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

8/29/2014

Certified Mail

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

Mr. Zach Streeter
Linde Gas North America, LLC
1150 Metcalf Street
Lima, OH 45804

RE: FINAL AIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0302020242
Permit Number: P0116496
Permit Type: Initial Installation
County: Allen

Dear Permit Holder:

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

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

How to appeal this permit

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

Environmental Review Appeals Commission
77 South High Street, 17th Floor
Columbus, OH 43215

How to save money, reduce pollution and reduce energy consumption

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

How to give us feedback on your permitting experience

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

How to get an electronic copy of your permit

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

If you have any questions, please contact Ohio EPA DAPC, Northwest District Office at (419)352-8461 or the Office of Compliance Assistance and Pollution Prevention at (614) 644-3469.

Sincerely,

Michael W. Ahern

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

Cc: U.S. EPA
Ohio EPA-NWDO; Indiana

Response to Comments

Facility ID:	0302020242
Facility Name:	Linde Gas North America, LLC
Facility Description:	Hydrogen Plant
Facility Address:	1150 S. Metcalf Street Lima, OH 45804 Allen County
Permit:	P0116496, Permit-To-Install - Initial Installation
A public notice for the draft permit issuance was published in the Ohio EPA Weekly Review and appeared in the The Lima News on 04/29/2014. The comment period ended on 05/29/2014.	
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.

1. Topic: The permit applicant, Linde Gas North America, LLC submitted a total of eight written comments.

Comment #1: CO_2e Facility Emissions

Location: First page of the Permit Strategy Write-up, Item number 3 table.

Issue: The "Total Emissions" column in the table only cites the CO_2e emissions from "Linde Lima 3." This does not accurately characterize the total facility emissions of both "Linde Lima 2" and "Linde Lima 3". It seems like it would be more appropriate to express the CO_2e emission relative to the major source threshold which, for facility total emissions, is all that really matters.

Requested Change: Please revise this to say: ">100,000".

Response #1: Ohio EPA concurs with the applicant, and changed the wording in "Linde Lima 2" (tons per year) column in section 3 of the table to: >100,000.

Comment #2: Language Around Reformer Heater SO_2 Limit

Location: Condition 1.b)(1)b on page 14 and condition 1.b)(2)b.i on page 16.

Issue: The proposed limit of 0.012 lb SO_2/mmbtu is presented as a burner design standard when it is really a fuel standard. The derivation of this standard is accurately described in the Applicable

Compliance Method of condition 1.f)(2)e on page 24. Also, condition 1.c)(1) effectively limits SO_2 emissions by limiting fuel burning to PSA purge gas, RFG and natural gas.
Requested Change: Revise condition 1.b)(1)b on page 14 to read "Meet 0.012 lb sulfur dioxide (SO2)/million Btu of actual heat input (See c)(1))" and delete condition 1.b)(2)b.i.(c).

Response #2: Ohio EPA concurs with the applicant, since the emissions are based on an exothermic reaction, and are not combustion based. The words: "Install and operate a burner that is designed to meet" were deleted. Ohio EPA did not include the reference "(See c)(1)) since this is a stand alone requirement as an operation restriction. Also, permit term 1.b)(2)b.i.(c) was not deleted, since the words, "The Permittee shall install a burner that is designed to meet" have already been deleted from permit term 1.b)(2)b.i.

Comment #3: Typo
Location: Condition 1.b)(1)b on page 15.
Issue: There appears to be an inadvertent typo with the following extra text appearing: "Emissions from the De-aerator Vent (Cont.)."
Requested Change: Please delete the extra text.

Response #3: Ohio EPA concurs with the applicant and deleted the extra text from permit term 1.b)(1)b.

Comment #4: De-aerator "Vent"
Location: Condition 1.b)(2)b.ii on page 16.
Issue: The condition describes install a "De-aerator Vent" designed to meet certain emission limitations; however the vent itself is just a stack/exhaust point and nothing about its design affects CO or VOC emissions.
Requested Change: Please delete the word "vent".

