Ohio Environmental Protection Agency

John R. Kasich, Governor
Mary Taylor, Lt. Governor
Craig W. Butler, Director

6/26/2015

Genevieve Damico *Via E-Mail Notification*
United States Environmental Protection Agency
Mail Code: AR-18J
77 West Jackson Blvd.
Chicago, IL 60604-3507

RE: PROPOSED AIR POLLUTION TITLE V PERMIT
Facility Name: PCS Nitrogen Ohio, L.P.
Facility ID: 0302020370
Permit Type: Renewal
Permit Number: P0117038

Dear Ms. Damico:

A proposed OAC Chapter 3745-77 Title V permit for the referenced facility has been issued for review by U.S. EPA. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Search for Permits" link under the Permitting topic on the Programs tab. If U.S. EPA does not object to this proposed permit, the permit will be processed for issuance as a final action not less than 45 days from the date of this letter. Please contact me at (614) 644-2835 by the end of the 45 day review period if you wish to object to the proposed permit.

Sincerely,

Michael E. Hopkins, P.E.
Assistant Chief, Permitting Section, DAPC

Cc: Ohio EPA DAPC, Northwest District Office

PROPOSED

Division of Air Pollution Control
Title V Permit
for
PCS Nitrogen Ohio, L.P.

Facility ID:	0302020370
Permit Number:	P0117038
Permit Type:	Renewal
Issued:	6/26/2015
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance

Ohio Environmental Protection Agency

Division of Air Pollution Control
Title V Permit
for
PCS Nitrogen Ohio, L.P.

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Authorization

Facility ID:	0302020370
Facility Description:	Nitrogenous Fertilizers
Application Number(s):	A0050191, A0050928, A0052633
Permit Number:	P0117038
Permit Description:	Title V renewal permit for a nitrogenous fertilizer production facility
Permit Type:	Renewal
Issue Date:	6/26/2015
Effective Date:	To be entered upon final issuance
Expiration Date:	To be entered upon final issuance
Superseded Permit Number:	P0115064

This document constitutes issuance of an OAC Chapter 3745-77 Title V permit to:

PCS Nitrogen Ohio, L.P.
Fort Amanda &Adgate Roads
None
Lima, OH 45804

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

Ohio EPA DAPC, Northwest District Office
347 North Dunbridge Road
Bowling Green, OH 43402
(419)352-8461

The above named entity is hereby granted a Title V permit pursuant to Chapter 3745-77 of the Ohio Administrative Code. This permit and the authorization to operate the air contaminant sources (emissions units) at this facility shall expire at midnight on the expiration date shown above. You will be sent a notice approximately 18 months prior to the expiration date regarding the renewal of this permit. If you do not receive a notice, please contact the Ohio EPA DAPC, Northwest District Office. If a renewal permit is not issued prior to the expiration date, the permittee may continue to operate pursuant to OAC rule 3745-77-08(E) and in accordance with the terms of this permit beyond the expiration date, if a timely renewal application is submitted. A renewal application will be considered timely if it is submitted no earlier than 18 months and no later than 6 months prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Craig W. Butler
Director

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. 24., Reporting Requirements Related to Monitoring and Record Keeping Requirements of State-Only Enforceable Permit Terms and Conditions

(2) Standard Term and Condition A. 25., Records Retention Requirements for State-Only Enforceable Permit Terms and Conditions

(3) Standard Term and Condition A. 27., Scheduled Maintenance/Malfunction Reporting For State-Only Requirements

(4) Standard Term and Condition A. 29., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations

(5) Standard Term and Condition A. 30.

(Authority for term: ORC 3704.036(A))

2. 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 (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit), 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.

(Authority for term: OAC rule 3745-77-07(A)(3)(b)(i))

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 all calibration and maintenance records and all original strip-chart recordingsfor continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.

(Authority for term: OAC rule 3745-77-07(A)(3)(b)(ii))

c) The permittee shall submit required reports in the following manner:

(1) All reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations caused by malfunctions shall be submitted in the following manner:

Any malfunction, as defined in OAC rule 3745-15-06(B)(1), shall be promptly reported to the Ohio EPA in accordance with OAC rule 3745-15-06. In addition, to fulfill the OAC rule 3745-77-07(A)(3)(c) deviation reporting requirements for malfunctions, written reports that identify each malfunction that occurred during each calendar quarter (including each malfunction reported only verbally in accordance with OAC rule 3745-15-06) shall be submitted by January 31, April 30, July 31, and October 31 of each year in accordance with Standard Term and Condition A.2.c)(2) below; and each report shall cover the previous calendar quarter. An exceedance of the visible emission limitations specified in OAC rule 3745-17-07(A)(1) that is caused by a malfunction is not a violation and does not need to be reported as a deviation if the owner or operator of the affected air contaminant source or air pollution control equipment complies with the requirements of OAC rule 3745-17-07(A)(3)(c).

In accordance with OAC rule 3745-15-06, a malfunction reportable under OAC rule 3745-15-06(B) is a deviation of the federally enforceable permit requirements. Even though verbal notifications and written reports are required for malfunctions pursuant to OAC rule 3745-15-06, the written reports required pursuant to this term must be submitted quarterly to satisfy the prompt reporting provision of OAC rule 3745-77-07(A)(3)(c).

In identifying each deviation caused by a malfunction, the permittee shall specify the emission limitation(s) (or control requirement(s)) for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. For a specific malfunction, if this information has been provided in a written report that was submitted in accordance with OAC rule 3745-15-06, the permittee may simply reference that written report to identify the deviation. Nevertheless, all malfunctions, including those reported only verbally in accordance with OAC rule 3745-15-06, must be reported in writing on a quarterly basis.

Any submittedscheduled maintenancerequests, as referenced in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described above for malfunctions.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

(2) Except as may otherwise be provided in the terms and conditions for a specific emissions unit (i.e., in section C. Emissions Unit Terms and Conditions of this Title V permit or, in some cases, in section B. Facility-Wide Terms and Conditions of this Title V permit), all reporting required in accordance with OAC rule 3745-77-07(A)(3)(c) for deviations of the emission limitations, operational restrictions, and control device operating parameter limitations shall be submitted in the following manner:

Written reports of (a) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, (b) the probable cause of such deviations, and (c) any corrective actions or preventive measures taken, shall be submitted promptly to the Ohio EPA DAPC, Northwest District Office. Except as provided below, the written reports shall be submitted by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

In identifying each deviation, the permittee shall specify the emission limitation(s), operational restriction(s), and/or control device operating parameter limitation(s) for which the deviation occurred, describe each deviation, and provide the estimated magnitude and duration of each deviation.

These written deviation reports shall satisfy the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations. Full compliance with OAC rule 3745-77-07(A)(3)(c) requires reporting of all other deviations of the federally enforceable requirements specified in the permit as required by such rule.

If an emissions unit has a deviation reporting requirement for a specific emission limitation, operational restriction, or control device operating parameter limitation that is not on a quarterly basis (e.g., within 30 days following the end of the calendar month, or within 30 or 45 days after the exceedance occurs), that deviation reporting requirement satisfies the reporting requirements specified in this Standard Term and Condition for that specific emission limitation, operational restriction, or control device parameter limitation. Following the provisions of that non-quarterly deviation reporting requirement will also satisfy (for the deviations so reported) the requirements of OAC rule 3745-77-07(A)(3)(c) pertaining to the submission of monitoring reports every six months and to the prompt reporting of all deviations, and additional quarterly deviation reports for that specific emission limitation, operational restriction, or control device parameter limitation are not required pursuant to this Standard Term and Condition.

See A.29 below if no deviations occurred during the quarter.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

(3) All reporting required in accordance with the OAC rule 3745-77-07(A)(3)(c) for other deviations of the federally enforceable permit requirements which are not reported in accordance with Standard Term and Condition A.2)c)(2) above shall be submitted in the following manner:

Unless otherwise specified by rule, written reports that identify deviations of the following federally enforceable requirements contained in this permit; Standard Terms and Conditions: A.3, A.4, A.5, A.7.e), A.8, A.13, A.15, A.19, A.20, A.21, and A.23 of this Title V permit, as well as any deviations from the requirements in section C. Emissions Unit Terms and Conditions of this Title V permit, and any monitoring, record keeping, and reporting requirements, which are not reported in accordance with Standard Term and Condition A.2.c)(2) above shall be submitted to the Ohio EPA DAPC, Northwest District Office by January 31 and July 31 of each year; and each report shall cover the previous six calendar months. Unless otherwise specified by rule, all other deviations from

federally enforceable requirements identified in this permit shall be submitted annually as part of the annual compliance certification, including deviations of federally enforceable requirements not specifically addressed by permit or rule for the insignificant activities or emissions levels (IEU) identified in section B. Facility-Wide Terms and Conditions of this Title V permit. Annual reporting of deviations is deemed adequate to meet the deviation reporting requirements for IEUs unless otherwise specified by permit or rule.

In identifying each deviation, the permittee shall specify the federally enforceable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation.

These semi-annual and annual written reports shall satisfy the reporting requirements of OAC rule 3745-77-07(A)(3)(c) for any deviations from the federally enforceable requirements contained in this permit that are not reported in accordance with Standard Term and Condition A.2.c)(2) above.

If no such deviations occurred during a six-month period, the permittee shall submit a semi-annual report which states that no such deviations occurred during that period.

(Authority for term: OAC rules 3745-77-07(A)(3)(c)(i) and (ii) and OAC rule 3745-77-07(A)(13)(b))

(4) 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 (including any written malfunction reports required by OAC rule 3745-15-06 that are referenced in the deviation reports) are true, accurate, and complete." Signature by the Responsible Official may be represented by entry of the personal identification number (PIN) by the Responsible Official as part of the electronic submission process or by the scanned attestation document signed by the Responsible Official that is attached to the electronically submitted written report.

(Authority for term: OAC rule 3745-77-07(A)(3)(c)(iv))

(5) Consistent with A.2.c.1. above, reports of any required monitoring and/or record keeping information required to be submitted to Ohio EPA shall be submitted to Ohio EPA DAPC, Northwest District Office unless otherwise specified.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

3. Reporting of Any Exceedence of a Federally Enforceable Emission Limitation or Control Requirement Resulting From Scheduled Maintenance

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. Except as provided in OAC rule 3745-15-06(A)(3), any scheduled maintenance necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emissions unit(s) that is (are) served by such control system(s). Any scheduled maintenance, as defined in OAC rule 3745-15-06(A)(1), that results in a deviation from a federally enforceable emission limitation (or control requirement) shall be reported in the same manner as described for malfunctions in Standard Term and Condition A.2.c)(1) above.

(Authority for term: OAC rule 3745-77-07(A)(3)(c))

4. Risk Management Plans

If applicable, the permittee shall 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"); and, pursuant to 40 C.F.R. 68.215(a), the permittee shall submit either of the following:

a) a compliance plan for meeting the requirements of 40 C.F.R. Part 68 by the date specified in 40 C.F.R. 68.10(a) and OAC 3745-104-05(A); or

b) as part of the compliance certification submitted under 40 C.F.R. 70.6(c)(5), a certification statement that the source is in compliance with all requirements of 40 C.F.R. Part 68 and OAC Chapter 3745-104, including the registration and submission of the risk management plan.

(Authority for term: OAC rule 3745-77-07(A)(4))

5. 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.

(Authority for term: OAC rule 3745-77-07(A)(5))

6. Severability Clause

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.

(Authority for term: OAC rule 3745-77-07(A)(6))

7. General Requirements

a) 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 reissuance, or modification, or for denial of a permit renewal application.

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 permitexcept as provided pursuant to A.16 below.

c) This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with A.11 below. 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, reopening 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.

f) Except as otherwise indicated below, this Title V permit, or permit modification, is effective for five years from the original effective date specified in the permit. In the event that this facility becomes eligible for non-title V permits, this permit shall cease to be enforceable when:

(1) the permittee submits an approved facility-wide potential to emit analysis supporting a claim that the facility no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on the permanent shutdown and removal of one or more emissions units identified in this permit; or

(2) the permittee no longer meets the definition of a "major source" as defined in OAC rule 3745-77-01(W) based on obtaining restrictions on the facility-wide potential(s) to emit that are federally enforceable or legally and practically enforceable ; or

(3) a combination of (1) and (2) above.

The permittee shall continue to comply with all applicable OAC Chapter 3745-31 requirements for all regulated air contaminant sources once this permit ceases to be enforceable. The permittee shall comply with any residual requirements, such as quarterly deviation reports, semi-annual deviation reports, and annual compliance certifications covering the period during which this Title V permit was enforceable. All records relating to this permit must be maintained in accordance with law.

(Authority for term: OAC rule 3745-77-01(W), OAC rule 3745-77-07(A)(3)(b)(ii), OAC rule 3745-77(A)(7))

8. 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.

(Authority for term: OAC rule 3745-77-07(A)(8))

9. Marketable Permit Programs

No revision of this permit is required under any approved economic incentive, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in this permit.

(Authority for term: OAC rule 3745-77-07(A)(9))

10. Reasonably Anticipated Operating Scenarios

The permittee is hereby authorized to make changes among operating scenarios authorized in this permit without notice to the Ohio EPA, but, contemporaneous with making a change from one operating scenario to another, the permittee must record in a log at the permitted facility the scenario under which the permittee is operating. The permit shield provided in these standard terms and conditions shall apply to all operating scenarios authorized in this permit.

(Authority for term: OAC rule 3745-77-07(A)(10))

11. Reopening for Cause

This Title V permit will be reopened prior to its expiration date under the following conditions:

a) Additional applicable requirements under the Act become applicable to one or more emissions units covered by this permit, and this permit has a remaining term of three or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to paragraph (E)(1) of OAC rule 3745-77-08.

b) This permit is issued to an affected source under the acid rain program and additional requirements (including excess emissions requirements) become applicable. Upon approval by the Administrator, excess emissions offset plans shall be deemed to be incorporated into the permit, and shall not require a reopening of this permit.

c) The Director of the Ohio EPA or the Administrator of the U.S. EPA determines that the federally applicable requirements in this permit are based on a material mistake, or that inaccurate statements were made in establishing the emissions standards or other terms and conditions of this permit related to such federally applicable requirements.

d) The Administrator of the U.S. EPA or the Director of the Ohio EPA determines that this permit must be revised or revoked to assure compliance with the applicable requirements.

(Authority for term: OAC rules 3745-77-07(A)(12) and 3745-77-08(D))

12. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that 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, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

(Authority for term: OAC rule 3745-77-07(B))

13. Compliance Requirements

a) Any document (including reports) required to be submitted and required by a federally applicable requirement in this Title V permit shall include a certification by a Responsible

Officialthat, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.

b) 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 paragraph (E) of OAC rule 3745-77-03.

(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.

c) The permittee shall submit progress reports to the Ohio EPA DAPC, Northwest 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.

d) Compliance certifications concerning the terms and conditions contained in this permit that are federally enforceable emission limitations, standards, or work practices, shall be submitted to the Director (the Ohio EPA DAPC, Northwest District Office) and the Administrator of the U.S. EPA in the following manner and with the following content:

(1) Compliance certifications shall be submitted annually on a calendar year basis. The annual certification shall be submitted on or before April 30th of each year during the permit term.

(2) Compliance certifications shall include the following:

a. Identification of each term or condition that is the basis of the certification. The identification may include a statement by the Responsible Official that every term and condition that is federally enforceable has been reviewed, and such terms and conditions with which there has been continuous compliance throughout the year are not separately identified.

b. The permittee's current compliance status.

c. Whether compliance was continuous or intermittentconsistent with A.13.d.2.a above.

d. The method(s) used for determining the compliance status of the source currently and over the required reporting period consistent with A.13.d.2.a above.

e. Such other facts as the Director of the Ohio EPA may require in the permit to determine the compliance status of the source.

(3) Compliance certifications shall contain such additional requirements as may be specified pursuant to sections 114(a)(3) and 504(b) of the Act.

(Authority for term: OAC rules 3745-77-07(C)(1),(2),(4) and (5) and ORC section 3704.03(L))

14. Permit Shield

a) Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC rule 3745-77-07) shall be deemed compliance with the applicable requirements identified and addressed in this permit as of the date of permit issuance.

b) This permit shield provision shall apply to any requirement identified in this permit pursuant to OAC rule 3745-77-07(F)(2), as a requirement that does not apply to the source or to one or more emissions units within the source.

(Authority for term: OAC rule 3745-77-07(F))

15. Operational Flexibility

The permittee is authorized to make the changes identified in OAC rule 3745-77-07(H)(1)(a) to (H)(1)(c) within the permitted stationary source without obtaining a permit revision, if such change is not a modification under any provision of Title I of the Act [as defined in OAC rule 3745-77-01(JJ)], and does not result in an exceedance of the emissions allowed under this permit (whether expressed therein as a rate of emissions or in terms of total emissions), and the permittee provides the Administrator of the U.S. EPA and the Ohio EPA DAPC, Northwest District Office with written notification within a minimum of seven days in advance of the proposed changes, unless the change is associated with, or in response to, emergency conditions. If less than seven days notice is provided because of a need to respond more quickly to such emergency conditions, the permittee shall provide notice to the Administrator of the U.S. EPA and the Ohio EPA DAPC, Northwest District Office as soon as possible after learning of the need to make the change. The notification shall contain the items required under OAC rule 3745-77-07(H)(2)(d).

(Authority for term: OAC rules 3745-77-07(H)(1) and (2))

16. Emergencies

The permittee shall have an affirmative defense of emergency to an action brought for noncompliance with technology-based emission limitations if the conditions of OAC rule 3745-77-07(G)(3) are met.

This emergency defense provision is in addition to any emergency or upset provision contained in any applicable requirement.

(Authority for term: OAC rule 3745-77-07(G))

17. Off-Permit Changes

The owner or operator of a Title V source may make any change in its operations or emissions at the source that is not specifically addressed or prohibited in the Title V permit, without obtaining an amendment or modification of the permit, provided that the following conditions are met:

a) The change does not result in conditions that violate any applicable requirements or that violate any existing federally enforceable permit term or condition.

b) The permittee provides contemporaneous written notice of the change to the Director and the Administrator of the U.S. EPA, except that no such notice shall be required for changes that qualify as insignificant emissions levels or activities as defined in OAC rule 3745-77-01(U). Such written notice shall describe each such change, the date of such change, any change in emissions or pollutants emitted, and any federally applicable requirement that would apply as a result of the change.

c) The change shall not qualify for the permit shield under OAC rule 3745-77-07(F).

d) The permittee shall keep a record describing all changes made at the source that result in emissions of a regulated air pollutant subject to an applicable requirement, but not otherwise regulated under the permit, and the emissions resulting from those changes.

e) The change is not subject to any applicable requirement under Title IV of the Act or is not a modification under any provision of Title I of the Act.

Paragraph (I) of rule 3745-77-07 of the Administrative Code applies only to modification or amendment of the permittee's Title V permit. The change made may require a permit-to-install under Chapter 3745-31 of the Administrative Code if the change constitutes a modification as defined in that Chapter. Nothing in paragraph (I) of rule 3745-77-07 of the Administrative Code shall affect any applicable obligation under Chapter 3745-31 of the Administrative Code.

(Authority for term: OAC rule 3745-77-07(I))

18. Compliance Method Requirements

Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee, including but not limited to, any challenge to the Credible Evidence Rule (see 62 Federal Register 8314, Feb. 24, 1997), in the context of any future proceeding.

(This term is provided for informational purposes only.)

19. Insignificant Activities or Emissions Levels

Each IEU that is subject to one or more applicable requirements shall comply with those applicable requirements.

(Authority for term: OAC rule 3745-77-07(A)(1))

20. Permit to Install Requirement

Prior to the "installation" or "modification" of any "air contaminant source," as those terms are defined in OAC rule 3745-31-01, a permit to install must be obtained from the Ohio EPA pursuant to OAC Chapter 3745-31.

(Authority for term: OAC rule 3745-77-07(A)(1))

21. 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.

(Authority for term: OAC rule 3745-77-07(A)(1))

22. Permanent Shutdown of an Emissions Unit

The permittee may notify Ohio EPA of any emissions unit that is permanently shut down by submitting a certification from the Responsible 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 Responsible Official that the emissions unit was permanently shut down.

After the date on which an emissions unit is permanently shut down (i.e., that 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 and therefore ceases to meet the definition of an "emissions unit" as defined in OAC rule 3745-77-01(O)), rendering existing permit terms and conditions irrelevant, the permittee shall not be required, after the date of the certification and submission to Ohio EPA, to meet any Title V permit requirements applicable to that emissions unit, except for any residual requirements, such as the quarterly deviation reports, semi-annual deviation reports and annual compliance certification covering the period during which the emissions unit last operated. All records relating to the shutdown emissions unit, generated while the emissions unit was in operation, must be maintained in accordance with law.

Unless otherwise exempted, noemissions unit identified in this permit that has beencertified by the Responsible Official as being permanently shut down may resume operation without first applying for and obtaining a permit to install pursuant to OAC Chapter 3745-31.

(Authority for term: OAC rule 3745-77-01)

23. Title VI Provisions

If applicable, the permittee shall comply with the standards for recycling and reducing emissions of ozone depleting substances pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners in Subpart B of 40 CFR Part 82:

a) Persons operating appliances for maintenance, service, repair, or disposal must comply with the required practices specified in 40 CFR 82.156.

b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment specified in 40 CFR 82.158.

c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 CFR 82.161.

(Authority for term: OAC rule 3745-77-01(H)(11)))

24. Reporting Requirements Related to Monitoring and Record Keeping RequirementsUnder State Law Only

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or record keeping information shall be submitted to theOhio EPA DAPC, Northwest District Office.

b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (i) any deviations (excursions) from emission limitations, operational restrictions, and control device operating parameter limitations that have been detected by the testing, monitoring, and record keeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures which have been or will be taken, shall be submitted to the Ohio EPA DAPC, Northwest District Office. In identifying each deviation, the permittee shall specify the applicable requirement for which the deviation occurred, describe each deviation, and provide the magnitude and duration of each deviation. 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, 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.)

25. Records Retention RequirementsUnder State Law Only

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.

26. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine

whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

(Authority for term: OAC rule 3745-77-07(C))

27. Scheduled Maintenance/Malfunction Reporting For State-Only Requirements

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

28. Permit Transfers

Any transferee of this permit shall assume the responsibilities of the prior permit holder. The Ohio EPA DAPC, Northwest District Office must be notified in writing of any transfer of this permit.

(Authority for term: OAC rule 3745-77-01(C))

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

If no emission limitation (or control requirement), operational restriction and/or control device parameter limitation 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 by January 31, April 30, July 31, and October 31 of each year; and each report shall cover the previous calendar quarter.

The permittee is not required to submit a quarterly report which states that no deviations occurred during that quarter for the following situations:

a) where an emissions unit has deviation reporting requirements for a specific emission limitation, operational restriction, or control device parameter limitation that override the deviation reporting requirements specified in Standard Term and Condition A.2.c)(2); or

b) where an uncontrolled emissions unit has no monitoring, record keeping, or reporting requirements and the emissions unit's applicable emission limitations are established at the potential to emit; or

c) where the company's Responsible Official has certified that an emissions unit has been permanently shut down.

30. Submitting Documents Required by this Permit

All applications, notifications or reports required by terms and conditions in this permit to be submitted or "reported in writing" are to be submitted to Ohio EPA through the Ohio EPA's eBusiness Center: Air Services web service ("Air Services"). Ohio EPA will accept hard copy submittals on an as-needed basis if the permittee cannot submit the required documents through the Ohio EPA eBusiness Center. In the event ofan alternative hard copy submission in lieu of the eBusiness Center, the post-marked date or the date the document is delivered in person will be recognized as the date submitted. Electronic submission of applications, notifications, or reports required to be submitted to Ohio EPA fulfills the requirement to submit the required information to the Director, the Ohio EPA DAPC, Northwest District Office, and/or any other individual or organization specifically identified as an additional recipient identified in this permit unless otherwise specified. Consistent with OAC rule 3745-15-03, the required application, notification or report is considered to be "submitted" on the date the submission is successful using a valid electronic signature. Signature by the Responsible Official may be represented as provided through procedures established in Air Services.

B. Facility-Wide Terms and Conditions

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

   a) None.

2. The following insignificant emissions units contained in this permit are subject to 40 CFR, Part 60, Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines: **P576 and P578**. The complete NSPS requirements, including the NSPS General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the Ohio EPA, Northwest District Office.

   These emissions units are emergency spark ignition (SI) internal combustion engines (ICE). These ICE must meet the definition of an emergency stationary ICE in section 60.4248, which includes operating according to the provisions specified in section 60.4243(d).

   The permittee shall comply with all applicable requirements of 40 CFR, Part 60, Subpart JJJJ, and shall also comply with all applicable requirements of 40 CFR, Part 60, Subpart A (General Provisions). Compliance with all applicable requirements shall be achieved by the dates set forth in 40 CFR, Part 60, Subpart JJJJ, and Subpart A.

   [OAC rule 3745-77-07(C)(1) and 40 CFR Part 60 Subpart JJJJ]

3. The following insignificant emissions unit contained in this permit is subject to 40 CFR, Part 63, Subpart ZZZZ, National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines: **P575**. The complete NESHAP requirements, including the NESHAP General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the Ohio EPA, Northwest District Office.

   This emissions unit is an emergency compression ignition (CI) reciprocating internal combustion engine (RICE) located at a major source for HAPs. This RICE must meet the definition of an emergency stationary RICE in section 63.6675, which includes operating according to the provisions specified in section 63.6640(f).

   The permittee shall comply with all applicable requirements of 40 CFR, Part 63, Subpart ZZZZ, and shall also comply with all applicable requirements of 40 CFR, Part 63, Subpart A (General Provisions). Compliance with all applicable requirements shall be achieved by the dates set forth in 40 CFR, Part 63, Subpart ZZZZ, and Subpart A.

   [OAC rule 3745-77-07(C)(1) and 40 CFR Part 63 Subpart ZZZZ]

4. The following insignificant emissions units contained in this permit are subject to 40 CFR, Part 63, Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters: **B508 and B510**. The complete NESHAP requirements, including the NESHAP General Provisions, may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the Ohio EPA, Northwest District Office.

In accordance with 63.7575, these emissions units are gaseous fuel 1 subcategory existing process heater located at a major source for HAPs.

Pursuant to 40 CFR 63.7540(a)(12), because these emissions units are process heaters or boilers with heat input capacity less than or equal to 5 mmBtu/hr combusting natural gas, the permittee shall conduct a tune-up of the boiler or process heater every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi). Pursuant to 40 CFR 63.7540(a)(13), if the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

The permittee shall have a one-time energy assessment performed by a qualified energy assessor, pursuant to work practice standards 4.a through 4.h in Table 3 of 40 CFR, Part 63, Subpart DDDDD. The subsequent report associated with this assessment shall be submitted no later than January 31, 2016.

These emissions units are subject to the initial notification requirements of 40 CFR, Part 63, Subpart DDDDD as outlined in 63.9(b) (i.e., they are not subject to the emission limits, performance testing, monitoring, or site-specific monitoring plan requirements of Subpart DDDDD or any other requirements in 40 CFR, Part 63, Subpart A).

[OAC rule 3745-77-07(C)(1) and 40 CFR Part 63 Subpart DDDDD]

5. The following insignificant emissions units contained in this permit are subject to 40 CFR, Part 63, Subpart FFFF, National Emission Standards for Hazardous Air Pollutants: Miscellaneous Organic Chemical Manufacturing:**P525, P527, P528, P529, P557, P563 and T560**. Each of these emissions units is an existing affected source per 40 CFR, 63.2440. The complete NESHAP requirements, including the NESHAP General Provisions may be accessed via the internet from the Electronic Code of Federal Regulations (e-CFR) website http://ecfr.gpoaccess.gov or by contacting the Ohio EPA, Northwest District Office.

The permittee shall comply with all applicable requirements of 40 CFR, Part 63, SubpartFFFF including the following sections. The permittee shall also comply with all applicable requirements of 40 CFR, Part 63, Subpart A (General Provisions). Compliance with all applicable requirements shall be achieved by the dates set forth in 40 CFR, Part 63, Subpart FFFF, and Subpart A.

