEMS).

b. Once every five (5) minutes, the analyzers will measure the stack SO_2 concentration (fraction, dry basis), the converter inlet SO_2 concentration (fraction, dry basis) and the volumetric flow rate (dry standard cubic feet per minute).

c. For purposes of calculating a rolling, 3-hour average the system will maintain an array of the 36 most recent measurements for each of the three monitored parameters. Every five minutes, the system will add the most recent readings to the array and exclude the oldest readings. The rolling, 3-hour average pound of SO_2 per ton of 100% H_2SO_4 emissions rate shall be calculated as follows:

$$E_{3\text{-hr ave}} = (1306.33 \text{ lb } SO_2/\text{ton acid}) \sum_{i=1}^{36} [(Q_{\text{stack } i})(B_i)(1-1.5A_i) \div (A_i - B_i)]$$

where:

A_i = converter inlet SO_2 concentration as a decimal fraction on a dry basis at measurement "i"

B_i = stack inlet concentration as a decimal fraction on a dry basis at measurement "i"

$E_{3\text{-hr ave}}$ = the 3-hour average SO_2 emission rate in units of pounds of SO_2 per ton of 100% H_2SO_4

Q_{stacki} = volumetric flow rate of stack gas in units of dry standard cubic feet per minute (dscfm) at measurement "i"

d. For purposes of calculating a rolling, 365-day average the system will maintain an array of all of the measurements for each of the three monitored parameters for 365 days. Every day, the system will add the readings from that day to the array and exclude the readings from the oldest day. The rolling, 365-day average pound of SO_2 per ton of 100% H_2SO_4 emissions rate shall be calculated as follows:

$$E_{365\text{-day ave}} = (1306.33 \text{ lb } SO_2/\text{ton}) \sum_{j=1}^{n} [(\text{Qstack j})(\text{Bj})(1 - 1.5\text{Aj}) \div (\text{Aj} - \text{Bj})]$$

where:

Aj = converter inlet SO_2 concentration as a decimal fraction on a dry basis at measurement "j"

Bj = stack inlet concentration as a decimal fraction on a dry basis at measurement "j"

$E_{365\text{-day ave}}$ = the rolling, 365-day average SO_2 emission rate in units of pounds of SO_2 per ton of 100% H_2SO_4

n = the number of measurements taken at 5-minute intervals over the 365 day period.

Qstack j = volumetric flow rate of stack gas in units of dry standard cubic feet per minute (dscfm) at measurement "j"

e. During routine calibration checks and adjustments of any of the analyzers, the pre-calibration will be used to fill in any analyzer gaps that occur pending completion of the calibration checks and adjustments.

f. If any one or more than one analyzer is/are not operating for a period of 24 hours or greater, data gaps in the array involving the non-operational analyzer(s) will be filled in as follows:

i. Exit stack gas will be sampled and analyzed for SO_2 at least once per hour, during all operating periods. Sampling will be conducted by Reich test or other established method (e.g. portable analyzer). The most recent hourly reading will be substituted for the twelve (12) five-minute readings that would otherwise have been taken if the analyzer had been operating normally.

ii. Converter inlet gas either will be sampled and analyzed for SO_2 using a Reich test or other established method, or the concentration will be estimated using engineering judgment, at least once every four (4) hours during all operating periods. The most recent four-hour measurement/estimate will be substituted for the 48 five-minute readings that would otherwise have been taken if the system had been operating normally.

iii. Stack volumetric flow rate will be estimated using engineering judgment.

g. If any one or more than one analyzer is/are not operating for a period of less than 24 hours, one of the following must be done: (i) the requirements set forth for a 24-hour or greater period of downtime must be used to fill in the data gaps; or (ii) the data recorded for the five minute reading immediately preceding the affected analyzer's(s') stoppage must be used to fill in the data gap.

h. In order to secure data on a "dry basis", the permittee may either:

i. directly measure the moisture content using a moisture analyzer,

ii. assume the moisture content is the greater of 3% or the highest measured moisture content in any Relative Accuracy Test Audit ("RATA"); or

iii. for saturated gas streams only, measure the stack temperature using a stack temperature sensor at the time of each SO_2 measurement and determine the moisture content using a psychometric chart or standard text water vapor pressure correlation.