Response #4: Ohio EPA concurs with the applicant and deleted the word "vent".

Comment #5: Tracking of Natural Gas usage as a Feedstock
Location: Condition 1.d)(2) on pages 17 and 18, and condition 1.e)(1) on page 21.
Issue: The current permit language does not mention monitoring or recordkeeping of NG used as a feedstock. Emissions of CO_2 from the hydrogen production process are based on both the amount of supplemental fuel firing (i.e. RFG and NG) and the amount of NG used as a feedstock. In accordance with 40 CFR Part 98, hydrogen production process unit CO_2 emissions are calculated under Subpart P based on the quantity of both fuel and feedstock used by the hydrogen production process unit (i.e. the SMR heater). [Note, CH_4 and N_2O emissions from the hydrogen production process are not required to be calculated.] CO_2 (and CH_4 and N_2O) emissions from other combustion sources (not including the hydrogen production process unit/SMR heater) are calculated per Subpart C; however, Linde Lima 3

will not include any other combustion sources. Therefore, Subpart C will not apply to Lima 3. Additionally, since the quantity of carbon in the PSA purge gas originates entirely from the NG feedstock, separate monitoring of the PSA purge gas combusted in the SMR heater is not necessary. In fact, measurement of the PSA gas flow would be redundant (and less accurate) with the measurement of NG used as a feedstock. Finally, Subpart P only requires calculating CO2 emissions from the hydrogen production process (calculating CH4 and N2O emissions is only required for other combustion sources).

Requested Change: Please revise conditions 1.d)(2)a and 1.d)(2)b to add the clause "and the volume, in million standard cubic feet, of natural gas feedstock", modify conditions 1.d)(2)c and 1.d)(2)d to include CO_2 emissions from use of NG as a feedstock, change "CO_2e" to "CO_2" in condition 1.d)(2)c and 1.d)(2)d, and delete the reference to "PSA purge gas" in conditions 1.d)(2)a, 1.d)(2)b, 1.d)(2)c, and 1.d)(2)d. Also, please revise condition 1.e)(1) to include the phrase "and when a feedstock other than natural gas or hydrogen was used".

Response #5: The draft permit included requirements associated with greenhouse gas (GHG) emissions in accordance with U.S. EPA's Greenhouse Gas Tailoring Rule. On June 23, 2014, the U.S. Supreme Court ruled in *Utility Air Regulatory Group v. Environmental Protection Agency* that U.S. EPA may not apply "Prevention of Significant Deterioration" (PSD) requirements on the basis of just GHG emissions. U.S. EPA can only regulate GHG emissions that are already subject ("anyway source") to the PSD program because they emit other criteria pollutants. The proposed Linde Gas North America LLC project does not trigger any PSD requirements based on the level of criteria pollutants emitted and as such in accordance with the U.S. Supreme Court ruling, GHG emissions are not subject to regulation. The U.S. Supreme Court decision will be administered in a final permit issuance by removing all requirements associated with GHG emissions.

Comment #6: CO and VOC emissions monitoring for the De-aerator Vent

Location: Condition 1.d)(3) on page 18 and conditions 1.f)(2)f and 1.f)(2)g on pages 24 and 25.

Issue: Emissions of CO and VOC from the De-aerator Vent are based on the design of the process. It is more appropriate to state that emissions compliance is inherent with the design of the process. The VOC and CO emissions from the de-aerator are not controlled by the operation of the de-aerator itself, but are inherent in the design of the Hydrogen plant. The VOC and CO that is emitted from the de-aerator come from the process condensate streams that are recycled through the de-aerator, which is used to "degas" the recycled and make-up water to the steam system. The process condensate is generated from the excess process steam (which is condensed in the synthesis gas cooling train). The process condensate will "absorb" the small amount of VOC in the synthesis gas (generated from a small side reaction in the process) as well as contain a small amount of dissolved gases (notably CO). The amount of the dissolved gases and VOC in the process condensate and ultimately in the DA vent is determined through process simulation and from past experience and is fixed by the rate of hydrogen production only. The de-aerator is maintained at a constant pressure, which in turn provides a constant overhead vent flow (total lb/h of steam vent), therefore the concentration of CO & VOC will go down when the H2 production rate is lower. The emission estimates provided assumed the plant would be

running at full rates, all the time.

