Ohio Environmental Protection Agency
John R. Kasich, Governor
Mary Taylor, Lt. Governor
Scott J. Nally, Director

4/6/2012

Certified Mail

Yes	TOXIC REVIEW
No	PSD
No	SYNTHETIC MINOR TO AVOID MAJOR NSR
No	CEMS
Yes	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

Robert Schmude
Millennium Inorganic Chemicals, Inc. Plant #I
2900 Middle Road
Ashtabula, OH 44004

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0204010200
Permit Number: P0108818
Permit Type: OAC Chapter 3745-31 Modification
County: Ashtabula

Dear Permit Holder:

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

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
309 South Fourth Street, Room 222
Columbus, OH 43215

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. If you have any questions regarding this permit, please contact the Ohio EPA DAPC, Northeast District Office. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page,www.epa.ohio.gov/dapc by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

Michael W. Ahern

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

Cc: U.S. EPA
Ohio EPA-NEDO; Pennsylvania; Canada

Ohio | Environmental Protection Agency

FINAL

Division of Air Pollution Control
Permit-to-Install
for
Millennium Inorganic Chemicals, Inc. Plant #I

Facility ID:	0204010200
Permit Number:	P0108818
Permit Type:	OAC Chapter 3745-31 Modification
Issued:	4/6/2012
Effective:	4/6/2012

Ohio Environmental Protection Agency

Division of Air Pollution Control
Permit-to-Install
for
Millennium Inorganic Chemicals, Inc. Plant #I

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Authorization

Facility ID: 0204010200
Facility Description: Manufacturer of titanium dioxide
Application Number(s): A0042783
Permit Number: P0108818
Permit Description: Process and equipment modification to increase the production of titanium oxide
Permit Type: OAC Chapter 3745-31 Modification
Permit Fee: $4,000.00
Issue Date: 4/6/2012
Effective Date: 4/6/2012

This document constitutes issuance to:

Millennium Inorganic Chemicals, Inc. Plant #I
2900 Middle Road
Ashtabula, OH 44004

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

Ohio EPA District Office or local air agency responsible for processing and administering your permit:

Ohio EPA DAPC, Northeast District Office
2110 East Aurora Road
Twinsburg, OH 44087
(330)425-9171

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: P0108818
Permit Description: Process and equipment modification to increase the production of titanium oxide

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:	Chlorination A Process
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P002**
Company Equipment ID:	Spray Dryer A.
Superseded Permit Number:	P0106447
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P006**
Company Equipment ID:	Chlorination B Process
Superseded Permit Number:	02-15582
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P007**
Company Equipment ID:	Spray Dryer B
Superseded Permit Number:	02-15582
General Permit Category and Type:	Not Applicable
Emissions Unit ID:	**P901**
Company Equipment ID:	Coke and Ore Unloading, Storage, and Handling
Superseded Permit Number:	
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 Ohio EPA DAPC, Northeast District Office.

(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 Ohio EPA DAPC, Northeast District Office. 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 Ohio EPA DAPC, Northeast District Office 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 Ohio EPA DAPC, Northeast District Office 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 Ohio EPA DAPC, Northeast District Office 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 Ohio EPA DAPC, Northeast District Office.

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 Ohio EPA DAPC, Northeast District Office. 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. Voluntary limits on allowable CO and COS emissions, OAC rule 3745-31-05(F)

   a) Applicable Emissions Limitations and/or Control Requirements

      (1) Carbon monoxide (CO) emissions shall not exceed 81,930 tons, as a rolling, 12-month summation, from emissions units P001 and P006 located at Plant 1 (Fac ID 02 04 01 0200) and from emissions unit P002 located at Plant 2 (Fac ID 02 04 01 0193).

      (2) Carbonyl sulfide (COS) emissions shall not exceed 3,909 tons, as a rolling, 12-month summation, from emissions units P001 and P006 located at Plant 1 (Fac ID 02 04 01 0200) and from emissions unit P002 located at Plant 2 (Fac ID 02 04 01 0193).

   b) Monitoring and Recordkeeping

      (1) The permittee shall monitor and record the following information for emissions units P001 and P006 located at Plant 1 (Fac ID 02 04 01 0200) and from emissions unit P002 located at Plant 2 (Fac ID 02 04 01 0193) monthly:

         a. the actual emissions of CO from each emissions unit, in tons, as determined by Testing as specified in paragraph 2.d) below;

         b. the total emissions for CO from the emissions units specified above, as a rolling, 12-month summation;

         c. the actual emissions of COS from each emissions unit, in tons, as determined by Testing as specified in paragraph 2.d) below;

         d. the total emissions for COS from the emissions units specified above, as a rolling, 12-month summation.

      (2) In the event the permittee elects to demonstrate compliance with the emission limits in paragraph 2.a) above based on continuous emission monitoring data in accordance with this paragraph and paragraph 2.d) below, each carbon monoxide (CO) monitoring system and/or carbonyl sulfide (COS) monitoring system shall be certified to meet the requirements of 40 CFR Part 60, Appendix B.

         At least 45 days before commencing certification testing of the each continuous monitoring system(s), the permittee shall develop and maintain a written quality assurance/quality control plan designed to ensure continuous valid and representative readings of CO and COS 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.

         Each continuous monitoring system quality assurance/quality control 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.

(3) Each 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.

(4) Prior to the installation of a continuous carbon monoxide (CO) monitoring system and/or a continuous carbonyl sulfide (COS) monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B.

(5) The permittee shall maintain a logbook containing records of data obtained by the continuous CO and/or COS monitoring system including, but not limited to:

a. emissions of CO and/or COS in parts per million on a one-hour average basis;

b. results of quarterly cylinder gas audits;

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

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

e. hours of operation of the emissions unit and the continuous CO and/or COS monitoring system;

f. the date, time, and hours of operation of the emissions unit without the continuous CO and/or COS monitoring system in operation;

g. the date, time, and hours of operation of the emissions unit during any malfunction of the continuous CO and/or COS monitoring system; as well as,

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

c) Reporting

(1) The permittee shall submit quarterly reports to the appropriate Ohio EPA District Office or local air agency, documenting all instances of CO and/or COS emissions in excess of the emission limits specified in paragraph 2.a) above. 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).

(2) These quarterly reports shall be submitted by January 31, April 30, July 31 and October 31 of each year and shall include the following:

a. the facility name and address;

b. the manufacturer and model number of each continuous emission and other associated monitors;

c. 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;

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

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

f. the total operating time of each continuous monitoring system while respective emissions unit was in operation;

g. results and dates of quarterly cylinder gas audits;

h. 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));

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

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

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

l. the reason (if known) and the corrective actions taken (if any) for each event in (c)(2)j and c)(2)k.

* 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 quarterly report

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

d) Testing

(1) 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:

Carbon monoxide (CO) emissions shall not exceed 81,930 tons, as a rolling, 12-month summation, from emissions units P001 and P006 located at Plant 1 (Fac ID 02 04 01 0200) and from emissions unit P002 located at Plant 2 (Fac ID 02 04 01 0193).

Applicable Compliance Method:

Either calculations based on the actual production rates for the time period in question multiplied by the emission factors derived from the most recent Reference Method stack testing representative of actual emission unit operation, or continuous emission monitoring of CO in accordance with paragraph b) above.

b. Emission Limitation:

Carbonyl sulfide (COS) emissions shall not exceed 3,909 tons per year, as a rolling, 12-month summation, from emissions units P001 and P006 located at Plant 1 (Fac ID 02 04 01 0200) and from emissions unit P002 located at Plant 2 (Fac ID 02 04 01 0193).

Applicable Compliance Method:

Either calculations based on the actual production rates for the time period in question multiplied by the emission factors derived from the most recent Reference Method stack testing representative of actual emission unit operation, or continuous emission monitoring of COS in accordance with paragraph b) above.

c. If a continuous CO emissions monitor system is not installed and certified for the emissions unit, the permittee shall conduct, or have conducted, emission testing for emissions units P001 and P006 located at Plant 1 (Fac ID 02 04 01 0200) and from emissions unit P002 located at Plant 2 (Fac ID 02 04 01 0193) in accordance with the following requirements. The emission limit of 81,930 tons per year (2-year annual average) was derived from the 2 year average of emissions reported in the permittee's 2007 and 2008 fee emission reports. The emission factors (expressed as pounds of CO and COS per ton of Titanium Tetrachloride [$TiCl_4$] produced) derived from Reference Method stack tests at P001 in June 2004 and at P006 in January 2000, multiplied by actual annual production of $TiCl_4$ during 2007 and 2008, is the basis for the annual CO and COS emissions from units P001 and P006 at Plant 1 for the 2007 and 2008 fee emission reports. The emission factors (expressed as pounds of CO and COS per ton of Titanium Tetrachloride [$TiCl_4$] produced) derived from Reference Method stack tests at Plant 2 in November 2002, multiplied by the actual annual production of $TiCl_4$ during 2007 and 2008, is the basis for the annual CO and COS emissions from Plant 2 for the 2007 and 2008 fee emission reports. If a physical change or change in the method of operation, within the meaning of OAC 3745-31-01(JJJ), occurs that the permittee or Ohio EPA believes would increase the CO and/or COS emission factor at one or more emission units subject to the emission limits in paragraph 2.a)(1) and 2.a)(2) above the levels

used for the 2007 and 2008 fee emission reports, emission testing to develop a new emission factor shall be conducted within 60 days of the change being implemented.

d. The following test method(s) shall be employed to establish emission factors (expressed as pounds of CO and COS per ton of Titanium Tetrachloride [$TiCl_4$] produced) to be multiplied by the 12-month rolling summation $TiCl_4$ production rates for the period in question, to demonstrate compliance with the allowable mass emission rate(s):

US EPA Reference Method 10 CO

US EPA Reference Method 15 COS.