63.2445(b) through 63.2445(d)	When do I have to comply with this subpart?
63.2450	Emission Limitations, Work Practice Standards and Compliance Requirements -- What are my general requirements for complying with this subpart?
63.2450(a)	You must be in compliance with the emission limits and work practice standards in tables 1 through 7* to this subpart at all times, except during periods of startup, shutdown, and malfunction (SSM), and you must meet the requirements specified in 63.2455 through 63.2490 (or the alternative means of compliance in 63.2495, 63.2500, or 63.2505), except as specified in paragraphs (b) through (s) of this section. You must meet the notification, reporting, and recordkeeping requirements specified in 63.2515, 63.2520, and 63.2525. *only the work practice standards listed in Table 6 are applicable
63.2450(m)	Reporting

63.2450(p)	Opening a safety device, as defined in 63.2550, is allowed at any time conditions require it to avoid unsafe conditions
63.2455	Emission Limitations, Work Practice Standards and Compliance Requirements – What requirements must I meet for continuous process vents?
63.2455(a)	You must meet each emission limit in Table 1 to this subpart that applies to your continuous process vents, and you must meet each applicable requirement specified in paragraphs (b) through (c) of this section. [Note: There are no emission limits and/or work practice standards in Table 1 that are applicable.]
63.2455(b)	For each continuous process vent, you must either designate the vent as a Group 1 continuous process vent or determine the total resource effectiveness (TRE) index value as specified in 63.115(d), except as specified in paragraphs (b)(1) through (3) of this section.
63.2480	Emission Limitations, Work Practice Standards and Compliance Requirements – What requirements must I meet for equipment leaks?
63.2480(a)	You must meet each requirement in Table 6 to this subpart that applies to your equipment leaks, except as specified in paragraphs (b) through (d) of this section. [See Table 6 below for requirements.]
63.2480(b)	If you comply with either subpart H or subpart UU of this part 63, you may elect to comply with the provisions in paragraphs (b)(1) through (5) of this section as an alternative to the referenced provisions in subpart H or subpart UU of this part.
63.2515	Notifications, Reports and Records – What notifications must I submit and when?
63.2515(a)	You must submit all of the notifications in 63.6(h)(4) and (5), 63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.
63.2515(b)	Initial notification* *The company submitted the initial notification in 2004
63.2520	Notifications, Reports and Records – What reports must I submit and when?
63.2520(a)	You must submit each report in Table 11 to this subpart that applies to you.
63.2520(b)	Unless the Administrator has approved a different schedule for submission of reports under 63.10(a), you must submit each report by the date in Table 11 to this subpart and according to paragraphs (b)(1) through (5) of this section.
63.2520(d)	Notification of compliance status report
63.2520(e)	Compliance report

63.2525	Notifications, Reports and Records – What records must I keep?
63.2525(a)	Each applicable record required by subpart A of this part 63 and in referenced subparts F, G, SS, UU, WW, and GGG of this part 63 and in referenced subpart F of 40 CFR part 65.
63.2525(b)	Records of each operating scenario as specified in paragraphs (b)(1) through (8) of this section.
63.2525(f)	A record of each time a safety device is opened to avoid unsafe conditions in accordance with 63.2450(s).
63.2525(j)	In the SSMP required by 63.6(e)(3), you are not required to include Group 2 emission points, unless those emission points are used in an emissions average. For equipment leaks, the SSMP requirement is limited to control devices and is optional for other equipment.
63.2535	Other Requirements and Information – What compliance options do I have if part of my plant is subject to both this subpart and another subpart?
63.2535(k)	Compliance with 40 CFR, part 60, subpart VV and 40 CFR, part 61, subpart V
63.2540	Other Requirements and Information – What parts of the General Provisions apply to me?
Table 6	Requirements for Equipment Leaks
Table 11	Requirements for Reports
Table 12	Applicability of General Provisions to Subpart FFFF

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart FFFF]

6. Pursuant to 40 CFR, Part 64, the permittee has submitted, and the Ohio EPA has approved a compliance assurance monitoring plan for emissions units P524, P531, P546, P560, P572, P573 and P577 at this facility. The permittee shall comply with the provisions of the plan during any operation of the aforementioned emissions units.

   [40 CFR, Part 64]

7. The permittee shall maintain the following records for emissions units B502, B503, B507, B509, B510, J001, J002, P520, P521, P522, P523, P526, P529, P554, P555, P563, P564, T518, T537, T551, T622, T623, T624 and T625 as described in Permit to Install application No. A0047234 submitted on July 10, 2013 in order to demonstrate that the ammonia and urea units expansion project does not trigger a major modification for PM2.5, NOx, CO and/or VOC:

   a) the projected actual annual emissions for PM2.5, NOx, CO and VOC, in tons per year, from the ammonia and urea units' expansion project as submitted in PTI application No. A0047234 submitted on July 10, 2013; and

b) the total actual annual emissions for PM2.5, NOx, CO and VOC, in tons per year, from emissions units B502, B503, B507, B509, B510, J001, J002, P520, P521, P522, P523, P526, P529, P554, P555, P563, P564, T518, T537, T551, T622, T623, T624 and T625,combined, for ten calendar years after commencing operation of the ammonia and urea units expansion project.

[PTI No. P0117742]

8. The permittee shall notify the Northwest District Office in writing if annual emissions from all emissions units in the ammonia and urea expansion project, as specified in facility-wide term and condition B.7.b., result in a significant PM2.5, NOx, CO and/or VOC emissions increase and exceed the projected actual PM2.5, NOx, CO and/or VOC emissions contained in the application for PTI No. A0047234, submitted July 10, 2013. This notification shall identify the cause for the significant emissions increase and the estimated PM2.5, NOx, CO and/or VOC emissions. This notification shall be submitted to the Northwest District Office within 120 days after the end of such year.

[PTI No. P0117742]

9. PTI No. P0117742 addresses a modification of facility operations associated with an ammonia and urea expansion project to produce more ammonia to be used for: 1) additional shipment of anhydrous ammonia offsite to other PCS facilities and/or customers, and 2) additional urea synthesis to produce more urea solutions, such as diesel exhaust fluid (DEF) for additional shipment offsite to customers. The requirements of PTI No. P0117742 shall become enforceable on the date the permittee commences operation under the modification authorized by PTI No. P0117742. Identification of the specific date modified operation commences is required by term A.13.b) within the Standard Terms and Conditions of PTI No. P0117742. Authorization and permitting requirements associated with the current operation (prior to modification) of emissions units B503, B507, J001, P520, P521, P522, P523*, P526, P563, and P564 are contained in the facility's Title V permit and are incorporated by reference (IBR) as requirements of this permit as indicated by the following:

a) The permittee shall comply with all applicable emission limitations/control measures, operational restrictions, monitoring and record keeping requirements, reporting requirements, testing requirements, and additional term and condition requirements contained in the facility's Final Title V Chapter 3745-77 permit. The IBR requirements shall cease to be enforceable for each emissions unit after the date an emissions unit commences operation under the modification authorized by PTI No. P0117742 as indicated above.

*See B.10. for additional requirements associated with the construction/modification activities for P523.

[PTI No. P0117742]

10. The modification and expansion project involves construction activities for the Ammonia Unit – CO_2 Stripper Section (emissions unit P523) associated with upgrades to the syngas compressor and the installation of a medium pressure condensate stripper (MPCS). Upgrades to the syngas compressor will result in increased ammonia production capacity while the MPCS affects emissions by increasing the recovery of ammonia and methanol for reuse. During any time period associated with construction activities that the syngas compressor has been upgraded and the MPCS is not fully operational, ammonia production shall not exceed an existing design capacity of 2,000 tons per day.

Authorization and permitting requirements associated with operation of emissions unit P523 with syngas compressor upgrades in conjunction with the above restriction on ammonia production due to the operational status of the MPCS are covered by the facility's current Title V permit requirements as outlined in Section B.9. above and the additional following requirements:

a) the permittee shall maintain records of ammonia production, in tons per day beginning the date the permittee commences operation after syngas compressor upgrades have been performed and the MPCS is not fully operational.

b) the permittee shall notify the Northwest District Office in writing of any daily record of ammonia production that exceeds 2,000 tons per day. This notification shall identify the cause of the exceedance and the actual ammonia production, in tons. This notification shall be submitted to the Northwest District Office within 15 days after the exceedance.

The P523 production restriction and associated monitoring, recordkeeping, and reporting above, in Section B.9, shall terminate at the time the MPCS is fully operational.

[PTI No. P0117742]

11. The following insignificant emissions units at this facility must comply with all applicable State and federal regulations, as well as any emission limitations and/or control requirements contained within the identified permit to install for the emissions unit. The insignificant emissions units listed below are subject to one or more applicable requirements contained in a permit to install or in the SIP-approved versions of OAC Chapters 3745-17, 3745-18, 3745-21 and 3745-31, and/or 40 CFR Part 60 or 63:

B508	Urea Prilling Section - Dryer (5 mmBtu/hr - Natural Gas - direct-fired)
J001	Diesel Exhaust Fluid (DEF), Urea Water, or UAN Solution Truck/Railcar Loading (PTI No. P0117742)
J002	Diesel Exhaust Fluid (DEF), Urea Water Solution Truck/Railcar Loading (PTI No. P0117742)
P525	Urea Prilling Section - Mother Liquor System
P527	Urea Prilling Section - Lump Dissolving Tank
P528	Urea Prilling Section: - Crystallizer
P529	Urea Prilling Section: - Concentrator (Rinsing spilled Prill off the floor)
P545	Urea Granulation Section - East Warehouse (PTI No. 03-968, issued on 10/2/80)
P557	Urea Water Solution Truck/Railcar Loading
P559	Urea Ammonium Nitrate Solution Truck/Railcar Loading (PTI No. P0115146)
P563	Urea Production Section - Reactor Feed Section (PTI No. P0117742)
P575	Fire Water Pump - 350 hp (≈260 kW) - diesel-fired - emergency - south side of fire water pond
P576	Emergency Generator - 228 hp (170 kW) - natural gas-fired - 4-stroke rich-burn - emergency - west side of T5/T6 dike area
P578	Emergency Generator - 454 hp (300 kW) - natural gas-fired - 4-stroke rich-burn - emergency - southwest corner of materials warehouse parking lot
T560	Urea Formaldehyde (UF-85) Storage Tank (PTI No. 03-968, issued on 10/2/80)
T622	Diesel Exhaust Fluid (DEF) Urea Water 50% Storage/Blend Tank (PTI No. P0117742)
T623	50% Urea Liquor Storage Tank (PTI No. P0117742)

[OAC rule 3745-77-07(A)(13)]

12.

C. Emissions Unit Terms and Conditions

1. B501, Ammonia Production Unit: Boiler #1

Operations, Property and/or Equipment Description:

Ammonia Production Unit –Boiler #1 (227 mmBtu/hr – Natural Gas Fired)

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 operations(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. 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)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
b.	OAC rule 3745-17-10(B)(1)	0.020 lb PE/mmBtu of actual heat input
c.	OAC rule 3745-18-06(E)	See b)(2)a.
d.	OAC rule 3745-18-08(D)(1)	1.27 lbs sulfur dioxide (SO2)/mmBtu of actual heat input
e.	40 CFR, Part 63, Subpart DDDDD (40 CFR 63.7480-7575) [In accordance with 63.7575, this emissions unit is a gaseous fuel 1 subcategory existing boiler located at a major source of HAP emissions and subject to the applicable requirements specified in this section.]	See b)(2)b., c)(2) and c)(3) 63.7500(a) Table 3 requirements

(2) Additional Terms and Conditions

a. This emissions unit is exempt from the requirements of OAC rule 3745-18-06(E) in accordance with OAC rule 3745-18-06(C).

b. This emissions unit is subject to the initial notification requirements of 40 CFR, Part 63, Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, or site-specific monitoring plan requirements of Subpart DDDDD or any other requirements in 40 CFR, Part 63, Subpart A).

c) Operational Restrictions

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

[OAC rule 3745-77-07(A)(1)]

(2) Pursuant to 40 CFR 63.7540(a)(10), because this emissions unit is a process heater or boiler with heat input capacity greater than 10 mmBtu/hr combusting natural gas, the permittee shall conduct a tune-up of the boiler or process heater annually as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi). Pursuant to 40 CFR 63.7540(a)(13), if the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart DDDDD]

(3) The permittee shall have a one-time energy assessment performed by a qualified energy assessor, pursuant to work practice standards 4.a through 4.h in Table 3 of 40 CFR, Part 63, Subpart DDDDD. The subsequent report associated with this assessment shall be submitted no later than January 31, 2016.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart DDDDD]

d) Monitoring and/or Recordkeeping Requirements

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

[OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

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

[OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Compliance with the emission limitations in Section b)(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance with the visible emissions limitation above shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

0.020 lb PE/mmBtu of actual heat input

Applicable Compliance Method:

The permittee may demonstrate compliance with this limitation by multiplying the maximum hourly natural gas consumption rate (mm cu. ft/hr) by the emission factor from AP-42, Table 1.4-2 (revised 7/98) of 1.9 lbs PE (filterable)/mm cu. ft, and then dividing by the maximum heat input capacity of the boiler (mmBtu/hr).

If required, compliance with the lb/mmBtu limitation shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(9).

[OAC rule 3745-77-07(C)(1)]

c. Emission Limitation:

1.27 lbs SO2/mmBtu of actual heat input

Applicable Compliance Method:

When firing natural gas, compliance with this limitation will be assumed due to the negligible percent sulfur, by weight, in the fuel.

If required, compliance with the limitation above shall be determined in accordance with Methods 1 – 4 and 6 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

2. B502, Ammonia Production Unit: Boiler #2

Operations, Property and/or Equipment Description:

Ammonia Production Unit - Boiler #2 (227 mmBtu/hr - Natural Gas Fired)

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 operations(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. 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)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
b.	OAC rule 3745-17-10(B)(1)	0.020 lb PE/mmBtu of actual heat input
c.	OAC rule 3745-18-06(E)	See b)(2)a.
d.	OAC rule 3745-18-08(D)(1)	1.27 lbs sulfur dioxide (SO2)/mmBtu of actual heat input
e.	40 CFR, Part 63, Subpart DDDDD (40 CFR 63.7480-7575) [In accordance with 63.7575, this emissions unit is a gaseous fuel 1 subcategory existing boiler located at a major source of HAP emissions and subject to the applicable requirements specified in this section.]	See b)(2)b., c)(2) and c)(3) 63.7500(a) Table 3 requirements

(2) Additional Terms and Conditions

a. This emissions unit is exempt from the requirements of OAC rule 3745-18-06(E) in accordance with OAC rule 3745-18-06(C).

b. This emissions unit is subject to the initial notification requirements of 40 CFR, Part 63, Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, or site-specific monitoring plan requirements of Subpart DDDDD or any other requirements in 40 CFR, Part 63, Subpart A).

c) Operational Restrictions

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

[OAC rule 3745-77-07(A)(1)]

(1) Pursuant to 40 CFR 63.7540(a)(10), because this emissions unit is a process heater or boiler with heat input capacity greater than 10 mmBtu/hr combusting natural gas, the permittee shall conduct a tune-up of the boiler or process heater annually as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi). Pursuant to 40 CFR 63.7540(a)(13), if the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart DDDDD]

(2) The permittee shall have a one-time energy assessment performed by a qualified energy assessor, pursuant to work practice standards 4.a through 4.h in Table 3 of 40 CFR, Part 63, Subpart DDDDD. The subsequent report associated with this assessment shall be submitted no later than January 31, 2016.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart DDDDD]

d) Monitoring and/or Recordkeeping Requirements

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

[OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

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

[OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Compliance with the emission limitations in Section b)(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance with the visible emissions limitation above shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

0.020 lb PE/mmBtu of actual heat input

Applicable Compliance Method:

The permittee may demonstrate compliance with this limitation by multiplying the maximum hourly natural gas consumption rate (mm cu. ft/hr) by the emission factor from AP-42, Table 1.4-2 (revised 7/98) of 1.9 lbs PE (filterable)/mm cu. ft, and then dividing by the maximum heat input capacity of the boiler (mmBtu/hr).

If required, compliance with the lb/mmBtu limitation shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(9).

[OAC rule 3745-77-07(C)(1)]

c. Emission Limitation:

1.27 lbs SO2/mmBtu of actual heat input

Applicable Compliance Method:

When firing natural gas, compliance with this limitation will be assumed due to the negligible percent sulfur, by weight, in the fuel.

If required, compliance with the limitation above shall be determined in accordance with Methods 1 – 4 and 6 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

3. B503, Ammonia Production Unit: Primary Reformer

Operations, Property and/or Equipment Description:

Ammonia Production Unit - Primary Reformer (750.1 million Btu/hr - Natural Gas, Tail, Flash, Purge and Regeneration Fuel Gas Fired)

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) b)(1)h. and d)(2).

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(D) [PTI No. P0117742, issued 10/15/14]	5.61 lbs of particulate emissions/ particulate matter less than or equal to 10 microns in diameter/particulate matter less than or equal to 2.5 microns in diameter ($PE/PM_{10}/PM_{2.5}$)/hr and 24.58 tons of $PE/PM_{10}/PM_{2.5}$/yr 0.35 lb of sulfur dioxide (SO2)/hr and 1.54 tons of SO2/yr 190.05 lbs of nitrogen oxides (NOx)/hr and 832.43 tons of NOx/yr [See b)(2)j.] 4.95 lbs of carbon monoxide (CO)/hr and 21.69 tons of CO/yr 4.06 lbs of volatile organic compounds (VOC)/hr and 17.79 tons of VOC/yr See b)(2)a. through b)(2)c.
b.	ORC 3704.03(T)	See b)(2)d.
c.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity as a six-minute average, except as provided by rule
d.	OAC rule 3745-17-10(B)(1)	0.020 lb of PE/mmBtu of actual heat input [See b)(2)e.]
e.	OAC rule 3745-18-08(D)(2)	1.27 lb of SO2/mmBtu of actual heat input [See b)(2)f.]

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)g. and b)(2)h.
g.	OAC rule 3745-31-05(A)(3), as effective 12/1/06	See b)(2)i.
h.	ORC 3704.03(F) and OAC rule 3745-114	See d)(2)

(2) Additional Terms and Conditions

a. The mass emission rate limitations in b)(1)a. above represent the potentials to emit (PTE), defined as the maximum capacity to emit an air pollutant under its physical and operational design. Therefore, no monitoring, record keeping, or reporting requirements are necessary to ensure compliance with these emission limitations. See f)(1)a., b, c., d., and e. for details regarding the PTEs.

b. It is assumed that all PE are equivalent to both PM_{10} and $PM_{2.5}$.

c. This permit establishes the following federally enforceable emission limitations for the purpose of representing the potentials to emit of this emissions unit:

i. 5.61 lbs of PE/PM_{10}/$PM_{2.5}$/hr and 24.58 tons of PE/PM_{10}/$PM_{2.5}$/yr;

ii. 0.35 lb of SO2/hr and 1.54 tons of SO2/yr;

iii. 190.05 lbs of NOx/hr and 832.43 tons of NOx/yr;

iv. 4.95 lbs of CO/hr and 21.69 tons of CO/yr; and

v. 4.06 lbs of VOC/hr and 17.79 tons of VOC/yr.

d. Best Available Technology (BAT) requirements for PE/PM_{10}/$PM_{2.5}$, NOx, CO and VOC emissions under ORC 3704.03(T) have been determined to be compliance with the annual emission limitations for PE/PM_{10}/$PM_{2.5}$, NOx, CO and VOC as established pursuant to OAC rule 3745-31-05(D).

e. The emission limitation of 0.020 lb of particulate emissions (PE) per million Btu of actual heat input specified by OAC 3745-17-10(B)(1) is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(D).

f. The emission limitation of 1.27 lb of sulfur dioxide (SO2) per million Btu of actual heat input specified by OAC rule 3745-18-08(D)(2) is less stringent than the SO2 limitation established pursuant to OAC rule 3745-31-05(D).

g. BAT requirements for SO2 emissions under OAC rule 3745-31-05(A)(3), as effective 11/30/01 have been determined to be compliance with the annual SO2 emission limitation as established pursuant to OAC rule 3745-31-05(D).

h. The permittee has satisfied the BAT requirements for SO2 emissions pursuant to OAC rule 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 ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulation for NAAQS pollutant emissions less than 10 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 revision 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 limits and control measures no longer apply.

i. 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 BAT requirements under OAC rule 3745-31-05(A)(3)(a) do not apply to the SO2 emissions since the potential to emit is less than 10 tons per year.

j. The NOx emission limitations of 190.05 lbs/hr and 832.43 tons/yr shall become effective on the date the permittee commences operation of emissions unit B503 following completion of the modification authorized by this permit. Identification of the specific date modified operation commences is required by term A.13.b) within the Standard Terms and Conditions of this permit.

Prior to commencing operation following completion of the modification authorized by this permit emissions unit B503 shall be subject to a NOx emission limitation of 0.324 lb/mmBtu as established under OAC rule 3745-31-05(A)(3) in PTI No. P0108792 issued 11/18/2011.

It should be noted that the maximum heat input of emissions unit B503 will remain at a level of 1,300 mmBtu/hr as authorized under PTI No. P0108792 until operation commences following completion of the modification authorized by this permit.

Upon commencement of operation following completion of the modification authorized by this permit the maximum heat input will be 750.1 mmBtu/hr as indicated in the equipment description above.

c) Operational Restrictions

(1) The permittee shall burn only natural gas, tail gas, flash gas, purge gas, or regeneration (regen.) fuel gas in this emissions unit.

[OAC rule 3745-77-07(A)(1) and PTI No. P0117742]

d) Monitoring and/or Recordkeeping Requirements

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

(2) Modeling to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary for this permit action because actual emissions of the toxic air contaminant ammonia (NH3), as specified in OAC rule 3745-114-01, resulted in an actual decrease. Other than NH3, the maximum annual emissions for each toxic air contaminant (as specified in OAC rule 3745-114-01) that is not subject to MACT and/or NESHAP regulations will be less than 1.0 ton per year. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit-to-install (PTI) prior to making a "modification" as defined by OAC rule 3745-31-01.

The permittee is hereby advised that changes in the composition of the materials, or use of new materials, etc. that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.

[PTI No. P0117742]

e) Reporting Requirements

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

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. Emission Limitations:

5.61 lbs of $PE/PM_{10}/PM_{2.5}$/hr and 24.58 tons of $PE/PM_{10}/PM_{2.5}$/yr

Applicable Compliance Method:

The hourly $PE/PM_{10}/PM_{2.5}$ emission limitation above was developed by the following ratio of fuel firing:

<u>Total maximum heat input</u> = 750.1 million Btu/hr, which consists of a typical composite fuel heat input of 598.7 million Btu/hr from natural gas; plus 123.9 million Btu/hr from tail gas and purge gas, combined; plus 27.7 million Btu/hr from flash gas.

Fuel firing rates: Natural gas = (598.7 million Btu/hr)/(1,020 Btu/scf) = **0.5869 million scf/hr**

Tail gas and purge gas, combined = (123.9 million Btu/hr)/(353.62 Btu/scf) = **0.3504 million scf/hr**

Flash gas = (27.7 million Btu/hr)/(502.18 Btu/scf) = **0.0551 million scf/hr**

Emission factors: natural gas = 7.6 lbs/million scffrom AP-42, Table 1.4-2 (dated 7/98); tail, purge and flash gas, combined = 2.837 lbs/million scf from ratio of fuel gas heat contents in AP-42, Table 1.4-2 (dated 7/98)

PE/PM_{10}/$PM_{2.5}$ emissions =

From natural gas: (7.6 lbs/million scf)(0.5869 million scf/hr) = 4.46 lbs PE/PM_{10}/$PM_{2.5}$/hr;

From tail gas and purge gas, combined: (2.837 lbs/million scf)(0.3504 million scf/hr) = 0.99 lbPE/PM_{10}/$PM_{2.5}$/hr; and

From flash gas: (2.837 lbs/million scf)(0.0551 million scf/hr) = 0.16 lbPE/PM_{10}/$PM_{2.5}$/hr

Total PE/PM_{10}/$PM_{2.5}$ emissions = 4.46 + 0.99 + 0.16 = **5.61 lbs/hr**

Compliance is presumed by only using natural gas, tail gas, flash gas, purge gas or regen. fuel gas, as required in c)(1).

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Methods 1 through 4 of 40 CFR, Part 60, Appendix A and Methods 201, 201A and 202 of 40 CFR, Part 51, Appendix M. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/hr emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

b. Emission Limitations:

0.35 lb of SO2/hr and 1.54 tons of SO2/yr

Applicable Compliance Method:

The hourly SO2 emission limitation above was developed by multiplying the SO2 emission factor from AP-42, Table 1.4-2 (dated 7/98) (0.6 lb/million scf) by the maximum heat input of 598.7 million Btu/hr when firing natural gas (all other fuels

fired have negligible sulfur content), then dividing by the natural gas heat content of 1,020 Btu/scf. Compliance is presumed by only using natural gas, tail gas, flash gas, purge gas or regen. fuel gas, as required in c)(1).

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Method 1 through 4, and 6of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/hr emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

c. Emission Limitations:

190.05 lbs of NOx/hr and 832.43 tons of NOx/yr

Applicable Compliance Method:

The hourly NOx emission limitation above was developed by the following ratio of fuel firing:

Total maximum heat input = 750.1 million Btu/hr, which consists of a typical composite fuel heat input of 598.7 million Btu/hr from natural gas; plus 123.9 million Btu/hr from tail gas and purge gas, combined; plus 27.7 million Btu/hr from flash gas.

Fuel firing rates: Natural gas = (598.7 million Btu/hr)/(1,020 Btu/scf) = **0.5869 million scf/hr**

Tail gas and purge gas, combined = (123.9 million Btu/hr)/(353.62 Btu/scf) = **0.3504 million scf/hr**

Flash gas = (27.7 million Btu/hr)/(502.18 Btu/scf) = **0.0551 million scf/hr**

Emission factors: natural gas = 252 lbs/million scf based on vendor guaranteed value which is a 10 percent reduction from AP-42, Table 1.4-1 (dated 7/98) emission factor of 280 lbs/million scf due to burner modifications and upgrades during maintenance turnaround conducted in 2010; tail gas, purge gas and flash gas, combined = 94.085 lbs/million scf from ratio of fuel gas heat contents in AP-42, Table 1.4-1 (dated 7/98); plus an additional 0.286 lb/lb ammonia combusted from tail gas, purge gas and flash gas based on vendor information and review of previous stack test reports

NOx emissions =

From natural gas: (252 lbs/million scf)(0.5869 million scf/hr) = 147.90 lbs NOx/hr;

From tail gas and purge gas, combined: (94.085 lbs/million scf)(0.3504 million scf/hr) = 32.97 lbsNOx/hr;

From flash gas: (94.085 lbs/million scf)(0.0551 million scf/hr) = 5.18 lbsNOx/hr; and

From tail gas, purge gas and flash gas, combined, introduced into reformer for combustion of ammonia, from vendor information: (0.286 lb/lb ammonia combusted)(13.991 lbs ammonia/hr) = 4.00 lbs NOx/hr

Total NOx emissions = 147.90 + 32.97 + 5.18 + 4.00 = **190.05 lbs/hr**

The permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Method 1 through 4, and 7of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/hr emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

d. Emission Limitations:

4.95 lbs of CO/hr and 21.69 tons of CO/yr

Applicable Compliance Method:

The hourly CO emission limitation above was developed from previous stack test, and adjusted to remove turbine emissions, plus a margin of 15 percent. Compliance is presumed by only using natural gas, tail, flash, purge or regeneration fuel gas, as required in c)(1).

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Method 1 through 4, and 10of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the

lb/hremission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

e. Emission Limitations:

4.06 lbs of VOC/hr and 17.79 tons of VOC/yr

Applicable Compliance Method:

The hourly VOC emission limitation above was developed by the following ratio of fuel firing:

Total maximum heat input = 750.1 million Btu/hr, which consists of a typical composite fuel heat input of 598.7 million Btu/hr from natural gas; plus 123.9 million Btu/hr from tail gas and purge gas, combined; plus 27.7 million Btu/hr from flash gas.

Fuel firing rates: Natural gas = (598.7 million Btu/hr)/(1,020 Btu/scf) = **0.5869 million scf/hr**

Tail gas and purge gas, combined = (123.9 million Btu/hr)/(353.62 Btu/scf) = **0.3504 million scf/hr**

Flash gas = (27.7 million Btu/hr)/(502.18 Btu/scf) = **0.0551 million scf/hr**

Emission factors: natural gas = 5.5 lbs/million scf from AP-42, Table 1.4-2 (dated 7/98); tail gas, purge gas and flash gas, combined = 2.053 lbs/million scf from ratio of fuel gas heat contents in AP-42, Table 1.4-2 (dated 7/98)

VOC emissions =

From natural gas: (5.5 lbs/million scf)(0.5869 million scf/hr) = 3.23 lbs VOC/hr;

From tail gas and purge gas, combined: (2.053 lbs/million scf)(0.3504 million scf/hr) = 0.72 lbVOC/hr; and

From flash gas: (2.053 lbs/million scf)(0.0551 million scf/hr) = 0.11 lbVOC/hr

Total VOC emissions = 3.23 + 0.72 + 0.11 = **4.06 lbs/hr**

Compliance is presumed by only using natural gas, tail gas, flash gas, purge gas or regen. fuel gas, as required in c)(1).

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Method 1 through 4, and 18, 25, or 25A, as applicable,of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/hr emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

f. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible particulate emission limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A, and the requirements specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

g. Emission Limitation:

0.324 lb of NOx/mmBtu

Applicable Compliance Method:

The emission limitation represents the PTE (defined as the maximum capacity to emit an air pollutant under the physical and operational design). The PTE is based on a stack test conducted on 12/09/00.

If required, the permittee shall demonstrate compliance with this emission limitation pursuant to testing in accordance with the methods and procedures specified in Method 1 through 4, and 7 of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

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

a. The emission testing shall be conducted within six months of completion of installation and commencement of operation in modified mode for the equipment associated with the urea and ammonia expansion project for PTI No. P0116538, issued 3/28/14.