Requested Change: Please delete condition 1.d)(3) and revise the Applicable Compliance Method for conditions 1.f)(2)f and 1.f(2)g to be: "Compliance is inherent with the design of the process."

Response #6: Ohio EPA disagrees with the applicant. Senate Bill 265 requires emissions tracking in this situation, and thus, the requirements to track the emissions of VOC and CO cannot be deleted. Permit terms 1.d)(3), 1.f)(2)f and 1.f(2)g will remain the same as in the draft permit.

Comment #7: Test Date
Location: Condition 1.f)(1)a on page 22.
Issue: Condition 1.f)(1)a inadvertently stated to conduct emissions testing within 6 months after "permit issuance" instead of "startup".
Requested Change: Please revise condition 1.f)(1)a to read: "The emission testing shall be conducted within 6 months after startup."

Response #7: Ohio EPA concurs with the applicant, and revised permit term 1.f)(1)a. to: "The emission testing shall be conducted within 6 months after startup."

Comment #8: Test Report Due Date
Location: Condition 1.f(1)g on page 23.
Issue: Condition 1.f(1)g requires submitting the test report within only 30 days of completing the test – while this may be achievable, it is a fairly tight turn around.
Requested Change: Please revise the test report due date to 45 days following completion of the tests.

Response #8: Ohio EPA disagrees with the applicant. The 30-day time period for submitting stack test reports is a standard time period used in all permits to install and cannot be changed. Ohio EPA may grant additional time to submit a stack test report, but only on a case-by-case basis if extenuating circumstances arise, and notification must be made to the Northwest District Office if approval to extend a test report submittal date becomes necessary.

2. Topic: U.S. EPA – Region 5 submitted a total of two written comments.

Comment #1: The permit contains several case-by-case "source design" Best Available Technology (BAT) limits under which Linde Gas is required to install an emissions unit only "designed to meet" certain emission rates but the permit does not require any way to assure compliance with those BAT limits. The permit contains these "source design" BAT limits for: (1) Nitrogen Oxides (NOx), Carbon Monoxide (CO), Volatile Organic Compounds (VOC), particulate matter small than 10 microns, and sulfur dioxide, for the Reformer Heater, and (2) CO and VOCs for the De-aerator Vent. EPA disagrees with the methodology for "source design" permitting because such limits are not practically enforceable

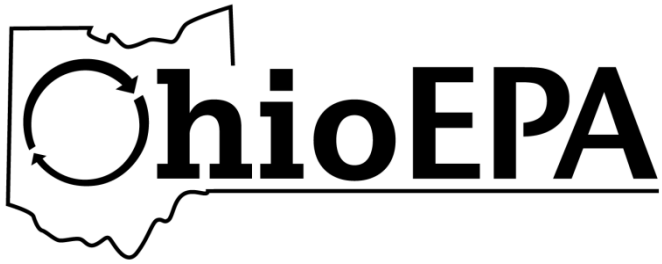
because they fail to provide for actual emission limits, testing, monitoring, recordkeeping or reporting. Under such permits there is no way to assure ongoing compliance with the BAT limit. For example, page 14 of the draft permit sets forth a "source design" BAT limit requiring the Reformer Heater to be designed to meet 0.033 pound of NOx per million Btu, but the permit does not require any means to assure that the Reformer Heater is actually operated at or below the 0.033 pound per million Btu emission rate. The permit does require NOx emission testing for the Reformer Heater, but that does not assure ongoing compliance with the BAT limit. The Reformer Heater's 0.033 pound per million Btu NOx emission rate equates to 37.44 tons per year NOx emissions, and that is close to the 40 tons per year NOx significant emission rate. Without a practically enforceable limit, the Reformer Heater could possibly trigger the 40 tpy NOx significant emission rate in the future without realizing it, thus triggering PSD requirements for NOx. The permit should be revised to assure that the source is actually operated in a way that meets the limit.