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

e. The test(s) shall be conducted while the emissions unit is operating at 90% of the maximum production rate or more, unless otherwise specified or approved by the appropriate Ohio EPA District Office or local air agency.

f. 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).

g. 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.

h. 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 60 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.

(2) Within 60 days of the installation of a continuous CO and/or COS monitoring system, the permittee shall conduct certification tests of the continuous CO and/or COS monitoring system in units of the applicable standard(s), to demonstrate compliance with 40 CFR Part 60, Appendix B.

Personnel from the Ohio EPA Central Office and the appropriate Ohio EPA District Office or local air agency shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. Two copies of the test results shall be submitted to Ohio EPA, one copy to the appropriate Ohio EPA District Office or local air agency and one copy to Ohio EPA Central Office, and pursuant to OAC rule 3745-15-04, within 60 days after the test is completed.

Certification of the continuous CO and/or COS monitoring system shall be granted upon determination by the Ohio EPA Central Office that the system meets the requirements of 40 CFR Part 60, Appendix B.

Ongoing compliance with the CO and/or COS emission limits specified in paragraph 2.a) above shall be demonstrated through the data collected as required in the Monitoring and Record keeping, and Report requirements of paragraphs 2.b) and 2.c) above and the Testing requirements of this paragraph.

3. 40 CFR Part 63, Subpart DDDDD, Commercial, Institutional and Industrial Boiler and Process Heater MACT

On May 16, 2011, U.S. EPA decided to Stay the Commercial, Institutional and Industrial Boiler and Process Heater MACT (40 CFR Part 63, Subpart DDDDD). This delay of effectiveness will remain in place until the proceedings for judicial review are completed or U.S. EPA completes its reconsideration of the rules, whichever is earlier, and the Agency publishes a notice in the Federal Register announcing that the rules are in effect. Upon being effective, emissions unit, P006, may be subject to 40 CFR Part 63, Subpart DDDDD.

4. 40 CFR 52, Prevention of Significant Deterioration of Air Quality

OAC rule 3745-31-10

a) Operating Restrictions

(1) None

b) Monitoring and Recordkeeping

(1) For a period of 10 years following completion of this project, the permittee shall calculate and maintain a record of post-change actual annual emissions for PM10, CO, VOC, and CO_{2e}, in tons per year, for the following sources combined:

ID	Description	PM10	CO	VOC	CO2e
P001	'A' Chlorination Process	x	x	x	x
P002	27.5 MMBTU/hr Spray Dryer 'A'	x	x	x	x
P006	'B' Chlorination Process	x	x	x	x
P007	50 MMBTU/hr Spray Dryer 'B'	x	x	x	x
P010	TiCl4 Vaporizer and Oxygen 'B' Preheater	x	x	x	x
P011	TiCl4 Vaporizer and Oxygen 'A' Preheater	x	x	x	x
P050	#2 Filter Feed Tank	x			
P023	"A" Treatment Tanks	x			

P901	Ore/Coke unloading/handling	x			
S018	#1 Rotary Drum Vacuum Filter and Receiver	x			
S019	#2 Rotary Drum Vacuum Filter and Receiver	x			
S020	#3 Rotary Drum Vacuum Filter and Receiver	x			
S021	#4 Rotary Drum Vacuum Filter and Receiver	x			
S022	#5 Rotary Drum Vacuum Filter and Receiver	x			
S023	#6 Rotary Drum Vacuum Filter and Receiver	x			
S024	#7 Rotary Drum Vacuum Filter and Receiver	x			
T004	Toluene Storage Tanks for Train B			x	
T045	#1 Blend Tank	x			
T046	#2 Blend Tank	x			
T047	#3 Blend Tank	x			
T048	#4 Blend Tank	x			
T049	#5 Blend Tank	x			
P028	#4 Haver packer	x			
P029	#5 Haver packer	x			
P030	#6 Haver packer	x			
P031	#1 semi-bulk	x			
P032	#2 Semi-bulk	x			
P033	#3 Semi-bulk	x			
	Packer Dust Collector	x			

If during this project additional de minimus and permit exempt emissions units (finishing equipment, packaging equipment, storage tanks, etc.) are installed or modified and the change is involved in this project, the change in emissions unit shall be added to the list above.

The purpose of this record is to demonstrate that post-change emissions from these emissions units, combined, did not trigger major New Source Review (NSR) upon completion of the project as provided in the application for the Millennium Inorganic Chemicals, Inc. Plant 1 air permit to install P0108818. The permittee's application indicated that these pollutants equaled or exceeded fifty (50) percent of the applicable NSR significance level, as defined in OAC rule 3745-31-01(MMMMM)(effective date 12/14/2007), for that pollutant when emissions are excluded from projected actual emissions for independent factors unrelated to the project.

c) Reporting

(1) For a period of 10 years following completion of this project, the permittee shall submit a report if the actual annual emissions(after exclusion of emissions due to independent factors unrelated to the project including but not limited to sampling and/or measurement variability), in tons per year, from emissions units P001, P002, P006, P007, P901 and all other de minimus and permit exempt emissions units involved in this project (finishing equipment, packaging equipment, storage tanks) exceed the baseline actual emissions [as documented and maintained in b)(1)] by a significant amount for that pollutant, as defined in OAC rule 3745-31-01(MMMMM), and if such emissions differ from the

preconstruction projection as documented and maintained pursuant to OAC rule 3745-31-10(A)(1)(c). The report shall contain the following:

a. the name, address and telephone number of the major stationary source;

b. the actual annual emissions; and

c. any other information that the permittee wishes to include in the report (e.g., an explanation as to why the emissions differ from the preconstruction projection).

The report shall be submitted within 60 days after the end of each year during which an exceedance occurs.

5. PM-2.5 nonattainment and minor source status.

This facility is located in an area designated nonattainment for PM-2.5. The potential to emit PM-2.5 for the facility is less than 100 tons per year. Therefore, nonattainment NSR does not apply to this project for PM-2.5.

6. PM-10 emissions.

PM-10 emissions limitations included in the terms and conditions of this permit for emissions units P002, P006 and P007 include both filterable and condensable fractions. Upon permit issuance, Reference Methods 201A and 202 shall apply to testing of PM-10 emissions for PSD and/or NNSR applicability purposes. Ohio EPA recognizes the absence of Method 201A/202 test data, and an estimate of condensable particulate emissions, from the baseline actual emissions for this project. Ohio EPA will account for differences in baseline and post-project actual annual average PM-10 emissions in a consistent and reasonable manner.

C. Emissions Unit Terms and Conditions

1. P001, Chlorination A Process

Operations, Property and/or Equipment Description:

Train "A" Chlorination process: including two chlorinators (CHL-1202 and CHL-5203), two cyclones (CYC-1202 and CYC-5203) and two condensers (CND-1211 and CND-1212) with a demister (MEL-1212), a spray tower wet scrubber (TWR-1305), a venturi scrubber (SBR-1305), a separator (SEP-1315) and a packed tower scrubber (TWR-1320) that are used to control normal production emissions via P001STK1310 egress.

(In addition a scrubber spray tower (TWR-5370), a venturi scrubber (SBR-5375) and a separator tower (SEP-5380) are used to control emissions during maintenance operations via the STK-SNAKE egress. A venturi scrubber (SBR-0100) and a separator (SEP-0101) are used to control emissions during cold startup operations via STK-0102 egress.)

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) d)(8), d)(9), d)(10), d)(11) and e)(4)

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 3745-17-07(A)(1)	Visible emissions shall not exceed 20 % opacity, as a six-minute average, except as provided by rule.
b.	OAC rule 3745-17-11(B)	Particulate emissions (PE) shall not exceed 33.0 lbs/hr. See b)(2)a.
	OAC rule 3745-18-06(E)(2)	Sulfur dioxide (SO_2) emissions shall not exceed 242 lbs/hr. See b)(2)b.
	40 CFR Part 64 Compliance Assurance Monitoring (CAM)	See b)(2)e.

(2) Additional Terms and Conditions

a. The allowable, hourly PE rate is based on Table I in OAC rule 3745-17-11. The uncontrolled mass rate of emissions, which is used to determine the allowable

PE rate using curve P-1 within Figure II in OAC rule 3745-17-11, cannot be accurately ascertained by emissions testing or by using emissions factors.

b. The measured SO_2 emissions rate during normal production operations at the P001STK1310 egress point was determined to be 0.82 lbs/hr via a U.S. EPA Method 6C test conducted on June 22, 2004. Since there is no equipment to control SO_2 emissions, the potential emissions should always be within the allowable SO_2 emissions limit. No monitoring, record keeping or reporting requirements to verify compliance with the hourly SO_2 emissions limit are needed.

c. The following control equipment is used to control emissions during maintenance operations at this emissions unit and also to control emissions during maintenance operations at Train "B" Chlorination Process (P006): a scrubber spray tower (TWR-5370), a venturi scrubber (SBR-5375) and a separator tower (SEP-5380).

d. The following control equipment is used to control emissions during startup operations at this emissions unit and also to control emissions during startup operations at Train "B" Chlorination Process (P006): a venturi scrubber (SBR-0100) and a separator (SEP-0101). This system is capable of ventilating the system during maintenance when the emissions unit is not in operation.

e. This emissions unit is a pollutant specific emissions unit according to 40 CFR 64 and will be required to develop a CAM plan prior to the issuance of the Title V operating permit.

c) Operational Restrictions

(1) The permittee shall employ the venturi scrubber SBR-1305 whenever the emissions unit is in operation except during startup, shutdown, maintenance, malfunction, or calibration periods.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record:

a. each instance the process was vented to the startup scrubber system when the source was in operation (during a cold startup) including the start time and date and end time and date; and

b. each instance the process was not vented to venturi scrubber SBR-1305 when the source was in operation, including the start time and date and end time and date.

