



Environmental Protection Agency

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

6/22/2012

Certified Mail

Brian Thiesse
Linde Gas North America LLC
575 Mountain Avenue
Murray Hill, NJ 07974

RE: FINALAIR POLLUTION PERMIT-TO-INSTALL
Facility ID: 0302020242
Permit Number: P0109508
Permit Type: Administrative Modification
County: Allen

No	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
No	MODELING SUBMITTED
No	MAJOR GHG
No	SYNTHETIC MINOR TO AVOID MAJOR GHG

Dear Permit Holder:

Enclosed please find a final Air Pollution Permit-to-Install (PTI) which will allow you to install or modify the described emissions unit(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, we urge you to read it carefully. Please complete a survey at www.epa.ohio.gov/dapc/permitsurvey.aspx and give us feedback on your permitting experience. We value your opinion.

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

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, OH 43215

The Ohio EPA is encouraging companies to investigate pollution prevention and energy conservation. Not only will this reduce pollution and energy consumption, but it can also save you money. If you would like to learn ways you can save money while protecting the environment, please contact our Office of Compliance Assistance and Pollution Prevention at (614) 644-3469. If you have any questions regarding this permit, please contact the Ohio EPA DAPC, Northwest District Office. This permit can be accessed electronically on the Division of Air Pollution Control (DAPC) Web page, www.epa.ohio.gov/dapc by clicking the "Issued Air Pollution Control Permits" link.

Sincerely,

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

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



FINAL

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

Facility ID: 0302020242
Permit Number: P0109508
Permit Type: Administrative Modification
Issued: 6/22/2012
Effective: 6/22/2012



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

Table of Contents

Authorization 1
A. Standard Terms and Conditions 3
1. Federally Enforceable Standard Terms and Conditions 4
2. Severability Clause 4
3. General Requirements 4
4. Monitoring and Related Record Keeping and Reporting Requirements 5
5. Scheduled Maintenance/Malfunction Reporting 6
6. Compliance Requirements 6
7. Best Available Technology 7
8. Air Pollution Nuisance 7
9. Reporting Requirements 7
10. Applicability 8
11. Construction of New Sources(s) and Authorization to Install 8
12. Permit-To-Operate Application 9
13. Construction Compliance Certification 9
14. Public Disclosure 9
15. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations 10
16. Fees 10
17. Permit Transfers 10
18. Risk Management Plans 10
19. Title IV Provisions 10
B. Facility-Wide Terms and Conditions 11
C. Emissions Unit Terms and Conditions 13
1. P042, Pressure Swing Absorption (PSA) purge gas/refinery fuel gas 14

Authorization

Facility ID: 0302020242
Facility Description: Administrative modification to hydrogen plant PTI to transfer ownership.
Application Number(s): A0043833
Permit Number: P0109508
Permit Description: This is an administrative modification to remove monitoring and record keeping requirements related to the PSA purge gas requiring monthly testing to ensure an H2S emission limitation of 3 ppm as PSA purge gas has an inherently low sulfur content.
Permit Type: Administrative Modification
Permit Fee: \$0.00
Issue Date: 6/22/2012
Effective Date: 6/22/2012

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.

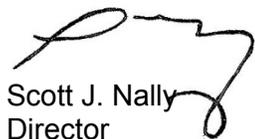
Ohio EPA District Office or local air agency responsible for processing and administering your permit:

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


Scott J. Nally
Director



Authorization (continued)

Permit Number: P0109508

Permit Description: This is an administrative modification to remove monitoring and record keeping requirements related to the PSA purge gas requiring monthly testing to ensure an H2S emission limitation of 3 ppm as PSA purge gas has an inherently low sulfur content.

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

Emissions Unit ID:

P042

Company Equipment ID:

Pressure Swing Absorption (PSA) purge gas/refinery fuel gas/

Superseded Permit Number:

03-17096

General Permit Category and Type:

Not Applicable

A. Standard Terms and Conditions

1. Federally Enforceable Standard Terms and Conditions

- a) All Standard Terms and Conditions are federally enforceable, with the exception of those listed below which are enforceable under State law only:
 - (1) Standard Term and Condition A.2.a), Severability Clause
 - (2) Standard Term and Condition A.3.c) through A. 3.e)General Requirements
 - (3) Standard Term and Condition A.6.c) and A. 6.d), Compliance Requirements
 - (4) Standard Term and Condition A.9., Reporting Requirements
 - (5) Standard Term and Condition A.10., Applicability
 - (6) Standard Term and Condition A.11.b) through A.11.e), Construction of New Source(s) and Authorization to Install
 - (7) Standard Term and Condition A.14., Public Disclosure
 - (8) Standard Term and Condition A.15., Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations
 - (9) Standard Term and Condition A.16., Fees
 - (10) Standard Term and Condition A.17., Permit Transfers

2. Severability Clause

- a) A determination that any term or condition of this permit is invalid shall not invalidate the force or effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.
- b) All terms and conditions designated in parts B and C of this permit are federally enforceable as a practical matter, if they are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA and the State and by citizens (to the extent allowed by section 304 of the Act) under the Act. Terms and conditions in parts B and C of this permit shall not be federally enforceable and shall be enforceable under State law only, only if specifically identified in this permit as such.