Response #1: The permit has been revised by deleting all references to "source design characteristics" in permit terms 1.b)(1)a., 1.b)(1)b., 1.b)(2)a. and 1.b)(2)b. In addition, stack testing is required for the pollutants with the larger allowable emissions rates, for NOx and CO.

Comment #2: The permit application (page No. 6-6) show the BAT determination for the Reformer Heater as the use of ultra-low NOx burners along with the 0.033 pound of NOx per million Btu emission rate. The permit does not specifically require the use of ultra-low NOx burners. Please add the specific requirement to use ultra-low NOx burners to the permit.

Response #2: An operational restriction, permit term 1.c)(2), has been added to the permit as follows:

"The permittee shall install and operate ultra-low nitrogen oxides burners in this emissions unit."



FINAL

Division of Air Pollution Control
Permit-to-Install
for
Linde Gas North America, LLC

Facility ID:	0302020242
Permit Number:	P0116496
Permit Type:	Initial Installation
Issued:	8/29/2014
Effective:	8/29/2014

Division of Air Pollution Control
Permit-to-Install
for
Linde Gas North America, LLC

Table of Contents

Authorization

Facility ID:	0302020242
Facility Description:	Hydrogen Plant
Application Number(s):	A0050309
Permit Number:	P0116496
Permit Description:	Installation of Pressure Swing Absorption (PSA) purge gas/refinery fuel gas/natural gas fired reformer heater for hydrogen plant equipped with ultra-low nitrogen oxides burners and de-aerator vent, 259 million Btu per hour maximum heat input.
Permit Type:	Initial Installation
Permit Fee:	$1,000.00
Issue Date:	8/29/2014
Effective Date:	8/29/2014

This document constitutes issuance to:

Linde Gas North America, LLC
1150 S. Metcalf Street
Lima, OH 45804

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

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

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

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Craig W. Butler
Director

Authorization (continued)

Permit Number: P0116496
Permit Description: Installation of Pressure Swing Absorption (PSA) purge gas/refinery fuel gas/natural gas fired reformer heater for hydrogen plant equipped with ultra-low nitrogen oxides burners and de-aerator vent, 259 million Btu per hour maximum heat input.

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

Emissions Unit ID:	**P001**
Company Equipment ID:	Hydrogen Plant
Superseded Permit Number:	
General Permit Category and Type:	Not Applicable

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

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

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

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

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

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

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

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

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

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

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

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

2. Severability Clause

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

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

3. General Requirements

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

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

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

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

e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

4. Monitoring and Related Record Keeping and Reporting Requirements

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

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

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

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

(4) The analytical techniques or methods used.

(5) The results of such analyses.

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

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

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

(1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, Northwest District Office.

(2) Quarterly written reports of (i) any deviations from federally enforceable emission limitations, operational restrictions, and control device operating parameter limitations, excluding deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06, that have been detected by the testing, monitoring and recordkeeping requirements specified in this permit, (ii) the probable cause of such deviations, and (iii) any corrective actions or preventive measures taken, shall be made to the Ohio EPA DAPC, Northwest District Office. The written reports shall be submitted (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. See A.15. below if no deviations occurred during the quarter.

(3) Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the Ohio EPA DAPC, Northwest District Office every six months, by January 31 and July 31 of each year for the previous six calendar months. If no deviations occurred during a six-month period, the permittee shall submit a semi-annual report, which states that no deviations occurred during that period.