(2) The permittee shall properly operate and maintain equipment to monitor:

a. The venturi scrubber SBR-1305 water flow rate, in gallons per minute, during operation of this emissions unit, except for periods of startup, shutdown, maintenance, malfunction, or calibration periods;

b. The venturi scrubber SBR-5375 water flow rate, in gallons per minute, during operation of this emissions unit in normal and/or maintenance operation except during startup, shutdown, maintenance, or calibration periods; and

c. The venturi scrubber SBR-0100 water flow rate, in gallons per minute, while the emissions unit is in cold startup operation.

(3) The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals(s), unless the permittee determines that a departure therefrom is warranted based on good engineering and maintenance practices, the permittee shall record the water flow rate of the venturi scrubber on a once per 12-hour shift basis.

For purposes of this condition, the optimum ranges for:

a. The venturi scrubber (SBR-1305 water flow rate as a one hour average is not less the minimum value established during the most recent emissions test that demonstrated that the emissions unit was in compliance except during startup, shutdown, maintenance, malfunction, or calibration periods.

b. The venturi scrubber (SBR-5375) water flow rate as a one hour average is not less than the manufacturers recommended operating value or the minimum value established during the most recent emissions test that demonstrated that the emissions unit was in compliance while the emissions unit is in normal and/or maintenance operation except during startup, shutdown, maintenance, malfunction, or calibration periods.

c. The venturi scrubber (SBR-0100) water flow rate as a one hour average is not less than the manufacturer's recommended operating value or the minimum value established during the most recent emissions test that demonstrated that the emissions unit was in compliance while the emissions unit is in cold startup operation.

(4) Whenever the monitored value for any parameter deviates from the ranges or minimum limits established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the control equipment parameters within the acceptable ranges, or at or above the minimum limits specified in this permit,

unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

a. a description of the corrective action;

b. the date the corrective action was completed;

c. the date and time the deviation ended;

d. the total period of time (in minutes) during which there was a deviation;

e. the flow rate readings immediately after the corrective action was implemented; and

f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

(5) These limits for the liquid flow rates are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted range or limit for the pressure drop or liquid flow rate based upon information obtained during future performance tests that demonstrate compliance with the allowable particulate emission rate for this/these emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor modification.

(6) The permittee shall operate and maintain existing equipment to continuously monitor and record the chlorine concentration in parts per million at the P001STK1310 egress. The permittee shall maintain records of all data obtained by the continuous chlorine monitoring system including, but not limited to, parts per million chlorine on an instantaneous basis, and results of daily zero/span calibration checks.

(7) The permittee shall implement a Standard Operating Procedure to respond to excessive levels of chlorine concentrations as determined by the continuous monitor. Such a procedure shall include acknowledgement of an alarm condition by operating personnel, the cause of the alarm, and corrective action taken.

(8) The application for these emissions units, P001 and P006, combined, was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to these emissions units for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant with an increase over one ton per year using an air dispersion model SCREEN3 The predicted 1-hour maximum ground-level

concentration results from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions units, (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

   i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or

   ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4\ TLV/XY = MAGLC$$

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year):

Toxic Contaminant:	S_2 CAS 75-15-0
TLV (mg/m3):	3.108
Maximum Hourly Emission Rate (lbs/hr):	4.875
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3):	16.39
MAGLC (ug/m3):	74

Toxic Contaminant:	HCl
TLV (mg/m3):	2.194
Maximum Hourly Emission Rate (lbs/hr):	2.025
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3):	6.81
MAGLC (ug/m3):	52

The permittee, has demonstrated that emissions of CS_2 and HCl, from emissions units P001 and P006, combined were calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

(9) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final permit to install prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

(10) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s) modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);

c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

(11) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. each period of time (start time and date, and end time and date) when the venturi scrubber SBR-1305 wet scrubber water flow rate was lower than the recommended minimum from above;

b. each period of time (start time and date, and end time and date) during cold startup operation when the venturi scrubber SBR-0100 water flow rate was lower than the recommended minimum from above;

c. each period of time (start time and date, and end time and date) maintenance operation when venturi scrubber SBR-5375 water flow rate was lower than the recommended minimum from above;

d. each incident of deviation described in "a" through "c"(above) where a prompt investigation was not conducted;

e. each incident of deviation described in “a” through “c”(where prompt corrective action, that would bring the liquid flow rate into compliance with the acceptable range, was determined to be necessary and was not taken; and

f. each incident of deviation described in “a” through “c”(where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

(2) The permittee shall submit quarterly reports that identify each instance the process was vented to the startup scrubber system including the start time and date and end time and date.

(3) The permittee shall submit reports that identify each occasion when the chlorine emissions were in excess of the reportable quantity required by the Emergency Planning and Community Right-to-Know Act (EPCRA), except during calibration spans. These reports shall contain the date, commencement and completion times, duration of each occasion, the total chlorine emissions for each occasion (in pounds), and the corrective actions taken (if any). Each report shall be submitted within 30 days after the reportable quantity chlorine release occurs.

(4) The permittee shall submit annual reports that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the Toxic Air Contaminate Statute, ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:

a. the original model input;

b. the updated model input;

c. the reason for the change(s) to the input parameter(s);

d. a summary of the results of the updated modeling, including the input changes; and

e. a statement indicating if the updated model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

f) Testing Requirements

(1) 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. <u>Emission Limitation</u>:

Visible particulate emissions (PE) from any stack egress shall not exceed 20% opacity as a 6-minute average.

Applicable Compliance Method:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

b. Emission Limitation:

Particulate emissions (PE) shall not exceed 33.0 lbs/hr.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

c. Emission Limitation:

Sulfur dioxide (SO2) emissions shall not exceed 242 lbs/hr.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6C and the procedures in OAC rule 3745-18-04.

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

The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of the modified titanium oxide production process.

The emission testing shall be conducted to verify emissions factors at the maximum production rate and to establish the control device operating parameters.

The following test method(s) shall be employed:

PM See the applicable compliance method in f)(1)

. SOx See the applicable compliance method in f)(1)

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

The test(s) shall be conducted under representative normal operating conditions at or near maximum capacity of the emissions unit. The conditions of operation during the emission test shall be approved by the Ohio EPA during the Intent-to-Test evaluation.

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).

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.

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.

2. P002, Spray Dryer A.

Operations, Property and/or Equipment Description:

Train A Finishing process: including a TiO2 paste feed tank (TNK-2501), TiO2 paste dryer (DRY-2505), a nominal 27.5 mmBtu/hr natural gas fired burner (BRN-2508) with two baghouses (BAG-2515 and BAG-2520) to control particulate emissions

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.	ORC 3704.03(T)	Nitrogen oxides (NOx) from the collection system egress STK-2535 shall not exceed 2.70 lbs/hr.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001	Particulate matter (PM_{10}) less than 10 microns in diameter/ particulate matter ($PM_{2.5}$) less than 2.5 microns in diameter from the collection system egress STK-2535 shall not exceed 1.42lbs/hr, which is the same as 0.00561 grain/dscf and 6.23 TPY. Filterable particulate matter (PM) from the collection system egress STK-2535 shall not exceed 1.27lbs/hr, which is the same as .0050 grain/dscf and 5.56 TPY. Carbon monoxide (CO) from the collection system egress STK-2535 shall not exceed 2.26 lbs/hr and 9.92 TPY. Organic compounds (OC) from the collection system egress STK-2535 shall not exceed 0.30 lb/hr and 1.30 TPY. There shall be no visible particulate emissions from the collection system egress STK-2535, except during periods

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		of startup, shutdown or malfunction as set forth in 40 CFR 60.8(c) and OAC rule 3745-15-06. The exclusion for uncombined water as set forth in OAC rule 3745-17-07(A)(2) shall apply. See b)(2)a and b)(2)c.
c.	OAC rule 3745-31-05(A)(3), as effective 12/01/2006	See b)(2)b.
d.	OAC rule 3745-17-07(A)	The limitations specified in this rule is currently less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3) as effective November 30, 2001 and 40 CFR 60,Subpart UUU
e.	OAC rule 3745-17-11(B)	The emission limitations specified in this rule are currently less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3) as effective November 30, 2001 and 40 CFR 60, Subpart UUU.
f.	OAC rule 3745-18-06	This emission unit is exempt from paragraphs (D), (F) and (G) of this rule and from rules 3745-18-07 to 3745-18-94 of the Administrative Code during any calendar day in which natural gas is the only fuel burned.
g.	40 CFR Part 60, Subpart UUU	The emissions shall not exceed 0.025 grain/dscf particulate matter (PM) and 10 percent (%) opacity, as a 6-minute average from the collection system egress STK-2535. The emission limitations specified in 40 CFR Part 60, Subpart UUU are currently less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3) as effective November 30, 2001. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the Ohio State Implementation Plant, the PM emission limitation of 0.025 grain/dscf of exhaust gases from the collection system egress STK-2535 specified in 40 CFR 60.732(a) will apply.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		However, the opacity limitation specified in 40 CFR 60.732(b) will continue to be less stringent than the opacity limitation specified in OAC rule 3745-31-05(A)(3) as effective on November 30, 2001. See b)(2)d.