(5) The permittee shall comply with the applicable monitoring and recordkeeping requirements required under 40 CFR Part 60, Subparts A and H, and Appendices B and F.

(6) Pursuant to under 40 CFR Part 60.13 and Appendices B and F, the permittee shall maintain records of all data obtained by the continuous SO2 monitoring system including, but not limited to:

a. emissions of SO2 in parts per million for each cycle time of the analyzer;

b. emissions of SO2 in units of the applicable standard(s) in the appropriate averaging period;

c. results of quarterly cylinder gas audits;

d. results of daily zero/span calibration checks and the magnitude of manual calibration adjustments;

e. results of required relative accuracy test audit(s), including results in units of the applicable standard(s);

f. hours of operation of the emissions unit, continuous SO2 monitoring system, and control equipment;

g. the date, time, and hours of operation of the emissions unit without the control equipment and/or the continuous SO2 monitoring system;

h. the date, time, and hours of operation of the emissions unit during any malfunction of the control equipment and/or the continuous SO2 monitoring system; as well as,

i. the reason (if known) and the corrective actions taken (if any) for each such event in (g) and (h).

e) Reporting Requirements

(1) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurs.

(2) The permittee shall submit semiannual written reports that identify:

a. all days during which any visible particulate emissions were observed from the stack serving this emissions unit; and

b. any corrective actions taken to minimize or eliminate the visible particulate emissions.

These reports shall be submitted to the Director (the appropriate Ohio EPA District Office or local air agency) by January 31 and July 31 of each year and shall cover the previous 6-month period.

(3) Pursuant to the provisions established in the federal consent decree, Section VI.48., for purposes of compliance with OAC rule 3745-31-05(D), The permittee shall submit quarterly deviation (excursion) reports that identify all deviations (excursions) of:

a. the rolling, 3-hour average of 3.5 pounds per ton of 100% sulfuric acid produced (short-term limit); and

b. the rolling, 365-day average of 2.50 pounds per ton of 100% sulfuric acid produced (long-term limit.

(4) The permittee shall comply with the applicable reporting requirements for the emissions unit and its continuous SO_2 monitoring system pursuant to the provisions established in 40 CFR Part 60, Subparts A and H.

(5) Pursuant to 40 CFR 60.7, the permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous SO_2 monitoring system:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR Parts 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports

within 30 days following the end of each calendar quarter to the appropriate Ohio EPA District Office or local air agency, documenting all instances of SO_2 emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapter 3745-18, and any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

b. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall include the following:

i. the facility name and address;

ii. the manufacturer and model number of the continuous SO_2 and other associated monitors;

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

iv. the excess emissions report (EER)*, i.e., a summary of any exceedances during the calendar quarter, as specified above;

v. the total operating time (hours) of the emissions unit;

vi. the total operating time of the continuous SO_2 monitoring system while the emissions unit was in operation;

vii. results and dates of quarterly cylinder gas audits;

viii. unless previously submitted, results and dates of the relative accuracy test audit(s), including results in units of the applicable standard(s), (during appropriate quarter(s));

ix. unless previously submitted, the results of any relative accuracy test audit showing the continuous SO_2 monitor out-of-control and the compliant results following any corrective actions;

x. the date, time, and duration of any/each malfunction** of the continuous SO_2 monitoring system, emissions unit, and/or control equipment;

xi. the date, time, and duration of any downtime** of the continuous SO_2 monitoring system and/or control equipment while the emissions unit was in operation; and

xii. the reason (if known) and the corrective actions taken (if any) for each event in (b)(x) and (xi).

Each report shall address the operations conducted and data obtained during the previous calendar quarter.

