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

9/10/2013

Certified Mail

Normand Paquette
LINDE GAS NORTH AMERICA, LLC
2226 NAVARRE RD
Oregon, OH 43616

Facility ID: 0448020085
Permit Number: P0110395
County: Lucas

RE: PRELIMINARY PROPOSED AIR POLLUTION TITLE V PERMIT
Permit Type: Initial

Dear Permit Holder:

Enclosed is the Ohio Environmental Protection Agency (EPA)Preliminary Proposed Title V permit that was issued in draft form on 7/8/2013. The comment period for the Draft permit has ended. We are now ready to submit this permit to U.S. EPA for approval.

We are submitting this for your review and comment. If you do not agree with the Preliminary Proposed Title V permit as written, you now have the opportunity to raise your concerns. 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. Comments will be accepted as a marked-up copy of the permit or in narrative format. Any comments must be sent to the following within 14 days of your receipt of this letter:

Andrew Hall
Permit Review/Development Section
Ohio EPA, DAPC
50 West Town Street, Suite 700
P.O. Box 1049
Columbus, Ohio 43216-1049

and

Toledo Department of Environmental Services
348 South Erie Street
Toledo, OH 43604

If you believe that it is necessary to have an informal conference with us, then, as part of your written comments, you should request a conference concerning the written comments.If comments are not submitted within 14 days of your receipt of this letter, we will forward the proposed permit to U.S. EPA for approval. All comments received will be carefully considered before proceeding with the proposed permit.

Sincerely,

Michael W. Ahern

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

Cc: Toledo Department of Environmental Services

Response to Comments

Facility ID:	0448020085
Facility Name:	LINDE GAS NORTH AMERICA, LLC
Facility Description:	Hydrogen Plant
Facility Address:	2226 NAVARRE RD Oregon, OH 43616 Lucas County
Permit:	P0110395, Title V Permit - Initial
A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the Toledo Blade on 07/16/2013. The comment period ended on 08/15/2013.	
Hearing date (if held)	
Hearing Public Notice Date (if different from draft public notice)	

The following comments were received during the comment period specified. Ohio EPA reviewed and considered all comments received during the public comment period. By law, Ohio EPA has authority to consider specific issues related to protection of the environment and public health. Often, public concerns fall outside the scope of that authority. For example, concerns about zoning issues are addressed at the local level. Ohio EPA may respond to those concerns in this document by identifying another government agency with more direct authority over the issue.

In an effort to help you review this document, the questions are grouped by topic and organized in a consistent format. PDF copies of the original comments in the format submitted are available upon request.

NOTE: No comments received from company after the draft was issued. Some comments were received before the permit was issued draft because of a modification to a Permit to Install. The draft TV terms covered the facilities concerns before the permit was issued by the state.

PRELIMINARY PROPOSED

Division of Air Pollution Control
Title V Permit
for
LINDE GAS NORTH AMERICA, LLC

Facility ID:	0448020085
Permit Number:	P0110395
Permit Type:	Initial
Issued:	9/10/2013
Effective:	To be entered upon final issuance
Expiration:	To be entered upon final issuance

Division of Air Pollution Control
Title V Permit
for
LINDE GAS NORTH AMERICA, LLC

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Authorization

Facility ID:	0448020085
Facility Description:	Hydrogen Plant
Application Number(s):	A0044822
Permit Number:	P0110395
Permit Description:	Hydrogen Plant that became a major source for greenhouse gas emissions.
Permit Type:	Initial
Issue Date:	9/10/2013
Effective Date:	To be entered upon final issuance
Expiration Date:	To be entered upon final issuance
Superseded Permit Number:	

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

LINDE GAS NORTH AMERICA, LLC
2226 NAVARRE RD
Oregon, OH 43616

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

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

The above named entity is hereby granted a 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 Toledo Department of Environmental Services. 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 (540 days) and no later than 6 months (180 days) prior to the expiration date.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Scott J. Nally
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

(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

(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 recordings for 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 (i.e., postmarked) 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 scheduled maintenance, 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 promptly made to the appropriate Ohio EPA District Office or local air agency. Except as provided below, the written reports shall be submitted (i.e., postmarked) 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 (i.e., postmarked) to the appropriate Ohio EPA District Office or local air agency 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."

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

(5) Reports of any required monitoring and/or record keeping information shall be submitted to Toledo Department of Environmental Services.

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

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

c) This permit may be modified, reopened, revoked, or revoked and reissued, for cause, in accordance with Standard Term and Condition 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 official that, 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 appropriate Ohio EPA District Office or local air agency 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 appropriate Ohio EPA District Office or local air agency) 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 (i.e., postmarked) on or before April 30th of each year during the permit term.