(2) Additional Terms and Conditions

a. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio.

Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

b. This paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the sulfur dioxide emissions, carbon monoxide, or volatile organic compound emissions from this air contaminant source since the uncontrolled potential to emit for these emissions are each less than 10 tons per year.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the filterable particulate emission, particulate matter emissions less than 10 microns and particulate matter emissions less than 2.5 microns from this air contaminant source since the after control potential to emit for these emissions are each less than 10 tons per year.

c. No BAT controls are required for the condensable fraction of PM emissions from this emissions unit. The BAT limit for this emissions unit includes condensable PM emissions based upon AP-42 emission factors for natural gas combustion. The condensable fraction of the BAT limit may be adjusted upward, with an administrative permit amendment, to the extent warranted by future stack testing that is more representative of actual condensable PM emissions from this emissions unit than the AP-42 emission factor relied upon.

d. The requirements of 40 CFR Part 60, Subpart UUU have been included for this emissions unit on the basis that USEPA has tentatively determined that the rule is applicable to this emissions unit. This determination is currently under review at USEPA. If USEPA determines in the future that Subpart UUU does not apply to this emissions unit, the terms and conditions established pursuant to 40 CFR Part 60, Subpart UUU shall be void and cease to apply. This emissions unit has potential PM emissions less than 11 tons per year. Therefore, unless and until USEPA makes a final determination otherwise, this emissions unit is exempt from any monitoring requirements under 40 CFR 60.734, consistent with 57 Fed. Reg. 44501 (Sept. 28, 1992).

c) Operational Restrictions

(1) The permittee shall burn only natural gas in the TiO2 paste dryer burner (BRN-2508).

(2) The permittee shall employ the two baghouse collection system (BAG-2515, BAG-2520) at all times while the emissions unit is in normal operation. The baghouse collection system operates as a product collection device and inherently cannot be bypassed; therefore, no monitoring, recordkeeping or reporting of the operating time of the baghouse collection device is required.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas in the TiO2 paste dryer burner (BRN-7508), the permittee shall maintain a record of the type and quantity of fuel burned, and the sulfur content of the fuel.

(2) The permittee shall perform daily checks of the spray dryer STK-2535 egress, 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. whether the visible emissions during the observation period were continuous or intermittent;

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

f. the results of any initial deposition rod test; and

g. the results of any depositions rod test following any corrective actions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions

incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that:

a. identify all days during which any visible particulate emissions were observed from spray dryer STK-2535 egress and

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

These reports shall be submitted to the Ohio EPA Northeast District Office by January 31 and July 31 of each year and shall cover the previous six-month period.

(2) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in the TiO2 paste dryer burner (BRN-2508). Each report shall be submitted within 30 days after the deviation occurs.

f) Testing Requirements

(1) 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. <u>Emission Limitation:</u>

There shall be no visible particulate emissions from the STK-2535 egress, except during periods of startup, shutdown or malfunction as set forth in 40 CFR 60.8(c) and OAC rule 3745-15-06. The exclusion for uncombined water as set forth in OAC rule 3745-17-07(A)(2) shall apply.

<u>Applicable Compliance Method(s):</u>

Compliance shall be determined by 40 CFR 60, Appendix A, Method 22,

b. <u>Emission Limitation:</u>

Particulate matter (PM_{10}) less than 10 microns in diameter / particulate matter ($PM_{2.5}$) less than 2.5 microns in diameter from the collection system egress STK-2535 shall not exceed 1.42 lbs/hr which is the same as 0.00561 grain/dscf and 6.23 TPY.

<u>Applicable Compliance Method(s):</u>

If required, the permittee shall demonstrate compliance with the short term emission limitations through the emission tests results performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Methods 201A and 202.

The tpy emission limitation was developed by multiplying the short-term allowable particulate emission limitation (1.42 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

c. Emission Limitation:

Filterable particulate matter (PM) from the collection system egress STK-2535 shall not exceed 1.27 lbs/hr, which is the same as .0050 grain/dscf and 5.56 TPY.

Applicable Compliance Method(s):

If required, the permittee shall demonstrate compliance with the short term emission limitations through the summation of the hourly emission tests results performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

The tpy emission limitation was developed by multiplying the short-term allowable particulate emission limitation (1.27 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

d. Emission Limitation:

Carbon monoxide (CO) from the collection system egress STK-2535 shall not exceed 2.26 lbs/hr and 9.92 TPY.

Applicable Compliance Method(s):

If required, the permittee shall demonstrate compliance with the short-term emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10.

The tpy emission limitation was developed by multiplying the short-term allowable particulate emission limitation (2.26 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

e. Emission Limitation:

Nitrogen oxides (NOx) from the collection system egress STK-2535 shall not exceed 2.70 lbs/hr. .

Applicable Compliance Method(s):

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7E.

f. Emission Limitation:

Organic compounds (OC) from the collection system egress STK-2535 shall not exceed, 0.30 lb/hr and 1.30 TPY.

Applicable Compliance Method(s):

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25A.

The tpy emission limitation was developed by multiplying the short-term allowable particulate emission limitation (0.30 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

g. Emission Limitation:

Visible particulate emissions shall not exceed 10 % opacity, as a 6-minute average from the collection system egress STK-7537.

Applicable Compliance Method(s):

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

h. Emission Limitation:

Particulate matter (PM) from the collection system egress STK-7537 shall not exceed 0.025 grain/dscf.

Applicable Compliance Method(s):

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10) and NSPS, Subpart UUU.

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

The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of the modified emissions unit.

The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for filterable PM, in pounds per hour, the allowable concentration of filterable particulate emissions in the exhaust stream and PM_{10}//$PM_{2.5}$,in pounds per hour.

The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

a. PM See the applicable compliance method in f)(1)

b. PM_{10} See the applicable compliance method in f)(1)

c. $PM_{2.5}$ See the applicable compliance method in f)(1)

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

The test(s) shall be conducted under representative normal operating conditions at or near maximum capacity of the emissions unit. The conditions of operation during the emission test shall be approved by the Ohio EPA during the Intent-to-Test evaluation.

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).

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.

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.

3. P006, Chlorination B Process

Operations, Property and/or Equipment Description:

Train "B" Chlorination Process: including two chlorinators (CHL-5201, CHL-5203), two cyclones (CYC-5201, CYC-5203), a quench column (CND-5208), two condensers (CND-5211, CND-5212) with a mist eliminator (MEL-5212), a spray tower wet scrubber (TWR-5300), a venturi scrubber (SBR-5305), which controls PE, a separator tower (SEP-5310) followed by a 17.6 mmBtu/hr natural gas fired thermal convertor (BRN-5330), which controls CO and OC emissions and which transfers heat to a heat recovery boiler, and a water quench with a packed column caustic scrubber mist eliminator (SBR-5390), which controls H_2SO_4 mist emissions during normal operations via a stack egress (STK-5355)

In addition a scrubber spray tower (TWR-5370), a venturi scrubber (SBR-5375), which controls PE, and a separator tower (SEP-5380) are used during maintenance operations via a stack egress (STK-SNAKE). A venturi scrubber (SBR-0100), which controls PE, and a separator tower (SEP-0101) are used during cold startup or during maintenance activities.

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) d)(8), d)(9), d)(10), d)(11) and e)(7)

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.	ORC 3704.03(T)	Sulfur dioxide (SO_2) shall not exceed 8.90 lbs/hr. Carbon monoxide (CO) shall not exceed 15.89 lbs/hr. Hydrogen chloride (HCl) shall not exceed 3.79 lbs/hr.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001	Filterable particulate matter (PM) /particulate matter (PM_{10}) less than 10 microns in diameter/ particulate matter ($PM_{2.5}$) less than 2.5 microns in diameter shall not exceed 1.25 lbs/hr and 5.48 TPY. Nitrogen oxides (NO_x) shall not exceed 0.64 lb/hr and 2.80 TPY.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		Carbonyl sulfide (COS)/Volatile Organic Compounds (VOC) shall not exceed 1.69 lbs/hr and 7.40 TPY. The requirements of this rule include compliance with OAC rule 3745-17-07(A)(1). See b)(2)b through b)(2)e and b)(2)j. See b)(2)h.
c.	OAC rule 3745-31-05(A)(3), as effective 12/01/2006	See b)(2)a through b)(2)d. See b)(2)i.
d.	OAC rule 3745-31-10 - OAC rule 3745-31-20 40 CFR Part 52, Section 52.21	Sulfuric acid (H_2SO_4) shall not exceed 4.50 lbs/hr and 19.71 TPY. See section b)(2)e.
e.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions shall not exceed 20 % opacity, except as provided by rule.
f.	OAC rule 3745-17-11(B)	Particulate emissions (PE) shall not exceed 37.0 lbs/hr. See b)(2)f. The emission limitations specified in this rule are currently less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3) as effective November 30, 2001. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the Ohio State Implementation Plant, the PE limitation 37.0 lbs/hr of exhaust gases will apply.
g.	OAC rule 3745-18-06(E)(2)	The requirements established pursuant to this rule is less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3) and OAC rule 3745-31-10 through OAC rule 3745-31-20.
h.	40 CFR Part 64 Compliance Assurance Monitoring (CAM)	See b)(2)g.