The emission testing shall be conducted to demonstrate compliance with theallowable emission rate of 190.05 lbs of NOx/hr.

b. The following test methods shall be employed to demonstrate compliance withthe allowable mass emission rate for NOx: Methods 1 through 4, and 7 of 40 CFR, Part 60, Appendix A. Alternate U.S. EPA-approved test methods may be used withprior approval from the Ohio EPA.

c. The test(s) shall be conducted while the emissions unit is operating at itsmaximum capacity, unless otherwise specified or approved by the Ohio EPA,Northwest District Office.

d. Not later than 30 days prior to the proposed test date(s), the permittee shallsubmit an "Intent to Test" notification to the Ohio EPA,Northwest District Office. The "Intent to Test" notification shall describe in detail theproposed test methods and procedures, the emissions unit operatingparameters, the time(s) and date(s) of the test(s), and the person(s) who will beconducting the test(s).

Failure to submit such notification for review and approvalprior to the test(s) may result in the Ohio EPA,Northwest District Office's refusal to accept the results of the emission test(s).

e. Personnel from the Ohio EPA,Northwest District Office shallbe permitted to witness the test(s), examine the testing equipment, and acquiredata and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions fromthe emissions unit and/or the performance of the control equipment.

f. A comprehensive written report on the results of the emissions test(s) shall besigned by the person or persons responsible for the tests and submitted to the Ohio EPA,Northwest District Office within 30 days followingcompletion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Northwest District Office.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

g) Miscellaneous Requirements

(1) None.

4. B504, Ammonia Production Unit: Converter Start-up Heater

Operations, Property and/or Equipment Description:

Ammonia Production Unit – Converter Start-up Heater (37mmBtu/hr – Natural Gas Fired)

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 operations(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. 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)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
b.	OAC rule 3745-17-10(B)(1)	0.020 lb PE/mmBtu of actual heat input
c.	OAC rule 3745-18-06(E)	See b)(2)a.
d.	40 CFR, Part 63, Subpart DDDDD (40 CFR 63.7480-7575) [In accordance with 63.7575, this emissions unit is a gaseous fuel 1 subcategory existing process heater located at a major source of HAP emissions and subject to the applicable requirements specified in this section.]	See b)(2)b., c)(2) and c)(3) 63.7500(a) Table 3 requirements

(2) Additional Terms and Conditions

a. This emissions unit is exempt from the requirements of OAC rule 3745-18-06(E) in accordance with OAC rule 3745-18-06(C).

b. This emissions unit is subject to the initial notification requirements of 40 CFR, Part 63, Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, or site-specific monitoring plan requirements of Subpart DDDDD or any other requirements in 40 CFR, Part 63, Subpart A).

c) Operational Restrictions

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

[OAC rule 3745-77-07(A)(1)]

(2) Pursuant to 40 CFR 63.7540(a)(10), because this emissions unit is a process heater or boiler with heat input capacity greater than 10 mmBtu/hr combusting natural gas, the permittee shall conduct a tune-up of the boiler or process heater annually as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi). Pursuant to 40 CFR 63.7540(a)(13), if the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart DDDDD]

(3) The permittee shall have a one-time energy assessment performed by a qualified energy assessor, pursuant to work practice standards 4.a through 4.h in Table 3 of 40 CFR, Part 63, Subpart DDDDD. The subsequent report associated with this assessment shall be submitted no later than January 31, 2016.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart DDDDD]

d) Monitoring and/or Recordkeeping Requirements

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

[OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

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

[OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Compliance with the emission limitations in Section b)(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance with the visible emissions limitation above shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

0.020 lb PE/mmBtu of actual heat input

Applicable Compliance Method:

The permittee may demonstrate compliance with this limitation by multiplying the maximum hourly natural gas consumption rate (mm cu. ft/hr) by the emission factor from AP-42, Table 1.4-2 (revised 7/98) of 1.9 lbs PE (filterable)/mm cu. ft, and then dividing by the maximum heat input capacity of the heater (mmBtu/hr).

If required, compliance with the lb/mmBtu limitation shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(9).

[OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

5. B506, Ammonia Production Unit: Gas Turbine

Operations, Property and/or Equipment Description:

AmmoniaProduction Unit –Gas Turbine (240 mmBtu/hr – Natural Gas Fired)

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 operations(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. 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)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
b.	OAC rule 3745-17-11(B)(4)	0.040 lb PE/mmBtu of actual heat input
c.	OAC rule 3745-18-06(E)	See b)(2)a.

(2) Additional Terms and Conditions

a. This emissions unit is exempt from the requirements of OAC rule 3745-18-06(E) in accordance with OAC rule 3745-18-06(C).

c) Operational Restrictions

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

[OAC rule 3745-77-07(A)(1)]

d) Monitoring and/or Recordkeeping Requirements

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

[OAC rule 3745-77-07(C)(1)]

e) Reporting Requirements

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

[OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Compliance with the emission limitations in Section b)(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance with the visible emissions limitation above shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1)]

b. Emission Limitation: 0.040 lb PE/mmBtu of actual heat input

Applicable Compliance Method:

The permittee may demonstrate compliance with this limitation by multiplying the maximum hourly natural gas consumption rate (mm cu. ft/hr) by the emission factor from AP-42, Table 1.4-2 (revised 7/98) of 1.9 lbs PE (filterable)/mm cu. ft, and then dividing by the maximum heat input capacity of the turbine (mmBtu/hr).

If required, compliance with the lb/mmBtu limitation shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(10).

[OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

6. B507, Ammonia Load Heater

Operations, Property and/or Equipment Description:

Ammonia Load Heater (product area) (40 million Btu/hr - Natural Gas Fired)

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) b)(1)f. and d)(2).

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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) [PTI No. P0117742, issued 10/15/14]	0.082 lb of carbon monoxide (CO)/million Btu See b)(2)a. and b)(2)b.
b.	OAC rule 3745-31-05(D) [PTI No. P0117742, issued 10/15/14]	3.92 lbs of nitrogen oxides (NOx)/hr and 17.18 tons of NOx/yr See b)(2)b.
c.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
d.	OAC rule 3745-17-10(B)(1)	0.020 lb PE/mmBtu of actual heat input
e.	OAC rule 3745-18-06(E)	Exempt, see b)(2)c.
f.	ORC 3704.03(F) and OAC rule 3745-114	See d)(2)
g.	40 CFR, Part 63, Subpart DDDDD (40 CFR 63.7480-7575) [In accordance with 63.7575, this emissions unit is a gaseous fuel 1 subcategory existing process heater located at a major source of HAP emissions and subject to the applicable requirements specified in this section.]	See b)(2)d., c)(2) and c)(3) 63.7500(a) Table 3 requirements

(2) Additional Terms and Conditions

a. The CO emissions limitation was previously established in permit-to-install No. P0105861, issued on 5/21/10. Best Available Technology (BAT) requirements for NOx emissions under ORC 3704.03(T) have been determined to be compliance with the annual NOx emission limitation as established pursuant to OAC rule 3745-31-05(D).

b. The mass emission rate limitations in b)(1)a. and b)(1)b. above represent the potentials to emit (PTE), defined as the maximum capacity to emit an air pollutant under the physical and operational design.

Therefore, no monitoring, record keeping, or reporting requirements are necessary to ensure compliance with these emission limitations. See f)(1)a. and f)(1)b. for details regarding the PTE.

Emissions from the ammonia load heater are associated with the combustion of natural gas and include: particulate emissions (PE), particulate matter 10 microns or less in size (PM_{10}), particulate matter 2.5 microns or less in size ($PM_{2.5}$), organic compounds (OC), volatile organic compounds (VOC), and sulfur dioxide (SO2).

The uncontrolled potential emissions of PE, PM_{10}, $PM_{2.5}$, OC, VOC, and SO2 are of negligible quantities for criteria pollutants and therefore have not been addressed within this permit.

c. This emissions unit is exempt from the requirements of OAC rule 3745-18-06(E) in accordance with OAC rule 3745-18-06(C).

d. This emissions unit is subject to the initial notification requirements of 40 CFR, Part 63, Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, or site-specific monitoring plan requirements of Subpart DDDDD or any other requirements in 40 CFR, Part 63, Subpart A).

c) Operational Restrictions

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

[OAC rule 3745-77-07(A)(1)and PTI No. P0117742]

(2) Pursuant to 40 CFR 63.7540(a)(10), because this emissions unit is a process heater or boiler with heat input capacity greater than 10 mmBtu/hr combusting natural gas, the permittee shall conduct a tune-up of the boiler or process heater annually as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi). Pursuant to 40 CFR 63.7540(a)(13), if the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart DDDDD]

(3) The permittee shall have a one-time energy assessment performed by a qualified energy assessor, pursuant to work practice standards 4.a through 4.h in Table 3 of 40 CFR, Part 63, Subpart DDDDD. The subsequent report associated with this assessment shall be submitted no later than January 31, 2016.

[OAC rule 3745-77-07(A)(1) and 40 CFR, Part 63, Subpart DDDDD]

d) Monitoring and/or Recordkeeping Requirements

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

[OAC rule 3745-77-07(C)(1)and PTI No. P0117742]

(2) Modeling to demonstrate compliance with, the “Toxic Air Contaminant Statute”, ORC 3704.03(F)(4)(b), was not necessary for this permit action because actual emissions of the toxic air contaminant ammonia (NH3), as specified in OAC rule 3745-114-01, resulted in an actual decrease. Other than NH3, the maximum annual emissions for each toxic air contaminant (as specified in OAC rule 3745-114-01) that is not subject to MACT and/or NESHAP regulations will be less than 1.0 ton per year. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit-to-install (PTI) prior to making a "modification" as defined by OAC rule 3745-31-01.

The permittee is hereby advised that changes in the composition of the materials, or use of new materials, etc. that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.

[PTI No. P0117742]

e) Reporting Requirements

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

[OAC rule 3745-77-07(C)(1)and PTI No. P0117742]

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. Emission Limitation:

0.082 lb of CO/million Btu

Applicable Compliance Method:

The emission limitation represents the PTE (defined as the maximum capacity to emit an air pollutant under the physical and operational design). The PTE is based on a heat content of 1,020 Btu/scf and a CO emission factor of 84 lbs/million scf (AP-42, Table 1.4-1 [7/98]).

If required, the permittee shall demonstrate compliance with this emission limitation pursuant to Methods 1 through 4, and 10 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1)and PTI No. P0117742]

b. Emission Limitations:

3.92 lbs of NOx/hr and 17.18 tons of NOx/yr

Applicable Compliance Method:

The emission limitation represents the PTE (defined as the maximum capacity to emit an air pollutant under the physical and operational design). The PTE is based on a heat content of 1,020 Btu/scf and a NOx emission factor of 100 lbs/million scf (AP-42, Table 1.4-1 [7/98]).

If required, the permittee shall demonstrate compliance with this emission limitation pursuant to Methods 1 through 4, and 7 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/hr emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1)and PTI No. P0117742]

c. Emission Limitation:

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

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A, and the requirements specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1)and PTI No. P0117742]

d. Emission Limitation:

0.020 lb PE/million Btu of actual heat input

Applicable Compliance Method:

The permittee may demonstrate compliance with the PE limitation above by multiplying the maximum hourly natural gas consumption rate (0.0392 million scf/hr) by an AP-42 emission factor of 1.9 lbs PE (filterable)/million scf (AP-42, Table 1.4-2 [7/98]), and then dividing by the maximum heat input capacity of the heater (40 million Btu/hr).

If required, compliance with the lb/million Btu PE limitation above shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(9).

[OAC rule 3745-77-07(C)(1)and PTI No. P0117742]

g) Miscellaneous Requirements

(1) None.

7. B509, Ammonia Production Unit: Boiler #3Operations, Property and/or Equipment Description:

Ammonia Production Unit - Boiler #3 (227 million Btu/hr - Natural Gas Fired)

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) b)(1)j. and d)(3).

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(D) [PTI No. P0117742, issued 10/15/14]	1.69 lbs of particulate emissions/ particulate matter less than or equal to 10 microns in diameter/particulate matter less than or equal to 2.5 microns in diameter ($PE/PM_{10}/PM_{2.5}$)/hr and 7.41 tons of $PE/PM_{10}/PM_{2.5}$/yr 0.13 lb of sulfur dioxide (SO2)/hr and 0.58 ton of SO2/yr 22.70 lbs of nitrogen oxides (NOx)/hr and 99.43 tons of NOx/yr 18.69 lbs of carbon monoxide (CO)/hr and 81.88 tons of CO/yr 1.22 lbs of volatile organic compounds (VOC)/hr and 5.36 tons of VOC/yr See b)(2)a. through b)(2)c.
b.	ORC 3704.03(T)	See b)(2)d.
c.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a six-minute average, except as provided by rule.
d.	OAC rule 3745-17-10(B)(1)	0.020 lb of PE/mmBtu of actual heat input [See b)(2)e.]
e.	OAC rule 3745-18-06(E)	Exempt, see b)(2)f.
f.	40 CFR, Part 63, Subpart DDDDD (40 CFR 63.7480-7575)	See b)(2)g., c)(2) and c)(3) 63.7500(a) Table 3 requirements

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	[In accordance with 63.7575, this emissions unit is a gaseous fuel 1 subcategory new process heater located at a major source of HAP emissions and subject to the applicable requirements specified in this section.]	
g.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)h. and b)(2)i.
h.	OAC rule 3745-31-05(A)(3), as effective 12/1/06	See b)(2)j.
i.	OAC rule 3745-110	See b)(2)k.
j.	ORC 3704.03(F) and OAC rule 3745-114	See d)(3)
k.	40 CFR, Part 60, Subpart Db 40 CFR 60.40b - 60.49b	0.20 lb of NOx (expressed as NO_2)/mmBtu of actual heat input on a 30-day rolling average basis [See b)(2)l., d)(2) and e)(2)]

(2) Additional Terms and Conditions

a. The mass emission rate limitations in b)(1)a. above represent the potential to emit (PTE), defined as the maximum capacity to emit an air pollutant under the physical and operational design. Therefore, no monitoring, record keeping, or reporting requirements are necessary to ensure compliance with these emission limitations. See f)(1)a., b, c., d., and e. for details regarding the PTE.

b. It is assumed that all PE are equivalent to both PM_{10} and $PM_{2.5.}$

c. This permit establishes the following federally enforceable emission limitations for the purpose of representing the potentials to emit of this emissions unit:

i. 1.69 lbs of PE/PM_{10}/$PM_{2.5}$/hr and 7.41 tons of PE/PM_{10}/$PM_{2.5}$/yr;

ii. 0.13 lb of SO2/hr and 0.58 ton of SO2/yr;

iii. 22.70 lbs of NOx/hr and 99.43 tons of NOx/yr;

iv. 18.69 lbs of CO/hr and 81.88 tons of CO/yr; and

v. 1.22 lbs of VOC/hr and 5.36 tons of VOC/yr.

d. Best Available Technology (BAT) requirements for NOx and CO emissions under ORC 3704.03(T) have been determined to be compliance with the annual emission limitations for NOx and CO as established pursuant to OAC rule 3745-31-05(D).

e. The emission limitation of 0.020 lb of particulate emissions (PE) per million Btu of actual heat input specified by OAC 3745-17-10(B)(1) is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(D).

f. This emissions unit is exempt from the requirements of OAC rule 3745-18-06(E) in accordance with OAC rule 3745-18-06(C).

g. This emissions unit is subject to the initial notification requirements of 40 CFR, Part 63, Subpart DDDDD (Boiler MACT) as outlined in 63.9(b) (i.e., it is not subject to the emission limits, performance testing, monitoring, or site-specific monitoring plan requirements of Subpart DDDDD or any other requirements in 40 CFR, Part 63, Subpart A).

h. BAT requirements for PE/PM_{10}/$PM_{2.5}$, SO2 and VOC emissions under OAC rule 3745-31-05(A)(3), as effective 11/30/01 have been determined to be compliance with the annual emission limitations for PE/PM_{10}/$PM_{2.5}$, SO2 and VOC as established pursuant to OAC rule 3745-31-05(D).

i. The permittee has satisfied the BAT requirements for PE/PM_{10}/$PM_{2.5}$, SO2 and VOC emissions pursuant to OAC rule 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 ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulation for NAAQS pollutant emissions less than 10 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 revision 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 limits and control measures no longer apply.

j. 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 BAT requirements under OAC rule 3745-31-05(A)(3)(a) do not apply to the PE/PM_{10}/$PM_{2.5}$, SO2 and VOC emissions since the potential to emit is less than 10 tons per year.

k. Pursuant to OAC rule 3745-110-01(B)(19), this emissions unit is a new large boiler. The emissions limitations for NOx in OAC rule 3745-110-03(C) are as stringent as the NOx emission limitation established pursuant to OAC rule 3745-31-05(D).

l. The emission limitation of 0.20 lb of NOx (expressed as NO_2)/mmBtu of actual heat input on a 30-day rolling average basis specified by 40 CFR 60.44b(i) and (l)(1) for a boiler with "high heat release rate" is less stringent than the NOx limitation established pursuant to OAC rule 3745-31-05(D).

c) Operational Restrictions

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

[OAC rule 3745-77-07(A)(1) and PTI No. P0117742]

(2) Pursuant to 40 CFR 63.7540(a)(12), because this emissions unit is a process heater or boiler in the Gas 1 subcategory with a continuous oxygen trim system that maintains an optimum air to fuel ratio, the permittee shall conduct a tune-up of the boiler or process heater every 5 years as specified in 40 CFR 63.7540(a)(10)(i) through 63.7540(a)(10)(vi). The permittee may delay the burner inspection specified in paragraph 63.7540(a)(10)(i) until the next scheduled or unscheduled unit shutdown, but the permittee must inspect each burner at least once every 72 months. Pursuant to 40 CFR 63.7540(a)(13), if the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0117742]

(3) The permittee shall have a one-time energy assessment performed by a qualified energy assessor, pursuant to work practice standards 4.a through 4.h in Table 3 of 40 CFR, Part 63, Subpart DDDDD. The subsequent report associated with this assessment shall be submitted no later than January 31, 2016.

[OAC rule 3745-77-07(A)(1); 40 CFR, Part 63, Subpart DDDDD; and PTI No. P0117742]

d) Monitoring and/or Recordkeeping Requirements

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

(2) The permittee shall perform the following monitoring and record keeping requirements contained in 40 CFR, Part 60, Subpart Db for purposes of demonstrating compliance with the 0.20 lb of NOx (expressed as NO2)/mmBtu of actual heat input on a 30-day rolling average basis emission limitation:

a. The permittee shall install, calibrate, maintain, and operate CEMS for measuring NOx and O2 (or CO2) emissions discharged to the atmosphere, and shall record the output of the system. [40 CFR 60.48b(b)(1)]

b. The CEMS shall be operated and data recorded during all periods of operation of the affected facility except for CEMS breakdowns and repairs. Data is recorded during calibration checks, and zero and span adjustments.[40 CFR 60.48b(c)]

c. The 1-hour average NOx emission rates measured by the continuous NOx monitor required under 40 CFR 60.13(h) shall be expressed in ng/J or lb/mmBtu heat input and shall be used to calculate the average emission rates. The 1-hour averages shall be calculated using the data points required under 40 CFR 60.13(h)(2). [40 CFR 60.48b(d)]

d. The procedures under 40 CFR 60.13 shall be followed for installation, evaluation, and operation of the continuous monitoring systems. The span value for NOx is determined using the procedures in 40 CFR 60.48b(e)(2)(i). [40 CFR 60.48b(e)(2)]

e. When NOx emission data are not obtained because of CEMS breakdowns, repairs, calibration checks and zero and span adjustments, emission data will be obtained by using standby monitoring systems, Method 7 of appendix A of this part, Method 7A of appendix A of this part, or other approved reference methods to provide emission data for a minimum of 75% of the operating hours in each steam generating unit operating day, in at least 22 out of 30 successive steam generating unit operating days.[40 CFR 60.48b(f)]

f. The permittee shall record and maintain records of the amount of natural gas combusted during each day and calculate the annual capacity factor for natural gas for the reporting period. The annual capacity factor is determined on a 12-month rolling average basis with a new annual capacity factor calculated at the end of each calendar month.[40 CFR 60.49b(d)(1)]

g. The permittee shallmaintain records of the following information for each steam generating unit operating day:[40 CFR 60.49b(g)]

i. Calendar date;

ii. The average hourly NOx emission rates (expressed as NO2) (ng/J or lb/mmBtu heat input) measured or predicted;

iii. The 30-day average NOx emission rates (ng/J or lb/mmBtu heat input) calculated at the end of each steam generating unit operating day from the measured or predicted hourly NOx emission rates for the preceding 30 steam generating unit operating days;

iv. Identification of the steam generating unit operating days when the calculated 30-day average NOx emission rates are in excess of the NOx emission limitation (specified above in b)(1)l.), with the reasons for such excess emissions as well as a description of corrective actions taken;

v. Identification of the steam generating unit operating days for which pollutant data have not been obtained, including reasons for not obtaining sufficient data and a description of corrective actions taken;

vi. Identification of the times when emission data have been excluded from the calculation of average emission rates and the reasons for excluding data;

vii. Identification of “F” factor used for calculations, method of determination, and type of fuel combusted;

viii. Identification of the times when the pollutant concentration exceeded full span of the CEMS;

ix. Description of any modifications to the CEMS that could affect the ability of the CEMS to comply with Performance Specification 2 or 3; and

x. Results of daily CEMS drift tests and quarterly accuracy assessments as required under appendix F, Procedure 1 of this part.

h. All records required under this section shall be maintained by the permittee for a period of 2 years following the date of such record.[40 CFR 60.49b(o)]

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Db; and PTI No. P0117742]

(3) Modeling to demonstrate compliance with, the “Toxic Air Contaminant Statute”, ORC 3704.03(F)(4)(b), was not necessary for this permit action because actual emissions of the toxic air contaminant ammonia (NH3), as specified in OAC rule 3745-114-01, resulted in an actual decrease. Other than NH3, the maximum annual emissions for each toxic air contaminant (as specified in OAC rule 3745-114-01) that is not subject to MACT and/or NESHAP regulations will be less than 1.0 ton per year. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit-to-install (PTI) prior to making a "modification" as defined by OAC rule 3745-31-01.

The permittee is hereby advised that changes in the composition of the materials, or use of new materials, etc. that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.

[PTI No. P0117742]

e) Reporting Requirements

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

(2) The permittee shall perform the following reporting requirements contained in 40 CFR. Part 60, Subpart Db:

a. The permittee shall submit notification of the date of initial startup, as provided by 40 CFR 60.7. This notification shall include:[40 CFR 60.49b(a)]

i. The design heat input capacity of the affected facility and identification of the fuels to be combusted in the affected facility; and [40 CFR 60.49b(a)(1)]

ii. The annual capacity factor at which the owner or operator anticipates operating the facility based on all fuels fired and based on each individual fuel fired. [40 CFR 60.49b(a)(3)]

b. The permittee shallsubmit to the Administrator the performance test data from the initial performance test and the performance evaluation of the CEMS using

the applicable performance specifications in appendix B of 40 CFR, Part 60.[40 CFR 60.49b(b)]

c. The permittee shallsubmit excess emission reports for any excess emissions that occurred during the reporting period. Excess emissions are defined as any calculated 30-day rolling average NOx emission rate that exceeds the applicable emission limit.[40 CFR 60.49b(h)]

d. The permittee shall submit reports containing the information recorded under the recordkeeping requirements in d)(3)g. [40 CFR 60.49b(i)]

e. The permittee may submit electronic quarterly reports for NOx in lieu of submitting the written reports required under 40 CFR 60.49b(h) or (i). The format of each quarterly electronic report shall be coordinated with the permitting authority. The electronic report(s) shall be submitted no later than 30 days after the end of the calendar quarter and shall be accompanied by a certification statement from the permittee, indicating whether compliance with the applicable emission standards and minimum data requirements of this subpart was achieved during the reporting period. Before submitting reports in the electronic format, the permittee shall coordinate with the permitting authority to obtain their agreement to submit reports in this alternative format. [40 CFR 60.49b(v)]

f. The reporting period for the reports required under this subpart is each 6 month period. All reports shall be submitted to the Administrator and shall be postmarked by the 30th day following the end of the reporting period.[40 CFR 60.49b(w)]

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Db; and PTI No. P0117742]

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. Emission Limitations:

1.69 lbs of PE/PM_{10}/$PM_{2.5}$/hr and 7.41 tons of PE/PM_{10}/$PM_{2.5}$/yr

Applicable Compliance Method:

The hourly PE/PM_{10}/$PM_{2.5}$ emission limitation above was developed by multiplying the PE/PM_{10}/$PM_{2.5}$ emission factor from AP-42, Table 1.4-2 (dated 7/98) (7.6 lbs/million scf) by the maximum heat input of 227 million Btu/hr, then dividing by the natural gas heat content of 1,020 Btu/scf. Compliance is presumed by only using natural gas as required in (c)(1).

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Methods 1 through 4 of 40 CFR, Part 60, Appendix A and

Methods 201, 201A and 202 of 40 CFR, Part 51, Appendix M. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/hr emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

b. Emission Limitations:

0.13 lb of SO2/hr and 0.58 ton of SO2/yr

Applicable Compliance Method:

The hourly SO2 emission limitation above was developed by multiplying the SO2 emission factor from AP-42, Table 1.4-2 (dated 7/98) (0.6 lb/million scf) by the maximum heat input of 227 million Btu/hr, then dividing by the natural gas heat content of 1,020 Btu/scf. Compliance is presumed by only using natural gas as required in (c)(1).

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Method 1 through 4, and 6of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/hr emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

c. Emission Limitations:

22.70 lbs of NOx/hr and 99.43 tons of NOx/yr

Applicable Compliance Method:

The hourly NOx emission limitation above was developed by multiplying the required Ohio EPA NOx Reasonably Available Control Technology emission limit of 0.1 lb/million Btu from OAC rule 3745-110-03(C) by the maximum heat input of 227 million Btu/hr. Compliance is presumed by only using natural gas as required in (c)(1).

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Method 1 through 4, and 7of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/hr emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

d. Emission Limitations:

18.69 lbs of CO/hr and 81.88 tons of CO/yr

Applicable Compliance Method:

The hourly CO emission limitation above was developed by multiplying the CO emission factor from AP-42, Table 1.4-1 (dated 7/98) (84 lbs/million scf) by the maximum heat input of 227 million Btu/hr, then dividing by the natural gas heat content of 1,020 Btu/scf. Compliance is presumed by only using natural gas as required in (c)(1).

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Method 1 through 4, and 10of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton.

Therefore, provided compliance is shown with the lb/hr emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

e. Emission Limitations:

1.22 lbs of VOC/hr and 5.36 tons of VOC/yr

Applicable Compliance Method:

The hourly VOC emission limitation above was developed by multiplying the VOC emission factor from AP-42, Table 1.4-2 (dated 7/98) (5.5 lbs/million scf) by the maximum heat input of 227 million Btu/hr, then dividing by the natural gas

heat content of 1,020 Btu/scf. Compliance is presumed by only using natural gas as required in (c)(1).

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Method 1 through 4, and 18, 25, or 25A, as applicable,of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/hr emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

f. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible particulate emission limitation above in accordance with the methods and procedures specified in Method 9 of 40 CFR, Part 60, Appendix A, and the requirements specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

g. Emission Limitation:

0.20 lb of NOx (expressed as NO2)/mmBtu of actual heat input on a 30-day rolling average basis

Applicable Compliance Method:

The permittee shall demonstrate compliance with the 30-day rolling average emission limitation by conducting the performance testing as required under 40 CFR 60.8 using the continuous system for monitoring NOx under 40 CFR 60.48(b). Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA. [40 CFR 60.46b(e)]

i. For the initial compliance test, NOx from the boiler are monitored for 30 successive steam generating unit operating days and the 30-day average emission rate is used to determine compliance with the NOx emission limit. The 30-day average emission rate is calculated as the average of all hourly emissions data recorded by the monitoring system during the 30-day test period.[40 CFR 60.46b(e)(1)]

ii. Following the date on which the initial performance test is completed or required to be completed under 40 CFR 60.8, whichever date comes first, thepermittee shall, upon request, determine compliance with the NOx emission limit through the use of a 30-day performance test. During periods when performance tests are not requested, NOx emissions data collected pursuant to 40 CFR 60.48b(g)(1) are used to calculate a 30-day rolling average emission rate on a daily basis and used to prepare excess emission reports, but will not be used to determine compliance with the NOx emission standards. A new 30-day rolling average emission rate is calculated each steam generating unit operating day as the average of all of the hourly NOx emission data for the preceding 30 steam generating unit operating days.[40 CFR 60.46b(e)(4)]

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart Db; and PTI No. P0117742]

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

a. The emission testing shall be conducted within 60 days after achieving the maximum production rate at which the affected facility will be operated, but not later than 180 days after initial startup of such facility. [40 CFR 60.8(a)]

The emission testing shall be conducted to demonstrate compliance with theallowable emission rate of 0.20 lb of NOx (expressed as NO2)/mmBtu of actual heat input on a 30-day rolling average basis.

b. The following test methods shall be employed to demonstrate compliance withthe allowable mass emission rate for NOx:using the continuous system for monitoring NOx under 40 CFR 60.48(b).Alternate U.S. EPA-approved test methods may be used withprior approval from the Ohio EPA.

c. The test(s) shall be conducted while the emissions unit is operating at itsmaximum capacity, unless otherwise specified or approved by the Ohio EPA,Northwest District Office.

d. Not later than 30 days prior to the proposed test date(s), the permittee shallsubmit an "Intent to Test" notification to the Ohio EPA,Northwest District Office. The "Intent to Test" notification shall describe in detail theproposed test methods and procedures, the emissions unit operatingparameters, the time(s) and date(s) of the test(s), and the person(s) who will beconducting the test(s).