(2) Compliance certifications shall include the following:

a. An identification of each term or condition of this permit that is the basis of the certification.

b. The permittee's current compliance status.

c. Whether compliance was continuous or intermittent.

d. The method(s) used for determining the compliance status of the source currently and over the required reporting period.

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 appropriate Ohio EPA District Office or local air agency 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 appropriate District Office of the Ohio EPA or local air agency 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 Fed. Reg. 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 has 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.

No emissions unit certified 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 opening 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 the appropriate Ohio EPA District Office or local air agency.

b) Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (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 appropriate Ohio EPA District Office or local air agency. 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 (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

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

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

28. Permit Transfers

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

(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 (i.e., postmarked) 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 potentials to emit; or

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

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.

C. Emissions Unit Terms and Conditions

1. Emissions Unit Group -Hydrogen Reformer Group: P001,P002,

EU ID	Operations, Property and/or Equipment Description
P001	Hydrogen Reformer Train 1 - 514 mmBtu/hr (Higher Heating Value (HHV) basis) methane steam reformer train with low NOx burners and selective catalytic reduction (SCR), NOx continuous emission monitor (CEM); fired with PSA off-gas and supplemented with refinery fuel gas and natural gas; and a deaerator with vents.
P002	Hydrogen Reformer Train 2 - 514 mmBtu/hr (Higher Heating Value (HHV) basis) methane steam reformer train with low NOx burners and selective catalytic reduction (SCR), NOx continuous emission monitor (CEM); fired with PSA off-gas and supplemented with refinery fuel gas and natural gas; and a deaerator with vents

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

(1) d)(15), d)(16), d)(17), d)(18) and e)(8).

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
Stack Emissions (each emissions unit):		
a.	OAC rule 3745-17-07(A)(1)	Visible particulate emissions from any stack shall not exceed 20% opacity as a six-minute average, unless otherwise specified by the rule
b.	OAC rule 3745-17-11(B)(1)	See b)(2)a.
c.	OAC rule 3745-18-06(E)(2)	See b)(2)a.
d.	OAC rule 3745-31-05(A)(3)	3.39 lb/hr nitrogen oxides (NOx) measured as NO_2 corrected to 3% O_2 in flue gas, on a dry basis, and 14.87 tons per year; 5.49 lb/hr carbon monoxide (CO) and 24.07 tons per year; 3.56 lb/hr volatile organic compounds

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		(VOC) and 15.59 tons per year; 3.56 lb/hr particulate matter less than 10 microns (PM_{10}) and 15.59 tons per year; 2.97 lb/hr sulfur dioxide (SO_2); and 10 ppmv ammonia corrected to 15% oxygen on a dry basis and 11.39 tons per year. See b)(2)b., b)(2)c,b)(2)d. and b)(2)e.
e.	OAC rule 3745-31-05(F)	2.76 tons per year of SO_2 See c)(3).
deaerator vent emissions (each emissions unit)		
f.	OAC rule 3745-31-05(A)(3) (PTI 04-01367 issued 11/09/2004, modified on 2/12/2008)	1.83 lb/hr and 8.00 TPY CO; 0.51 lb/hr and 2.22 TPY VOC (as methanol); and 0.34 lb/hr and 1.50 TPY ammonia see b)(2)c.
Greenhouse Gas Regulations:		
g.	OAC rule 3745-77-11	See b(2)f.

(2) Additional Terms and Conditions

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

b. The permittee shall not burn in any fuel gas combustion device, any fuel gas that contains hydrogen sulfide (H_2S) in excess of 230 milligrams per dry standard cubic meter (0.10 grain per dry standard cubic foot or 159 ppmv at 14.7 psia and 60°F).

c. The pound per hour and ton per year emission limitations were established for PTI purposes to reflect the potential to emit for this emissions unit. Therefore, it is not necessary to develop record keeping and/or reporting requirements to ensure compliance with this limitation.

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

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

e. The continuous emission monitoring system consists of all the equipment used to acquire data to provide a record of emissions and includes the sample extraction and transport hardware, sample conditioning hardware, analyzers, and data recording/processing hardware and software.

f. Notwithstanding any provisions to the contrary in this chapter, on or after January 2, 2011 Title V permits for major sources emitting greenhouse gases shall be required as provided in this rule and in 40 CFR Section 70.2, as amended (76 FR 43490, July 20, 2011). For the purpose of this rule, "CO_2 equivalent emissions" and "greenhouse gases" shall have the same meaning as set forth in 40 CFR 70.2 as amended (76 FR 43490, July 20, 2011).

c) Operational Restrictions

(1) The permittee shall burn only refinery fuel gas, natural gas and/or process Pressure Swing Absorption (PSA) purge gas in this emissions unit.