(2) Additional Terms and Conditions

a. Methane injection must be employed to control chlorine emissions from a chlorine release that occurs during a safety bypass of the thermal converter (BRN-5330) and the caustic scrubber (SBR-5390).

b. The following control equipment are used to control emissions during maintenance operations at this emissions unit and also to control emissions during maintenance operations at Train "A" Chlorination Process (P001): a scrubber spray tower (TWR-5370), a venturi scrubber (SBR-5375) and a separator tower (SEP-5380).

c. The following control equipment is used to control emissions during startup operations at this emissions unit and also to control emissions during startup operations at Train "A" Chlorination Process (P001): a venturi scrubber (SBR-0100) and a separator (SEP-0101).

d. A safety bypass around the thermal converter was incorporated as part of the original Plant design of the B train chlorination system. The function of the safety bypass is to route combustible gases from chlorination around the thermal converter during a flame out, directly to the exhaust stack. A catastrophic explosion could occur if combustible gases are allowed to enter a hot vessel without a flame to ensure complete combustion.

A Preventative Maintenance Malfunction Abatement Plan (PMMAP), has been prepared and approved by Ohio EPA for the B train thermal converter. It outlines the procedures employed to minimize emissions that result from the use of the safety bypass. A safety bypass will not be considered a malfunction or deviation for Title V reporting so long as the approved PMMAP is followed. The pound per hour limit for CO is representative of normal operation and shall not apply during startup, shutdown, or safety bypass. If a safety bypass event occurs and the PMMAP is not followed, it will be considered a deviation for purposes of Title V reporting. A call will be made to Ohio EPA's Northeast District Office within 24 hours of the occurrence to report a malfunction per OAC rule 3745-15-06. The permittee shall maintain records of safety bypass emissions estimates.

e. Based on the "Prevention of Significant Deterioration" (PSD) analysis conducted to ensure the application of "Best Available Control Technology" (BACT), it has been determined that no additional air pollution controls are required to control H_2SO_4. The emission limitations based on the BACT requirements are listed under OAC rules 3745-31-10 thru 20 above.

f. The allowable, hourly PE rate is based on Table I in OAC rule 3745-17-11. The uncontrolled mass rate of emissions, which is used to determine the allowable PE rate using curve P-1 within Figure II in OAC rule 3745-17-11, cannot be accurately ascertained by emissions testing or by using emissions factors.

g. This emissions unit is a pollutant specific emissions unit according to 40 CFR 64 and will be required to develop a CAM plan prior to the issuance of the Title V operating permit.

h. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio.

Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

i. This paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the nitrogen oxide emissions from this air contaminant source since the uncontrolled potential to emit for these emissions are each less than 10 tons per year.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the particulate matter (PM_{10}) less than 10 microns in diameter/ particulate matter ($PM_{2.5}$) less than 2.5 microns in diameter and carbonyl sulfide/volatile organic compound from this air contaminant source since the after control potential to emit for these emissions are each less than 10 tons per year.

j. Best Available Technology (BAT) for PM-10/PM-2.5 includes the filterable fraction and the condensable fraction of particulate emissions. However, when this permit was issued, no data was available to determine the condensable fraction. Therefore, the listed BAT emission limit only includes the filterable fraction. This limit may be adjusted to include both filterable and condensable fractions of particulate once the post permit emissions testing is completed. The existing control scenario as described in this permit has been determined to meet BAT for the combination of filterable and condensable PM-10/PM-25.

c) Operational Restrictions

(1) The permittee shall employ the venturi scrubber SBR-15305, the thermal convertor BRN-5330 and the water quench with a packed column caustic scrubber mist eliminator SBR-5390 whenever the emissions unit is in operation except during startup, shutdown, maintenance, malfunction, calibration periods or safety bypass events.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record:

a. each instance the process was vented to the startup scrubber system when the sources was in operation (during cold startup) including the start time and date and end time and date; and

b. each instance the process was not vented to venturi scrubber SBR-5305 when the source was in operation, including the start time and date and end time and date.

(2) The permittee shall properly operate and maintain equipment to monitor:

a. The venturi scrubber SBR-5305 water flow rate, in gallons per minute, during operation of this emissions unit, except for periods of startup, shutdown, maintenance, malfunction, calibration periods, or safety bypass events;

b. The thermal convertor BRN-5330 average combustion temperature, in degrees Fahrenheit (or Celsius), during operation of this emissions unit, except for periods of startup, shutdown, maintenance, malfunction, calibration periods, or safety bypass events;

c. The packed column caustic scrubber mist eliminator SBR-5390 20% caustic solution flow rate, in gallons per minute, during operation of this emissions unit, except for periods of startup, shutdown, maintenance, malfunction, calibration periods, or safety bypass events;

d. The venturi scrubber SBR-5375 water flow rate, in gallons per minute, during operation of this emissions unit in normal and/or maintenance operation except during startup, shutdown, maintenance, or calibration periods; and

e. The venturi scrubber SBR-0100 water flow rate, in gallons per minute, while the emissions unit is in cold startup operation.

(3) The monitoring equipment shall be calibrated, operated, and maintained in accordance with the manufacturer's recommendations, instructions, and operating manuals(s), unless the permittee determines that a departure therefrom is warranted based on good engineering and maintenance practices, the permittee shall record the water flow rate of the venture scrubber on a once per 12-hour shift basis.

For purposes of this condition, the optimum ranges for:

a. The venturi scrubber (SBR-5305) water flow rate as a 1-hour average is not less the minimum value established during the most recent emissions test that demonstrated that the emissions unit was in compliance except during startup, shutdown, maintenance, malfunction, calibration periods, or safety bypass events.

b. The thermal converter (BRN-5330) average combustion temperature is any 3-hour block of time, of not less than 1,350 degrees Fahrenheit (762 degrees

Celsius) as outlined in the PMMAP or no more than 50 degrees Fahrenheit (28 degrees Celsius) below the average temperature during the most recent emissions test that demonstrated that the emissions unit was in compliance except during startup, shutdown, maintenance, malfunction, calibration periods, or safety bypass events.

c. The packed column caustic scrubber mist eliminator SBR-5390 20% caustic flow rate 1-hour average is at or above the manufacturer's recommended operating value or the minimum value established during the most recent emissions test that demonstrated that the emissions unit was in compliance except during startup, shutdown, maintenance, malfunction, calibration periods, or safety bypass events

d. The venturi scrubber (SBR-5375) water flow rate1-hour average is not less than the manufacturer's recommended operating value or the minimum value established during the most recent emissions test that demonstrated that the emissions unit was in compliance while the emissions unit is in normal and/or maintenance operation except during startup, shutdown, maintenance, malfunction, or calibration periods.

e. The venturi scrubber (SBR-0100) water flow rate as a one hour average is not less than the manufacturer's recommended operating value or the minimum value established during the most recent emissions test that demonstrated that the emissions unit was in compliance while the emissions unit is in cold startup operation.

(4) Whenever the monitored value for any parameter deviates from the ranges or minimum limits established in accordance with this permit, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

a. the date and time the deviation began;

b. the magnitude of the deviation at that time;

c. the date the investigation was conducted;

d. the name(s) of the personnel who conducted the investigation; and

e. the findings and recommendations.

In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the control equipment parameters within the acceptable ranges, or at or above the minimum limits specified in this permit, unless the permittee determines that corrective action is not necessary and documents the reasons for that determination and the date and time the deviation ended. The permittee shall maintain records of the following information for each corrective action taken:

a. a description of the corrective action;

b. the date the corrective action was completed;

c. the date and time the deviation ended;

d. the total period of time (in minutes) during which there was a deviation;

e. the flow rate readings immediately after the corrective action was implemented; and

f. the name(s) of the personnel who performed the work.

Investigation and records required by this paragraph do not eliminate the need to comply with the requirements of OAC rule 3745-15-06 if it is determined that a malfunction has occurred.

(5) These limits for the liquid flow rates are effective for the duration of this permit, unless revisions are requested by the permittee and approved in writing by the appropriate Ohio EPA District Office or local air agency. The permittee may request revisions to the permitted range or limit for the pressure drop or liquid flow rate based upon information obtained during future performance tests that demonstrate compliance with the allowable particulate emission rate for this/these emissions unit(s). In addition, approved revisions to the range or limit will not constitute a relaxation of the monitoring requirements of this permit and may be incorporated into this permit by means of a minor modification.

(6) The permittee shall operate and maintain existing equipment to continuously monitor and record the chlorine concentration in parts per million at the P001STK5355 egress. The permittee shall maintain records of all data obtained by the continuous chlorine monitoring system including, but not limited to, parts per million chlorine on an instantaneous basis, and results of daily zero/span calibration checks.

(7) The permittee shall implement a Standard Operating Procedure to respond to excessive levels of chlorine concentrations as determined by the continuous monitor. Such a procedure shall include acknowledgement of an alarm condition by operating personnel, the cause of the alarm, and corrective action taken.