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

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

5. Scheduled Maintenance/Malfunction Reporting

Any scheduled maintenance of air pollution control equipment shall be performed in accordance with paragraph (A) of OAC rule 3745-15-06. The malfunction, i.e., upset, of any emissions units or any associated air pollution control system(s) shall be reported to the Ohio EPA DAPC, Northwest District Office in accordance with paragraph (B) of OAC rule 3745-15-06. (The definition of an upset condition shall be the same as that used in OAC rule 3745-15-06(B)(1) for a malfunction.) The verbal and written reports shall be submitted pursuant to OAC rule 3745-15-06.

Except as provided in that rule, any scheduled maintenance or malfunction necessitating the shutdown or bypassing of any air pollution control system(s) shall be accompanied by the shutdown of the emission unit(s) that is (are) served by such control system(s).

6. Compliance Requirements

a) 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 of an 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 appropriate Ohio EPA District Office or contracted

local air agency, 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 electronic signature date shall constitute the date that the required application, notification or report is considered to be "submitted". Any document requiring signature may be represented by entry of the personal identification number (PIN) by responsible official as part of the electronic submission process or by the scanned attestation document signed by the Authorized Representative that is attached to the electronically submitted written report.

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

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 ORC section 3704.08.

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

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

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.

7. Best Available Technology

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

8. Air Pollution Nuisance

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

9. Reporting Requirements

The permittee shall submit required reports in the following manner:

a) Reports of any required monitoring and/or recordkeeping of state-only enforceable information shall be submitted to the Ohio EPA DAPC, Northwest District Office.

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

10. Applicability

This Permit-to-Install is applicable only to the emissions unit(s) identified in the Permit-to-Install. Separate application must be made to the Director for the installation or modification of any other emissions unit(s) not exempt from the requirement to obtain a Permit-to-Install.

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

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

b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the

Director within a reasonable time before the termination date and the permittee shows good cause for any such extension.

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

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

Unless otherwise exempted, no emissions unit certified by the responsible official as being permanently shut down may resume operation without first applying for and obtaining a permit pursuant to OAC Chapter 3745-31 and OAC Chapter 3745-77 if the restarted operation is subject to one or more applicable requirements.

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

12. Permit-To-Operate Application

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

13. Construction Compliance Certification

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

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

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

14. Public Disclosure

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

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

If no deviations occurred during a calendar quarter, the permittee shall submit a quarterly report, which states that no deviations occurred during that quarter. The reports shall be submitted quarterly by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

16. Fees

The permittee shall pay fees to the Director of the Ohio EPA in accordance with ORC section 3745.11 and OAC Chapter 3745-78. The permittee shall pay all applicable permit-to-install fees within 30 days after the issuance of any permit-to-install. The permittee shall pay all applicable permit-to-operate fees within thirty days of the issuance of the invoice.

17. Permit Transfers

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

18. Risk Management Plans

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

19. Title IV Provisions

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

B. Facility-Wide Terms and Conditions

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

   a) None.

C. Emissions Unit Terms and Conditions

1. P001, Hydrogen Plant

Operations, Property and/or Equipment Description:

Pressure Swing Absorption (PSA) purge gas/refinery fuel gas/natural gas-fired reformer heater for hydrogen plant equipped with ultra-low nitrogen oxides burners and de-aerator vent, 259 million Btu per hour maximum heat input

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)(4) through d)(7), and e)(5)

b) Applicable Emissions Limitations and/or Control Requirements

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

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	ORC 3704.03(T)	Emissions from the Reformer Heater: 0.033 lb nitrogen oxides (NOx)/million Btu of actual heat input 0.02 lb carbon monoxide (CO)/million Btu of actual heat input See b)(2)a.
b.	OAC rule 3745-31-05(A)(3), as effective 11/30/01	Emissions from the Reformer Heater: 0.006 lb volatile organic compounds (VOC)/million Btu of actual heat input 0.006 lb particulate matter less than 10 microns in size (PM_{10})/million Btu of actual heat input 0.012 lb sulfur dioxide (SO2)/million Btu of actual heat input Emissions from the De-aerator Vent: 0.284 ton CO/month, averaged over a 12-month rolling period 0.404 ton VOC/month, averaged over a 12-month rolling period