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

(2) The quality of the refinery fuel gas burned in this emissions unit shall meet a hydrogen sulfide content which is sufficient to comply with a volume-weighted, daily average H_2S concentration no greater than 230 milligrams per dry standard cubic meter (0.10 grain per dry standard cubic foot or 159 ppmv at 14.7 psia and 60 degrees F).

The process Pressure Swing Absorption (PSA) purge gas burned in this emissions unit shall meet a hydrogen sulfide content of 0.20 ppmv.

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

(3) The maximum volumetric flow rate of refinery fuel gas and natural gas, for each emissions unit (P001 and P002), shall not exceed 963.6 mmscf/yr based upon a rolling, 12-month summation of the monthly flow rate for refinery fuel gas.

Compliance with the maximum flow rate for refinery fuel gas shall be based upon a rolling, 12-month summation of the cumulative flow rate of the refinery fuel gas (in mmscf).

The volumetric flow rates shall be measured by traceable orifice meters installed on the lines feeding purge gas and refinery fuel gas to the reformer burners. The natural gas meter to the reformer burners shall be used to track natural gas feed rates.

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

(4) The permittee shall operate the selective catalytic reduction (SCR) unit whenever this emissions unit is in operation.

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

(5) The permittee shall not exceed the molar based ratio of ammonia to nitrogen oxides established during the most recent stack test during which compliance with the ammonia slip limitation was demonstrated: 1.4 for P001 and 1.6 for P002 as tested on March 5 and 6, 2013. Operation of the SCR at an ammonia to nitrogen oxides ratio greater than the ratio specified above does not by itself constitute a violation of the mass ammonia emissions limitation, but rather serves as an indicator of the need for additional stack testing and/or further investigation to establish compliance with the emission limitation

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

d) Monitoring and/or Recordkeeping Requirements

(1) ALL FUELS COMBUSTED
For each day during which the permittee burns a fuel other than refinery fuel gas, natural gas and/or Pressure Swing Absorption (PSA) purge gas, the permittee shall maintain a record of the type, quantity, sulfur content (pound(s) of sulfur per mmdscf), and heating value (Btu/dscf) of the fuel burned.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) REFINERY FUEL GAS TERMS
The permittee shall collect daily or require the refinery fuel gas supplier to collect daily a representative sample of the refinery fuel gas that is received for burning in this emissions unit. The permittee shall perform or require the supplier to perform analyses of each daily refinery fuel gas sample for sulfur content, heat content and density in accordance with the appropriate ASTM methods.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(3) The permittee shall maintain daily records of the density of the refinery fuel gas, the actual heating value of the refinery fuel gas, and the mass decimal fraction of sulfur in the refinery fuel gas as burned in this emissions unit.

The actual heating value (H) and density (D) of the refinery fuel gas shall be calculated as follows from the results of a daily refinery fuel gas compositional analysis using gas chromatography:

H = summation of (h_i x m_i)

m_i = the mass fraction of each chemical compound detected in the refinery fuel gas using chromatographic analysis; and

h_i = the heat content of each chemical compound detected in the refinery fuel gas, in Btu per pound of chemical.

D = (P x M) / (10.73 x T)

where:

10.73 = ideal gas constant with units of psia - cubic feet/lb mole - degrees Rankine

P = the refinery fuel gas line pressure, in psia;

T = the refinery fuel gas line temperature, in degrees Rankine; and

M = the molecular weight of refinery fuel gas, in lb/lb mole.

The molecular weight of the gas shall be calculated as follows:

M = summation of (MW_i x f_i)

where:

MW_i = the molecular weight of each chemical component of the refinery fuel gas, in lb/lb mole; and

f_i = the mole fraction of each chemical compound detected in the refinery fuel gas using gas chromatographic analysis.

As an alternative, the permittee may require the refinery fuel gas supplier to provide the above information.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(4) The permittee shall install a hydrogen sulfide continuous emission monitor, or require the refinery fuel gas supplier to provide a volume-weighted 24 hour daily average of the hydrogen sulfide CEMS data, in ppm and identify the H_2S CEM monitor. The CEMs data is only required when refinery fuel gas is used as a fuel to the reformer.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(5) When refinery fuel gas is used as a fuel, the permittee shall maintain daily records of the 24 hour daily average of the decimal (mass) fraction of sulfur in the refinery gas. The decimal (mass) fraction of sulfur shall be calculated as follows:

$S = (A_{H2S} / 1X10^6) \times 0.9408$

where:

A_{H2S} = 24 hour daily average of the H_2S CEMS data, in ppm; and

0.9408 = the pound of sulfur per pound of hydrogen sulfide

[Authority for term: OAC rule 3745-77-07(C)(1)]

(6) The permittee shall maintain daily records of the calculated, 24 hour daily SO_2 emission rate for the refinery fuel gas based upon the daily average of the sulfur content, daily heat content value, and daily density value of the refinery fuel gas. The SO_2 emission rate shall be calculated as follows, in accordance with OAC rule 3745-18-04(F)(3):

$ERG = (1x10^6/H) \times (D) \times (S) \times (1.998)$

where:

ERG = each 24 hour daily average SO_2 emission rate, in pounds of SO_2 per mmBtu;

H = the calculated daily average heat value of the fuel, in Btu/dscf of refinery fuel gas;

D = the density value of the fuel, in pounds per dscf of refinery fuel gas; and

S = each 24 hour daily average decimal (mass) fraction of sulfur in the refinery fuel gas.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(7) The permittee shall monitor and record the hourly, daily, and monthly total flow rate of refinery fuel gas, process PSA purge gas, and natural gas, in terms of standard cubic feet per hour. The flow monitoring device shall be certified to have an accuracy of plus or minus 2% of the upper range value across the range of the fuel flow rate to be measured at the unit.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(8) PSA PURGE GAS
The permittee shall analyze the reformer feed gas at least once each month for the presence of hydrogen sulfide during normal operation in order to ensure the absence of sulfur in the PSA Purge Gas. If the analyses show that the hydrogen sulfide content is 0.20 ppmv or less for 6 consecutive calendar months of normal operation, the required frequency of analyses for the presence of hydrogen sulfide in the reformer feed gas may be reduced to quarterly (once every 3 calendar months, when the emissions unit is in operation). If a subsequent analysis by the permittee indicates the presence of hydrogen sulfide greater than 0.20 ppmv, the permittee shall calculate the potential sulfur dioxide emissions from the reformer furnace based on combustion of the process PSA purge gas at maximum capacity. The permittee shall also revert to testing for the presence of hydrogen sulfide in the reformer feed gas on a monthly basis until the hydrogen sulfide content is 0.20 ppmv or less for 6 consecutive calendar months of normal operation.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(9) SCR
The permittee shall maintain daily records that document any time periods when the SCR was not in service when the emissions unit was in operation.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(10) The permittee shall operate and maintain equipment to continuously monitor and record the molar based ratio of ammonia to nitrogen oxides in this emissions unit as a rolling, 3-hour average.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(11) The permittee shall maintain on site, the document(s) of certification received from the U.S. EPA or the Ohio EPA's Central Office documenting that the continuous NOx monitoring system has been certified to meet the requirements of 40 CFR Part 60, Appendix B, Performance Specifications 2 and 6. The letter(s)/document(s) of certification shall be made available to the Director (the appropriate Ohio EPA District Office or local air agency) upon request.

[Authority for term: 40 CFR 60.13, 40 CFR Part 60, Appendix B and OAC rule 3745-77-07(C)(1)]]

(12) NOx CEM
The permittee shall operate and maintain equipment to continuously monitor and record NOx emissions from this emissions unit in units of the applicable standard(s). The continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.

The permittee shall maintain records of all data obtained by the continuous NOx monitoring system including, but not limited to:

a. emissions of NOx in parts per million for each cycle time of the analyzer, with no resolution less than one data point per minute required;

b. emissions of NOx in pounds per hour and in units of the applicable standard(s) in the appropriate averaging period (i.e., 24-hour rolling average);

c. results of quarterly cylinder gas audits;

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

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

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

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

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

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

All valid data points generated and recorded by the continuous emission monitoring and data acquisition and handling system shall be used in the calculation of the pollutant concentration and/or emission rate over the appropriate averaging period.

[Authority for term: 40 CFR 60.13, 40 CFR Part 60, Appendices B & F and OAC rule 3745-77-07(C)(1)]]

(13) The permittee shall maintain records of all data obtained by the continuous NOx monitoring system including, but not limited to, the hourly fuel flow rate and Fd-factor of the combined fuel being fired by the emissions unit, and the emissions of NOx in units of pounds per million Btu of heat input in the appropriate averaging period (e.g., hourly). The Fd-factor shall be determined through the use of an on-line gas chromatograph that is installed, operated and maintained according to the manufacturer's recommendations, and guidance using the applicable methodology provided in 40 CFR Part 60, Appendix A, Test Method 19, Section 12.