(8) The application for these emissions units, P001 and P006, combined, was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to these emissions units for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and modeling was performed for each toxic air contaminant with and increase over one ton per year using an air dispersion model SCREEN3 The predicted 1-hour maximum ground-level concentration results from the approved air dispersion model, was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

a. the exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour workday and a 40-hour workweek, for each toxic compound(s) emitted from the emissions units, (as determined from the raw materials processed and/or coatings or other materials applied) has been documented from one of the following sources and in the following order of preference (TLV was and shall be used, if the chemical is listed):

   i. threshold limit value (TLV) from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; or

   ii. STEL (short term exposure limit) or the ceiling value from the American Conference of Governmental Industrial Hygienists (ACGIH) "Threshold Limit Values for Chemical Substances and Physical Agents Biological Exposure Indices"; the STEL or ceiling value is multiplied by 0.737 to convert the 15-minute exposure limit to an equivalent 8-hour TLV.

b. The TLV is divided by ten to adjust the standard from the working population to the general public (TLV/10).

c. This standard was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "X hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

$$TLV/10 \times 8/X \times 5/Y = 4\ TLV/XY = MAGLC$$

d. The following summarizes the results of dispersion modeling for the significant toxic contaminants (emitted at 1 or more tons/year):

Toxic Contaminant:	CS_2 CAS 75-15-0
TLV (mg/m3):	3.108
Maximum Hourly Emission Rate (lbs/hr):	4.875
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3):	16.39
MAGLC (ug/m3):	74

Toxic Contaminant:	HCl
TLV (mg/m3):	2.194
Maximum Hourly Emission Rate (lbs/hr):	2.025

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3):	6.81
MAGLC (ug/m3):	52

The permittee, has demonstrated that emissions of CS_2 and HCl, from emissions units P001 and P006, combined, were calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

(9) Prior to making any physical changes to or changes in the method of operation of the emissions unit(s), that could impact the parameters or values that were used in the predicted 1-hour maximum ground-level concentration, the permittee shall re-model the change(s) to demonstrate that the MAGLC has not been exceeded. Changes that can affect the parameters/values used in determining the 1-hour maximum ground-level concentration include, but are not limited to, the following:

a. changes in the composition of the materials used or the use of new materials, that would result in the emission of a new toxic air contaminant with a lower Threshold Limit Value (TLV) than the lowest TLV previously modeled;

b. changes in the composition of the materials, or use of new materials, that would result in an increase in emissions of any toxic air contaminant listed in OAC rule 3745-114-01, that was modeled from the initial (or last) application; and

c. physical changes to the emissions unit(s) or its/their exhaust parameters (e.g., increased/ decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).

If the permittee determines that the "Toxic Air Contaminant Statute" will be satisfied for the above changes, the Ohio EPA will not consider the change(s) to be a "modification" under OAC rule 3745-31-01 solely due to a non-restrictive change to a parameter or process operation, where compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), has been documented. If the change(s) meet(s) the definition of a "modification", the permittee shall apply for and obtain a final PTI prior to the change. The Director may consider any significant departure from the operations of the emissions unit, described in the permit application, as a modification that results in greater emissions than the emissions rate modeled to determine the ground level concentration; and he/she may require the permittee to submit a permit application for the increased emissions.

(10) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F):

a. a description of the parameters/values used in each compliance demonstration and the parameters or values changed for any re-evaluation of the toxic(s)

modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

b. the Maximum Acceptable Ground-Level Concentration (MAGLC) for each significant toxic contaminant or worst-case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F);

c. a copy of the computer model run(s), that established the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit(s) to be in compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. the documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), and documentation of any determination that was conducted to re-evaluate compliance due to a change made to the emissions unit(s) or the materials applied.

(11) The permittee shall maintain a record of any change made to a parameter or value used in the dispersion model, used to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F), through the predicted 1-hour maximum ground-level concentration. The record shall include the date and reason(s) for the change and if the change would increase the ground-level concentration.

e) Reporting Requirements

(1) The permittee shall submit quarterly deviation (excursion) reports that identify:

a. each period of time (start time and date, and end time and date) when the venturi scrubber SBR-5305 wet scrubber water flow rate was lower than the recommended minimum from above;

b. each period of time (start time and date, and end time and date) when the thermal convertor BRN-5330 average combustion temperature, (all 3-hour blocks of time) was lower than the recommended minimum from above;

c. each period of time (start time and date, and end time and date) when the packed column caustic scrubber mist eliminator SBR-5390 20 % caustic solution flow rate was lower than the recommended minimum from above;

d. each period of time (start time and date, and end time and date) during cold startup operation when the venturi scrubber SBR-0100 water flow rate was lower than the recommended minimum from above;

e. each period of time (start time and date, and end time and date) maintenance operation when venturi scrubber SBR-5375 water flow rate was lower than the recommended minimum from above;

f. each incident of deviation described in "a" through "e" (above) where a prompt investigation was not conducted;

g. each incident of deviation described in “a” through “e” where prompt corrective action, that would bring the liquid flow rate into compliance with the acceptable range, was determined to be necessary and was not taken; and

h. each incident of deviation described in “a” through “e” where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and record keeping requirements of this permit.

(2) The permittee shall submit quarterly reports that identify each instance the process was vented to the cold startup system including the start time and date and end time and date.

(3) The permittee shall submit reports that identify each occasion when the chlorine emissions were in excess of the reportable quantity required by the Emergency Planning and Community Right-to-Know Act (EPCRA), except during calibration spans. These reports shall contain the date, commencement and completion times, duration of each occasion, the total chlorine emissions for each occasion (in pounds), and the corrective actions taken (if any). Each report shall be submitted within 30 days after the reportable quantity chlorine release occurs.

(4) Notification must be made to Ohio EPA Northeast District Office within 24 hours after any of the following conditions occurs:

a. a malfunction incident such that process equipment, control equipment or related equipment breaks down or fails in such a manner to cause air contaminant emissions above the allowable levels specified in section b)(1). (except as provided in section b)(2)h.;

b. a malfunction has been corrected and the equipment is operational again; or

c. actions are taken during a safety bypass that are not consistent with the PMMAP.

(5) Written notification must be made to Ohio EPA Northeast District Office after actions are taken during a safety bypass that are not consistent with the PMMAP within the specified time period(s) and shall include the name, title, and signature of the owner or operator or other responsible official who is certifying its accuracy, explaining the circumstances of the event, the reasons for not following the PMMAP, whether any excess emissions and/or parameter monitoring exceedances are believed to have occurred, and if there was delay in making repairs, proof that repair parts have been ordered or any other records that would explain that the delay was beyond the owner/operator's control:

a. within 7 work days after the end of a safety bypass incident, excluding safety bypasses resulting from temperature monitoring of the thermal convertor BRN-5330; and

b. within 14 work days after the end of a thermal convertor BRN-5330 temperature monitoring safety bypass incident.

(6) The permittee shall submit quarterly deviation (excursion) reports to the Ohio EPA Northeast District Office. If no malfunctions occurred during a calendar quarter, the

permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. These reports shall contain the following information for each malfunction incident:

a. date;

b. commencement time, completion time and duration;

c. an identification of the process equipment and/or control equipment affected by the malfunction;

d. an identification and estimated quantity of air contaminant emissions that have been or may have been emitted (in pounds);

e. the corrective actions taken (if any);

f. whether the actions taken were consistent with the procedures specified in the PMMAP or not; and

g. if applicable, the reasons why the PMMAP procedures were not followed.

(7) Within thirty (30) days following the end of each calendar quarter, the permittee shall submit quarterly malfunction summary reports to the Ohio EPA Northeast District Office. These reports shall contain the following information:

a. the beginning and ending dates of the reporting period;

b. the total operating time of the emissions unit during the reporting period;

c. the identification of the air contaminant emissions and sum total duration of excess emissions for all malfunction incidents during the reporting period (recorded in minutes);

d. the sum total duration of excess emissions for all malfunction incidents, expressed as a per cent of the total emissions unit operating time during the reporting period;

e. a summary account of incidents that were caused by the same type of malfunction during the reporting period; and

f. if malfunctions that affect temperature monitoring of the thermal convertor BRN-5330 occurred, the following information:

i. the date of the most recent continuous temperature monitoring device certification or audit;

ii. the total continuous temperature monitoring down-time during the reporting period;

iii. the sum total duration of continuous temperature monitoring down-time expressed as a percent of the total emissions unit operating time during the reporting period; and

iv. a summary account of temperature monitoring malfunction incidents that were caused by the same type malfunction during the reporting period.

(8) The permittee shall submit annual reports that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the Toxic Air Contaminant Statute, ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:

a. the original model input;

b. the updated model input;

c. the reason for the change(s) to the input parameter(s);

d. a summary of the results of the updated modeling, including the input changes; and

e. a statement indicating if the updated model results indicate that the 1-hour maximum ground-level concentration is less than 80% of the MAGLC.

If no changes to the emissions, emissions unit(s), or the exhaust stack have been made during the reporting period, then the report shall include a statement to that effect.

f) Testing Requirements

(1) 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. <u>Emission Limitation</u>:

Visible particulate emissions (PE) from any stack egress shall not exceed 20 % opacity, except as provided by rule.

<u>Applicable Compliance Method</u>:

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

b. <u>Emission Limitation</u>:

Filterable particulate matter (PM) /particulate matter (PM_{10}) less than 10 microns in diameter and particulate matter ($PM_{2.5}$) less than 2.5 microns in diameter shall not exceed 1.25 lb/hr and 5.48 TPY.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the short term filterable particulate matter emission limitations through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

If required, the permittee shall demonstrate compliance with the short term PM_{10} emission limitations through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4, 201A and 202.

If required, the permittee shall demonstrate compliance with the short term $PM_{2.5}$ emission limitations through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4, and 202.

The tpy emission limitation was developed by multiplying the short-term allowable particulate emission limitation (1.25 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

c. Emission Limitation:

Sulfur dioxide (SOx) shall not exceed 8.90 lbs/hr.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the short-term emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 6C and the procedures in OAC rule 3745-18-04.

d. Emission Limitation:

Carbon monoxide (CO) shall not exceed 15.89 lbs/hr .

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the short-term emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10.

e. Emission Limitation:

Nitrogen oxides (NO_x) shall not exceed 0.64 lb/hr and 2.80 TPY.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7E.

The tpy emission limitation was developed by multiplying the short-term allowable particulate emission limitation (0.64 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

f. Emission Limitation:

Hydrogen chloride (HCl) shall not exceed 3.79 lbs/hr.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the short-term emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 26.

g. Emission Limitation:

Carbonyl sulfide (COS)/Volatile Organic Compounds (VOC) shall not exceed 1.69 lbs/hr and 7.40 TPY.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the short-term emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and15.