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
		See b)(2)b. and b)(2)c.
c.	OAC rule 3745-31-05(A)(3)(b), as effective 12/1/06	See b)(2)d.
d.	OAC rule 3745-17-07(A)	Visible particulate emissions (PE) from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by rule.
e.	OAC rule 3745-17-10(B)(1)	See b)(2)e.
f.	OAC rule 3745-18-06(E)	See b)(2)f.
g.	OAC rule 3745-114 ORC 3704.03(F)	See d)(3) through d)(6), and e)(5)

(2) Additional Terms and Conditions

a. Best Available Technology (BAT) control requirements under ORC 3704.03(T) for this emissions unit have been determined to be compliance with the following emissions limitations:

i. 0.033 lb NOx/million Btu of actual heat input from the Reformer Heater; and

ii. 0.02 lb CO/million Btu of actual heat input from the Reformer Heater.

b. BAT control requirements under OAC rule 3745-31-05(A)(3), as effective 11/30/01, for this emissions unit have been determined to be compliance with the following emissions limitations:

i. 0.006 lb VOC/million Btu of actual heat input from the Reformer Heater;

ii. 0.006 lb PM_{10}/million Btu of actual heat input from the Reformer Heater;

iii. 0.012 lb sulfur dioxide (SO2)/million Btu of actual heat input;

iv. 0.284 ton CO/month, averaged over a 12-month rolling period from the De-aerator Vent; and

v. 0.404 ton VOC/month, averaged over a 12-month rolling period from the De-aerator Vent.

c. The permittee has satisfied the BAT requirements pursuant to OAC paragraph 3745-31-05(A)(3), as effective November 30, 2001, in this permit. On December 1, 2006, paragraph (A)(3) of OAC rule 3745-31-05 was revised to conform to ORC changes effective August 3, 2006 (S.B. 265 changes), such that BAT is no longer required by state regulations for NAAQS pollutants less than ten tons per year. However, that rule revision has not yet been approved by U.S. EPA as a revision to Ohio's State Implementation Plan (SIP). Therefore, until the SIP

revision occurs and the U.S. EPA approves the revisions to OAC rule 3745-31-05, the requirement to satisfy BAT still exists as part of the federally-approved SIP for Ohio. Once U.S. EPA approves the December 1, 2006 version of 3745-31-05, then these emission limits/controls measures no longer apply.

d. OAC rule 3745-31-05(A)(3)(b) applies once U.S. EPA approves the December 1, 2006 version of OAC rule 3745-31-05 as part of the SIP.

The BAT requirements under OAC rule 3745-31-05(A)(3)(a) do not apply to the emissions of VOC, PM_{10} and SO2 from this air contaminant source since the uncontrolled potential to emit for VOC, PM_{10} and SO2 are each less than 10 tons per year.

e. The emission limitation specified by this applicable rule is less stringent than the emission limitation established pursuant to OAC rule 3745-31-05(A)(3), as effective 11/30/01.

f. The reformer heater portion of this emissions unit is fuel burning equipment which combusts PSA purge gas, refinery fuel gas, and natural gas. When firing natural gas, the emissions unit is exempt from OAC rule 3745-18-06 per OAC rule 3745-18-06(A). When firing PSA purge gas or refinery fuel gas, OAC rule 3745-18-06(E) does not establish an emission limitation because the process weight rate [as defined in OAC rule 3745-18-01(B)(14)] is equal to zero.

c) Operational Restrictions

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

(2) The permittee shall install and operate ultra-low nitrogen oxides burners in this emissions unit.