Failure to submit such notification for review and approvalprior to the test(s) may result in the Ohio EPA,Northwest District Office's refusal to accept the results of the emission test(s).

e. Personnel from the Ohio EPA,Northwest District Office shallbe permitted to witness the test(s), examine the testing equipment, and acquiredata and information necessary to ensure that the operation of the emissions unit and the

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

f. A comprehensive written report on the results of the emissions test(s) shall besigned by the person or persons responsible for the tests and submitted to the Ohio EPA,Northwest District Office within 30 days followingcompletion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Northwest District Office.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

g) Miscellaneous Requirements

(1) None.

9. P520, Ammonia Production Unit: Reforming

Operations, Property and/or Equipment Description:

Ammonia Production Unit - Reforming Section

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) b)(1)c. and d)(2).

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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(D) [PTI No. P0117742, issued 10/15/14]	2,439.85 lbs of carbon monoxide (CO)/hr during emissions unit start-up periods 8.22 lbs of CO/hr during normal production mode of operation 489.83 tons of CO/yr during start-up periods and normal production mode of operation, combined 37.15 lbs of volatile organic compounds (VOC)/hr during emissions unit start-up periods 0.75 lb of VOC/hr during normal production mode of operation 10.20 tons of VOC/yr during start-up periods and normal production mode of operation, combined See b)(2)a., b)(2)b., c)(1), d)(1) and e)(1)
b.	ORC 3704.03(T)	See b)(2)c.
c.	ORC 3704.03(F) and OAC rule 3745-114	See d)(2)

(2) Additional Terms and Conditions

a. The mass emission rate limitations in b)(1)a. above represent the potentials to emit (PTE), defined as the maximum capacity to emit an air pollutant under the physical and operational design. Therefore, no monitoring, record keeping, or reporting requirements are necessary to ensure compliance with these emission limitations. See f)(1)a. andb., for details regarding the PTE.

b. This permit establishes the following federally enforceable emission limitations for the purpose of representing the potentials to emit of this emissions unit. The federally enforceable limitations are based on the operational restrictions in c)(1):

i. 2,439.85 lbs of CO/hr during emissions unit start-up periods;

ii. 8.22 lbs of CO/hr during normal production mode of operation;

iii. 489.83 tons of CO/yr during start-up periods and normal production mode of operation, combined;

iv. 37.15 lbs of VOC/hr during emissions unit start-up periods;

v. 0.75 lb of VOC/hr during normal production mode of operation; and

vi. 10.20 tons of VOC/yr during start-up periods and normal production mode of operation, combined.

c. Best Available Technology (BAT) requirements for CO and VOC emissions under ORC 3704.03(T) have been determined to be compliance with the annual emission limitations for CO and VOC as established pursuant to OAC rule 3745-31-05(D).

c) Operational Restrictions

(1) Start-up, shutdown, and normal operations for the ammonia reforming unit is limited by the following:

$$\sum_{M=1}^{12}\sum_{n} CO_n \leq 489.83 \; and \; \sum_{n} VOC_n \leq 10.20$$

where:

M = the increment of the rolling 12-month period;

n = type of operation (i.e. normal, start-up, shutdown) during the period;

CO_n = calculated emissions of carbon monoxide in tons;

VOC_n = calculated emissions of volatile organic compounds in tons;

[OAC rule 3745-77-07(A)(1) and PTI No. P0117742]

(2) To ensure federal enforceability during the first 12 calendar months of operation under the provisions of this permit, start-up, shutdown, and normal operations for the ammonia reforming unit is limited by the following:

Allowable Operation Limitations

Month(s)	$\sum_n CO_n \leq$	and	$\sum_n VOC_n \leq$
1-1	100.00	and	2.00
1-2	200.00	and	4.00
1-3	300.00	and	6.00
1-4	400.00	and	8.00
1-12	489.83	and	10.20

After the first 12 calendar months of operation under the provisions of this permit, compliance with the allowable operation limitations shall be based upon a rolling 12-month summation.

[OAC rule 3745-77-07(A)(1) and PTI No. P0117742]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall collect and record the following information each month:

a. Type and time period of each operation (startup, shutdown, normal);

b. The calculated CO and VOC emissions, in tons, associated with each type of operation, based on a detailed review of startup, shutdown, and normal operations.

c. The total CO and VOC emission rates, in tons, from all operation types [summation of d)(1)b. for startup, shutdown, and normal operations];

d. For the first 12 calendar months of operation under the provisions of this permit, the cumulative monthly CO and VOC emissions, in tons; and

e. After the first 12 months of operation under the provisions of this permit, the rolling 12-month CO and VOC emissions, in tons.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

(2) Modeling to demonstrate compliance with, the “Toxic Air Contaminant Statute”, ORC 3704.03(F)(4)(b), was not necessary for this permit action because actual emissions of the toxic air contaminant ammonia (NH3), as specified in OAC rule 3745-114-01,

resulted in an actual decrease. Other than NH3, the maximum annual emissions for each toxic air contaminant (as specified in OAC rule 3745-114-01) that is not subject to MACT and/or NESHAP regulations will be less than 1.0 ton per year.OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit-to-install (PTI) prior to making a "modification" as defined by OAC rule 3745-31-01.

The permittee is hereby advised that changes in the composition of the materials, or use of new materials, etc. that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.

[PTI No. P0117742]

e) Reporting Requirements

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

a. all exceedances of the rolling 12-month operational restriction specified in c)(1); and

b. all exceedances of the allowable operational limitations for the first 12 months of operation as specified in c)(2);

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

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. Emission Limitation:

2,439.85 lbs of CO/hr during emissions unit start-up periods

Applicable Compliance Method:

The hourly emission limitation during start-up periods is based on PCS Engineering staff system knowledge and a detailed review of operations history. Compliance shall be demonstrated by the recordkeeping requirements in d)(1).

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Method 1 through 4, and 10of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

b. Emission Limitation

8.22 lbs of CO/hr during normal production mode of operation

Applicable Compliance Method:

The hourly emission limitation is based on previous stack testing data, and reflects the potential to emit (PTE) for this emissions unit during normal production mode of operation.

Therefore, it is not necessary to develop any further monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation.

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Method 1 through 4, and 10of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

c. Emission Limitation:

489.83 tons of CO/yr during start-up periods and normal production mode of operation, combined

Applicable Compliance Method:

The annual emission limitation is based on 453.81 tons of CO/yr during emissions unit start-up periods: (2,439.85 lbs of CO/hr)(372 hrs/yr of start-up)/(2,000 lbs/ton); plus an additional 36.02 tons of CO during the remaining 8,388 hrs/yr. Compliance with the annual emission limitation shall be demonstrated by the recordkeeping requirements in d)(1).

The 36.02 tons of CO/yr is based on previous stack testing, and reflects the potential to emit (PTE) for this emissions unit during normal production operating mode. Therefore, it is not necessary to develop any further monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

d. Emission Limitation:

37.15 lbs of VOC/hr during emissions unit start-up periods

Applicable Compliance Method:

The hourly emission limitation during start-up periods is based on PCS Engineering staff system knowledge and a detailed review of operations history. Compliance shall be demonstrated by the recordkeeping requirements in d)(1).

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Method 1 through 4, and 18, 25, or 25A, as applicable,of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

e. Emission Limitation:

0.75 lb of VOC/hr during normal production mode of operation

Applicable Compliance Method:

The hourly emission limitation is based on previous stack testing data, and reflects the potential to emit (PTE) for this emissions unit during normal production mode of operation.

Therefore, it is not necessary to develop any further monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation.

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Method 1 through 4, and 18, 25, or 25A, as applicable,of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

f. Emission Limitation:

10.20 tons of VOC/yr during start-up periods and normal production mode of operation, combined

Applicable Compliance Method:

The annual emission limitation is based on 6.91 tons of VOC/yr during emissions unit start-up periods: (37.15 lbs of VOC/hr)(372 hrs/yr of start-up)/(2,000 lbs/ton); plus an additional 3.29 tons of VOC during the remaining 8,388 hrs/yr. Compliance with the annual emission limitation shall be demonstrated by the recordkeeping requirements in d)(1).

The 3.29 tons of VOC/yr is based on previous stack testing, and reflects the potential to emit (PTE) for this emissions unit during normal production operating mode.

Therefore, it is not necessary to develop any further monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

g) Miscellaneous Requirements

(1) None.

10. P521, Ammonia Production Unit: Purification

Operations, Property and/or Equipment Description:

Ammonia Production Unit - Purification Section

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) b)(1)e. and d)(1).

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(D) [PTI No. P0117742, issued 10/15/14]	2.62 lbs of carbon monoxide (CO)/hr and 11.49 tons of CO/yr 0.37 lb of volatile organic compounds (VOC)/hr and 1.62 tons of VOC/yr See b)(2)a. and b)(2)b.
b.	ORC 3704.03(T)	See b)(2)c.
c.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)d. and b)(2)e.
d.	OAC rule 3745-31-05(A)(3), as effective 12/1/06	See b)(2)f.
e.	ORC 3704.03(F) and OAC rule 3745-114	See d)(1)

(2) Additional Terms and Conditions

a. The mass emission rate limitations in b)(1)a. above represent the potential to emit (PTE), defined as the maximum capacity to emit an air pollutant under the physical and operational design. Therefore, no monitoring, record keeping, or reporting requirements are necessary to ensure compliance with these emission limitations. See f)(1)a. andb. for details regarding the PTE.

b. This permit establishes the following federally enforceable emission limitations for the purpose of representing the potentials to emit of this emissions unit:

i. 2.62 lbs of CO/hr and 11.49 tons of CO/yr; and

ii. 0.37 lb of VOC/hr and 1.62 tons of VOC/yr.

c. Best Available Technology (BAT) requirements for CO emissions under ORC 3704.03(T) have been determined to be compliance with the annual CO emission limitation as established pursuant to OAC rule 3745-31-05(D).

d. BAT requirements for VOC emissions under OAC rule 3745-31-05(A)(3), as effective 11/30/01 have been determined to be compliance with the annual VOC emission limitation as established pursuant to OAC rule 3745-31-05(D).

e. The permittee has satisfied the BAT requirements for VOC emissions pursuant to OAC rule 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 ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulation for NAAQS pollutant emissions less than 10 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 revision 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 limits and 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 BAT requirements under OAC rule 3745-31-05(A)(3)(a) do not apply to the VOC emissions since the potential to emit is less than 10 tons per year.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Modeling to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary for this permit action because actual emissions of the toxic air contaminant ammonia (NH3), as specified in OAC rule 3745-114-01, resulted in an actual decrease. Other than NH3, the maximum annual emissions for each toxic air contaminant (as specified in OAC rule 3745-114-01) that is not subject to MACT and/or NESHAP regulations will be less than 1.0 ton per year. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit-to-install (PTI) prior to making a "modification" as defined by OAC rule 3745-31-01.

The permittee is hereby advised that changes in the composition of the materials, or use of new materials, etc. that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.

[PTI No. P0117742]

e) Reporting Requirements

(1) None.

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. Emission Limitations:

2.62 lbs of CO/hr and 11.49 tons of CO/yr

Applicable Compliance Method:

The hourly emission limitation is based on previous stack testing data, and reflects the potential to emit (PTE) for this emissions unit. Therefore, it is not necessary to develop any further monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation.

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Method 1 through 4, and 10of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/hr emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

b. Emission Limitations:

0.37 lb of VOC/hr and 1.62 tons of VOC/yr

Applicable Compliance Method:

The hourly emission limitation is based on previous stack testing data, and reflects the potential to emit (PTE) for this emissions unit. Therefore, it is not necessary to develop any further monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation.

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Method 1 through 4, and 18, 25, or 25A, as applicable,of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/hr emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

g) Miscellaneous Requirements

(1) None.

11. P522, Ammonia Production Unit: Synthesis

Operations, Property and/or Equipment Description:

Ammonia Production Unit - Synthesis Section, with South Stripper Stack Flare

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) b)(1)e. and d)(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 3745-31-05(D) [PTI No. P0117742, issued 10/15/14]	<u>Emissions from the flare:</u> Visible particulate emissions (PE) from the flare shall not exceed 5% opacity, as a 6-minute average. 2.41 lbs of carbon monoxide (CO)/hr and 10.55 tons of CO/yr during normal production mode of operation <u>Emissions from process equipment</u>: 6.04 tons of volatile organic compounds (VOC)/yrduring normal production mode of operation See b)(2)a., b)(2)b., b)(2)g., c)(1), d)(1) through d)(3), and e)(1) through e)(3)
b.	ORC 3704.03(T)	See b)(2)c.
c.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)d. and b)(2)e.
d.	OAC rule 3745-31-05(A)(3), as effective 12/1/06	See b)(2)f.
e.	ORC 3704.03(F) and OAC rule 3745-114	See d)(4)

(2) Additional Terms and Conditions

a. The mass emission rate limitations in b)(1)a. above represent the potentials to emit (PTE), defined as the maximum capacity to emit an air pollutant under the physical and operational design. Therefore, no monitoring, record keeping, or reporting requirements are necessary to ensure compliance with these emission limitations. See f)(1)b. andc., for details regarding the PTE.

b. This permit establishes the following federally enforceable emission limitations for the purpose of representing the potentials to emit of this emissions unit. The federally enforceable limitation for VOCis based on the operational restriction in c)(1):

i. 2.41 lbs of CO/hr and 10.55 tons of CO/yr from the flare during normal production mode of operation; and

ii. 6.04 tons of VOC/yr from process equipment during normal production mode of operation.

c. Best Available Technology (BAT) requirements for CO emissions under ORC 3704.03(T) have been determined to be compliance with the emission limitations and requirements established pursuant to OAC rule 3745-31-05(D).

d. BAT requirements for VOC emissions under OAC rule 3745-31-05(A)(3), as effective 11/30/01 have been determined to be compliance with the annual VOC emission limitation as established pursuant to OAC rule 3745-31-05(D).

e. The permittee has satisfied the BAT requirements for VOC emissions pursuant to OAC rule 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 ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulation for NAAQS pollutant emissions less than 10 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 revision 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 limits and 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 BAT requirements under OAC rule 3745-31-05(A)(3)(a) do not apply to the VOC emissions since the potential to emit is less than 10 tons per year.

g. Criteria pollutant emissions resulting from shutdown events and from combustion of gas streams in the flare have been determined to be negligible for this emissions unit. The VOC emissions that vent through the flare (determined by

previous stack testing)have been determined to be negligible(0.01 ton of VOC/yr). [See c)(1)c.]

c) Operational Restrictions

(1) The following operational restrictions have been included in this permit for establishing federally enforceable requirements which limit PTE for VOC [See b)(2)b.ii.]:

a. The maximum amount of methanol used as an anti-freeze agent shall not exceed 1,830 gallons methanol per rolling, 12 month period;

b. To ensure federal enforceability during the first 12 calendar months of operation under the provisions of this permit, methanol usage is limited by the following:

Maximum Allowable Methanol Usage

MONTH(S)	GALLONS
1-1	350
1-2	700
1-3	1,050
1-4	1,400
1-12	1,830

After the first 12 calendar months of operation under the provisions of this permit, compliance with the allowable operation limitations shall be based upon a rolling 12-month summation.

c. The permittee shall employ a flare during all dryer depressuring, loop depressuring and refrigeration depressuring periods. [See b)(2)g.]

[OAC rule 3745-77-07(A)(1) and PTI No. P0117742]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform daily checks, when the emissions unit is being shut down and when the weather conditions allow, for any visible particulate emissions from the flare serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

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

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

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

(2) The permittee shall maintain records showing that emissions were vented to the flare during all dryer depressuring, loop depressuring and refrigeration depressuring events.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

(3) The permittee shall maintain monthly records of the following information:

a. the number of gallons of methanol used for each month;

b. for the first 12 calendar months of operation under the provisions of this permit, the cumulative monthly usage of methanol in gallons; and

c. After the first 12 months of operation under the provisions of this permit, the rolling, 12-month usage of methanol in gallons.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

(4) Modeling to demonstrate compliance with, the “Toxic Air Contaminant Statute”, ORC 3704.03(F)(4)(b), was not necessary for this permit action because actual emissions of the toxic air contaminant ammonia (NH3), as specified in OAC rule 3745-114-01, resulted in an actual decrease. Other than NH3, the maximum annual emissions for each toxic air contaminant (as specified in OAC rule 3745-114-01) that is not subject to MACT and/or NESHAP regulations will be less than 1.0 ton per year. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit-to-install (PTI) prior to making a "modification" as defined by OAC rule 3745-31-01.

The permittee is hereby advised that changes in the composition of the materials, or use of new materials, etc. that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.

[PTI No. P0117742]

e) Reporting Requirements

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

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

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

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

(2) If emissions were not vented to the flare during all dryer depressuring, loop depressuring and/or refrigeration depressuring events, the permittee shall notify the Ohio EPA, Northwest District Office within 30 days of such occurrence. The notification shall include calculations that show the emissions of any criteria pollutants from the depressuring events, and if necessary, submit a PTI modification application.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

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

a. all exceedances of the rolling, 12-month operational restriction specified in c)(1)a; and

b. all exceedances of the allowable methanol usage restrictions for the first 12 months of operation as specified in c)(1)b.;

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

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. Emission Limitation:

Visible PE from the flare shall not exceed 5% opacity, as a 6-minute average.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods and procedures specified in Method 9 in Appendix A of 40 CFR, Part 60.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

b. Emission Limitations:

2.41 lbs of CO/hr and 10.55 tons of CO/yr from the flare during normal production mode of operation

Applicable Compliance Method:

The hourly emission limitation is based on previous stack testing data, and reflects the potential to emit (PTE) for this emissions unit during normal production mode of operation. Therefore, it is not necessary to develop any further monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation.

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Method 1 through 4, and 10of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/hr emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

c. Emission Limitations:

6.04 tons of VOC/yr from process equipment during normal production mode of operation

Applicable Compliance Method:

The VOC emissions are based on mass balance calculations for the use of methanol as an anti-freeze agent during colder weather months to prevent freezing of instrument air systems, and on previous stack testing data upstream of the flare. The annual potential to emit of methanol as an anti-freeze agent is based on using a maximum of 5 gallons of methanol per 12-hour shift, multiplied by two shifts/day, multiplied by 183 days/yr (October 15 to April 15 assumed), multiplied by a solvent density of 6.589 lbs VOC/gallon, then divided by 2,000 lbs/ton = 6.03 tons of VOC/yr. The potential VOC emissions that ventfrom the flare (determined by previous stack testingupstream of the flare) are 0.01 ton of VOC/yr.

Compliance shall also be based on the recordkeeping requirements in d)(3).

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

g) Miscellaneous Requirements

(1) None.

12. P523, Ammonia Production Unit: Carbon Dioxide (CO2) Stripper

Operations, Property and/or Equipment Description:

Ammonia Production Unit – CO_2 Stripper Section

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) b)(1)e. and d)(1).

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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(D) [PTI No. P0117742, issued 10/15/14]	1.03 lbs of carbon monoxide (CO)/hr and 4.50 tons of CO/yr 49.81 lbs of volatile organic compounds (VOC)/hr and 218.15 tons of VOC/yr See b)(2)b. and b)(2)c.
b.	ORC 3704.03(T)	See b)(2)d.
c.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)e. and b)(2)f.
d.	OAC rule 3745-31-05(A)(3), as effective 12/1/06	See b)(2)g.
e.	ORC 3704.03(F) and OAC rule 3745-114	See d)(1)

(2) Additional Terms and Conditions

a. The Medium Pressure Condensate Stripper associated with this emissions unit is integral to the process equipment as a product recovery device. Thus, there is no parametric monitoring necessary.

b. The mass emission rate limitations in b)(1)a. above represent the potentials to emit (PTE), defined as the maximum capacity to emit an air pollutant under the physical and operational design. Therefore, no monitoring, record keeping, or reporting requirements are necessary to ensure compliance with these emission limitations. See f)(1)a. andb., for details regarding the PTE.

c. This permit establishes the following federally enforceable emission limitations for the purpose of representing the potentials to emit for this emissions unit:

i. 1.03 lbs of CO/hr and 4.50 tons of CO/yr; and

ii. 49.81 lbs of VOC/hr and 218.15 tons of VOC/yr.

d. Best Available Technology (BAT) requirements for VOC emissions under ORC 3704.03(T) have been determined to be compliance with the annual VOC emission limitation as established pursuant to OAC rule 3745-31-05(D).

e. BAT requirements for CO emissions under OAC rule 3745-31-05(A)(3), as effective 11/30/01 have been determined to be compliance with the annual CO emission limitation as established pursuant to OAC rule 3745-31-05(D).

f. The permittee has satisfied the BAT requirements for CO emissions pursuant to OAC rule 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 ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulation for NAAQS pollutant emissions less than 10 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 revision 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 limits and control measures no longer apply.

g. 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 BAT requirements under OAC rule 3745-31-05(A)(3)(a) do not apply to the CO emissions since the potential to emit is less than 10 tons per year.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary for this permit action because actual emissions of the toxic air contaminant ammonia (NH3), as specified in OAC rule 3745-114-01, resulted in an actual decrease. Other than NH3, the maximum annual emissions for each toxic air contaminant (as specified in OAC rule 3745-114-01) that is not subject to MACT and/or NESHAP regulations will be less than 1.0 ton per year.OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit-to-install (PTI) prior to making a "modification" as defined by OAC rule 3745-31-01.

The permittee is hereby advised that changes in the composition of the materials, or use of new materials, etc. that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.

[PTI No. P0117742]

e) Reporting Requirements

(1) None.

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. Emission Limitations:

1.03 lbs of CO/hr and 4.50 tons of CO/yr

Applicable Compliance Method:

The hourly CO emission limitation above was developed by multiplying an adjusted CO emission factor from AP-42, Table 8.1-1 (dated 7/93) (0.0105 lb/ton of ammonia, which was adjusted from PCS Engineering staff system knowledge, a detailed review of operations history,and process chemistry and conversion data) by the maximum ammonia production rate of 97.917 tons/hr.

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Method 1 through 4, and 10of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/hr emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

b. Emission Limitations:

49.81 lbs of VOC/hr and 218.15 tons of VOC/yr

Applicable Compliance Method:

The hourly VOC emission limitation above was developed by multiplying an adjusted VOC emission factor from AP-42, Table 8.1-1 (dated 7/93) (0.5087 lb/ton of ammonia, which was adjusted from PCS Engineering staff system knowledge, a detailed review of operations history,and process chemistry and conversion data) by the maximum ammonia production rate of 97.917 tons/hr.

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Method 1 through 4, and 18, 25, or 25A, as applicable,of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/hr emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

g) Miscellaneous Requirements

(1) None.

13. P524, Urea Prilling Section: Cyclone

Operations, Property and/or Equipment Description:

Urea Prilling Section – Cyclone, with Cyclone Scrubber

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(D) [PTI No. P0108792, issued 11/18/11]	3.34 lbs of particulate emissions (PE)/hr; 14.62 tons of PE/yr (filterable) 2.00 lbs of particulate matter 10 microns or less in size (PM_{10})/hr; 8.77 tons of PM_{10}/yr (filterable) 1.43 lbs of particulate matter 2.5 microns or less in size ($PM_{2.5}$)/hr; 6.28 tons of $PM_{2.5}$/yr (filterable) Visible PE shall not exceed 10% opacity as a six-minute average. See b)(2)a. and c)(1)
b.	ORC 3704.03(T) [PTI No. P0108792, issued 11/18/11]	See b)(2)b. and b)(2)c.
c.	OAC rule 3745-17-07(A)	See b)(2)d.
d.	OAC rule 3745-17-11(B)(1)	See b)(2)e.
e.	40 CFR, Part 63, Subpart FFFF [40 CFR 63.2430 – 63.2550] In accordance with 40 CFR 63.2440, this emissions unit is an existing affected source consisting of crystal drying, conveying, melting and associated equipment which is part of a miscellaneous organic chemical manufacturing process unit at an	See b)(2)f., d)(7), and e)(2)

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	existing chemical manufacturing facility subject to the emission limitations/control measures specified in this section.	
f.	40 CFR 63.1-15 [40 CFR 63.2540]	Table 12 to 40 CFR, Part 63, Subpart FFFF – Applicability of General Provisions to Subpart FFFF shows which parts of the General Provisions in 40 CFR 63.1-15 apply.
g.	40 CFR, Part 64- Compliance Assurance Monitoring (CAM)	See c)(1), d)(1) through d)(6) and e)(1)

(2) Additional Terms and Conditions

a. PTI No. P0108792 established the federally enforceable emission limitations in b)(1)a. above for purposes of limiting potential to emit (PTE) for emissions of particulate matter from this emissions unit. The federally enforceable emission limitations are based on the operational restrictions contained in c)(1) which requires control equipment.

b. The BAT requirements under ORC 3704.03(T) have been determined to be the compliance with the operational restrictions contained in c)(1).

c. Once the U.S. EPA approves the December 1, 2006 version of 3745-31-05, BAT requirements will not be applicable to the particulate emissions emitted from this emissions unit. BAT (under Senate Bill 265 changes) is only applicable to emissions of an air contaminant or precursor of an air contaminant for which a national ambient air quality standard (NAAQS) has been adopted under the Clean Air Act. Particulate (also referred to as total suspended particulate or particulate matter) is an air contaminant that does not involve an established NAAQS.

d. The visible emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(D).

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

f. The permittee shall comply with the additional terms and conditions under 40 CFR, Part 63, Subpart FFFF, including the following sections:

63.2445(b) through (d)	When do I have to comply with this subpart?
63.2450	Emission Limitations, Work Practice Standards and Compliance Requirements -- What are my general requirements for complying with this

	subpart?
63.2450(a)	You must be in compliance with the emission limits and work practice standards in tables 1 through 7* to this subpart at all times, except during periods of startup, shutdown, and malfunction (SSM), and you must meet the requirements specified in 63.2455 through 63.2490 (or the alternative means of compliance in 63.2495, 63.2500, or 63.2505), except as specified in paragraphs (b) through (s) of this section. You must meet the notification, reporting, and recordkeeping requirements specified in 63.2515, 63.2520, and 63.2525. * Only the work practice standards listed in Table 6 are applicable
63.2450(p)	Opening a safety device, as defined in 63.2550, is allowed at any time conditions require it to avoid unsafe conditions
63.2455	Emission Limitations, Work Practice Standards and Compliance Requirements – What requirements must I meet for continuous process vents?
63.2455(a)	You must meet each emission limit in Table 1 to this subpart that applies to your continuous process vents, and you must meet each applicable requirement specified in paragraphs (b) through (c) of this section. [Note: There are no emission limits and/or work practice standards in Table 1 that are applicable.]
63.2455(b)	For each continuous process vent, you must either designate the vent as a Group 1 continuous process vent or determine the total resource effectiveness (TRE) index value as specified in 63.115(d), except as specified in paragraphs (b)(1) through (3) of this section.
63.2480	Emission Limitations, Work Practice Standards and Compliance Requirements – What requirements

	must I meet for equipment leaks?
63.2480(a)	You must meet each requirement in Table 6 to this subpart that applies to your equipment leaks, except as specified in paragraphs (b) through (d) of this section. [See Table 6 below for requirements.]
63.2480(b)	If you comply with either subpart H or subpart UU of this part 63, you may elect to comply with the provisions in paragraphs (b)(1) through (5) of this section as an alternative to the referenced provisions in subpart H or subpart UU of this part.
63.2535	Other Requirements and Information – What compliance options do I have if part of my plant is subject to both this subpart and another subpart?
63.2535(k)	Compliance with 40 CFR, Part 60, subpart VV and 40 CFR, Part 61, subpart V
63.2540	Other Requirements and Information – What parts of the General Provisions apply to me?
Table 6	Requirements for Equipment Leaks

c) Operational Restrictions

(1) The following operational restrictions have been included in this permit for purposes of establishing federally enforceable requirements which limit the PTE [see b)(2)a.]. All exhaust gas from the urea prilling dryer cyclone shall be controlled by a scrubber. The scrubber control system shall meet the following requirements:

a. a maximum outlet concentration of 0.016 grains per dry standard cubic foot (gr/dscf) of exhaust gas for PE (filterable);

b. a maximum outlet concentration of 0.010 gr/dscf of exhaust gas for PM_{10} (filterable); and

c. a maximum outlet concentration of 0.007 gr/dscf of exhaust gas for $PM_{2.5}$ (filterable).

d. The scrubber shall maintain the blower amps at a value less than or equal to 43.91 amps, as a daily average, at all times while the emissions unit is in operation. This operational restriction was established through a series of diagnostic and compliance stack tests in 2004, and was approved in a letter to the permittee dated August 19, 2005.

e. The scrubber shall maintain a liquid flow rate of a value greater than or equal to 4.93 gallons per minute, as a daily average, at all times while the emissions unit is in operation. This operational restriction was established through a series of diagnostic and compliance stack tests in 2004, and was approved in a letter to the permittee dated August 19, 2005.

f. The permittee may petition to the Ohio EPA for reestablishment, based on emissions testing or the collection of data, of the scrubber blower amps and water flow rate values provided the permittee can demonstrate to the Ohio EPA's satisfaction that the new values will reasonably ensure compliance and the basis upon which the values were previously established is no longer applicable.