The tpy emission limitation was developed by multiplying the short-term allowable particulate emission limitation (1.69 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

h. Emission Limitation:

Sulfuric acid mist shall not exceed 4.50 lbs/hr and 19.71 TPY.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 8.

The tpy emission limitation was developed by multiplying the short-term allowable particulate emission limitation (4.50 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

i. Emission Limitation:

Particulate emissions (PE) shall not exceed 37.0 lbs/hr.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

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

The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of the modified titanium oxide production process.

The emission testing shall be conducted to verify emissions factors at the maximum production rate and to establish the control device operating parameters.

The following test method(s) shall be employed:

PM See the applicable compliance method in f)(1)

. PM_{10} See the applicable compliance method in f)(1)

$PM_{2.5}$ See the applicable compliance method in f)(1)

. CO See the applicable compliance method in f)(1)

. NOx See the applicable compliance method in f)(1)

. HCl See the applicable compliance method in f)(1)

. COS See the applicable compliance method in f)(1)

. SOx See the applicable compliance method in f)(1)

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

The test(s) shall be conducted under representative normal operating conditions at or near maximum capacity of the emissions unit. The conditions of operation during the emission test shall be approved by the Ohio EPA during the Intent-to-Test evaluation.

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).

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.

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.

4. P007, Spray Dryer B

Operations, Property and/or Equipment Description:

Train B Finishing process: including a TiO2 paste feed tank (TNK-2501), TiO2 paste dryer (DRY-2505), a nominal 50 mmBtu/hr natural gas fired burner (BRN-7508) with four baghouses (BAG-7515, BAG-7517, BAG-7519 and BAG-7521) to control particulate emissions

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.	ORC 3704.03(T)	Carbon monoxide (CO) from the collection system egress STK-7537 shall not exceed 3.45 lbs/hr. Nitrogen oxides (NOx) from the collection system egress shall not exceed STK-7537 4.90 lbs/hr. .
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/2001	Particulate matter (PM_{10}) less than 10 microns in diameter/ particulate matter ($PM_{2.5}$) less than 2.5 microns in diameter from the collection system egress STK-7537 shall not exceed 2.19 lbs/hr, which is the same as .00539 grain/dscf and 9.60 TPY. Filterable particulate matter (PM) from the collection system egress STK-7537 shall not exceed 1.91lbs/hr which is the same as 0.00470 grain/dscf and 8.37 TPY. Organic compounds (OC) from the collection system egress STK-7537 shall not exceed 0.54 lb/hr and 2.36 TPY. There shall be no visible particulate emissions from the collection system egress STK-7537, except during periods

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		of startup, shutdown or malfunction as set forth in 40 CFR 60.8(c) and OAC rule 3745-15-06. The exclusion for uncombined water as set forth in OAC rule 3745-17-07(A)(2) shall apply. See b)(2)b and b)(2)d.
c.	OAC rule 3745-31-05(A)(3), as effective 12/01/2006	See b)(2)c.
d.	40 CFR Part 60, Subpart UUU	The emissions shall not exceed 0.025 grain/dscf particulate matter (PM) and 10 % opacity, as a 6-minute average from the collection system egress STK-7537. The emission limitations specified in 40 CFR Part 60, Subpart UUU are currently less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3) as effective November 30, 2001. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the Ohio State Implementation Plant, the PM emission limitation of 0.025 grain/dscf of exhaust gases from the collection system egress STK-7537 specified in 40 CFR 60.732(a) will apply. See b)(2)a.
e.	OAC rule 3745-17-07(A)	The requirements specified in OAC rule 3745-17-07(A) are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3) and 40 CFR Part 60, Subpart UUU.
f.	OAC rule 3745-17-11(B)	The requirements established pursuant to OAC rule 3745-17-11(B) are less stringent than the requirements established pursuant to OAC rule 3745-31-05(A)(3) and 40 CFR Part 60, Subpart UUU.
g.	OAC rule 3745-18-06	This emission unit is exempt from paragraphs (D), (F) and (G) of this rule and from rules OAC rule 3745-18-07 to 3745-18-94 during any calendar day in which natural gas is the only fuel burned.

(2) Additional Terms and Conditions

a. The requirements of 40 CFR Part 60, Subpart UUU have been included for emissions unit P007 on the basis that USEPA has tentatively determined that the rule is applicable to this emissions unit. This determination is currently under review at USEPA. If USEPA determines in the future that Subpart UUU does not apply to this emissions unit, the terms and conditions established pursuant to 40 CFR Part 60, Subpart UUU shall be void and cease to apply. This emissions unit has potential PM emissions less than 11 tons per year. Therefore, unless and until USEPA makes a final determination otherwise, this emissions unit is exempt from any monitoring requirements under 40 CFR 60.734, consistent with 57 Fed. Reg. 44501 (Sept. 28, 1992).

b. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio.

Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, then these emission limitations/control measures no longer apply.

c. This paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the sulfur dioxide emissions, or volatile organic compound emissions from this air contaminant source since the uncontrolled potential to emit for these emissions are each less than 10 tons per year.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the filterable particulate emissions, particulate matter emissions less than 10 microns and particulate matter emissions less than 2.5 microns from this air contaminant source since the after control potential to emit for these emissions are each less than 10 tons per year.

d. No BAT controls are required for the condensable fraction of PM emissions from this emissions unit. The BAT limit for this emissions unit includes condensable PM emissions based upon AP-42 emission factors for natural gas combustion. The condensable fraction of the BAT limit may be adjusted upward, with an administrative permit amendment, to the extent warranted by future stack testing that is more representative of actual condensable PM emissions from this emissions unit than the AP-42 emission factor relied upon.

c) Operational Restrictions

(1) The permittee shall burn only natural gas in the TiO2 paste dryer burner (BRN-7508).

(2) The permittee shall employ the four baghouse collection system (BAG-7515, BAG-7517, BAG-7519 and BAG-7521) at all times while the emissions unit is in normal operation. The baghouse collection system operates as a product collection device and inherently cannot be bypassed; therefore, no monitoring, recordkeeping or reporting of the operating time of the baghouse collection device is required.

d) Monitoring and/or Recordkeeping Requirements

(1) For each day during which the permittee burns a fuel other than natural gas in the TiO2 paste dryer burner (BRN-7508), the permittee shall maintain a record of the type and quantity of fuel burned, and the sulfur content of the fuel.

(2) The permittee shall perform daily checks of the spray dryer STK-7537 egress, 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. whether the visible emissions during the observation period were continuous or intermittent;

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

f. the results of any initial deposition stick test;

g. the results of any depositions stick test following any corrective actions.

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

(3) Notwithstanding the frequency of the inspections specified in section d)(2), the permittee may reduce the frequency for this emissions unit from daily to three days per week if the following conditions are met:

a. for one full quarter the permittee's inspections indicate no visible particulate emissions; and

b. thepermittee continues to comply with all the record keeping and monitoring requirements specified in section d).

The permittee shall revert to daily readings if any visible particulate emissions are observed.

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that:

a. identify all days during which any visible particulate emissions were observed from spray dryer STK-7537 egress and

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

These reports shall be submitted to the Ohio EPA Northeast District Office by January 31 and July 31 of each year and shall cover the previous six-month period.

(2) The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in the TiO2 paste dryer burner (BRN-7508). Each report shall be submitted within 30 days after the deviation occurs.

f) Testing Requirements

(1) 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. <u>Emission Limitation:</u>

There shall be no visible particulate emissions from the STK-7537 egress, except during periods of startup, shutdown or malfunction as set forth in 40 CFR 60.8(c) and OAC rule 3745-15-06. The exclusion for uncombined water as set forth in OAC rule 3745-17-07(A)(2) shall apply.

<u>Applicable Compliance Method(s):</u>

Compliance shall be determined by 40 CFR 60, Appendix A, Method 22.

b. <u>Emission Limitation:</u>

Visible particulate emissions shall not exceed 10 % opacity, as a 6-minute average from the collection system egress STK-7537.

Applicable Compliance Method(s):

If required, compliance shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9, and the procedures specified in OAC rule 3745-17-03(B)(1).

c. Emission Limitation:

Particulate matter (PM_{10}) less than 10 microns in diameter / particulate matter ($PM_{2.5}$) less than 2.5 microns in diameter from the collection system egress STK-7537 shall not exceed 2.19 lbs/hr, which is the same as 0.00539 grain/dscf and 9.60 TPY.

Applicable Compliance Method(s):

If required, the permittee shall demonstrate compliance with the short-term emission limitations through the emission test results performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and Methods 201A and 202

The tpy emission limitation was developed by multiplying the short-term allowable particulate emission limitation (2.19 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

d. Emission Limitation:

Filterable particulate matter (PM) from the collection system egress STK-7537 shall not exceed 1.91 lbs/hr, which is the same as .00470 grain/dscf and 8.37 TPY.

Applicable Compliance Method(s):

If required, the permittee shall demonstrate compliance with the short-term emission limitation through the emission tests results performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10).

The tpy emission limitation was developed by multiplying the short-term allowable particulate emission limitation (1.91 lbs/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

e. Emission Limitation:

Carbon monoxide (CO) from the collection system egress STK-7537 shall not exceed 3.45 lbs/hr.

Applicable Compliance Method(s):

If required, the permittee shall demonstrate compliance with the short-term emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 10.

f. Emission Limitation:

Nitrogen oxides (NOx) from the collection system egress STK-7537 shall not exceed 4.90 lbs/hr.