Additionally, a record of total hourly and total monthly heat input (in terms of million Btu) for this emissions unit shall be determined using term d)(7) required fuel-flow monitors and f-factors as determined above. The total monthly heat input shall be a sum of the hourly heat input records.

The permittee shall also maintain records of hourly NOx emissions in pounds per hour. The permittee shall multiply the hourly heat input in million Btu per hour (as recorded above) by the pound NOx per million Btu of heat input from the CEM to determine the NOx emissions in units of pounds per hour.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(14) ALL FUELS COMBUSTED RECORDKEEPING
The permittee shall maintain records of the following information:

a. The hourly feed rate (Q-factor) and Fd-factor (as defined in 40 CFR 60, Appendix A, Method 19, section 12) of the combined fuels shall be monitored and recorded. These are required for the calculation of the NOx emission rate.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(15) AIR TOXICS
The permit to install application for these emissions unit(s), P001 and P002, was evaluated based on the actual materials and the design parameters of the emissions unit's(s') exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this/these emissions unit(s) for each toxic air contaminant listed in OAC rule 3745-114-01, using data from the permit application; and

modeling was performed for each toxic air contaminant(s) emitted at over one ton per year using an air dispersion model such as SCREEN3, AERMOD, or ISCST3, or other Ohio EPA approved model. The predicted 1-hour maximum ground level concentration result(s) from the approved air dispersion model, was compared to the Maximum Acceptable Ground Level Concentration (MAGLC), calculated as described in the Ohio EPA guidance document entitled "Review of New Sources of Air Toxic Emissions, Option A", as follows:

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

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

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

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

c. This standard is/was then adjusted to account for the duration of the exposure or the operating hours of the emissions unit(s), i.e., "24" hours per day and "7" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation shall be used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

   TLV/10 x 8/24 x 5/7 = 4 TLV/168 = TLV/42 = MAGLC

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

   i. Toxic Contaminant: ammonia – 25.50 TPY (max) for P001 and P002.

      TLV (mg/m3): 17.413

      Maximum Hourly Emission Rate (lbs/hr): 5.88 (combined)

      Predicted 1-Hour Maximum Ground Level Concentration (ug/m3): 0.004

      MAGLC (ug/m3): 0.415

ii. Toxic Contaminant: methanol – 4.44 TPY for P001 and P002.

TLV (mg/m3): 262.1

Maximum Hourly Emission Rate (lbs/hr): 1.02 (combined)

Predicted 1-Hour Maximum Ground Level Concentration (ug/m3): 0.054

MAGLC (ug/m3): 6.240

The permittee, has demonstrated that emissions of ammonia and methanol, from emissions units P001 and P002, are calculated to be less than eighty per cent of the maximum acceptable ground level concentration (MAGLC); any new raw material or processing agent shall not be applied without evaluating each component toxic air contaminant in accordance with the "Toxic Air Contaminant Statute", ORC 3704.03(F).

[Authority for source: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

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

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

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

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

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

[Authority for term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

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

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

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

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

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

[Authority for term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

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

[Authority for term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, Option A, Engineering Guide #70]

e) Reporting Requirements

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

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) REFINERY FUEL GAS
The permittee shall submit quarterly deviation (excursion) reports that identify each 24 hour daily SO_2 emission rate, as calculated in d)(6) for refinery fuel gas combined with d)(8) for PSA purge gas, that exceeds the SO_2 emission limitation of 2.97 lb SO_2 per hour.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(3) The permittee shall submit quarterly deviation/excursion reports that identify each period in which the rolling, 12 month summation of the flow rates for refinery fuel gas and/or natural gas in c)(4) were exceeded.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(4) PSA PURGE GAS
The permittee shall notify the Toledo Division of Environmental Services in writing of any analysis of the process PSA purge gas that exceeded 0.20ppmv of H_2S. The notification shall include a copy of such record and shall be sent to the Toledo Division of Environmental Services within 30 days after the event occurs.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(5) SCR
The permittee shall notify the Toledo Division of Environmental Services in writing of any daily record(s):

a. showing that the SCR was not in service when the emissions unit was in operation; and/or

b. showing that the molar based ratio of ammonia to nitrogen oxides as a 3-hour average exceeds the maximum ammonia slip limitation established during the most recent stack test which demonstrated compliance with the ammonia slip limitation.

The notification shall include a copy of such record and shall be sent to the Toledo Division of Environmental Services within 30 days after the event occurs.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(6) NOx CEM
The permittee shall comply with the following quarterly reporting requirements for the emissions unit and its continuous NOx monitoring system:

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 appropriate Ohio EPA District Office or local air agency, documenting all instances of NOx emissions in excess of any applicable limit specified in this permit, 40 CFR Part 60, OAC Chapters 3745-14 and 3745-23, and any other applicable rules or regulations.