The operation of the control equipment outside the values established in c)(1)d. and c)(1)e. above may or may not indicate a mass emission and/or visible emission violation. If required by the Ohio EPA, Northwest District Office, compliance with the mass emission limitations and visible emission limitations shall be determined by performing concurrent mass emission tests and visible emission readings, using U.S. EPA approved methods and procedures. The results of any required emission tests and visible emission readings shall be used in determining whether or not the operation of the control equipment outside the values that will be established above is indicative of a possible violation of the mass emission limitation and/or visible emission limitations. In addition, the permittee may provide other relevant credible evidence to the Ohio EPA to demonstrate that a deviation of an operational restriction is not a violation of the applicable mass emission and/or visible emission limitations.

[OAC rule 3745-77-07(A)(1), PTI No. P0108792 and 40 CFR, Part 64]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall operate and maintain equipment to monitor the scrubber blower amps and the scrubber water flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

a. The permittee shall collect and record the following information each shift:

i. the scrubber blower amps;

ii. the scrubber water flow rate, in gallons per minute; and

iii. a log of the down time for the scrubber and monitoring equipment when the associated emissions unit was in operation.

b. Whenever the monitored values for the scrubber blower amps and/or scrubber water flow rate deviate from the range specified in section c)(1)d. and/or c)(1)e., the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

i. the date and time the deviation began and the magnitude of the deviation at that time;

ii. the date(s) the investigation was conducted;

iii. the names of the personnel who conducted the investigation; and

iv. the findings and recommendations.

Records of these inspections shall be kept in accordance with the Standard Terms and Conditions of this permit.

c. In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable ranges specified in section c)(1)d. and/or c)(1)e. unless the permittee determines that corrective action is not necessary.

i. The permittee shall maintain records of the following information for each deviation when it was determined that corrective action was not necessary:

(a) the reason corrective action was not necessary; and

(b) the date and time the deviation ended.

ii. The permittee shall maintain records of the following information for each corrective action taken:

(a) a description of the corrective action;

(b) the date it 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 scrubber blower amps and/or scrubber water flow rate immediately after the corrective action; and

(f) the names of the personnel who performed the work.

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

[OAC rule 3745-77-07(C)(1),PTI No. P0108792 and 40 CFR, Part 64]

(2) Scrubber operating parameters shall be re-verified as a result of any changes to the operating conditions of the scrubber or emissions unit. In addition to periodic monitoring of their scrubber operating parameters, the permittee also has an inspection and

maintenance program for the scrubber. Based on the results of the monitoring and inspection program, repairs to the scrubber shall be made as needed. If the current indicators and/or the scrubber inspection program is considered inadequate, the permittee will develop a Quality Improvement Plan.

At all times, the permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

[OAC rule 3745-77-07(C)(1),PTI No. P0108792 and 40 CFR, Part 64]

(3) If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance, the permittee shall promptly notify the Ohio EPA, Northwest District Office, and if necessary, submit a proposed modification to the Title V permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, re-establishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

[OAC rule 3745-77-07(C)(1),PTI No. P0108792 and 40 CFR, Part 64]

(4) The CAM plan for this emissions unit has been developed for particulate emissions. The CAM performance indicators for the scrubber controlling this emissions unit are the scrubber blower amps and the scrubber water flow rate which were established in accordance with the manufacturer's recommendations and verified during site-specific particulate emission testing and scrubber parametric data collected during the emission testing. When the blower amps and/or the water flow rate of the scrubber are operating outside the indicator ranges, the permittee shall take corrective actions to restore operation of the emissions unit and/or its control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions and comply with the reporting requirements specified in Section e) below.

The emissions unit and control equipment shall be operated in accordance with the approved CAM Plan, or any approved revision of the Plan. The scrubber shall not be configured to have bypass capability.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(5) In addition to the parametric monitoring required in Section d)(1), the permittee shall conduct visual inspections of the scrubber's spray nozzles every twelve (12) months. At a minimum, each spray nozzle shall be inspected for the following:

a. excessive wear, or clogging; and

b. appropriate directional output to ensure that the spray is covering the entire gas stream. Records of these inspections shall be kept in accordance with the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(6) The permittee shall maintain a supply of replacement nozzles, or any other parts necessary to ensure that the scrubbing system will operate properly. Any worn, or clogged nozzles shall be replaced, or fixed during the inspection.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(7) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart FFFF, including the following sections:

63.2525	Notifications, Reports and Records – What records must I keep?
63.2525(a)	Each applicable record required by subpart A of this part 63 and in referenced subparts F, G, SS, UU, WW, and GGG of this part 63 and in referenced subpart F of 40 CFR part 65.
63.2525(b)	Records of each operating scenario as specified in paragraphs (b)(1) through (8) of this section.
63.2525(f)	A record of each time a safety device is opened to avoid unsafe conditions in accordance with 63.2450(s).
63.2525(j)	In the SSMP required by 63.6(e)(3), you are not required to include Group 2 emission points, unless those emission points are used in an emissions average. For equipment leaks, the SSMP requirement is limited to control devices and is optional for other equipment.

[OAC rule 3745-77-07(C)(1), 40 CFR, Part 63, Subpart FFFF, and PTI No. P0108792]

(8) The permittee shall maintain the following records for emissions units B503, B506, B507, B508, P520, P521, P522, P523, P524, P525, P526, P527, P528, P529, P536, P554, P555, P560, P563, P564, T518, T537, and T551, as described in Permit to Install application No. A0038802 for PTI No. P0105861 submitted on December 22, 2009 in order to demonstrate that the ammonia and urea units modification project does not trigger a major modification for PE, $PM_{10}/PM_{2.5}$, SO2, NOx, CO, and VOC:

a. the projected actual annual emissions for PE, $PM_{10}/PM_{2.5}$, SO2, NOx, CO, and VOC, in tons per year, from the ammonia and urea units modification project as submitted in application No. A0038802 for PTI No. P0105861 on December 22, 2009; and

b. the total actual annual emissions for PE, $PM_{10}/PM_{2.5}$, SO2, NOx, CO, and VOC, in tons per year, from emissions units B503, B506, B507, B508, P520, P521, P522, P523, P524, P525, P526, P527, P528, P529, P536, P554, P555, P560,

P563, P564, T518, T537, and T551 combined, for five calendar years after commencing operation of the ammonia and urea units modification project.

[OAC rule 3745-77-07(C)(1) and PTI No. P0108792]

e) Reporting Requirements

(1) The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. Each period of time (start time and date and end time and date) when the scrubber blower amps or liquid flow rate was/were outside of the applicable limit(s) contained in this permit;

b. Any period of time (start time and date and end time and date) when the emissions unit was in operation and the process emissions were not vented to the scrubber;

c. Each incident of deviation described in e)(1)a. or e)(1)b. above where a prompt investigation was not conducted;

d. Each incident of deviation described in e)(1)a. or e)(1)b. where prompt corrective action that would bring the blower amps and/or liquid flow rate into compliance with the applicable limit was determined to be necessary and was not taken; and

e. Each incident of deviation described in e)(1)a. or e)(1)b. where proper records were not maintained for the investigation and/or the corrective action(s), as identified in the monitoring and recordkeeping requirements of this permit.

[OAC rule 3745-77-07(C)(1), PTI No. P0108792 and 40 CFR, Part 64]

(2) The permittee shall submit semiannual reports and such other notifications and reports to the Ohio EPA, Northwest District Office, as are required pursuant to 40 CFR, Part 63, Subpart FFFF, per the following sections:

63.2450(m)	Reporting
63.2515	Notifications, Reports and Records – What notifications must I submit and when?
63.2515(a)	You must submit all of the notifications in 63.6(h)(4) and (5), 63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.
63.2515(b)	Initial notification (the initial notification was submitted in 2004)
63.2520	Notifications, Reports and Records – What reports must I submit and when?
63.2520(a)	You must submit each report in Table 11 to this subpart that applies to you.

63.2520(b)	Unless the Administrator has approved a different schedule for submission of reports under 63.10(a), you must submit each report by the date in Table 11 to this subpart and according to paragraphs (b)(1) through (5) of this section.
63.2520(d)	Notification of compliance status report
63.2520(e)	Compliance report
Table 11	Requirements for Reports

[OAC rule 3745-77-07(C)(1), 40 CFR, Part 63, Subpart FFFF, and PTI No. P0108792]

(3) The permittee shall notify the Northwest District Office in writing if annual emissions from all emissions units in the ammonia and urea modification, as specified in d)(5)b., result in a significant PE, $PM_{10}/PM_{2.5}$, SO2, NOx, CO, and/or VOC emissions increase and exceed the projected actual PE, $PM_{10}/PM_{2.5}$, SO2, NOx, CO, and VOC emissions contained in application No. A0038802 for PTI No. P0105861, submitted December 22, 2009. This notification shall identify the cause for the significant emissions increase and the estimated PE, $PM_{10}/PM_{2.5}$, SO2, NOx, CO, and/or VOC emissions. This notification shall be submitted to the Northwest District Office within 120 days after the end of such year.

[OAC rule 3745-77-07(C)(1) and PTI No. P0108792]

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. Emission Limitation:

Visible PE shall not exceed 10% opacity as a six-minute average.

Applicable Compliance Method:

If required, compliance shall be determined in accordance with 40 CFR, Part 60, Appendix A, Method 9.

[OAC rule 3745-77-07(C)(1) and PTI No. P0108792]

b. Emission Limitation:

0.016 gr/dscf for PE;

3.34 lbs of PE/hr; and

14.62 tons of PE/yr.

Applicable Compliance Method:

Compliance with the gr/dscf and hourly limitations was demonstrated on March 23, 2011.

If required, further compliance with the gr/dscf and hourly limitations shall be determined in accordance with the test methods and procedures of 40 CFR, Part 60, Appendix A, Methods 1-5.

The annual limitation was developed by multiplying the hourly emission rate by 8,760 hours per year and dividing by 2,000 lbs. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0108792]

c. Emission Limitation:

0.010 gr/dscf for PM_{10} (filterable):

2.00 lbs of PM_{10}/hr (filterable); and

8.77 tons of PM_{10}/yr (filterable).

Applicable Compliance Method:

The gr/dscf and hourly limitations were developed using stack test results for filterable particulate emissions (March 23, 2011) and particle size data from AP-42, Table 8.2-2 (7/93, reformatted 1/95). Compliance with the gr/dscf and hourly limitations will not be able to be determined using the test methods and procedures of Methods 201/201A of 40 CFR, Part 51, Appendix M or alternative U.S. EPA approved test methods due to the presence of entrained water droplets within the scrubber exhaust. The permittee will be required to demonstrate compliance by actual emissions testing at the time appropriate methodologies become available.

Additionally, the permittee will be required to perform stack testing if the scrubber exhaust conditions involving entrained water droplets change such that Methods 201/201A of 40 CFR, Part 51, Appendix M or alternative U.S. EPA approved test methods can be properly applied.

The annual limitation was developed by multiplying the hourly emission rate by 8,760 hours per year and dividing by 2,000 lbs. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0108792]

d. Emission Limitation:

0.007 gr/dscf for $PM_{2.5}$ (filterable);

1.43 lbs of $PM_{2.5}$/hr (filterable); and

6.28 tons of $PM_{2.5}$/yr (filterable).

Applicable Compliance Method:

The gr/dscf and hourly limitations were developed using stack test results for filterable particulate emissions (March 23, 2011) and particle size data from AP-42, Table 8.2-2 (7/93, reformatted 1/95). Compliance with the gr/dscf and hourly limitations will not be able to be determined using the test methods and procedures of Methods 201/201A of 40 CFR, Part 51, Appendix M or alternative U.S. EPA approved test methods due to the presence of entrained water droplets within the scrubber exhaust. The permittee will be required to demonstrate compliance by actual emissions testing at the time appropriate methodologies become available.

Additionally, the permittee will be required to perform stack testing if the scrubber exhaust conditions involving entrained water droplets change such that Methods 201/201A of 40 CFR, Part 51, Appendix M or alternative U.S. EPA approved test methods can be properly applied.

The annual limitation was developed by multiplying the hourly emission rate by 8,760 hours per year and dividing by 2,000 lbs. Therefore, as long as compliance with the hourly allowable emission limitation is maintained, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0108792]

g) Miscellaneous Requirements

(1) None.

14. P526, Urea Production Section: Synthesis

Operations, Property and/or Equipment Description:

Urea Production Section - Synthesis, with Flare during start-up periods

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) b)(1)e. and d)(3).

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(D) [PTI No. P0117742, issued 10/15/14]	<u>Emissions from Urea Unit Flare</u>: 187.5 lbs of nitrogen oxides (NOx)/hr and 0.75 ton of NOx/yrduring emissions unit start-up periods when start-up venting is taking place Visible particulate emissions (PE) from the flare shall not exceed 5% opacity, as a 6-minute average during emissions unit start-up periods when start-up venting is taking place <u>Emissions from Urea Plant Synthesis process equipment</u>: 2.85 lbs of volatile organic compounds (VOC)/hr and 12.50 tons of VOC/yrduring normal production mode of operation See b)(2)a., b)(2)b., b)(2)g., c)(1), d)(1), d)(2), d)(5), e)(1), e)(2) and e)(4)
b.	ORC 3704.03(T)	See b)(2)c.
c.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)d. and b)(2)e.
d.	OAC rule 3745-31-05(A)(3), as effective 12/1/06	See b)(2)f.
e.	ORC 3704.03(F) and OAC rule 3745-114	See d)(3)

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	40 CFR, Part 63, Subpart FFFF [40 CFR 63.2430 – 63.2550] In accordance with 40 CFR 63.2440,this emissions unit is an existingaffected source consisting of a pressurized reactor;which is partof a miscellaneous organic chemicalmanufacturing process unit at anexisting chemical manufacturingfacility subject to the emissionlimitations/control measuresspecified in this section.	See b)(2)h., d)(4), and e)(3)

(2) Additional Terms and Conditions

a. The mass emission rate limitations in b)(1)a. above represent the potential to emit (PTE), defined as the maximum capacity to emit an air pollutant under the physical and operational design. Therefore, no monitoring, record keeping, or reporting requirements are necessary to ensure compliance with these emission limitations. See f)(1)a. andc., for details regarding the PTE.

b. This permit establishes the following federally enforceable emission limitations for the purpose of representing the potentials to emit of this emissions unit:

i. 187.5 lbs of NOx/hr and 0.75 ton of NOx/yr during emissions unit start-up periodswhen start-up venting is taking place; [See c)(1)] and

ii. 2.85 lbs of VOC/hr and 12.50 tons of VOC/yr during normal production mode of operation.

c. Best Available Technology (BAT) requirements for VOC emissions under ORC 3704.03(T) have been determined to be compliance with the annual VOC emission limitation as established pursuant to OAC rule 3745-31-05(D).

d. BAT requirements for NOx emissions under OAC rule 3745-31-05(A)(3), as effective 11/30/01 have been determined to be compliance with the annual NOx emission limitation as established pursuant to OAC rule 3745-31-05(D).

e. The permittee has satisfied the BAT requirements for NOx emissions pursuant to OAC rule 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 ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulation for NAAQS pollutant emissions less than 10 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 revision 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 limits and 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 BAT requirements under OAC rule 3745-31-05(A)(3)(a) do not apply to the NOx emissions since the potential to emit is less than 10 tons per year.

g. Criteria pollutant emissions resulting from shutdown events have been determined to be negligible for this emissions unit.

h. The permittee shall comply with the additional terms and conditions under 40 CFR, Part 63, Subpart FFFF, including the following sections:

63.2445(b) through (d)	When do I have to comply with this subpart?
63.2450	Emission Limitations, Work Practice Standards and Compliance Requirements -- What are my general requirements for complying with this subpart?
63.2450(a)	You must be in compliance with the emission limits and work practice standards in tables 1 through 7* to this subpart at all times, except during periods of startup, shutdown, and malfunction (SSM), and you must meet the requirements specified in 63.2455 through 63.2490 (or the alternative means of compliance in 63.2495, 63.2500, or 63.2505), except as specified in paragraphs (b) through (s) of this section. You must meet the notification, reporting, and recordkeeping requirements specified in 63.2515, 63.2520, and 63.2525. * Only the work practice standards listed in Table 6 are applicable
63.2450(p)	Opening a safety device, as defined in 63.2550, is allowed at any time conditions require it to avoid unsafe conditions
63.2455	Emission Limitations, Work Practice Standards and Compliance Requirements – What requirements must I meet for continuous process vents?
63.2455(a)	You must meet each emission limit in Table 1 to this subpart that applies to your continuous process vents, and you must meet each applicable requirement specified in paragraphs (b) through (c) of this section. [Note: There are no emission limits and/or work practice standards in Table 1 that are applicable.]

63.2455(b)	For each continuous process vent, you must either designate the vent as a Group 1 continuous process vent or determine the total resource effectiveness (TRE) index value as specified in 63.115(d), except as specified in paragraphs (b)(1) through (3) of this section.
63.2480	Emission Limitations, Work Practice Standards and Compliance Requirements – What requirements must I meet for equipment leaks?
63.2480(a)	You must meet each requirement in Table 6 to this subpart that applies to your equipment leaks, except as specified in paragraphs (b) through (d) of this section. [See Table 6 below for requirements.]
63.2480(b)	If you comply with either subpart H or subpart UU of this part 63, you may elect to comply with the provisions in paragraphs (b)(1) through (5) of this section as an alternative to the referenced provisions in subpart H or subpart UU of this part.
63.2535	Other Requirements and Information – What compliance options do I have if part of my plant is subject to both this subpart and another subpart?
63.2535(k)	Compliance with 40 CFR, Part 60, subpart VV and 40 CFR, Part 61, subpart V
63.2540	Other Requirements and Information – What parts of the General Provisions apply to me?
Table 6	Requirements for Equipment Leaks

c) Operational Restrictions

(1) The following operational restrictions have been included in this permit for establishing federally enforceable requirements which limit PTE for NOx [See b)(2)b.i.]:

a. The permittee shall employ a flare during all emission unit start-up periods when start-up venting is taking place; and

b. Start-up operations, when start-up venting is taking place, for the urea synthesis plant is limited by the following:

$$\sum_{M=1}^{12} \sum_{n} NOx_n \leq 0.75$$

where:

M = the increment of the rolling 12-month period;

n = individual startup event during the period;

NOx_n = calculated emissions of nitrogen oxide in tons;

c. To ensure federal enforceability during the first 12 calendar months of operation under the provisions of this permit, start-up operations, when start-up venting is taking place, for the urea synthesis plant is limited by the following:

Allowable Operation Limitations

MONTH(S)	$\sum_n NOx_n \leq$
1-1	0.15
1-2	0.30
1-3	0.45
1-4	0.60
1-12	0.75

After the first 12 calendar months of operation under the provisions of this permit, compliance with the allowable operation limitations shall be based upon a rolling 12-month summation.

[OAC rule 3745-77-07(A)(1) and PTI No. P0117742]

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform daily checks, when the emissions unit is being started up when start-up venting is taking place and when the weather conditions allow, for any visible particulate emissions from the flare serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

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

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

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

(2) The permittee shall collect and record the following information each month:

a. Time period for each startup operation when start-up venting is taking place;

b. The calculated NOx emissions, in tons, for each startup operation when start-up venting is taking place;

c. The total NOx emission rate, in tons, from all startup operations when start-up venting is taking place [summation of d)(2)b.];

d. For the first 12 calendar months of operation under the provisions of this permit, the cumulative monthly NOx emissions, in tons; and

e. After the first 12 months of operation under the provisions of this permit, the rolling 12-month NOx emissions, in tons.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

(3) Modeling to demonstrate compliance with, the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary for this permit action because actual emissions of the toxic air contaminant ammonia (NH3), as specified in OAC rule 3745-114-01, resulted in an actual decrease. Other than NH3, the maximum annual emissions for each toxic air contaminant (as specified in OAC rule 3745-114-01) that is not subject to MACT and/or NESHAP regulations will be less than 1.0 ton per year. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit-to-install (PTI) prior to making a "modification" as defined by OAC rule 3745-31-01.

The permittee is hereby advised that changes in the composition of the materials, or use of new materials, etc. that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.

[PTI No. P0117742]

(4) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart FFFF, including the following sections:

63.2525	Notifications, Reports and Records – What records must I keep?
63.2525(a)	Each applicable record required by subpart A of this part 63 and in referenced subparts F, G, SS, UU, WW, and GGG of this part 63 and in referenced subpart F of 40 CFR part 65.
63.2525(b)	Records of each operating scenario as specified in paragraphs (b)(1) through (8) of this section.
63.2525(f)	A record of each time a safety device is opened to avoid unsafe conditions in accordance with 63.2450(s).

63.2525(j)	In the SSMP required by 63.6(e)(3), you are not required to include Group 2 emission points, unless those emission points are used in an emissions average. For equipment leaks, the SSMP requirement is limited to control devices and is optional for other equipment.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart FFFF; and PTI No. P0117742]

(5) The permittee shall maintain records showing that emissions were vented to the flare during all emissions unit start-up periods when start-up venting is taking place.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

e) Reporting Requirements

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

a. all days during which any visible PE were observed from the flare serving this emissions unit when start-up venting is taking place; and

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

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

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

a. all exceedances of the rolling, 12-month operational restriction specified in c)(1)b.; and

b. all exceedances of the allowable operational limitations for the first 12 months of operation as specified in c)(1)c;

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

(3) The permittee shall submit semiannual reports and such other notifications and reports to the Ohio EPA, Northwest District Office, as are required pursuant to 40 CFR, Part 63, Subpart FFFF, per the following sections:

63.2450(m)	Reporting
63.2515	Notifications, Reports and Records – What notifications must I submit and when?

63.2515(a)	You must submit all of the notifications in 63.6(h)(4) and (5), 63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.
63.2515(b)	Initial notification* * the company submitted the initial notification in 2004
63.2520	Notifications, Reports and Records – What reports must I submit and when?
63.2520(a)	You must submit each report in Table 11 to this subpart that applies to you.
63.2520(b)	Unless the Administrator has approved a different schedule for submission of reports under 63.10(a), you must submit each report by the date in Table 11 to this subpart and according to paragraphs (b)(1) through (5) of this section.
63.2520(d)	Notification of compliance status report
63.2520(e)	Compliance report
Table 11	Requirements for Reports

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart FFFF; and PTI No. P0117742]

(4) If emissions were not vented to the flare during all emissions unit start-up periods when start-up venting is taking place, the permittee shall notify the Ohio EPA, Northwest District Office within 30 days of such occurrence. The notification shall include calculations that show the emissions of any criteria pollutants from the startup event(s), and if necessary, submit a PTI modification application.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

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. Emission Limitations:

187.5 lbs of NOx/hr and 0.75 ton of NOx/yr during emissions unit start-up periods when start-up venting is taking place (from the flare)

Applicable Compliance Method:

The hourly emission limitation was developed by using a flare manufacturer emission factor of 0.005 lb NOx/lb of ammonia introduced to the flare, multiplied by the maximum of 37,500 lbs of ammonia/hr = 187.5 lbs of NOx/hr.

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Method 1 through 4, and 7of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation is based on a maximum annual-average rate of NOx emissions (based on maximum annual-average rate of ammonia introduced to the flare of 7,500 lb of ammonia/hr) of 37.50 lbs of NOx/hr during emissions unit start-ups when start-up venting is taking place multiplied by a maximum of 40 hrs/yr of start-ups, then divided by 2,000 lbs/ton.

The emission limitations during start-up periods when start-up venting is taking place are based on PCS Engineering staff system knowledge and a detailed review of operations history. Compliance shall be demonstrated by the recordkeeping requirements in d)(2).

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

b. Emission Limitation:

Visible PE from the flare shall not exceed 5% opacity, as a 6-minute average during emissions unit start-up periods when start-up venting is taking place

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods and procedures specified in Method 9 in Appendix A of 40 CFR, Part 60.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

c. Emission Limitations:

2.85 lbs of VOC/hr and 12.50 tons of VOC/yr during normal production mode of operation (from process equipment, not flare)

Applicable Compliance Method:

The hourly emission limitation is based on previous stack testing data, and reflects the potential to emit (PTE) for this emissions unit during normal production mode of operation. Therefore, it is not necessary to develop any further monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation.

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Method 1 through 4, and 18, 25, or 25A, as applicable,of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/hr emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

g) Miscellaneous Requirements

(1) None.

15. P531, Ammonium Nitrate Neutralizer System

Operations, Property and/or Equipment Description:

Ammonium Nitrate Neutralizer System, with Scrubber Tower and Pond Water Scrubber

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
b.	OAC rule 3745-17-11(B)(1)	15.4lbs PE/hr
c.	40 CFR, Part 64 - Compliance Assurance Monitoring (CAM)	See d)(1) through d)(7), and e)(1)

(2) Additional Terms and Conditions

a. None.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The CAM plan for this emissions unit has been developed for particulate emissions. The CAM performance indicators for the scrubbers controlling this emissions unit are the scrubber pressure drop and the scrubber water circulation flow rate which were established in accordance with the manufacturer's recommendations and verified during site-specific particulate emission testing and scrubber parametric data collected during the emission testing. When the pressure drop and/or the water circulation flow rate of the scrubbers are operating outside the indicator ranges, the permittee shall take corrective actions to restore operation of the emissions unit and/or its control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions and comply with the reporting requirements specified in Section e) below. The emissions unit and control

equipment shall be operated in accordance with the approved CAM Plan, or any approved revision of the Plan. The scrubbers shall not be configured to have bypass capability.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(2) The permittee shall operate and maintain equipment to monitor the scrubber pressure drop and the scrubber water circulation flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

a. The permittee shall collect and record the following information each shift:

i. the scrubber pressure drop; in inches water column;

ii. the scrubber water circulation flow rate, in gallons per minute; and

iii. a log of the down time for the scrubber and monitoring equipment when the associated emissions unit was in operation.

b. Whenever the monitored values for the scrubber pressure drop and/or scrubber water circulation flow rate deviate from the indicator ranges, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

i. the date and time the deviation began and the magnitude of the deviation at that time;

ii. the date(s) the investigation was conducted;

iii. the names of the personnel who conducted the investigation; and

iv. the findings and recommendations.

Records of these inspections shall be kept in accordance with the Standard Terms and Conditions of this permit.

c. In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable ranges specified below unless the permittee determines that corrective action is not necessary.

i. The permittee shall maintain records of the following information for each deviation when it was determined that corrective action was not necessary:

(a) the reason corrective action was not necessary; and

(b) the date and time the deviation ended.

ii. The permittee shall maintain records of the following information for each corrective action taken:

(a) a description of the corrective action;

(b) the date it 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 scrubber pressure drop and/or scrubber water circulation flow rate immediately after the corrective action; and

(f) the names of the personnel who performed the work.

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

d. Pressure drop indicator range

The pressure drop across the neutralizer scrubbers shall be continuously maintained at a value greater than or equal to 0.33 inches water column, as a daily average, at all times while the emissions unit is in operation.

e. Scrubber water flow rate indicator range

The scrubber water circulation flow rate shall be continuously maintained at a value greater than or equal to 41.41 gallons per minute, as a daily average, at all times while the emissions unit is in operation.

f. These range(s) and/or limit(s) for the pressure drop and liquid flow rate 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 permit modification.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(3) Scrubber operating parameters shall be re-verified as a result of any changes to the operating conditions of the scrubbers or emissions unit. In addition to periodic monitoring of their scrubber operating parameters, the permittee also has an inspection and maintenance program for the scrubbers. Based on the results of the monitoring and inspection program, repairs to the scrubbers shall be made as needed. If the current

CAM indicators and/or the scrubber inspection program is considered inadequate, the permittee will develop a Quality Improvement Plan.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(4) At all times, the permittee shall maintain the monitoring equipment, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(5) If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance, the permittee shall promptly notify the Ohio EPA, Northwest District Office, and if necessary, submit a proposed modification to the Title V permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, re-establishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(6) In addition to the parametric monitoring required in Section d)(2), the permittee shall conduct visual inspections of the scrubbers every twelve (12) months. At a minimum, each scrubber shall be inspected for the following:

a. scrubber trays for excessive wear; and

b. any other mechanical parts associated with the tray mounts, for excessive wear.