(3) The permittee shall install an oxygen trim system, the monitoring system shall maintain excess air at the desired level by providing a feedback signal to the combustion air controller.

(4) The permittee shall perform a tune-up and inspection of the burners every 5 years as specified below:

a. inspect the burner, and clean or replace any components of the burner as necessary;

b. inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;

c. inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that is correctly calibrated and functioning properly;

d. optimize emissions of CO. This optimization should be consistent with the manufacturer's specifications, if available, and with the requirement for NOx;

e. measure the concentrations in the effluent stream of CO in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer and should be performed at high fire or typical operating load.

The permittee shall maintain on-site, a report containing the information in a. through e. above.

d) Monitoring and/or Recordkeeping Requirements

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

(2) The permittee shall maintain monthly records of the CO and VOC emissions from the De-aerator Vent for this emissions unit; and at the end of 12 months of operation, the rolling, 12-month summation of CO and VOC emissions and the average calculated over each rolling 12-month period.

Note: The above records shall be determined in accordance with the emissions calculations presented to the Ohio EPA in the permit application submitted by the permittee.

(3) The permit-to-install (PTI) application for this emissions unit, P001, was evaluated based on the actual materials and the design parameters of the emissions units' exhaust system, as specified by the permittee. The "Toxic Air Contaminant Statute", ORC 3704.03(F), was applied to this emissions unit 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., "X" hours per day and "Y" days per week, from that of 8 hours per day and 5 days per week. The resulting calculation was (and shall be) used to determine the Maximum Acceptable Ground-Level Concentration (MAGLC):

TLV/10 x 8/X x 5/Y = 4 TLV/XY = MAGLC

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

Toxic Contaminant: Hexane

TLV (mg/m3): 176.2

Maximum Hourly Emission Rate (lbs/hr): 0.46

Predicted 1-Hour Maximum Ground Level Concentration (ug/m3): 0.03

MAGLC (ug/m3): 4,196

Toxic Contaminant: Methanol

TLV (mg/m3): 262.1

Maximum Hourly Emission Rate (lbs/hr): 1.03

Predicted 1-Hour Maximum Ground Level Concentration (ug/m3): 24.2

MAGLC (ug/m3): 6,240

Toxic Contaminant: Ammonia

TLV (mg/m3): 17.4

Maximum Hourly Emission Rate (lbs/hr): 1.48

Predicted 1-Hour Maximum Ground Level Concentration (ug/m3): 16.1

MAGLC (ug/m3): 415

The permittee, has demonstrated that emissions of hexane, methanol and ammonia, from emissions unit P001, are each 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).

(4) 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.

(5) 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.

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

e) Reporting Requirements

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

(2) The permittee shall notify the Director (the Ohio EPA, Northwest District Office) on a quarterly basis, in writing, of:

a. All exceedances of the 0.284 ton CO/month, averaged over a 12-month rolling period, emission limitation from the De-aerator Vent; and

b. All exceedances of the 0.404 ton VOC/month, averaged over a 12-month rolling period, emission limitation from the De-aerator Vent.

The notification shall include a copy of the record and shall be sent to the Director (the Ohio EPA, Northwest District Office) by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during previous calendar quarters.

(3) The permittee shall submit quarterly deviation (excursion) reports that identify any deviations from the federally and state-only enforceable emission limitations, operational restrictions, and control device operating parameter limitations, in accordance with the reporting requirements of the Standard Terms and Conditions of this permit. The quarterly reports shall include (a) the probable cause of such deviations and (b) any corrective actions or preventative measures that have been or will be taken to eliminate the deviation(s).

(4) The permittee shall submit written reports that identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements every six months, in

accordance with the reporting requirements of the Standard Terms and Conditions of this permit.