The report shall document the date, commencement and completion times, duration, and magnitude of each exceedance, as well as the reason (if known) and the corrective actions taken (if any) for each exceedance. Excess emissions shall be reported in units of the applicable standard(s).

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

i. the facility name and address;

ii. the manufacturer and model number of the continuous 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 dates of quarterly cylinder gas audits;

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

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

[Authority for term: 40 CFR 60.7 and OAC rule 3745-77-07(C)(1)]

(7) If there are no excess NOx emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissins unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions.

The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(8) AIR TOXICS PROGRAM
The permittee shall submit annual reports, due January 30, that include any changes to any parameter or value used in the dispersion model used to demonstrate compliance with the "Toxic Air Contaminate Statute", ORC 3704.03(F), through the predicted 1 hour maximum concentration. The report should include:

a. the original model input;

b. the updated model input;

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

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

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

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

[Authority for term: ORC 3704.03(F)(3)(c) and F(4), OAC rule 3745-114-01, and Option A, Engineering Guide #70]

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:

REFORMER STACK EMISSIONS:

a. Emission Limitation:

20% opacity as a 6-minute average

Applicable Compliance Method:

If required, compliance shall be demonstrated based upon the procedures specified in 40 CFR Part 60, Appendix A, Method 9 and OAC rule 3745-17-03(B)(1).

b. Emission Limitation:

3.39 pounds per hour NOx measured as NO_2 corrected to 3% O_2 in flue gas, on a dry basis on a rolling, 24-hour period

Applicable Compliance Method:

The NOx continuous emissions monitor (CEM) shall be used to demonstrate on-going compliance. The NOx CEM shall be certified in units of pounds of NOx per million Btu of heat input. The permittee shall calculate the NOx emissions in units of pounds of NOx per hour using the recorded process parameters in the calculation methodology of 40 CFR 60 Appendix A, Method 19, Section 12.

If required, compliance shall be demonstrated based upon the procedures specified in Methods 1 through 4 and 7 or Method 7e of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods can be used with prior approval from Ohio EPA.

c. Emission Limitation:

5.49 pounds per hour carbon monoxide (CO)

Applicable Compliance Method:

Multiply the manufacturer's supplied CO emission factor (0.0107 lb/mmBtu of fuel gas burned) by the daily average firing rate (mmBtu) per hour. If required, compliance shall be demonstrated based upon the procedures specified in Methods 1 through 4 and 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods can be used with prior approval from Ohio EPA.

d. Emission Limitation:

3.56 pounds per hour volatile organic compounds (VOC)

Applicable Compliance Method:

Multiply the manufacturer's supplied VOC emission factor (0.0069 lb/mmBtu of fuel gas burned) by the daily average firing rate (mmBtu) per hour. If required, compliance shall be demonstrated based upon the procedures specified in

Methods 1 through 4 and 25 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA-approved test methods can be used with prior approval from Ohio EPA.

e. Emission Limitation:

3.56 pound per hour PM_{10} emissions

Applicable Compliance Method:

Multiply the manufacturer's supplied particulate matter emission factor (0.0069 lb/mmBtu of fuel gas burned) by the daily average firing rate (mmBtu) per hour. If required, compliance shall be demonstrated based upon the procedures specified in Methods 201 and 202 of 40 CFR Part 51, Appendix M, and the procedures specified in OAC rule 3745-17-03(B)(9). Alternative U.S. EPA-approved test methods can be used with prior approval from Ohio EPA.

f. Emission Limitation:

2.97 pound per hour SO_2, as 24 hour average

Applicable Compliance Method:

Calculate the sulfur dioxide emission rate for the RFG/natural gas and for the PSA purge gas, then add the two results together.

i.e. for the RFG and natural gas calculation:

(Conc $H_2S_{RFG\&NG}$ppmv H_2S) * (34.08 lb/385,100,000 ft^3)/1 ppmv * ((64 lb SO_2/lb-mole)/(34.08 lb H_2S/lb-mole)) * ($FR_{RFG\&NG}$mmscf/hr) * (1,000,000 scf/mmscf) = pound per hour of SO_2 from RFG & NG

likewise for the PSA purge gas

(Conc H_2S_{PSA}ppmv H_2S) * (34.08 lb/385100000 ft^3)/1 ppmv * ((64 lb SO_2/lb-mole)/(34.08 lb H_2S/lb-mole)) * (FR_{PSA}mmscf/hr) * (1000000 scf/mmscf) = pound per hour of SO_2 from PSA gas

where:

MW H_2S=34.08 lb/lb-mole MW SO_2 = 64 lb/lb-mole

1 ppmv =MW/385,100,000 (lb/ft^3) [AP-42, Appendix A, Miscellaneous Data and Conversion Factors (9/85)]

$FR_{RFD\&NG}$ = actual flow rate for RGF and natural gas for the day (mmscf/hr) from term d)(7)

FR_{PSA} = actual flow rate for PSA purge gas for the day (mmscf/hr) from term d)(7)

Conc $H_2S_{RFG\&NG}$ (ppmv) = the 24 hour daily average of the H_2S concentration from term d)(4)

Conc H_2S_{PSA} (ppmv) = the monthly average concentration of H_2S from the purge gas (ppmv) from term d)(8)

If required, compliance shall be demonstrated based upon the procedures specified in Method 6 or 6C of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods can be used with prior approval from Ohio EPA.

g. Emission Limitation:

14.87 tons NOx per year

Applicable Compliance Method:

The NOx continuous emissions monitoring system shall serve as demonstration of compliance with this emissions limit.

h. Emission Limitation:

24.07 tons CO per year

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the hourly allowable CO emission limitation (5.49 lbs/hr) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

i. GEmission Limitation:

15.59 tons VOC per year

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the hourly allowable VOC emission limitation (3.56 lbs/hr) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

j. Emission Limitation:

15.59 tons PM_{10} per year

Applicable Compliance Method:

The annual emission limitation was developed by multiplying the hourly allowable PM_{10} emission limitation (3.56 lbs/hr) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton. Therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

k. Emission Limitation:

2.76 tons SO_2 per year

Applicable Compliance Method:

Compliance with the annual SO_2 emission limitation shall be calculated using the following calculations and adding the two results together:

For the RFG and natural gas calculation:

ERG * H * (actual annual flow rate of RFG & NG) * (1 ton/2000 lbs) = TPY SO_2 from RFG & NG

ERG = the annual average SO_2 emission rate (lb SO_2/mmBtu) calculated using the 24-hour daily average values recorded in term d)(6)

H = the average annual heat content of the fuel (Btu/dscf) calculated using the values recorded in term d)(6).

Annual flow rate of RFG & NG from term c)(3) (mmscf/yr)

For the PSA purge gas:

ERG_{PSA} * H_{PSA} * (actual annual flow rate of PSA) * (1 ton/2000 lbs) = TPY SO_2 from PSA

ERG_{PSA} = each 24-hour daily average SO_2 emission rate (lb SO_2/mmBtu)

H_{PSA} = the average heat content of the PSA purge gas (Btu/dscf)

Annual flow rate of PSA is from the values recorded in term d)(7) (mmscf/yr).

l. Emission Limitation:

10 ppmv ammonia corrected to 15% oxygen in flue gas, on a dry basis and 11.39 TPY

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the 10 ppmv ammonia emission limit using U.S. EPA Conditional Test Method (CTM) 027. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.

The annual emission limitation was based on the maximum stack gas flow rate of 175,000 acfm and the 10 ppmv. For example:

Ammonia TPY = (stack gas flow rate (cfm)) * (60 min/hr) * (24 hr/day) * (365 day/yr) * (10/1,000,000) * (17.03 lb NH_3/lb-mole) / (2000 lbs/ton) / (379.43 ft^3/lb-mole)

m. Emission Limitation:

0.10 grain H_2S per dry standard cubic foot (159 ppmv at 14.7 psia and 60 degrees F) of refinery fuel gas burned as a volume-weighted, 24 hour daily average

Applicable Compliance Method:

Compliance shall be demonstrated based upon the monitoring and record keeping requirements of d). If required, compliance shall also be demonstrated based upon the following methods: Method 11, 15, 15A, or 16 of 40 CFR Part 60, Appendix A, shall be used to determine the H_2S concentration. The gases entering the sampling train should be at about atmospheric pressure. If the pressure in the refinery fuel gas lines is relatively high, a flow control valve may be used to reduce the pressure. If the line pressure is high enough to operate the sampling train without a vacuum pump, the pump may be eliminated from the sampling train. The sample shall be drawn from a point near the centroid of the fuel gas line.

i. For Method 11, the sampling time and sample volume shall be at least 10 minutes and 0.010 dscm (0.35 dscf). Two samples of equal sampling times shall be taken at about 1-hour intervals. The arithmetic average of these two samples shall constitute a run. For most fuel gases, sampling times exceeding 20 minutes may result in depletion of the collection solution, although fuel gases containing low concentrations of H_2S may necessitate sampling for longer periods of time.

ii. For Method 15 or 16, at least three injects over a 1-hour period shall constitute a run.

iii. For Method 15A, a 1-hour sample shall constitute a run.

n. Emission Limitation:

0.20 ppmv H_2S from the process PSA purge gas

Applicable Compliance Method:

Compliance shall be demonstrated based upon the analysis of the process PSA purge gas and the recordkeeping requirements of d).