Records of these inspections shall be kept in accordance with the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(7) The permittee shall maintain a supply of any parts necessary to ensure that the scrubbing system will operate properly. Any worn parts shall be replaced, or fixed during the inspection.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

e) Reporting Requirements

(1) The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. each period of time (start time and date, and end time and date)when the pressure drop across the scrubber and/or the liquid flow rate was/were outside of the appropriate range or exceeded the applicable limit contained in this permit;

b. any period of time (start time and date, and end time and date)when the emissions unit(s) was/were in operation and the process emissions were not vented to the scrubber;

c. an identification of each incident of deviation described in e)(1)a. and e)(1)b. above where a prompt investigation was not conducted;

d. an identification of each incident of deviation described in e)(1)a. and e)(1)b. above where prompt corrective action, that would bring the scrubber pressure drop and/or the scrubber water circulation flow rate into compliance with the acceptable range, was determined to be necessary and was not taken; and

e. an identification of each incident of deviation described in e)(1)a. and e)(1)b. above where proper records were not maintained for the investigation and/or the corrective action.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

f) Testing Requirements

(1) Compliance with the emission limitations in Section b)(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance with the visible emissions limitation above shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

15.4 lbs PE/hr

Applicable Compliance Method:

The permittee may demonstrate compliance with the hourly PE limitation by multiplying an emission factor of 0.284 lb PE/ton times a maximum process weight rate of 18.75 tons per hour. The emission factor was derived from stack testing conducted on April 12, 2005 as follows:

Actual PE = 3.8 lbs PE/hr

Actual process weight rate during stack test = 13.387 tons/hr

Emission factor for PE = (3.8 lbs PE/hr)/(13.387 tons/hr) = 0.284 lb PE/ton

If required, compliance with the hourly PE limitation shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(10).

[OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

16. P536, Urea Prilling Section: West Warehouse/Bagging

Operations, Property and/or Equipment Description:

Urea Prilling Section – West Warehouse/Bagging, with Dust Collector and Scrubber (each is capable of controlling this emissions unit independently and meeting the emissions limits)

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 operations(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. 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)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
b.	OAC rule 3745-17-11(B)(1)	5.4lbs PE/hr
c.	OAC rule 3745-31-05(A)(3) (PTI No. 03-968, issued 10/2/80)	The requirements of this rule are equivalent to the requirements of OAC rule 3745-17-07(A) and OAC rule 3745-17-11(B)(1).

(2) Additional Terms and Conditions

a. There shall be no fugitive emissions from this emissions unit.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform daily checks, when the emissions unit is in operation and when the weather conditions allow, for any visible particulate emissions from the baghouse and scrubber serving this emissions unit. The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions:

b. whether the emissions are representative of normal operations;

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

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

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

If visible emissions are present, a visible emission incident has occurred. The observer does not have to document the exact start and end times for the visible emission incident under item d)(1)d. above or continue the daily check until the incident has ended. The observer may indicate that the visible emission 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.

[OAC rule 3745-77-07(C)(1)]

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 the baghouse and scrubber serving this emissions unit and (b) describe any corrective actions taken to eliminate the visible particulate emissions. These reports shall be submitted to the Ohio EPA, Northwest District Office by January 31 and July 31 of each year and shall cover the previous 6-month period.

[OAC rule 3745-77-07(C)(1)]

f) Testing Requirements

(1) Compliance with the emission limitations in Section b)(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance with the visible emissions limitation above shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

5.4lbs PE/hr

Applicable Compliance Method:

The permittee may demonstrate compliance with the hourly PE limitation by multiplying an emission factor of 0.0073 lb PE/ton times a maximum process weight rate of 166.67 tons per hour. The emission factor was derived from stack testing conducted on September 28, 2004 as follows:

Actual PE = 0.55 lb PE/hr

Actual process weight rate during stack test = 75 tons/hr

Emission factor for PE = (0.55 lb PE/hr)/(75 tons/hr) = 0.0073 lb PE/ton

If required, compliance with the hourly PE limitation shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(10).

[OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

17. P546, Urea Granulation Section: Granulator Drum

Operations, Property and/or Equipment Description:

Urea Granulation Section – Granulator Drum, with Granulator Duct Scrubber

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
b.	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05.
c.	OAC rule 3745-21-07(M)	See b)(2)a.
d.	OAC rule 3745-31-05(A)(3) (PTI No. 03-968, issued on 10/2/80)	18.0 lbs PE/hr The requirements of this rule are equivalent to the requirements of OAC rules 3745-17-07(A)and 3745-17-11(B).
e.	40 CFR, Part 64 - Compliance Assurance Monitoring (CAM)	See d)(1) through d)(7), and e)(1)
f.	40 CFR, Part 63, Subpart FFFF [40 CFR 63.2430 – 63.2550] In accordance with 40 CFR63.2440, this emissions unit is an existing affected source consisting of a granulator and associated equipment;which is part of a miscellaneous organic chemical manufacturing process unit at an existing chemicalmanufacturing facility subject to the emissionlimitations/controlmeasures	See b)(2)b., d)(8) and e)(2)

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	specified in this section.	
g.	40 CFR 63.1-15 [40 CFR 63.2540]	Table 12 to 40 CFR, Part 63, Subpart FFFF – Applicability of General Provisions to Subpart FFFF shows which parts of the General Provisions in 40 CFR 63.1-15 apply.

(2) Additional Terms and Conditions

a. This emissions unit is not subject to the requirements of the rule because it does not meet all of the conditions outlined in OAC rule 3745-21-07(M)(3)(a).

b. The permittee shall comply with the additional terms and conditions under 40 CFR, Part 63, Subpart FFFF, including the following sections:

63.2445(b) through 63.2445(d)	When do I have to comply with this subpart?
63.2450	Emission Limitations, Work Practice Standards and Compliance Requirements -- What are my general requirements for complying with this subpart?
63.2450(a)	You must be in compliance with the emission limits and work practice standards in tables 1 through 7* to this subpart at all times, except during periods of startup, shutdown, and malfunction (SSM), and you must meet the requirements specified in 63.2455 through 63.2490 (or the alternative means of compliance in 63.2495, 63.2500, or 63.2505), except as specified in paragraphs (b) through (s) of this section. You must meet the notification, reporting, andrecordkeeping requirements specified in 63.2515, 63.2520, and 63.2525. * only the work practice standards listed in Table 6 are applicable
63.2450(p)	Opening a safety device, as defined in 63.2550, is allowed at any time conditions require it to avoid unsafe conditions

63.2455	Emission Limitations, Work Practice Standards and Compliance Requirements – What requirements must I meet for continuous process vents?
63.2455(a)	You must meet each emission limit in Table 1 to this subpart that applies to your continuous process vents, and you must meet each applicable requirement specified in paragraphs (b) through (c) of this section. [Note: There are no emission limits and/or work practice standards in Table 1 that are applicable.]
63.2455(b)	For each continuous process vent, you must either designate the vent as a Group 1 continuous process vent or determine the total resource effectiveness (TRE) index value as specified in 63.115(d), except as specified in paragraphs (b)(1) through (3) of this section.
63.2480	Emission Limitations, Work Practice Standards and Compliance Requirements – What requirements must I meet for equipment leaks?
63.2480(a)	You must meet each requirement in Table 6 to this subpart that applies to your equipment leaks, except as specified in paragraphs (b) through (d) of this section. [See Table 6 below for requirements.]
63.2480(b)	If you comply with either subpart H or subpart UU of this part 63, you may elect to comply with the provisions in paragraphs (b)(1) through (5) of this section as an alternative to the referenced provisions in subpart H or subpart UU of this part.
63.2535	Other Requirements and Information – What compliance options do I have if part of my plant is subject to both this

	subpart and another subpart?
63.2535(k)	Compliance with 40 CFR, part 60, subpart VV and 40 CFR, part 61, subpart V
63.2540	Other Requirements and Information – What parts of the General Provisions apply to me?
Table 6	Requirements for Equipment Leaks

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart FFFF]

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The CAM plan for this emissions unit has been developed for particulate emissions. The CAM performance indicators for the scrubbers controlling this emissions unit are the scrubber pressure drop and the scrubber water circulation flow rate which were established in accordance with the manufacturer's recommendations and verified during site-specific particulate emission testing and scrubber parametric data collected during the emission testing. When the pressure drop and/or the water circulation flow rate of the scrubbers are operating outside the indicator ranges, the permittee shall take corrective actions to restore operation of the emissions unit and/or its control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions and comply with the reporting requirements specified in Section e) below.

The emissions unit and control equipment shall be operated in accordance with the approved CAM Plan, or any approved revision of the Plan. The scrubbers shall not be configured to have bypass capability.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(2) The permittee shall operate and maintain equipment to monitor the scrubber pressure drop and the scrubber water circulation flow rate while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer’s recommendations, instructions and operating manuals.

a. The permittee shall collect and record the following information each shift:

i. the scrubber pressure drop; in inches water column;

ii. the scrubber water circulation flow rate, in gallons per minute; and

iii. a log of the down time for the scrubber and monitoring equipment when the associated emissions unit was in operation.

b. Whenever the monitored values for the scrubber pressure drop and/or scrubber water circulation flow rate deviate from the indicator ranges, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

i. the date and time the deviation began and the magnitude of the deviation at that time;

ii. the date(s) the investigation was conducted;

iii. the names of the personnel who conducted the investigation; and

iv. the findings and recommendations.

Records of these inspections shall be kept in accordance with the Standard Terms and Conditions of this permit.

c. In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable ranges specified below unless the permittee determines that corrective action is not necessary.

i. The permittee shall maintain records of the following information for each deviation when it was determined that corrective action was not necessary:

(a) the reason corrective action was not necessary; and

(b) the date and time the deviation ended.

ii. The permittee shall maintain records of the following information for each corrective action taken:

(a) a description of the corrective action;

(b) the date it 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 scrubber pressure drop and/or scrubber water circulation flow rate immediately after the corrective action; and

(f) the names of the personnel who performed the work.

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

d. Pressure drop indicator range

The pressure drop across the scrubber shall be continuously maintained at a value greater than or equal to 1.3 inches water column, as a daily average, at all times while the emissions unit is in operation.

e. Scrubber water flow rate indicator range

The scrubber water circulation flow rate shall be continuously maintained at a value greater than or equal to 54.35 gallons per minute, as a daily average, at all times while the emissions unit is in operation.

f. These range(s) and/or limit(s) for the pressure drop and liquid flow rate 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 permit modification.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(3) Scrubber operating parameters shall be re-verified as a result of any changes to the operating conditions of the scrubbers or emissions unit. In addition to periodic monitoring of their scrubber operating parameters, the permittee also has an inspection and maintenance program for the scrubbers. Based on the results of the monitoring and inspection program, repairs to the scrubbers shall be made as needed.

If the current CAM indicators and/or the scrubber inspection program is considered inadequate, the permittee will develop a Quality Improvement Plan.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(4) At all times, the permittee shall maintain the monitoring equipment, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(5) If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance, the permittee shall promptly notify the Ohio EPA, Northwest District Office, and if necessary, submit a proposed modification to the Title V permit to address the necessary monitoring changes.

Such a modification may include, but is not limited to, re-establishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(6) In addition to the parametric monitoring required in Section d)(2), the permittee shall conduct visual inspections of the scrubber's spray nozzles every twelve (12) months. At a minimum, each spray nozzle shall be inspected for the following:

a. excessive wear, or clogging; and

b. appropriate directional output to ensure that the spray is covering the entire gas stream.

Records of these inspections shall be kept in accordance with the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(7) The permittee shall maintain a supply of replacement nozzles, or any other parts necessary to ensure that the scrubbing system will operate properly. Any worn, or clogged nozzles shall be replaced, or fixed during the inspection.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(8) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart FFFF, including the following sections:

63.2525	Notifications, Reports and Records – What records must I keep?
63.2525(a)	Each applicable record required by subpart A of this part 63 and in referenced subparts F, G, SS, UU, WW, and GGG of this part 63 and in referenced subpart F of 40 CFR part 65.
63.2525(b)	Records of each operating scenario as specified in paragraphs (b)(1) through (8) of this section.
63.2525(f)	A record of each time a safety device is opened to avoid unsafe conditions in accordance with 63.2450(s).
63.2525(j)	In the SSMP required by 63.6(e)(3), you are not required to include Group 2 emission points, unless those emission points are used in an emissions average. For equipment leaks, the SSMP requirement is limited to control devices

	and is optional for other equipment.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart FFFF]

e) Reporting Requirements

(1) The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. each period of time (start time and date, and end time and date)when the pressure drop across the scrubber and/or the liquid flow rate was/were outside of the appropriate range or exceeded the applicable limit contained in this permit;

b. any period of time (start time and date, and end time and date)when the emissions unit(s) was/were in operation and the process emissions were not vented to the scrubber;

c. an identification of each incident of deviation described in e)(1)a. and e)(1)b. above where a prompt investigation was not conducted;

d. an identification of each incident of deviation described in e)(1)a. and e)(1)b. above where prompt corrective action, that would bring the scrubber pressure drop and/or the scrubber water circulation flow rate into compliance with the acceptable range, was determined to be necessary and was not taken; and

e. an identification of each incident of deviation described in e)(1)a. and e)(1)b. above where proper records were not maintained for the investigation and/or the corrective action.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(2) The permittee shall submit semiannual reports and such other notifications and reports to the Ohio EPA, Northwest District Office, as are required pursuant to 40 CFR, Part 63, Subpart FFFF, per the following sections:

63.2450(m)	Reporting
63.2515	Notifications, Reports and Records – What notifications must I submit and when?
63.2515(a)	You must submit all of the notifications in 63.6(h)(4) and (5), 63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.
63.2515(b)	Initial notification* * the company submitted the initial

	notification in 2004
63.2520	Notifications, Reports and Records – What reports must I submit and when?
63.2520(a)	You must submit each report in Table 11 to this subpart that applies to you.
63.2520(b)	Unless the Administrator has approved a different schedule for submission of reports under 63.10(a), you must submit each report by the date in Table 11 to this subpart and according to paragraphs (b)(1) through (5) of this section.
63.2520(d)	Notification of compliance status report
63.2520(e)	Compliance report
Table 11	Requirements for Reports

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart FFFF]

f) Testing Requirements

(1) Compliance with the emission limitations in Section b)(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance with the visible emissions limitation above shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

18.0 lbs PE/hr

Applicable Compliance Method:

The permittee may demonstrate compliance with the hourly PE limitation by multiplying an emission factor of 0.07 lb PE/ton times a maximum process weight rate of 31.25 tons per hour. The emission factor was derived from stack testing conducted on November 30, 2004 as follows:

Actual PE = 2.18 lbs PE/hr (combined emissions for emissions units P546 and P547)

Actual process weight rate during stack test = 28.79 tons/hr

Emission factor for PE = (2.18 lbs PE/hr)/(28.79 tons/hr) = 0.07 lb PE/ton

If required, compliance with the hourly PE limitation shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(10).

[OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

18. P547, Urea Granulation Section: Evaporator

Operations, Property and/or Equipment Description:

Urea Granulation Section – Evaporator, with Granulator Duct Scrubber

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

(1) None.

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
b.	OAC rule 3745-17-11(B)(1)	The emission limitation specified by this rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05.
c.	OAC rule 3745-21-07(M)	See b)(2)a.
d.	OAC rule 3745-31-05(A)(3) (PTI No. 03-968, issued on 10/2/80)	4.0 lbs PE/hr The requirements of this rule are equivalent to the requirements of OAC rules 3745-17-07(A)and 3745-17-11(B).
e.	40 CFR, Part 63, Subpart FFFF [40 CFR 63.2430 – 63.2550] In accordance with 40 CFR63.2440, this emissions unit is an existing affected source consisting of an evaporator, evaporator air heater, urea surge tank and associated equipment;which is part of a miscellaneous organic chemical manufacturing process unit at an existing chemicalmanufacturing facility subject to the emissionlimitations/controlmeasures specified in this section.	See b)(2)c., d)(1) and e)(1)

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
f.	40 CFR 63.1-15 [40 CFR 63.2540]	Table 12 to 40 CFR, Part 63, Subpart FFFF – Applicability of General Provisions to Subpart FFFF shows which parts of the General Provisions in 40 CFR 63.1-15 apply.

(2) Additional Terms and Conditions

a. This emissions unit is not subject to the requirements of the rule because it does not meet all of the conditions outlined in OAC rule 3745-21-07(M)(3)(a).

b. This emissions unit is vented to a scrubber that also controls the emissions from emissions unit P546. All operational restrictions, monitoring, record keeping, reporting and testing requirements for the scrubber are established in the terms and conditions for emissions unit P546 and are also applicable to emissions unit P547. Therefore, no additional monitoring, record keeping, reporting and testing requirements are necessary for the scrubber for this emissions unit.

c. The permittee shall comply with the additional terms and conditions under 40 CFR, Part 63, Subpart FFFF, including the following sections:

63.2445(b) through 63.2445(d)	When do I have to comply with this subpart?
63.2450	Emission Limitations, Work Practice Standards and Compliance Requirements -- What are my general requirements for complying with this subpart?
63.2450(a)	You must be in compliance with the emission limits and work practice standards in tables 1 through 7* to this subpart at all times, except during periods of startup, shutdown, and malfunction (SSM), and you must meet the requirements specified in 63.2455 through 63.2490 (or the alternative means of compliance in 63.2495, 63.2500, or 63.2505), except as specified in paragraphs (b) through (s) of this section. You must meet the notification, reporting, andrecordkeeping requirements specified in 63.2515, 63.2520, and 63.2525. * only the work practice standards listed in Table 6 are applicable

63.2450(p)	Opening a safety device, as defined in 63.2550, is allowed at any time conditions require it to avoid unsafe conditions
63.2455(a)	You must meet each emission limit in Table 1 to this subpart that applies to your continuous process vents, and you must meet each applicable requirement specified in paragraphs (b) through (c) of this section. [Note: There are no emission limits and/or work practice standards in Table 1 that are applicable.]
63.2455(b)	For each continuous process vent, you must either designate the vent as a Group 1 continuous process vent or determine the total resource effectiveness (TRE) index value as specified in 63.115(d), except as specified in paragraphs (b)(1) through (3) of this section.
63.2480	Emission Limitations, Work Practice Standards and Compliance Requirements – What requirements must I meet for equipment leaks?
63.2480(a)	You must meet each requirement in Table 6 to this subpart that applies to your equipment leaks, except as specified in paragraphs (b) through (d) of this section. [See Table 6 below for requirements.]
63.2480(b)	If you comply with either subpart H or subpart UU of this part 63, you may elect to comply with the provisions in paragraphs (b)(1) through (5) of this section as an alternative to the referenced provisions in subpart H or subpart UU of this part.
63.2535	Other Requirements and Information – What compliance options do I have if part of my plant is subject to both this subpart and another subpart?

63.2535(k)	Compliance with 40 CFR, part 60, subpart VV and 40 CFR, part 61, subpart V
63.2540	Other Requirements and Information – What parts of the General Provisions apply to me?
Table 6	Requirements for Equipment Leaks

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart FFFF]

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart FFFF, including the following sections:

63.2525	Notifications, Reports and Records – What records must I keep?
63.2525(a)	Each applicable record required by subpart A of this part 63 and in referenced subparts F, G, SS, UU, WW, and GGG of this part 63 and in referenced subpart F of 40 CFR part 65.
63.2525(f)	A record of each time a safety device is opened to avoid unsafe conditions in accordance with 63.2450(s).
63.2525(j)	In the SSMP required by 63.6(e)(3), you are not required to include Group 2 emission points, unless those emission points are used in an emissions average. For equipment leaks, the SSMP requirement is limited to control devices and is optional for other equipment.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart FFFF]

e) Reporting Requirements

(1) The permittee shall submit semiannual reports and such other notifications and reports to the Ohio EPA, Northwest District Office, as are required pursuant to 40 CFR, Part 63, Subpart FFFF, per the following sections:

63.2450(m)	Reporting
63.2515	Notifications, Reports and Records – What notifications must I submit and when?
63.2515(a)	You must submit all of the notifications in 63.6(h)(4) and (5), 63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.
63.2515(b)	Initial notification* * the company submitted the initial notification in 2004
63.2520	Notifications, Reports and Records – What reports must I submit and when?
63.2520(a)	You must submit each report in Table 11 to this subpart that applies to you.
63.2520(b)	Unless the Administrator has approved a different schedule for submission of reports under 63.10(a), you must submit each report by the date in Table 11 to this subpart and according to paragraphs (b)(1) through (5) of this section.
63.2520(d)	Notification of compliance status report
63.2520(e)	Compliance report
Table 11	Requirements for Reports

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 63, Subpart FFFF]

f) Testing Requirements

(1) Compliance with the emission limitations in Section b)(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance with the visible emissions limitation above shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

4.0 lbs PE/hr

Applicable Compliance Method:

The permittee may demonstrate compliance with the hourly PE limitation by multiplying an emission factor of 0.07 lb PE/ton times a maximum process weight rate of 31.25 tons per hour. The emission factor was derived from stack testing conducted on November 30, 2004 as follows:

Actual PE = 2.18 lbs PE/hr (combined emissions for emissions units P546 and P547)

Actual process weight rate during stack test = 28.79 tons/hr

Emission factor for PE = (2.18 lbs PE/hr)/(28.79 tons/hr) = 0.07 lb PE/ton

If required, compliance with the hourly PE limitation shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(10).

[OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

19. P560, Urea Prilling Section: Prill Tower

Operations, Property and/or Equipment Description:

Urea Prilling Section - Prill Tower, with Bustle Pond Filter

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 operations(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. 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)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.
b.	OAC rule 3745-17-11(B)(1)	50.0 lbs PE/hr
c.	OAC rule 3745-21-07(M)	See b)(2)a.
d.	40 CFR, Part 64 - Compliance Assurance Monitoring (CAM)	See d)(1) through d)(7), and e)(1)

(2) Additional Terms and Conditions

a. This emissions unit is not subject to the requirements of the rule because it does not meet all of the conditions outlined in OAC rule 3745-21-07(M)(3)(a).

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The CAM plan for this emissions unit has been developed for particulate emissions. The CAM performance indicator for the scrubber controlling this emissions unit is the scrubber pressure drop which was established in accordance with the manufacturer's recommendations and verified during site-specific particulate emission testing and scrubber parametric data collected during the emission testing. When the pressure drop of the scrubber is operating outside the indicator range, the permittee shall take corrective actions to restore operation of the emissions unit and/or its control equipment to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions and comply with the

reporting requirements specified in Section e) below. The emissions unit and control equipment shall be operated in accordance with the approved CAM Plan, or any approved revision of the Plan. The scrubber shall not be configured to have bypass capability.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(2) The permittee shall operate and maintain equipment to monitor the scrubber pressure drop while the emissions unit is in operation. The monitoring devices and any recorders shall be installed, calibrated, operated and maintained in accordance with the manufacturer's recommendations, instructions and operating manuals.

a. The permittee shall collect and record the following information each shift:

i. the scrubber pressure drop; in inches water column; and

ii. a log of the down time for the scrubber and monitoring equipment when the associated emissions unit was in operation.

b. Whenever the monitored values for the scrubber pressure drop deviate from the indicator range specified, the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

i. the date and time the deviation began and the magnitude of the deviation at that time;

ii. the date(s) the investigation was conducted;

iii. the names of the personnel who conducted the investigation; and

iv. the findings and recommendations.

Records of these inspections shall be kept in accordance with the Standard Terms and Conditions of this permit.

c. In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable range specified below unless the permittee determines that corrective action is not necessary.

i. The permittee shall maintain records of the following information for each deviation when it was determined that corrective action was not necessary:

(a) the reason corrective action was not necessary; and

(b) the date and time the deviation ended.

ii. The permittee shall maintain records of the following information for each corrective action taken:

(a) a description of the corrective action;

(b) the date it 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 scrubber pressure drop immediately after the corrective action; and

(f) the names of the personnel who performed the work.

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

d. Pressure drop indicator

The pressure drop across the washed filter media scrubber shall be maintained at a minimum value of 0.5 inch of water, while the emissions unit is in operation.

e. These range(s) and/or limit(s) for the pressure drop 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 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 permit modification.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(3) Scrubber operating parameters shall be re-verified as a result of any changes to the operating conditions of the scrubber or emissions unit. In addition to periodic monitoring of their scrubber operating parameters, the permittee also has an inspection and maintenance program for the scrubbers. Based on the results of the monitoring and inspection program, repairs to the scrubber shall be made as needed. If the current CAM indicators and/or the scrubber inspection program is considered inadequate, the permittee will develop a Quality Improvement Plan.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(4) At all times, the permittee shall maintain the monitoring equipment, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(5) If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance, the permittee shall promptly notify the Ohio EPA, Northwest District Office, and if necessary, submit a proposed modification to the Title V permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, re-establishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(6) In addition to the parametric monitoring required in Section d)(2), the permittee shall conduct visual inspections of the scrubber's spray nozzles every twelve (12) months. At a minimum, each spray nozzle shall be inspected for the following:

a. excessive wear, or clogging; and

b. appropriate directional output to ensure that the spray is covering the entire gas stream.

Records of these inspections shall be kept in accordance with the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(7) The permittee shall maintain a supply of replacement nozzles, or any other parts necessary to ensure that the scrubbing system will operate properly. Any worn, or clogged nozzles shall be replaced, or fixed during the inspection.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

e) Reporting Requirements

(1) The permittee shall submit quarterly reports that identify the following information concerning the operation of the control equipment during the operation of this emissions unit:

a. each period of time (start time and date, and end time and date)when the pressure drop across the scrubber was outside of the appropriate range or exceeded the applicable limit contained in this permit;

b. any period of time (start time and date, and end time and date)when the emissions unit(s) was/were in operation and the process emissions were not vented to the scrubber;

c. an identification of each incident of deviation described in e)(1)a. and e)(1)b. above where a prompt investigation was not conducted;

d. an identification of each incident of deviation described in e)(1)a. and e)(1)b. above where prompt corrective action, that would bring the scrubber pressure drop into compliance with the acceptable range, was determined to be necessary and was not taken; and

e. an identification of each incident of deviation described in e)(1)a. and e)(1)b. above where proper records were not maintained for the investigation and/or the corrective action.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

f) Testing Requirements

(1) Compliance with the emission limitations in Section b)(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation:

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

Applicable Compliance Method:

If required, compliance with the visible emissions limitation above shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1)]

b. Emission Limitation:

50.0 lbs PE/hr

Applicable Compliance Method:

The permittee may demonstrate compliance with the hourly PE limitation by multiplying an emission factor of 0.50 lb PE/ton times a maximum process weight rate of 41.67 tons per hour. The emission factor was derived from stack testing conducted on December 16, 2004 as follows:

Actual PE = 18.4 lbs PE/hr

Actual process weight rate during stack test = 36.46 tons/hr

Emission factor for PE = (18.4 lbs PE/hr)/(36.46 tons/hr) = 0.50 lb PE/ton

If required, compliance with the hourly PE limitation shall be determined in accordance with the methods specified in OAC rule 3745-17-03(B)(10).

[OAC rule 3745-77-07(C)(1)]

g) Miscellaneous Requirements

(1) None.

20. P564, Urea Production Section: UTI Hotwell

Operations, Property and/or Equipment Description:

Urea Production Section- UTI Hotwell Section

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) b)(1)f. and d)(2).

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(D) [PTI No. P0117742, issued 10/15/14]	0.02 lb of particulate emissions/ particulate matter less than or equal to 10 microns in diameter/particulate matter less than or equal to 2.5 microns in diameter (PE/PM_{10}/$PM_{2.5}$)/hr and 0.09 ton of PE/PM_{10}/$PM_{2.5}$/yr Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average. 0.69 lb of carbon monoxide (CO)/hr and 3.01 tons of CO/yr 2.06 lbs of volatile organic compounds (VOC)/hr and 9.01 tons of VOC/yr See b)(2)b. through b)(2)d., d)(1) and e)(1)
b.	OAC rule 3745-17-11(B)	See b)(2)e.
c.	OAC rule 3745-17-07(A)	See b)(2)f.
d.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	See b)(2)g. and b)(2)h.
e.	OAC rule 3745-31-05(A)(3), as effective 12/1/06	See b)(2)i.
f.	ORC 3704.03(F) and OAC rule 3745-114	See d)(2)
g.	40 CFR, Part 63, Subpart FFFF	See b)(2)j., d)(3), and e)(2)

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
	[40 CFR 63.2430 – 63.2550] In accordance with 40 CFR 63.2440,this emissions unit is an existingaffected source consisting of a vapor condensing/recovery system;which is partof a miscellaneous organic chemicalmanufacturing process unit at anexisting chemical manufacturingfacility subject to the emissionlimitations/control measuresspecified in this section.	