* where no excess emissions have occurred or the continuous monitoring system(s) has/have not been inoperative, repaired, or adjusted during the calendar quarter, such information shall be documented in the EER quarterly report

** each downtime and malfunction event shall be reported regardless if there is an exceedance of any applicable limit.

(6) These deviation (excursion) reports shall be submitted in accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

(7) Unless other arrangements have been approved by the Director, all notifications and reports shall be submitted through the Ohio EPA's eBusiness Center: Air Services online web portal.

f) Testing Requirements

(1) Pursuant to 40 CFR 60.13 and 40 CFR Part 60, Appendices B and F, ongoing compliance with the SO_2 emission limitations contained in this permit shall be demonstrated through the data collected as required in the monitoring and record keeping section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.

(2) The permittee shall comply with the Quality Assurance Requirements of 40 CFR Part 60, Appendix F.

(3) Compliance with the Emissions Limitations and/or Control Requirements specified in section b) of these terms and conditions shall be determined in accordance with the following methods:

a. Emission Limitation:

4.12 pounds per hour of CO

Applicable Compliance Method:

This emission limitation was developed based on calculations using emission factors specified in USEPA reference document AP-42, Fifth Edition, Compilation of Air Pollution Emission Factors, Table 1.4-1 dated 7/98, as follows: divide the emission factor for natural gas combustion (84 pounds of CO per million standard cubic feet of natural gas) by a heating value of 1020 Btu per standard cubic foot and multiply by the maximum installed burner heat input capacity (50 mmBtu per hour).

If required, the permittee shall demonstrate compliance with this emission limitation in accordance with the methods and procedures specified in Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A. Alternate, equivalent methods may be used upon approval by the Toledo Division of Environmental Services.

b. Emission Limitation:

18.05 tons per year of CO

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the hourly allowable emission limitation (4.12 pounds per hour) by a maximum operating schedule of 8760 hours per year, and then dividing by 2000 pounds per ton. Therefore, provided compliance is shown with the hourly emissions limitation, compliance shall also be shown with the annual emission limitation.

c. Emission Limitation:

3.72 pounds per hour of NO_x

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by using a worst case operating scenario of a company supplied maximum exhaust gas flow rate of 17,000 scfm with a concentration of 30 ppmv of NO_x (as NO_2 at 46 lb/lb-mole) and a mole volume of 1 lb-mole = 379 scf.

If required, compliance shall be demonstrated by Methods 1 through 4 and Method 7 of 40 CFR Part 60, Appendix A. Alternate, equivalent methods may be used upon approval by the Toledo Division of Environmental Services.

The most recent stack testing for this emission unit, as performed on December 6, 2011, determined an emissions rate of 2.75 pounds as NO_2 per hour.

d. Emission Limitation:

16.27 tons per year of NO_x

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the hourly allowable emission limitation (3.72 pounds per hour) by a maximum operating schedule of 8760 hours per year, and then dividing by 2000 pounds per ton. Therefore, provided compliance is shown with the hourly emissions limitation, compliance shall also be shown with the annual emission limitation.

e. Emission Limitation:

3.5 pounds of SO_2 per ton of 100% sulfuric acid produced as a rolling, 3-hour average

4.0 pounds of SO_2 per ton of 100% sulfuric acid produced as a rolling, 3-hour average

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring and record keeping requirements specified in d).

If required, compliance shall be demonstrated by Methods 1 through 4 and Method 8 of 40 CFR Part 60 Appendix A and the procedures specified in 40 CFR 60.85(b). Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

The most recent stack testing for this emissions unit, as performed on June 8, 2011, determined an emission rate of 2.17 pounds of SO_2 per ton of 100 percent sulfuric acid produced

f. Emission Limitation:

2.50 pounds of SO_2 per ton of 100% sulfuric acid produced as a rolling 365-day average

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring and record keeping requirements specified in d).

g. Emission Limitation:

55.5 pounds per hour of SO_2 as a rolling, 3-hour average

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the rolling, 3-hour average hourly SO_2 emission limitation (3.5 pound SO_2 per ton H_2SO_4) by the maximum hourly production rate (in tons of H_2SO_4 per hour).