Applicable Compliance Method(s):

If required, the permittee shall demonstrate compliance with the short-term emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 7E.

g. Emission Limitation:

Organic compounds (OC) from the collection system egress STK-7537 shall not exceed 0.54 lb/hr and 2.36 TPY.

Applicable Compliance Method(s):

If required, the permittee shall demonstrate compliance with the short-term emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 4 and 25A.

The tpy emission limitation was developed by multiplying the short-term allowable particulate emission limitation (0.54 lb/hr) by the maximum annual hours of operation (8,760 hours), and then dividing by 2,000 lbs per ton. Therefore, if compliance is shown with the short-term allowable emission limitation, compliance shall also be shown with the annual emission limitation.

h. Emission Limitation:

Particulate matter (PM) from the collection system egress STK-7537 shall not exceed 0.025 grain/dscf.

Applicable Compliance Method(s):

If required, the permittee shall demonstrate compliance with the hourly emission limitation through emission tests performed in accordance with 40 CFR Part 60, Appendix A, Methods 1 through 5 and the procedures specified in OAC rule 3745-17-03(B)(10) and NSPS, Subpart UUU.

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

The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of the modified emissions unit.

The emission testing shall be conducted to demonstrate compliance with the allowable mass emission rate for filterable PM, in pounds per hour and the allowable concentration of filterable particulate emissions in the exhaust stream and PM_{10}/$PM_{2.5}$.

The following test method(s) shall be employed to demonstrate compliance with the allowable mass emission rate(s):

PM	See the applicable compliance method in f)(1)
PM_{10}	See the applicable compliance method in f)(1)
$PM_{2.5}$	See the applicable compliance method in f)(1)

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

The test(s) shall be conducted under representative normal operating conditions at or near maximum capacity of the emissions unit. The conditions of operation during the emission test shall be approved by the Ohio EPA during the Intent-to-Test evaluation.

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).

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.

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.

5. P901, Coke and Ore Unloading, Storage, and Handling

Operations, Property and/or Equipment Description:

Coke and ore material storage and feed system load-in.

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), as effective 11/30/01	Fugitive particulate emissions (PE) shall not exceed 6.03 tons per year. Fugitive particulate emissions less than 10 microns in diameter (PM_{10}) shall not exceed 2.85 tons per year. The requirements established pursuant to OAC rule 3745-31-05(A)(3) as effective 11/30/2001 include the requirements of OAC rule 3745-17-08(B) and OAC rule 3745-17-07(B)(6). See b)(2)a and b)(2)e.
b.	OAC rule 3745-31-05(A)(3)(b), as effective 12/01/06	See b)(2)f.
c.	OAC rule 3745-17-08(B)	Reasonably available control measures that are sufficient to minimize or eliminate visible emissions of fugitive dust shall be employed. See b)(2)b through b)(2)d.
d.	OAC rule 3745-17-07(B)(1)	Visible particulate emissions from any fugitive dust source, excepted the material storage piles, shall not exceed twenty per cent opacity as a three-minute average The emission limitation specified in OAC

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		rule 3745-17-07(B)(1) is currently less stringent than the emission limitations established pursuant to OAC rule 3745-31-05(A)(3) as effective November 30, 2001. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the Ohio State Implementation Plant, the visible particulate emissions limitation in this rule will apply.
e.	OAC rule 3745-17-07(B)(6)	No visible particulate emissions from any material storage pile except for a period of time not to exceed thirteen minutes during any sixty-minute observation period.

(2) Additional Terms and Conditions

a. Visible emissions of fugitive dust from any building opening enclosing the ore and coke material handling and storage operations shall not exceed ten percent opacity as a three-minute average.

b. The material handling operation(s) that are covered by this permit and subject to the following requirements are listed below:

i. Truck dumping of ore and coke to temporary piles within the material storage building;

ii. Ore and coke temporary pile load-out to front end loader within the material storage building;

iii. Loader dumping into A-train underground hopper (HOP-1021) located within the material storage building;

iv. Loader dumping into B-train underground hopper (HOP-5000) located within the material storage building; and

v. Temporary pile wind erosion.

c. The permittee shall employ reasonably available control measures for the above-identified material handling operation(s) for the purpose of ensuring compliance with the above-mentioned applicable requirements. In accordance with the permittee's permit application, the permittee has committed to perform the following control measure(s) to ensure compliance:

Maintain operations within a four-sided building enclosure.

If necessary to eliminate fugitive emissions, close building openings, weather permitting.

d. Implementation of the above-mentioned control measures in accordance with the terms and conditions of this permit is appropriate and sufficient to satisfy the requirements of OAC rule 3745-31-05(A) and OAC rule 3745-17-08.

e. The permittee has satisfied the Best Available Technology (BAT) requirements pursuant to Ohio Administrative Code (OAC) paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to the Ohio Revised Code (ORC) changes effective August 3, 2006 (Senate Bill 265 changes), such that BAT is no longer required by State regulations for National Ambient Air Quality Standards (NAAQS) pollutant(s) less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05, these emission limitations/control measures no longer apply.

f. This rule paragraph applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the State Implementation Plan.

The Best Available Technology (BAT) requirements under OAC rule 3745-31-05(A)(3) do not apply to the particulate emissions from this air contaminant source since the potential to emit for particulate emissions is less than 10 tons per year.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform weekly checks, when the emissions unit is in operation and when the weather conditions allow, for any visible emissions of fugitive dust from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit. The presence or absence of any visible fugitive 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 location and 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. whether the visible emissions during the observation period were continuous or intermittent; ; and

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

If visible emissions are present, a visible emissions incident has occurred. The observer does not have to document the exact start and end times for the visible emissions incident under item (d) above or continue the daily check until the incident has ended. The observer may indicate that the visible emissions incident was continuous during the observation period (or, if known, continuous during the operation of the emissions unit). With respect to the documentation of corrective actions, the observer may indicate that no corrective actions were taken if the visible emissions were representative of normal operations, or specify the minor corrective actions that were taken to ensure that the emissions unit continued to operate under normal conditions, or specify the corrective actions that were taken to eliminate abnormal visible emissions.

e) Reporting Requirements

(1) The permittee shall submit semiannual written reports that:

a. identify all days during which any visible emissions of fugitive dust were observed from the egress points (i.e., building windows, doors, roof monitors, etc.) serving this emissions unit, and

b. describe any corrective actions taken to minimize or eliminate the visible fugitive dust emissions

(2) These reports shall be submitted to the Ohio EPA, Northeast District Office by January 31 and July 31 of each year and shall cover the previous six-month period.

f) Testing Requirements

(1) Compliance with the allowable emission limitations in b)(1) and b)(2) shall be determined in accordance with the following methods:

a. <u>Emission Limitation</u>

Fugitive particulate emissions (PE) shall not exceed 6.03 tons per year.

Fugitive particulate emissions less than 10 microns in diameter (PM_{10}) shall not exceed 2.85 tons per year.

<u>Applicable Compliance Method</u>

Compliance with the fugitive particulate emissions limitation shall be determined by multiplying the particulate emissions factor by the annual throughput and the number of drop points.

PM/ PM_{10}=[(PWRore) x EFore x 4 transfer points] + [(PWRcoke x EFcoke x 4 transfer points]

Where:

PWRore = actual tons of ore received per year, (maximum 165,000 tons);

PWRcoke = actual tons of coke received per year, (maximum 48,000 tons);

EFore =emissions factor in pounds per ton of ore processed per drop point as calculated from the formula found in AP-42, Compilation of Air Pollutant Emission Factors, 13.2.4 Aggregate Handling and Storage Piles (11/06) or more recent version and the following variables:

For PM

k= 0.74 particulate size multiplier for PM <30 micron;

U= 1.3 mph mean wind speed; and

M= 0.20 % material moisture content

For PM_{10}

k= 0.35 particulate size multiplier for PM <10 micron;

U= 1.3 mph mean wind speed; and

M= 0.20 % material moisture content

EFcoke =emissions factor in pounds per ton of coke processed per drop point as calculated from the formula found in AP-42, Compilation of Air Pollutant Emission Factors, 13.2.4 Aggregate Handling and Storage Piles (11/06) or more recent version and the following variables:

For PM

k= 0.74 particulate size multiplier for PM <30 micron;

U= 1.3 mph mean wind speed; and

M= 0.10 % material moisture content

For PM_{10}

k= 0.35 particulate size multiplier for PM <10 micron;

U= 1.3 mph mean wind speed; and

M= 0.10 % material moisture content

b. Emission Limitation

Visible emissions of fugitive dust from any building opening enclosing the ore and coke material handling and storage operations shall not exceed ten percent opacity as a three-minute average.

Applicable Compliance Method

Compliance with the visible emissions limitation for fugitive dust from material handling operations shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3).

c. Emission Limitation

Visible particulate emissions from any fugitive dust source, excepted the material storage piles, shall not exceed twenty per cent opacity as a three-minute average

Applicable Compliance Method

Compliance with the visible emissions limitation for fugitive dust from material handling operations shall be determined through visible emissions observations performed in accordance with U.S. EPA Method 9 and the procedures specified in OAC rule 3745-17-03(B)(3).

d. Emission Limitation

No visible particulate emissions from any material storage pile except for a period of time not to exceed thirteen minutes during any sixty-minute observation period.

Applicable Compliance Method

Compliance with the visible emissions limitation for fugitive dust from any material storage pile shall be determined through visible emissions observations performed in accordance paragraph (B)(4) of rule 3745-17-03 of the Administrative Code.

g) Miscellaneous Requirements

a. None.