(2) Additional Terms and Conditions

a. The UTI Hotwell Scrubber associated with this emissions unit is integral to the process equipment as a product recovery device. Thus, there is no parametric monitoring necessary.

b. It is assumed that all PE are equivalent to both PM_{10} and $PM_{2.5}$.

c. The mass emission rate limitations in b)(1)a. above represent the potentials to emit (PTE), defined as the maximum capacity to emit an air pollutant under the physical and operational design. Therefore, no monitoring, record keeping, or reporting requirements are necessary to ensure compliance with these emission limitations. See f)(1)a., c. and d., for details regarding the PTE.

d. This permit establishes the following federally enforceable emission limitations for the purpose of representing the potentials to emit of this emissions unit:

i. 0.02 lb of PE/PM_{10}/$PM_{2.5}$/hr and 0.09 ton of PE/PM_{10}/$PM_{2.5}$/yr;

ii. 0.69 lb of CO/hr and 3.01 tons of CO/yr; and

iii. 2.06 lbs of VOC/hr and 9.01 tons of VOC/yr.

e. The PE limitation specified by OAC 3745-17-11(B) is less stringent than the PE limitation established pursuant to OAC rule 3745-31-05(D).

f. The visible emission limitation specified by OAC rule 3745-17-07(A) is equivalent to the visible emission limitation established pursuant to OAC rule 3745-31-05(D).

g. BAT requirements for PE/PM_{10}/$PM_{2.5}$, CO and VOC emissions under OAC rule 3745-31-05(A)(3), as effective 11/30/01 have been determined to be compliance

with the annual emission limitations for PE/PM_{10}/$PM_{2.5}$, CO and VOC as established pursuant to OAC rule 3745-31-05(D).

h. The permittee has satisfied the BAT requirements for PE/PM_{10}/$PM_{2.5}$, CO and VOC emissions pursuant to OAC rule 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 ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by State regulation for NAAQS pollutant emissions less than 10 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 revision 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 limits and control measures no longer apply.

i. 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 BAT requirements under OAC rule 3745-31-05(A)(3)(a) do not apply to the PE/PM_{10}/$PM_{2.5}$, CO and VOC emissions since the potential to emit is less than 10 tons per year.

j. The permittee shall comply with the additional terms and conditions under 40 CFR, Part 63, Subpart FFFF, including the following sections:

63.2445(b) through (d)	When do I have to comply with this subpart?
63.2450	Emission Limitations, Work Practice Standards and Compliance Requirements -- What are my general requirements for complying with this subpart?
63.2450(a)	You must be in compliance with the emission limits and work practice standards in tables 1 through 7* to this subpart at all times, except during periods of startup, shutdown, and malfunction (SSM), and you must meet the requirements specified in 63.2455 through 63.2490 (or the alternative means of compliance in 63.2495, 63.2500, or 63.2505), except as specified in paragraphs (b) through (s) of this section. You must meet the notification, reporting, and recordkeeping requirements specified in 63.2515, 63.2520, and 63.2525. * Only the work practice standards listed in Table 6 are applicable
63.2450(p)	Opening a safety device, as defined in 63.2550, is allowed at any time conditions require it to avoid unsafe conditions

63.2455	Emission Limitations, Work Practice Standards and Compliance Requirements – What requirements must I meet for continuous process vents?
63.2455(a)	You must meet each emission limit in Table 1 to this subpart that applies to your continuous process vents, and you must meet each applicable requirement specified in paragraphs (b) through (c) of this section. [Note: There are no emission limits and/or work practice standards in Table 1 that are applicable.]
63.2455(b)	For each continuous process vent, you must either designate the vent as a Group 1 continuous process vent or determine the total resource effectiveness (TRE) index value as specified in 63.115(d), except as specified in paragraphs (b)(1) through (3) of this section.
63.2480	Emission Limitations, Work Practice Standards and Compliance Requirements – What requirements must I meet for equipment leaks?
63.2480(a)	You must meet each requirement in Table 6 to this subpart that applies to your equipment leaks, except as specified in paragraphs (b) through (d) of this section. [See Table 6 below for requirements.]
63.2480(b)	If you comply with either subpart H or subpart UU of this part 63, you may elect to comply with the provisions in paragraphs (b)(1) through (5) of this section as an alternative to the referenced provisions in subpart H or subpart UU of this part.
63.2535	Other Requirements and Information – What compliance options do I have if part of my plant is subject to both this subpart and another subpart?
63.2535(k)	Compliance with 40 CFR, Part 60, subpart VV and 40 CFR, Part 61, subpart V
63.2540	Other Requirements and Information – What parts of the General Provisions apply to me?
Table 6	Requirements for Equipment Leaks

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform daily checks, when the emissions unit is being operated and when the weather conditions allow, for any visible particulate emissions from the scrubber stack serving this emissions unit. The presence or absence of any visible

emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. the color of the emissions;

b. whether the emissions are representative of normal operations;

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

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

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

(2) Modeling to demonstrate compliance with the "Toxic Air Contaminant Statute", ORC 3704.03(F)(4)(b), was not necessary for this permit action because actual emissions of the toxic air contaminant ammonia (NH3), as specified in OAC rule 3745-114-01, resulted in an actual decrease. Other than NH3, the maximum annual emissions for each toxic air contaminant (as specified in OAC rule 3745-114-01) that is not subject to MACT and/or NESHAP regulations will be less than 1.0 ton per year. OAC Chapter 3745-31 requires a permittee to apply for and obtain a new or modified permit-to-install (PTI) prior to making a "modification" as defined by OAC rule 3745-31-01.

The permittee is hereby advised that changes in the composition of the materials, or use of new materials, etc. that would cause the emissions of any toxic air contaminant to increase to above 1.0 ton per year may require the permittee to apply for and obtain a new PTI.

[PTI No. P0117742]

(3) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart FFFF, including the following sections:

63.2525	Notifications, Reports and Records – What records must I keep?
63.2525(a)	Each applicable record required by subpart A of this part 63 and in referenced subparts F, G, SS, UU, WW, and GGG of this part 63 and in referenced subpart F of 40 CFR part 65.
63.2525(b)	Records of each operating scenario as specified in paragraphs (b)(1) through (8) of this section.
63.2525(f)	A record of each time a safety device is opened to avoid unsafe conditions in accordance with 63.2450(s).
63.2525(j)	In the SSMP required by 63.6(e)(3), you are not required to include Group 2 emission points, unless those emission points are used in an emissions average. For equipment leaks, the SSMP requirement is limited to control devices and is optional for other equipment.

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart FFFF; and PTI No. P0117742]

e) Reporting Requirements

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

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

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

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

(2) The permittee shall submit semiannual reports and such other notifications and reports to the Ohio EPA, Northwest District Office, as are required pursuant to 40 CFR, Part 63, Subpart FFFF, per the following sections:

63.2450(m)	Reporting
63.2515	Notifications, Reports and Records – What notifications must I submit and when?
63.2515(a)	You must submit all of the notifications in 63.6(h)(4) and (5), 63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.
63.2515(b)	Initial notification* * the company submitted the initial notification in 2004
63.2520	Notifications, Reports and Records – What reports must I submit and when?
63.2520(a)	You must submit each report in Table 11 to this subpart that applies to you.
63.2520(b)	Unless the Administrator has approved a different schedule for submission of reports under 63.10(a), you must submit each report by the date in Table 11 to this subpart and according to paragraphs (b)(1) through (5) of this section.
63.2520(d)	Notification of compliance status report
63.2520(e)	Compliance report
Table 11	Requirements for Reports

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart FFFF; and PTI No. P0117742]

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. Emission Limitations:

0.02 lb of PE/PM_{10}/$PM_{2.5}$/hr and 0.09 ton of PE/PM_{10}/$PM_{2.5}$/yr

Applicable Compliance Method:

The hourly emission limitation is based on previous stack testing data, and reflects the potential to emit (PTE) for this emissions unit. Therefore, it is not necessary to develop any further monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation.

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Methods 1 through 4 of 40 CFR, Part 60, Appendix A and Methods 201, 201A and 202 of 40 CFR, Part 51, Appendix M. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/hr emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

b. Emission Limitation:

Visible PE shall not exceed 20% opacity, as a 6-minute average.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible particulate emissions limitation above in accordance with the methods and procedures specified in Method 9 in Appendix A of 40 CFR, Part 60.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

c. Emission Limitations:

0.69 lb of CO/hr and 3.01 tons of CO/yr

Applicable Compliance Method:

The hourly emission limitation is based on previous stack testing data, and reflects the potential to emit (PTE) for this emissions unit. Therefore, it is not necessary to develop any further monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation.

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Method 1 through 4, and 10of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/hr emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

d. Emission Limitations:

2.06 lbs of VOC/hr and 9.01 tons of VOC/yr

Applicable Compliance Method:

The hourly emission limitation is based on previous stack testing data, and reflects the potential to emit (PTE) for this emissions unit. Therefore, it is not necessary to develop any further monitoring, record keeping and/or reporting requirements to ensure compliance with this limitation.

If required, the permittee shall demonstrate compliance with the hourly emission limitation by conducting emission testing in accordance with the methods and procedures specified in Method 1 through 4, and 18, 25, or 25A, as applicable,of 40 CFR, Part 60, Appendix A. Alternative U.S. EPA-approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was established by multiplying the hourly emission limitation by the maximum operating schedule of 8,760 hrs/yr, and then dividing by 2,000 lbs/ton. Therefore, provided compliance is shown with the lb/hr emission limitation, compliance with the annual emission limitation shall also be demonstrated.

[OAC rule 3745-77-07(C)(1) and PTI No. P0117742]

g) Miscellaneous Requirements

(1) None.

21. P570, #2 Nitric Acid Plant

Operations, Property and/or Equipment Description:

#2 Nitric Acid Plant, with Selective Catalytic Reduction (SCR)

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) b)(1)d., d)(5), d)(6), d)(7), and e)(5)

b) Applicable Emissions Limitations and/or Control Requirements

(1) The specific operations(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. 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) (PTI No. P0103658, modified and issued on 10/2/08)	1.60 lbs of nitrogen oxides (NOx)/ton of acid (100% nitric acid) produced except during periods of startup and shutdown [See b)(2)a.] See b)(2)c. and b)(2)d.
b.	OAC rule 3745-31-05(D) (PTI No. P0103658, modified and issued on 10/2/08)	80.78 tons of NOx per rolling, 365-day period (including emissions from startups and shutdowns) [See b)(2)f.]
c.	40 CFR, Part 60, Subpart G	See b)(2)b. and b)(2)d.
d.	ORC 3704.03(F) and OAC rule 3745-114-01	See d)(5) through d)(7) and e)(5)

(2) Additional Terms and Conditions

a. Best Available Technology (BAT) control for this emissions unit has been determined to be the use of a selective catalytic reduction (SCR) control system that achieves an emission rate of 1.60 lbs of NOx/ton of acid (100% nitric acid) produced except during periods of startup and shutdown.

b. The permittee shall not discharge into the atmosphere, except during startup and shutdown, any gases which:

i. Contain NOx, expressed as NO2, in excess of 3.0 lb per ton of acid produced, the production being expressed as 100% nitric acid; and

ii. Exhibit 10% opacity or greater.

c. The requirements of this rule also include compliance with the requirements of 40 CFR, Part 60, Subpart G.

d. The lb NOx/ton of acid produced limitation specified by 40 CFR, Part 60, Subpart G is less stringent than the lb NOx/ton of acid produced limitation established pursuant to OAC rule 3745-31-05(A)(3). 40 CFR, Part 60, Subpart G requires a specific method for demonstrating compliance without any option of an alternative compliance method. This permit requires the use of a different method resulting in greater accuracy (as compared to the requirements of 40 CFR, Part 60, Subpart G) for demonstrating compliance with the lb NOx/ton of acid produced limitation established by OAC rule 3745-31-05(A)(3). Due to the necessity for greater accuracy to demonstrate compliance with the limitation established by OAC rule 3745-31-05(A)(3) and the lack of an alternative compliance option in 40 CFR, Part 60, Subpart G, the establishment of two separate lbs NOx/ton of acid produced limitations is necessary.

e. The permittee shall submit a plan for quantifying NOx emissions during times of startup* and shutdown* when emissions exceed the capability of the NOx monitoring system (i.e., the NOx concentration exceeds the span range, etc.). The plan shall be submitted for review to the Ohio EPA, Northwest District Office within 60 days of final issuance of PTI No. P0103658 and shall be implemented [as specified in d)(3) immediately upon approval.

* A startup consists of all periods of time when the reactor gauze temperature is below a minimum operating temperature of 1,700 degrees Fahrenheit while bringing the unit online. A shutdown consists of all periods of time when the reactor gauze temperature is below a minimum operating temperature of 1,200 degrees Fahrenheit while bringing the unit offline.

f. PTI No. P0103658 establishes the following federally enforceable emission limitation for purposes of avoiding Prevention of Significant Deterioration (PSD) applicability:

Annual emissions (including emissions from startups and shutdowns) shall not exceed 80.78 tons NOx per rolling, 365-day period.

To ensure enforceability during the first 12 calendar months of operation under the provisions of PTI No. P0103658, the permittee shall not exceed the emission levels specified in the following table:

Months	Maximum Allowable Cumulative Emissions of NOx (in tons)
1	17.00
1-2	34.00
1-3	51.00

Months	Maximum Allowable Cumulative Emissions of NOx (in tons)
1-4	68.00
1-5	80.78
1-6	80.78
1-7	80.78
1-8	80.78
1-9	80.78
1-10	80.78
1-11	80.78
1-12	80.78

After the first 12 calendar months of operation under the provisions of PTI No. P0103658, compliance with the annual emission limitation for NOx shall be based upon a rolling, 365-day summation of the daily emissions.

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall perform the following monitoring and record keeping requirements contained in 40 CFR, Part 60, Subpart G for purposes of demonstrating compliance with the 3.0 lb NOx per ton of acid produced limitation:

a. The permittee shall operate and maintain a continuous monitoring system for measuring NOx. The pollutant gas mixtures under Performance Specification 2 and for calibration checks under 40 CFR 60.13(d) of this part shall be nitrogen dioxide (NO2). The span value shall be 500 ppm of NO2. Method 7 shall be used for the performance evaluations under 40 CFR 60.13(c). Acceptable alternative methods to Method 7 are given in 40 CFR 60.74(c). [40 CFR 60.73(a)]

b. The permittee shall establish a conversion factor for the purpose of converting monitoring data into units of applicable standard (kg/metric ton, lb/ton). The conversion factor shall be established by measuring emissions with the continuous monitoring system concurrent with measuring emissions with the applicable reference method tests. Using only that portion of the continuous

monitoring emission data that represents emission measurements concurrent with the reference method test periods, the conversion factor shall be determined by dividing the reference method test data averages by the monitoring data averages to obtain a ratio expressed in units of the applicable standard to units of the monitoring data, i.e., kg/metric ton per ppm (lb/ton per ppm). The conversion factor shall be re-established during any performance test under 40 CFR 60.8 or any continuous monitoring system performance evaluation under 40 CFR 60.13(c). [40 CFR 60.73(b)]

c. The permittee shall record the daily production rate and the hours of operation. [40 CFR 60.73(c)]

[OAC rule 3745-77-07(C)(1), 40 CFR, Part 60, Subpart G and PTI No. P0103658]

(2) The permittee shall perform the following monitoring and recordkeeping requirements for purposes of quantifying NOx emissions which will be used in demonstrating ongoing compliance with the 1.60 lb NOx per ton of acid (100% nitric acid) produced limitation and the emission limitation of 80.78 tons NOx per rolling 365-day period:

a. The permittee shall operate and maintain equipment to continuously monitor and record NOx from thisemissions unit in appropriate units (lbs/day) to be used to demonstrate compliance with the NOx limitations presented above. Such continuous monitoring and recording equipment shallcomply with the requirements specified in 40 CFR Part 60.13.

b. The permittee shall maintain records of all data obtained by the continuous NOx monitoring systemincluding, but not limited to, parts per million NOx on an instantaneous (one-minute) basis, emissions of NOx in appropriate units and averaging period, results of daily zero/span calibration checks, and the magnitude of manual calibrationadjustments.

c. The permittee shall maintain a written quality assurance/quality control plan for the continuous NOxmonitoring system designed to ensure continuous valid and representative readings of NOx. The plan shallfollow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and alogbook dedicated to the continuous NOx monitoring system must be kept on site and available for inspectionduring regular office hours.

d. A statement of certification of the existing continuous NOx monitoring system shall be maintained on siteand shall consist of a letter from the Ohio EPA detailing the results of an Agency review of the certificationtests and a statement by the Agency that the system is considered certified in accordance with therequirements of 40 CFR, Part 60, Appendix B, Performance Specification 2 and/or 40 CFR, Part 75. Proof ofcertification shall be made available to the Director (the Ohio EPA, Northwest District Office) upon request.

In lieu of installing a continuous emissions monitoring system (CEM) for NOx (to demonstrate compliance with the NOx limitations of 1.60 lbs per ton of acid produced and 80.87 tons per rolling, 365-day period), the permittee may elect to installa predictive emission monitoring system (PEMS) for quantifying NOx

emissions. The PEMS must meet 'ExampleSpecifications and Test Procedures for Predictive Emission Monitoring Systems' as written by the UnitedStates Environmental Protection Agency, and the proposed system shall be approved in writing by Ohio EPAprior to installation. At such time that a performance specification for PEMS is promulgated, the PEMS shallbe required to meet the promulgated requirements.

After initial testing to assure the PEMS meets the 'Example Specifications and Test Procedures for PredictiveEmission Monitoring Systems', or when available, the promulgated performance specification, ongoing qualityassurance/quality control shall include a relative accuracy test audit (RATA) once every four (or less) calendarquarters. RATA requirements are in addition to any and all PEMS manufacturer-suggested qualityassurance/quality control procedures. RATA requirements shall include multi-load, multi-fuel (whenapplicable) testing. RATA testing shall be completed using the appropriate 40 CFR 60, Appendix A testmethods (Methods 7E, 3A and 1-4 as necessary). RATA testing protocol shall be submitted to the Director (theOhio EPA, Central Office) for approval prior to installation of the PEMS.

e. The permittee shall calculate and record the following information for purposes of determining compliance with the 1.60 lb of NOx per ton of acid produced:

The emission rate (E) of NOx shall be computed using the following equation:

$E = (Q_{NOx})/P$

where

E = emission rate of NOx as NO2, lb/ton of 100% nitric acid

Q_{NOx} = NOx emissions quantified by CEM/PEM, lbs/day

P = acid production rate, ton/day for 100% nitric acid

[OAC rule 3745-77-07(C)(1), 40 CFR, Part 60, Subpart G and PTI No. P0103658]

(3) The permittee shall maintain daily records of the following information for this emissions unit:

a. The total NOx emissions, in lbs/day, as quantified by the CEM/PEM [see d)(2)].

b. The total NOx emissions, in lbs/day, from startup and shutdown events during which emissions exceed the capability of the NOx monitoring system. The NOx emissions shall be determined in accordance with the requirement contained in b)(2)e.

c. The total NOx emission rate, in lbs/day, [summation of d)(3)a. and d)(3)b.]

d. The rolling, 365-day NOx emission rate, in tons.

[OAC rule 3745-77-07(C)(1) and PTI No. P0103658]

(4) The permittee shall perform daily checks when the emissions unit is in operation and when the weather conditions allow for any visible particulate emissions from the stack serving the emissions unit.

The presence or absence of any visible emissions shall be noted in an operations log. If visible emissions are observed, the permittee shall also note the following in the operations log:

a. The color of the emissions;

b. Whether the emissions are representative of normal emissions;

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

d. The total duration of any visible emissions incident; and

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0103658]

(5) The Permit to Install for this emissions unit was evaluated based on the actual materials and design parameters of the emissions unit's exhaust system, as specified in the permit application. The "Toxic Air Contaminant Statute," ORC 3704.03(F), was applied to this emissions unit for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application. Modeling was performed for each toxic air contaminant emitted at over one ton per year using the SCREEN 3.0 air dispersion model. 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 Toxic Air Emissions, Option A," as follows:

a. The exposure limit, expressed as a time-weighted average concentration for a conventional 8-hour work day and 40-hour work week, for each toxic compound emitted from the emissions unit, 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. TLV (threshold limit value) 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 ACGIH's "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 is then adjusted to account for the duration of the exposure or the operating hours of the emissions unit, i.e., "X" hours per day and "Y" hours per week, from that of 8 hours per day and 5 days per week. The resulting calculation was used to determine the MAGLC:

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

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

Toxic Contaminant: Ammonia

TLV (mg/m3): 17.41

Maximum Hourly Emission Rate (lbs/hr): 0.46

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 0.566

MAGLC (ug/m3): 415.00

The permittee has demonstrated that emissions of ammonia are calculated to be less than 80% of the MAGLC; any new raw material or processing agent shall not be applied without evaluating each toxic air contaminant in accordance with the "Toxic Air Contaminant Statute" in ORC 3704.03(F).

[PTI No. P0103658]

(6) The permittee shall collect, record, and retain the following information for each toxic evaluation conducted to determine compliance with the "Toxic Air Contaminant Statute" in 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 modeled (the composition of materials, new toxic contaminants emitted, change in stack/exhaust parameters, etc.);

b. The MAGLC for each significant toxic contaminant or worst case contaminant, calculated in accordance with the "Toxic Air Contaminant Statute";

c. A copy of the computer model runs that establish the predicted 1-hour maximum ground-level concentration that demonstrated the emissions unit to be in compliance with the "Toxic Air Contaminant Statute," initially and for each change that requires re-evaluation of the toxic air contaminant emissions; and

d. Documentation of the initial evaluation of compliance with the "Toxic Air Contaminant Statute" and documentation of any determination that was

conducted to re-evaluate compliance due to a change made to the emissions unit or the materials applied.

[PTI No. P0103658]

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

[PTI No. P0103658]

e) Reporting Requirements

(1) For the purpose of reports required under 40 CFR 60.7(c), periods of excess emissions that shall be reported are defined as any 3-hour period during which the average nitrogen oxide emissions (arithmetic average of three contiguous 1-hour periods), as measured by a continuous monitoring system, exceed the standard under 40 CFR 60.72(a). [40 CFR 60.73(e)]

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart G; and PTI No. P0103658]

(2) The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its two separate continuous NO_x monitoring systems [CEM for 3.0 lbs NOx/ton of acid, CEM/PEM for 1.60 lbs NOx/ton of acid and 80.87 tons NOx per rolling 365-day period [see d)(1) and d)(2)]:

a. Pursuant to the monitoring, record keeping, and reporting requirements for continuous monitoring systems contained in 40 CFR 60.7 and 60.13(h) and the requirements established in this permit, the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA,Northwest District Office, documenting all instances of NO_x emissions in excess of any applicable limit specified in this permitand any other applicable rules or regulations. The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

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

i. the facility name and address;

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

iii. a description of any change in the equipment that comprises the continuous emission monitoring system (CEMS), including any change to

the hardware, changes to the software that may affect CEMS readings, and/or changes in the location of the CEMS sample probe;

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

v. the total NOx emissions for the calendar quarter (tons);

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

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

viii. results and date of quarterly cylinder gas audits;

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

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

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

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

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

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

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

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

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart A; and PTI No. P0103658]

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

[OAC rule 3745-77-07(C)(1) and PTI No. P0103658]

(4) The permittee shall submit quarterly deviation (excursion) reports that identify the following:

a. for the first 12 calendar months of operation under the provisions of this permit, all exceedances of the maximum allowable cumulative emissions of NOx; and

b. after the first 12 calendar months of operation under the provisions of this permit, all exceedances of the rolling, 365-day NOx emission limitation.

These reports shall be submitted in accordance with the Standard Terms and Conditions of this permit.

[OAC rule 3745-77-07(C)(1) and PTI No. P0103658]

(5) The permittee shall submit annual reports to the Ohio EPA, Northwest District Office documenting any changes made to a parameter or value in the dispersion model that was used to demonstrate compliance with the "Toxic Air Contaminant Statute" through the predicted 1-hour maximum ground-level concentration. If no changes to the emissions unit or the exhaust stack have been made, the report shall include a statement to this effect. This report shall be postmarked or delivered no later than January 31 of each year and shall cover the previous calendar year.

[PTI No. P0103658]

f) Testing Requirements

(1) Compliance with the emission limitations in Section b)(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation:

1.60 lbs of NOx/ton of acid produced (100% nitric acid), except during periods of startup and shutdown

Applicable Compliance Method:

Compliance with the NOx emission limitation shall be based on the results of emission testing conducted in accordance with Methods 1 – 4 and 7 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0103658]

b. Emission Limitation:

3.00 lbs of NOx/ton of acid produced (100% nitric acid), except during periods of startup and shutdown

Applicable Compliance Method:

Compliance with the NOx emission limitation shall be based on the results of emission testing conducted in accordance with Methods 1 – 4 and 7 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0103658]

c. Emission Limitation:

80.78 tons of NOx per rolling, 365-day period (including emissions from startup and shutdown)

Applicable Compliance Method:

Compliance with the NOx emission limitation shall be based on the monitoring and record keeping in d)(3).

[OAC rule 3745-77-07(C)(1) and PTI No. P0103658]

d. Emission Limitation:

The permittee shall not discharge into the atmosphere, except during periods of startup and shutdown, any gases which exhibit 10% opacity or greater.

Applicable Compliance Method:

Compliance with the opacity limitation shall be based on the results of emission testing conducted in accordance with Method 9 of 40 CFR, Part 60, Appendix A.

[OAC rule 3745-77-07(C)(1) and PTI No. P0103658]

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

a. The emission testing shall be conducted within the first winter time period of January 1st to February 28th (for purposes of achieving maximum acid production) after the effective date of this permit.

b. The emissions testing shall be conducted to demonstrate compliance with the following limitations:

i. 1.60 lbs of NOx/ton of acid produced (100% nitric acid)

ii. 3.00 lbs of NOx/ton of acid produced (100% nitric acid)

iii. 10% opacity

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

i. For NOx, Methods 1 – 4 and 7 of 40 CFR Part 60, Appendix A

ii. For opacity, Method 9 of 40 CFR Part 60, Appendix A

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

d. The test(s) shall be conducted while the emissions unit is operating at its maximum capacity, unless otherwise specified or approved by the Ohio EPA, Northwest District Office.

e. The permittee shall determine compliance with the NOx per ton of acid produced limitations as follows:

i. The emission rate (E) of NOx shall be computed for each run using the following equation:

E = (Cs x Qsd)/P

where

E = emission rate of NOx as NO2, lb/ton of 100% nitric acid

Cs = concentration of NOx as NO2, lb/dscf

Qsd = volumetric flow rate of effluent gas, dscf/hr

P = acid production rate, ton/hr for 100% nitric acid

ii. Method 7 shall be used to determine the NOx concentration of each grab sample. Method 1 shall be used to select sampling site, and the sampling point shall be the centroid of the stack or duct or at a point no closer to the wall than 1 m (3.28 ft). Four grab samples shall be taken at approximately 15-minute intervals. The arithmetic mean of the four sample concentrations shall constitute the run value (Cs).

iii. Method 2 shall be used to determine the volumetric flow rate (Qsd of the effluent gas). The measurement site shall be the same as for the NOx samples taken.

iv. The methods of 40 CFR 60.73(c) shall be used to determine the production rate (P) of the nitric acid for each run. Material balance over the production system shall be used to confirm the production rate.

f. The permittee may use the following as alternatives to the reference methods and procedures specified in this section:

i. For Method 7, Method 7A, 7B, 7C, 7D, or 7E may be used. If Method 7C is used, the sampling time shall be at least 1 hour.

ii. The permittee shall use the procedures in 40 CFR 60.73(b) to determine the conversion factor for converting the monitoring data to the units of the standard.

Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Northwest District Office. 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, Northwest District Office's refusal to accept the results of the emissions test(s).

Personnel from the Ohio EPA, Northwest District Office 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 Ohio EPA, Northwest District Office within 30 days following the 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 Ohio EPA, Northwest District Office.

[OAC rule 3745-77-07(C)(1) and PTI No. P0103658]

g) Miscellaneous Requirements

(1) This emissions unit is subject to the applicable provisions of Subpart G of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR, Part 60.

The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR, Part 60 are also federally enforceable.

It should be noted that the permittee fulfilled the reporting requirements pursuant to 40 CFR, Part 60.7 during the permitting process that resulted in the issuance of PTI #03-05319 on 07/17/91.

22. P572, #2 Cooling Tower – NH3 &Demin

Operations, Property and/or Equipment Description:

#2 Cooling Tower - Ammonia (NH3) and Demineralization Units with Drift Eliminator

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(D) (PTI No. P0118384, issued 3/11/2015)	2.97 lbs particulate matter less than or equal to 10 microns in size (PM10)/hr; 13.03 tons PM10/yr See b)(2)a.
b.	ORC 3704.03(T) [Best Available Technology (BAT) for pollutants greater than 10 tons per year] (PTI No. P0118384, issued 3/11/2015)	See b)(2)b.
c.	OAC rule 3745-17-11(B)	See b)(2)c.
d.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
e.	40 CFR, Part 64 - Compliance Assurance Monitoring (CAM)	See c)(1), d)(1) through d)(4) and e)(1).

(2) Additional Terms and Conditions

a. This permit establishes the following federally enforceable emission limitations for the purpose of limiting potential to emit (PTE) to avoid Prevention of Significant Deterioration (PSD) requirements. The federally enforceable emission limitations are based on the operational restrictions contained in c)(1):

i. 2.97 lbs PM10/hr; and

ii. 13.03 tons PM10/yr.

b. The Best Available Technology (BAT) requirements established pursuant to ORC rule 3704.03(T) has been determined to be the installation of a high efficiency drift eliminator designed to meet an outlet drift factor of 0.0012 gallons drift per 100-gallons circulating water flow for PM10.