If required, compliance shall be demonstrated by Methods 1 though 4 and Method 8 of 40 CFR Part 60 Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

h. Emission Limitation:

173.6 tons of SO_2 as a rolling, 365-day summation

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the rolling, 365-day average hourly SO_2 emission limitation of 2.50 pounds of SO_2/ton of

$H_2SO_4$by the maximum hourly production rate (in tons of H_2SO_4 per hour) and by a maximum operating schedule of 8760 hours per year, and then dividing by 2000 pounds per ton. Therefore, provided compliance is shown with the rolling, 365-day average hourly SO_2 emission limitation, compliance shall also be shown with the annual emission limitation.

i. Emission Limitation:

2.38 pounds per hour of sulfuric acid mist

Applicable Compliance Method:

This emission limitation was established to reflect the potential to emit for this emissions unit. Compliance may be demonstrated by multiplying the 0.15 pound of acid mist per ton of 100% sulfuric acid produced emission limitation by the maximum hourly production rate (in tons of H_2SO_4 per hour).

If required, compliance shall be demonstrated by Methods 1 through 4 and Method 8 of 40 CFR Part 60, Appendix A and the procedures specified in 40 CFR 60.85(b). Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

j. Emission Limitation:

10.5 tons per year of sulfuric acid mist

Applicable Compliance Method:

The annual sulfuric acid mist emission limitation was developed by multiplying the hourly allowable emission limitation of 2.38 pounds per hour by a maximum operating schedule of 8760 hours per year, and then dividing by 2000 pounds per ton. Therefore, provided compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

k. Emission Limitation:

0.075 kg H_2SO_4 per metric ton of 100 percent sulfuric acid produced (0.15 lb per ton)

Applicable Compliance Method:

If required, compliance shall be demonstrated by the procedures specified in 40 CFR 60.85(b).

The most recent stack testing for this emissions unit, as performed on June 8, 2011, determined an emission rate of 0.056 pound of H_2SO_4 per ton of 100 percent sulfuric acid produced

l. Emission Limitation:

10 percent opacity

Applicable Compliance Method:

Compliance shall be demonstrated based upon the emission testing methods and procedures specified in Method 9 of 40 CFR Part 60, Appendix A and the procedures of 40 CFR 60.85(b).

The most recent stack testing for this emissions unit, as performed on June 18, 2012, determined an opacity of 0.0%.

(4) The permittee shall conduct, or have conducted, emission testing for this emissions unit in accordance with the following requirements:

a. The emission testing shall be conducted approximately every 2.5 years (the most recent stack testing for this emissions unit was performed on June 8, 2011)

b. The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rates for SO_2 and acid mist, in pounds per ton of 100 percent sulfuric acid produced,

c. The following test methods shall be employed to demonstrate compliance with the allowable mass emission rates:

Methods 1 through 4 and 8 of 40 CFR Part 60, Appendix A

Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

d. The test(s) shall be conducted under those representative conditions that challenge to the fullest extent possible a facility's ability to meet the applicable emissions limits and/or control requirements, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency. Although this generally consists of operating the emissions unit at its maximum material input/production rates and results in the highest emission rate of the tested pollutant, there may be circumstances where a lower emissions loading is deemed the most challenging control scenario. Failure to test under these conditions is justification for not accepting the test results as a demonstration of compliance.

e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the appropriate Ohio EPA District Office or local air agency. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the emissions unit operating parameters, the time(s) and date(s) of the test(s), and the person(s) who will be conducting the test(s). Failure to submit such notification for review and approval prior to the test(s) may result in the Ohio EPA District Office's or local air agency's refusal to accept the results of the emission test(s).

f. Personnel from the appropriate Ohio EPA District Office or local air agency shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit

and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the appropriate Ohio EPA District Office or local air agency within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the appropriate Ohio EPA District Office or local air agency.

g) Miscellaneous Requirements

(1) None.