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

a. the original model input;

b. the updated model input;

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

f) Testing Requirements

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

a. The emission testing shall be conducted within 6 months after start-up.

b. The emissions testing shall be conducted to demonstrate compliance with the design emission limitations for the reformer heater of 0.033 lb of NOx/million Btu of actual heat input, and 0.02 lb of CO/million Btu of actual heat input.

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

i. For NOx, Methods 1 through 4 and 7 of 40 CFR, Part 60, Appendix A; and

ii. For CO, Methods 1 through 4 and 10 of 40 CFR, Part 60, Appendix A.

Alternate U.S. EPA-approved test methods may be used with prior approval from the 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. Not later than 30 days prior to the proposed test date(s), the permittee shall submit and "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 emission test(s).

f. 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 performance of the control equipment.

g. A comprehensive written report on the results of the emissions test(s) shall be signed by the person or persons responsible for the tests and submitted to the Ohio EPA Northwest District Office within 30 days following completion of the tests.

(2) 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:

0.033 lb NOx/million Btu of actual heat input from the Reformer Heater

Applicable Compliance Method:

The permittee shall demonstrate compliance with the NOx emission limitation based on the results of emission testing conducted in accordance with the performance testing methods as outlined in f)(1).

b. Emission Limitation:

0.02 lb CO/million Btu of actual heat input from the Reformer Heater

Applicable Compliance Method:

The permittee shall demonstrate compliance with the CO emission limitation based on the results of emission testing conducted in accordance with the performance testing methods as outlined in f)(1).

c. Emission Limitation:

0.006 lb VOC/million Btu of actual heat input from the Reformer Heater

Applicable Compliance Method:

The VOC emission limitation was established based on the burner manufacturer's guaranteed emission rate of 0.006 lb VOC/million Btu of actual heat input.

If required, the permittee shall demonstrate compliance with the VOC emission limitation in accordance with Methods 1 through 4 and 18, 25 or 25A of 40 CFR, Part 60, Appendix A.

d. Emission Limitation:

0.006 lb PM_{10}/million Btu of actual heat input from the Reformer Heater

Applicable Compliance Method:

The PM_{10} emission limitation was established based on the burner manufacturer's guaranteed emission rate of 0.006 lb PM_{10}/million Btu of actual heat input.

If required, the permittee shall demonstrate compliance with the PM_{10} emission limitation in accordance with Methods 1 through 5 of 40 CFR, Part 60, Appendix A.

e. Emission Limitation:

0.012 lb SO2/million Btu of actual heat input

Applicable Compliance Method:

The SO2 emission limitation was established based on usage of the "worst case" fuel, which is refinery fuel gas. This fuel is supplied to the permittee by the Lima Refining Company, and Lima Refining Company is required by 40 CFR, Part 60, Subpart Ja, to meet a short-term maximum hydrogen sulfide concentration of 162 parts per million, three-hour rolling average. An additional 50 parts per million of non-hydrogen sulfide sulfur is assumed to be present in the refinery fuel gas.

The SO2 emission rate is based on a maximum usage rate of 3.12 lbs SO2/hr, as documented in the permit application, and on conversions and calculations provided by the permittee. Thus, the emission limitation is derived by the following equation:

(3.12 lbs SO2/hr)/(259 million Btu/hr) = 0.012 lb SO2/million Btu of actual heat input

f. Emission Limitation:

0.284 ton CO/month, averaged over a 12-month rolling period from the De-aerator Vent

Applicable Compliance Method:

Compliance shall be based upon the monitoring and record keeping requirements specified in section d)(2) for this emissions unit.

g. Emission Limitation:

0.404 ton VOC/month, averaged over a 12-month rolling period from the De-aerator Vent

Applicable Compliance Method:

Compliance shall be based upon the monitoring and record keeping requirements specified in section d)(2) for this emissions unit.

h. Emission Limitation:

Visible PE from any stack 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 40 CFR, Part 60, Appendix A, Method 9 and the requirements specified in OAC rule 3745-17-03(B)(1).

g) Miscellaneous Requirements

(1) None