[Authority for term: OAC rule 3745-77-07(C)(1)]

DEAERATOR VENT EMISSIONS:

o. Emission Limitation:

1.83 pounds per hour and 8.00 TPY CO

Applicable Compliance Method:

A one-time calculation of the hourly potential to emit, based upon the worst case operating scenario using a mass balance and the design of the unit, shall be used to demonstrate compliance with this limitation. The basis for the calculation used a flow rate of 128.37 lb-mole/hr from the vent, a molecular weight of 28 lb CO/lb-mole, and assumed the CO emissions were 461 ppm and then added 10% for flexibility. For emission limits were calculated as follows:

(461/1,000,000)*(128.37 lb-mole/hr)*(28 lb CO/lb-mole) * 1.10 = 1.83 lb/hr

(1.83 lb/hr) * (8760 hr/yr) * (1 ton/2000 lb) = 8.00 TPY

If required, the permittee shall demonstrate compliance with the hourly emission limitation using Methods 1 through 4 and 10 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 developed by multiplying the hourly allowable CO emission limitation (1.83 lbs/hr) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation

p. Emission Limitation:

0.51 pound per hour and 2.22 TPY volatile organic compounds (VOC) as methanol

Applicable Compliance Method:

A one-time calculation of the hourly potential to emit, based upon the worst case operating scenario using a mass balance and the design of the unit, shall be used to demonstrate compliance with this limitation. The basis for the calculation used a flow rate of 128.37 lb-mole/hr from the vent, a molecular weight of 32 lb VOC/lb-mole, and assumed the VOC emissions were 112 ppm and then added 10% for flexibility. The emission limits were calculated as follows:

(112/1,000,000)*(128.37 lb-mole/hr)*(32 lb VOC/lb-mole) * 1.10 = 0.51 lb/hr

(0.51 lb/hr) * (8760 hr/yr) * (1 ton/2000 lb) = 2.22 TPY

If required, the permittee shall demonstrate compliance with the hourly emission rate using Methods 1 through 4 of 40 CFR Part 60, Appendix A and Method 308 of 40 CFR Part 63, Appendix A. Alternative U.S. EPA-approved test methods can be used with prior approval from Ohio EPA.

The annual emission limitation was developed by multiplying the hourly allowable VOC emission limitation (0.51 lbs/hr) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is

shown with the hourly limitation, compliance shall also be shown with the annual emission limitation

q. Emission Limitation:

0.34 pound per hour and 1.50 TPY ammonia

Applicable Compliance Method:

A one-time calculation of the hourly potential to emit, based upon the worst case operating scenario using a mass balance and the design of the unit, shall be used to demonstrate compliance with this limitation. The basis for the calculation used a flow rate of 128.37 lb-mole/hr from the vent, a molecular weight of 17 lb NH_3/lb-mole, and assumed the NH_3 emissions were 141 ppm and then added 10% for flexibility. The emission limits were calculated as follows:

(141/1,000,000)*(128.37 lb-mole/hr)*(17 lb NH_3/lb-mole) * 1.10 = 0.34 lb/hr

(0.34 lb/hr) * (8760 hr/yr) * (1 ton/2000 lb) = 1.50 TPY

If required, the permittee shall demonstrate compliance with the hourly emission limitation using U.S. EPA Conditional Test Method (CTM) 027. Alternative U.S. EPA approved test methods may be used with prior approval from Ohio EPA.

The annual emission limitation was developed by multiplying the hourly allowable ammonia emission limitation (0.34 lbs/hr) by the maximum annual hours of operation (8760 hrs), and then dividing by 2000 lbs/ton and, therefore, if compliance is shown with the hourly limitation, compliance shall also be shown with the annual emission limitation.

[Authority for term: OAC rule 3745-77-07(C)(1)]

(2) NOx CEM
Ongoing compliance with the NOx emissions limitations contained in this permit, 40 CFR Part 60, and any other applicable standard(s) shall be demonstrated through the data collected as required in the Monitoring and Record keeping Section of this permit; and through demonstration of compliance with the quality assurance/quality control plan, which shall meet the testing and recertification requirements of 40 CFR Part 60.

[40 CFR 60.13] and [40 CFR Part 60, Appendices B & F]

g) Miscellaneous Requirements

(1) None.