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

c) Operational Restrictions

(1) The following operational restrictions have been included in this permit for the purpose of establishing legally and practically enforceable requirements which limit potential to emit [See b)(2)a.]:

a. The permittee shall not exceed a total dissolved solids (TDS) content of 6,000 mg/l in the cooling water for this emissions unit.

b. The use of a high efficiency drift eliminator capable of achieving an outlet drift factor of 0.0012 gallons drift per 100-gallons circulating water flow for PM10.

[OAC rule 3745-77-07(A)(1), PTI No. P0118384 and 40 CFR, Part 64]

d) Monitoring and/or Recordkeeping Requirements

(1) A CAM plan for this emissions unit has been developed for particulate emissions. The CAM performance indicator for the drift eliminator controlling this emissions unit is a daily TDS (via conductivity) test. The emissions unit and control equipment shall be operated in accordance with the approved CAM Plan, or any approved revision of the Plan. The drift eliminator shall not be configured to have bypass capability.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(2) Each month the permittee shall collect and record the following information for this emissions unit:

a. The permittee shall test and record the TDS content, in ppm or mg/l, of the cooling water at least once per month using a conductivity meter or other U.S. EPA-approved test procedures or an equivalent method approved by the Ohio EPA, Northwest District Office.

b. Whenever the monitored values for the drift eliminator exceed the TDS content specified in section c)(1)a., the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

i. the date and time the deviation began and the magnitude of the deviation at that time;

ii. the date(s) the investigation was conducted;

iii. the names of the personnel who conducted the investigation; and

iv. the findings and recommendations.

Records of these inspections shall be kept in accordance with the Standard Terms and Conditions of this permit.

c. In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the control equipment within the acceptable ranges specified in section c)(1)a. unless the permittee determines that corrective action is not necessary.

i. The permittee shall maintain records of the following information for each deviation when it was determined that corrective action was not necessary:

(a) the reason corrective action was not necessary; and

(b) the date and time the deviation ended.

ii. The permittee shall maintain records of the following information for each corrective action taken:

(a) a description of the corrective action;

(b) the date it 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 TDS content immediately after the corrective action; and

(f) the names of the personnel who performed the work.

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

[OAC rule 3745-77-07(C)(1),PTI No. P0118384 and 40 CFR, Part 64]

(3) TDS content shall be re-verified as a result of any changes to the operating conditions of the drift eliminator or emissions unit. In addition to periodic monitoring of TDS content, the permittee also has an inspection and maintenance program for the drift eliminator. Based on the results of the monitoring and inspection program, repairs to the drift eliminator shall be made as needed. If the current indicators are considered inadequate, the permittee will develop a Quality Improvement Plan.

At all times, the permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(4) If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance, the permittee shall promptly notify the Ohio EPA, Northwest District Office, and if necessary, submit a proposed modification to the Title V permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, re-establishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(5) Each month, the permittee shall calculate and record PM10 emissions, in lbs per hr as a monthly average. The PM10 shall be calculated as follows:

[(82,500 gallons/minute) x (ppm TDS) x (0.00005) x (60 min/hr) x (0.0584) x (0.24)] / (7,000 grains/lb) = PM10, in lbs/hr

Where:

82,500 gallons/minute = the maximum water flow rate;

ppm TDS = the TDS level, on a monthly average basis, if more than one measurement is taken in a month;

0.00005 = the maximum drift loss factor;

60 min/hr = conversion factor for minutes to hours;

0.0584 = conversion factor for ppm to grains/gallon;

0.24 = PM10 emissions are 24% of the total PM emissions, per figure 1 of "Calculating Realistic PM10 emissions from Cooling Towers" (Abstract No. 216, Session No. AM-1b, Joel Reisman and Gordon Frisbie, Greystone Environmental Consultants, Inc., 04/11/2002); and

7,000 gr/lb = conversion factor for grains to pounds.

[OAC rule 3745-77-07(C)(1) andPTI No. P0118384]

(6) Each month, the permittee shall use the information in d)(5) to calculate the cumulative PM10 to date, for the calendar year from January to December.

[OAC rule 3745-77-07(C)(1) andPTI No. P0118384]

e) Reporting Requirements

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

a. Any exceedances of the TDS content restriction of 6,000 mg/l;

b. an identification of each incident of deviation described in e)(1)a. above where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in e)(1)a. above where prompt corrective action, that would bring the TDS content into compliance with the acceptable range, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in e)(1)a. above where proper records were not maintained for the investigation and/or the corrective action.

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

[OAC rule 3745-77-07(C)(1),PTI No. P0118384 and 40 CFR, Part 64]

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. Emission Limitation:

2.97 lbs PM10/hr

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated by the monitoring and record keeping requirements specified in sections d)(2) and d)(5).

[OAC rule 3745-77-07(C)(1) andPTI No. P0118384]

b. Emission Limitation:

13.03 tons PM10/yr

Applicable Compliance Method:

Compliance with the annual emission limitation shall be demonstrated by the monitoring and record keeping requirements specified in sections d)(6).

[OAC rule 3745-77-07(C)(1) andPTI No. P0118384]

c. Emission Limitation:

Visible PE shall not exceed 20% opacity, as six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods and procedures specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) andPTI No. P0118384]

d. Emission Limitation:

Install a high efficiency drift eliminator designed to meet an outlet drift factor of 0.0012 gallons drift per 100-gallons circulating water flow for PM10.

Applicable Compliance Methods:

The outlet drift factor emission limitation was established based on the emissions factors provided by the permittee in permit application #A0052632.

[OAC rule 3745-77-07(C)(1) andPTI No. P0118384]

g) Miscellaneous Requirements

(1) None.

23. P573, #3 Cooling Tower - NA

Operations, Property and/or Equipment Description:

#3 Cooling Tower - Nitric Acid Unit with Drift Eliminator

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(D) (PTI No. P0117040, issued 9/30/2014)	0.07 lb of particulate matter less than or equal to 10 microns in size (PM10)/hr 0.29 ton of PM10/yr See b)(2)a.
b.	OAC rule 3745-17-11(B)	See b)(2)b.
c.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
d.	40 CFR, Part 64 - Compliance Assurance Monitoring (CAM)	See c)(1), d)(1) through d)(4) and e)(1).

(2) Additional Terms and Conditions

a. This permit establishes the following federally enforceable emission limitations for the purpose of limiting potential to emit (PTE) to avoid Prevention of Significant Deterioration (PSD) requirements. The federally enforceable emission limitations are based on the operational restrictions contained in c)(1):

i. 0.07 lb PM10/hr; and

ii. 0.29 ton of PM10/yr.

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

c) Operational Restrictions

(1) The following operational restrictions have been included in this permit for the purpose of establishing legally and practically enforceable requirements which limit potential to emit [See b)(2)a.]:

a. The permittee shall not exceed a total dissolved solids (TDS) content of 6,000 mg/l in the cooling water for this emissions unit.

b. The use of a high efficiency drift eliminator capable of achieving an outlet drift factor of 0.00024 gallons drift per 100-gallons circulating water flow for PM10.

[OAC rule 3745-77-07(A)(1), PTI No. P0117040 and 40 CFR, Part 64]

d) Monitoring and/or Recordkeeping Requirements

(1) A CAM plan for this emissions unit has been developed for particulate emissions. The CAM performance indicator for the drift eliminator controlling this emissions unit is a daily TDS (via conductivity) test. The emissions unit and control equipment shall be operated in accordance with the approved CAM Plan, or any approved revision of the Plan. The drift eliminator shall not be configured to have bypass capability.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(2) Each month the permittee shall collect and record the following information for this emissions unit:

a. The permittee shall test and record the TDS content, in ppm or mg/l, of the cooling water at least once per month using a conductivity meter or other U.S. EPA-approved test procedures or an equivalent method approved by the Ohio EPA, Northwest District Office.

b. Whenever the monitored values for the drift eliminator exceed the TDS content specified in section c)(1)a., the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

i. the date and time the deviation began and the magnitude of the deviation at that time;

ii. the date(s) the investigation was conducted;

iii. the names of the personnel who conducted the investigation; and

iv. the findings and recommendations.

Records of these inspections shall be kept in accordance with the Standard Terms and Conditions of this permit.

c. In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the

control equipment within the acceptable ranges specified in section c)(1)a. unless the permittee determines that corrective action is not necessary.

i. The permittee shall maintain records of the following information for each deviation when it was determined that corrective action was not necessary:

(a) the reason corrective action was not necessary; and

(b) the date and time the deviation ended.

ii. The permittee shall maintain records of the following information for each corrective action taken:

(a) a description of the corrective action;

(b) the date it 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 TDS content immediately after the corrective action; and

(f) the names of the personnel who performed the work.

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

[OAC rule 3745-77-07(C)(1),PTI No. P0117040 and 40 CFR, Part 64]

(3) TDS content shall be re-verified as a result of any changes to the operating conditions of the drift eliminator or emissions unit. In addition to periodic monitoring of TDS content, the permittee also has an inspection and maintenance program for the drift eliminator. Based on the results of the monitoring and inspection program, repairs to the drift eliminator shall be made as needed. If the current indicators are considered inadequate, the permittee will develop a Quality Improvement Plan.

At all times, the permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(4) If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance, the permittee shall promptly notify the Ohio EPA, Northwest District Office, and if necessary, submit a proposed modification to the Title V permit to address the necessary monitoring changes. Such a modification may include, but is not limited

to, re-establishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(5) Each month, the permittee shall calculate and record PM10 emissions, in lbs per hr as a monthly average. The PM10 shall be calculated as follows:

[(9,200 gallons/minute) x (ppm TDS) x (0.00001) x (60 min/hr) x (0.0584) x (0.24)] / (7,000 grains/lb) = PM10, in lbs/hr

Where:

9,200 gallons/minute = the maximum water flow rate;

ppm TDS = the TDS level, on a monthly average basis, if more than one measurement is taken in a month;

0.00001 = the maximum drift loss factor;

60 min/hr = conversion factor for minutes to hours;

0.0584 = conversion factor for ppm to grains/gallon;

0.24 = PM10 emissions are 24% of the total PM emissions, per figure 1 of "Calculating Realistic PM10 emissions from Cooling Towers" (Abstract No. 216, Session No. AM-1b, Joel Reisman and Gordon Frisbie, Greystone Environmental Consultants, Inc., 04/11/2002); and

7,000 gr/lb = conversion factor for grains to pounds.

[OAC rule 3745-77-07(C)(1) andPTI No. P0117040]

(6) Each month, the permittee shall use the information in d)(5) to calculate the cumulative PM10 to date, for the calendar year from January to December.

[OAC rule 3745-77-07(C)(1) andPTI No. P0117040]

e) Reporting Requirements

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

a. Any exceedances of the TDS content restriction of 6,000 mg/l;

b. an identification of each incident of deviation described in e)(1)a. above where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in e)(1)a. above where prompt corrective action, that would bring the TDS content into compliance with the acceptable range, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in e)(1)a. above where proper records were not maintained for the investigation and/or the corrective action.

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

[OAC rule 3745-77-07(C)(1),PTI No. P0117040 and 40 CFR, Part 64]

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. Emission Limitation:

0.07 lb of PM10/hr

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated by the monitoring and record keeping requirements specified in sections d)(2) and d)(5).

[OAC rule 3745-77-07(C)(1) and PTI No. P0117040]

b. Emission Limitation:

0.29 ton of PM10/yr

Applicable Compliance Method:

Compliance with the annual emission limitation shall be demonstrated by the monitoring and record keeping requirements specified in sections d)(6).

[OAC rule 3745-77-07(C)(1) and PTI No. P0117040]

c. Emission Limitation:

Visible PE shall not exceed 20% opacity, as six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods and procedures specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0117040]

g) Miscellaneous Requirements

(1) None.

24. P577, #4 Cooling Tower: Urea Unit

Operations, Property and/or Equipment Description:

#4 Cooling Tower – Urea Unit, with Drift Eliminator

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 operations(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. 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(D) (PTI No. P0110310, issued 8/8/2012)	0.32 lb of particulate matter less than or equal to 10 microns in size (PM10)/hr 1.42 tons of PM10/yr See b)(2)a.
b.	OAC rule 3745-17-11(B)	See b)(2)b.
c.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) shall not exceed 20% opacity, as a 6-minute average, except as provided by the rule.
d.	40 CFR, Part 64 - Compliance Assurance Monitoring (CAM)	See c)(1), d)(1) through d)(4) and e)(1).

(2) Additional Terms and Conditions

a. This permit establishes the following federally enforceable emission limitations for the purpose of limiting potential to emit (PTE) to avoid Prevention of Significant Deterioration (PSD) requirements. The federally enforceable emission limitations are based on the operational restrictions contained in c)(1):

i. 0.32 lb PM10/hr; and

ii. 1.42 ton of PM10/yr

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

c) Operational Restrictions

(1) The following operational restrictions have been included in this permit for the purpose of establishing legally and practically enforceable requirements which limit potential to emit [See b)(2)a.]:

a. The permittee shall not exceed a total dissolved solids (TDS) content of 6,000 mg/l in the cooling water for this emissions unit.

b. The use of a high efficiency drift eliminator capable of achieving an outlet drift factor of 0.00024 gallons drift per 100-gallons circulating water flow for PM10.

[OAC rule 3745-77-07(A)(1), PTI No. P0110310 and 40 CFR, Part 64]

d) Monitoring and/or Recordkeeping Requirements

(1) A CAM plan for this emissions unit has been developed for particulate emissions. The CAM performance indicator for the drift eliminator controlling this emissions unit is a daily TDS (via conductivity) test. The emissions unit and control equipment shall be operated in accordance with the approved CAM Plan, or any approved revision of the Plan. The drift eliminator shall not be configured to have bypass capability.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(2) Each month the permittee shall collect and record the following information for this emissions unit:

a. The permittee shall test and record the TDS content, in ppm or mg/l, of the cooling water at least once per month using a conductivity meter or other U.S. EPA-approved test procedures or an equivalent method approved by the Ohio EPA, Northwest District Office.

b. Whenever the monitored values for the drift eliminator exceed the TDS content specified in section c)(1)a., the permittee shall promptly investigate the cause of the deviation. The permittee shall maintain records of the following information for each investigation:

i. the date and time the deviation began and the magnitude of the deviation at that time;

ii. the date(s) the investigation was conducted;

iii. the names of the personnel who conducted the investigation; and

iv. the findings and recommendations.

Records of these inspections shall be kept in accordance with the Standard Terms and Conditions of this permit.

c. In response to each required investigation to determine the cause of a deviation, the permittee shall take prompt corrective action to bring the operation of the

control equipment within the acceptable ranges specified in section c)(1)a. unless the permittee determines that corrective action is not necessary.

i. The permittee shall maintain records of the following information for each deviation when it was determined that corrective action was not necessary:

(a) the reason corrective action was not necessary; and

(b) the date and time the deviation ended.

ii. The permittee shall maintain records of the following information for each corrective action taken:

(a) a description of the corrective action;

(b) the date it 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 TDS content immediately after the corrective action; and

(f) the names of the personnel who performed the work.

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

[OAC rule 3745-77-07(C)(1),PTI No. P0110310 and 40 CFR, Part 64]

(3) TDS content shall be re-verified as a result of any changes to the operating conditions of the drift eliminator or emissions unit. In addition to periodic monitoring of TDS content, the permittee also has an inspection and maintenance program for the drift eliminator. Based on the results of the monitoring and inspection program, repairs to the drift eliminator shall be made as needed. If the current indicators are considered inadequate, the permittee will develop a Quality Improvement Plan.

At all times, the permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(4) If the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance, the permittee shall promptly notify the Ohio EPA, Northwest District Office, and if necessary, submit a proposed modification to the Title V permit to address the necessary monitoring changes. Such a modification may include, but is not limited

to, re-establishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

[OAC rule 3745-77-07(C)(1) and 40 CFR, Part 64]

(5) Each month, the permittee shall calculate and record PM10 emissions, in lbs per hr as a monthly average. The PM10 shall be calculated as follows:

[(45,000 gallons/minute) x (ppm TDS) x (0.00001) x (60 min/hr) x (0.0584) x (0.24)] / (7,000 grains/lb) = PM10, in lbs/hr

Where:

45,000 gallons/minute = the maximum water flow rate;

ppm TDS = the TDS level, on a monthly average basis, if more than one measurement is taken in a month;

0.00001 = the maximum drift loss factor;

60 min/hr = conversion factor for minutes to hours;

0.0584 = conversion factor for ppm to grains/gallon;

0.24 = PM10 emissions are 24% of the total PM emissions, per figure 1 of "Calculating Realistic PM10 emissions from Cooling Towers" (Abstract No. 216, Session No. AM-1b, Joel Reisman and Gordon Frisbie, Greystone Environmental Consultants, Inc., 04/11/2002); and

7,000 gr/lb = conversion factor for grains to pounds.

[OAC rule 3745-77-07(C)(1) and PTI No. P0110310]

(6) Each month, the permittee shall use the information in d)(5) to calculate the cumulative PM10 to date, for the calendar year from January to December.

[OAC rule 3745-77-07(C)(1) and PTI No. P0110310]

e) Reporting Requirements

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

a. Any exceedances of the TDS content restriction of 6,000 mg/l;

b. an identification of each incident of deviation described in e)(1)a. above where a prompt investigation was not conducted;

c. an identification of each incident of deviation described in e)(1)a. above where prompt corrective action, that would bring the TDS content into compliance with the acceptable range, was determined to be necessary and was not taken; and

d. an identification of each incident of deviation described in e)(1)a. above where proper records were not maintained for the investigation and/or the corrective action.

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

[OAC rule 3745-77-07(C)(1), PTI No. P0110310 and 40 CFR, Part 64]

f) Testing Requirements

(1) Compliance with the emission limitations in Section b)(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. Emission Limitation:

0.32 lb of PM10/hr

Applicable Compliance Method:

Compliance with the hourly emission limitation shall be demonstrated by the monitoring and record keeping requirements specified in sections d)(2) and d)(5).

[OAC rule 3745-77-07(C)(1) and PTI No. P0110310]

b. Emission Limitation:

1.42 tons of PM10/yr

Applicable Compliance Method:

Compliance with the annual emission limitation shall be demonstrated by the monitoring and record keeping requirements specified in section d)(6).

[OAC rule 3745-77-07(C)(1) and PTI No. P0110310]

c. Emission Limitation:

Visible PE shall not exceed 20% opacity, as six-minute average, except as provided by rule.

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the visible PE limitation above in accordance with the methods and procedures specified in OAC rule 3745-17-03(B)(1).

[OAC rule 3745-77-07(C)(1) and PTI No. P0110310]

g) Miscellaneous Requirements

(1) None.

25. P801, Fugitive Leaks

Operations, Property and/or Equipment Description:

Fugitive leaks including ancillary equipment (such as pumps, valves, piping etc.) associated with any emissions unit at the facility.

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 operations(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. 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) (PTI No. P0118344, issued 2/5/2015)	See b)(2)a.
b.	OAC rule 3745-21-09(DD)	Fugitive emissions from equipment leaks [See b)(2)b., d)(1) and e)(1)]
c.	40 CFR, Part 60, Subpart VV	Fugitive emissions from equipment leaks [See b)(2)c., d)(2), e)(2) and f)(2)]
d.	40 CFR, Part 60, Subpart A	See 40 CFR 60.1 through 60.19
e.	40 CFR, Part 63, Subpart FFFF	Fugitive emissions from equipment leaks [See b)(2)d., d)(3) and e)(3)]
f.	40 CFR 63.1 through 63.15	Table 12 to 40 CFR, Part 63, Subpart FFFF – Applicability of General Provisions to Subpart FFFF shows which parts of the General Provisions in 40 CFR 63.1 - 63.15 apply.

(2) Additional Terms and Conditions

a. The Best Available Technology (BAT) requirements for this emissions unit have been determined to be compliance with 40 CFR, Part 63, Subpart FFFF.

b. The permittee shall comply with the applicable requirements under OAC rule 3745-21-09(DD), including the following sections:

OAC rule 3745-21-09(DD)(1)	Compliance requirements
OAC rule 3745-21-09(DD)(3)	Compressors
OAC rule 3745-21-09(DD)(4)	Pressure relief devices in gas/vapor service
OAC rule 3745-21-09(DD)(5)	Sampling connection systems
OAC rule 3745-21-09(DD)(6)	Open-ended valves or lines
OAC rule 3745-21-09(DD)(7)	Equipment designated for no detectable emissions
OAC rule 3745-21-09(DD)(8)	Barrier fluid systems and sensors for pumps and compressors
OAC rule 3745-21-09(DD)(9)	Closed vent systems
OAC rule 3745-21-09(DD)(10)	Control equipment
OAC rule 3745-21-09(DD)(11)	Delay of repair
OAC rule 3745-21-09(DD)(16)	Equivalent requirements
OAC rule 3745-21-09(DD)(17)	Exemptions
OAC rule 3745-21-09(DD), Appendix A	List of organic chemicals for which paragraph (DD) of Rule 3745-21-09 is applicable

c. The permittee shall comply with the applicable requirements under 40 CFR, Part 60, Subpart VV, including the following sections:

60.482-1	Standards: General
60.482-2	Standards: Pumps in light liquid service
60.482-3	Standards: Compressors
60.482-4	Standards: Pressure relief devices in gas/vapor service
60.482-5	Standards: Sampling connection systems
60.482-6	Standards: Open-ended valves or lines

60.482-7	Standards: Valves in gas/vapor service and in light liquid service
60.482-8	Standards: Pumps and valves in heavy liquid service, pressure relief devices in light liquid or heavy liquid service, and connectors
60.482-9	Standards: Delay of repair
60.482-10	Standards: Closed vent systems and control devices
60.483-1	Alternative standards for valves--allowable percentage of valves leaking
60.483-2	Alternative standards for valves--skip period leak detection and repair

d. The permittee shall comply with the applicable requirements under 40 CFR, Part 63, Subpart FFFF, including the following sections:

63.2445(b) through (d)	When do I have to comply with this subpart?
63.2450	Emission Limitations, Work Practice Standards and Compliance Requirements -- What are my general requirements for complying with this subpart?
63.2450(a)	You must be in compliance with the emission limits and work practice standards in tables 1 through 7* to this subpart at all times, except during periods of startup, shutdown, and malfunction (SSM), and you must meet the requirements specified in 63.2455 through 63.2490 (or the alternative means of compliance in 63.2495, 63.2500, or 63.2505), except as specified in paragraphs (b) through (s) of this section. You must meet the notification, reporting, and recordkeeping requirements specified in 63.2515, 63.2520, and 63.2525. * Only the work practice standards

	listed in Table 6 are applicable
63.2480	Emission Limitations, Work Practice Standards and Compliance Requirements – What requirements must I meet for equipment leaks?
63.2480(a)	You must meet each requirement in Table 6 to this subpart that applies to your equipment leaks, except as specified in paragraphs (b) through (d) of this section. [See Table 6 below for requirements.]
63.2480(b)	If you comply with either subpart H or subpart UU of this part 63, you may elect to comply with the provisions in paragraphs (b)(1) through (5) of this section as an alternative to the referenced provisions in subpart H or subpart UU of this part.
63.2535	Other Requirements and Information – What compliance options do I have if part of my plant is subject to both this subpart and another subpart?
63.2535(k)	Compliance with 40 CFR, Part 60, Subpart VV: After the compliance date specified in 63.2445, if you have an affected source with equipment that is also subject to the requirements of 40 CFR Part 60, Subpart VV, you may elect to apply this subpart to all such equipment. After the compliance date specified in 63.2445, if you have an affected source with equipment to which this subpart does not apply, but which is subject to the requirements of 40 CFR Part 60, Subpart VV, you may elect to apply this subpart to all such equipment. If you elect either of these methods of compliance, you must consider all total organic compounds, minus methane and ethane, in such equipment for purposes of compliance with this subpart, as if they were organic HAP. Compliance with the

	provisions of this subpart, in the manner described in this paragraph (k), will constitute compliance with 40 CFR,Part 60, Subpart VV, as applicable.
63.2540	Other Requirements and Information – What parts of the General Provisions apply to me?
Table 6	Requirements for Equipment Leaks

c) Operational Restrictions

(1) None.

d) Monitoring and/or Recordkeeping Requirements

(1) The permittee shall comply with the applicable monitoring and record keeping requirements under OAC rule 3745-21-09(DD), including the following sections:

OAC rule 3745-21-09(DD)(2)	Leak detection and repair program
OAC rule 3745-21-09(DD)(12)	Alternative monitoring schedule for valves based on a skip period
OAC rule 3745-21-09(DD)(13)	Alternative monitoring standard for valves based on the allowable percentage of valves leaking
OAC rule 3745-21-09(DD)(14)	Record keeping

[OAC rule 3745-77-07(C)(1); OAC rule 3745-21-09(DD); and PTI No. P0118344]

(2) The permittee shall comply with the applicable monitoring and record keeping requirements under 40 CFR, Part 60, Subpart VV, including the following sections:

60.486(a) through 60.486(k)	Identification of leaking components Maintain log of all leaking components. repair attempts and repair methods Maintain schematics, including piping and instrumentation diagrams Maintain lists of unsafe to monitor and difficult to monitor components

	Maintain monitoring schedule Maintain list of process unit shut downs that occur during monitoring periods

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart VV; and PTI No. P0118344]

(3) The permittee shall comply with the applicable monitoring and recordkeeping requirements under 40 CFR, Part 63, Subpart FFFF, including the following sections:

63.2525	Notifications, Reports and Records – What records must I keep?

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart FFFF; and PTI No. P0118344]

e) Reporting Requirements

(1) The permittee shall comply with the applicable reporting requirements under OAC rule 3745-21-09(DD), including the following section:

OAC rule 3745-21-09(DD)(15)	Reporting

[OAC rule 3745-77-07(C)(1); OAC rule 3745-21-09(DD); and PTI No. P0118344]

(2) The permittee shall submit semiannual reports and such other notifications and reports to the Ohio EPA, Northwest District Office, as are required pursuant to 40 CFR, Part 60, Subpart VV, per the following sections:

60.487(a) through 60.487(f)	Number of each type of component monitored each month Number of leaks for each type of component Number of components not repaired within the required time period Explanation for each delay of repair List of process unit shut downs

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart VV; and PTI No. P0118344]

(3) The permittee shall submit semiannual reports and such other notifications and reports to the Ohio EPA, Northwest District Office, as are required pursuant to 40 CFR, Part 63, Subpart FFFF, per the following sections:

63.2450(m)	Reporting
63.2515	Notifications, Reports and Records – What notifications must I submit and when?
63.2515(a)	You must submit all of the notifications in 63.6(h)(4) and (5), 63.7(b) and (c), 63.8(e), (f)(4) and (6), and 63.9(b) through (h) that apply to you by the dates specified.
63.2515(b)	Initial notification* * the company submitted the initial notification in 2004
63.2520	Notifications, Reports and Records – What reports must I submit and when?
63.2520(a)	You must submit each report in Table 11 to this subpart that applies to you.
63.2520(b)	Unless the Administrator has approved a different schedule for submission of reports under 63.10(a), you must submit each report by the date in Table 11 to this subpart and according to paragraphs (b)(1) through (5) of this section.
63.2520(d)	Notification of compliance status report
63.2520(e)	Compliance report
Table 11	Requirements for Reports

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 63, Subpart FFFF; and PTI No. P0118344]

f) Testing Requirements

(1) Compliance with the emission limitations in Section b)(1) of the terms and conditions of this permit shall be determined in accordance with the following methods:

a. None.

(2) The permittee shall comply with the applicable testing requirements under 40 CFR Part 60, Subpart VV, including the following sections:

60.485(a) through 60.485(h)	Reference methods for sample equipment used to detect component VOC leaks

[OAC rule 3745-77-07(C)(1); 40 CFR, Part 60, Subpart VV; and PTI No. P0118344]

g) Miscellaneous Requirements

(1) None.

26. Emissions Unit Group –2 Flares Controlled Emissions Units: P554, P555, T518, T537, T551

EU ID	Operations, Property and/or Equipment Description
P554	Ammonia (Anhydrous) Truck Loading
P555	Ammonia (Anhydrous) Railcar Loading

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 operations(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. 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 3745-104	See Standard Term and Condition A.4. (Risk Management Plans).

(2) Additional Terms and Conditions

a. These emissions units emit a regulated air pollutant [as defined in OAC rule 3745-77-01(FF)(5)] in excess of five tons per year in the form of anhydrous ammonia, which is subject to Section 112(r) of the Clean Air Act. As such, these emissions units are significant emissions units [as defined in OAC rule 3745-77-01(JJ)].

c) Operational Restrictions

(1) None

d) Monitoring and/or Recordkeeping Requirements

(1) None.

e) Reporting Requirements

(1) None.

f) Testing Requirements

(1) None.

g) Miscellaneous Requirements

(1) None.