3. General Requirements

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

- b) It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the federally enforceable terms and conditions of this permit.
- c) This permit may be modified, revoked, or revoked and reissued, for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or revocation, or of a notification of planned changes or anticipated noncompliance does not stay any term and condition of this permit.
- d) This permit does not convey any property rights of any sort, or any exclusive privilege.
- e) The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying or revoking this permit or to determine compliance with this permit. Upon request, the permittee shall also furnish to the Director or an authorized representative of the Director, copies of records required to be kept by this permit. For information claimed to be confidential in the submittal to the Director, if the Administrator of the U.S. EPA requests such information, the permittee may furnish such records directly to the Administrator along with a claim of confidentiality.

4. Monitoring and Related Record Keeping and Reporting Requirements

- a) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall maintain records that include the following, where applicable, for any required monitoring under this permit:
 - (1) The date, place (as defined in the permit), and time of sampling or measurements.
 - (2) The date(s) analyses were performed.
 - (3) The company or entity that performed the analyses.
 - (4) The analytical techniques or methods used.
 - (5) The results of such analyses.
 - (6) The operating conditions existing at the time of sampling or measurement.
- b) Each record of any monitoring data, testing data, and support information required pursuant to this permit shall be retained for a period of five years from the date the record was created. Support information shall include, but not be limited to all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Such records may be maintained in computerized form.
- c) Except as may otherwise be provided in the terms and conditions for a specific emissions unit, the permittee shall submit required reports in the following manner:
 - (1) Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the Ohio EPA DAPC, 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 (i.e., postmarked) 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) The emissions unit(s) identified in this Permit shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.
- b) Any document (including reports) required to be submitted and required by a federally applicable requirement in this permit shall include a certification by a responsible official that, based on information and belief formed after reasonable inquiry, the statements in the document are true, accurate, and complete.



- c) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow the Director of the Ohio EPA or an authorized representative of the Director to:
 - (1) At reasonable times, enter upon the permittee's premises where a source is located or the emissions-related activity is conducted, or where records must be kept under the conditions of this permit.
 - (2) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit, subject to the protection from disclosure to the public of confidential information consistent with ORC section 3704.08.
 - (3) Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - (4) As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- d) The permittee shall submit progress reports to the Ohio EPA DAPC, 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 (i.e., postmarked) quarterly, by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters. (These quarterly reports shall exclude deviations resulting from malfunctions reported in accordance with OAC rule 3745-15-06.)

10. Applicability

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

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

- a) This permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. This permit does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the application and terms and conditions of this permit. The action of beginning and/or completing construction prior to obtaining the Director's approval constitutes a violation of OAC rule 3745-31-02. Furthermore, issuance of this permit does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Issuance of this permit is not to be construed as a waiver of any rights that the Ohio Environmental Protection Agency (or other persons) may have against the applicant for starting construction prior to the effective date of the permit. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed facilities cannot meet the requirements of this permit or cannot meet applicable standards.
- b) If applicable, authorization to install any new emissions unit included in this permit shall terminate within eighteen months of the effective date of the permit if the owner or operator has not undertaken a continuing program of installation or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation. This deadline may be extended by up to 12 months if application is made to the Director within a reasonable time before the termination date and the party shows good cause for any such extension.
- c) The permittee may notify Ohio EPA of any emissions unit that is permanently shut down (i.e., the emissions unit has been physically removed from service or has been altered in such a way that it can no longer operate without a subsequent "modification" or "installation" as defined in OAC Chapter 3745-31) by submitting a certification from the authorized official that identifies the date on which the emissions unit was permanently shut down. Authorization to operate the affected emissions unit shall cease upon the date certified by the authorized official that the emissions unit was permanently shut down. At a minimum, notification of permanent shut down shall be made or confirmed by marking the affected emissions unit(s) as "permanently shut down" in Ohio EPA's "Air Services" along with the date the emissions unit(s) was permanently removed and/or disabled. Submitting the facility profile update will constitute notifying of the permanent shutdown of the affected emissions unit(s).

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

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

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

12. Permit-To-Operate Application

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

13. Construction Compliance Certification

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

- a) Completion of initial installation date shall be 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 (i.e., postmarked), by January 31, April 30, July 31, and October 31 of each year and shall cover the previous calendar quarters.

16. Fees

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

17. Permit Transfers

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

18. Risk Management Plans

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

19. Title IV Provisions

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

B. Facility-Wide Terms and Conditions

1. All the following facility-wide terms and conditions are federally enforceable with the exception of those listed below which are enforceable under state law only:
 - a) None.

C. Emissions Unit Terms and Conditions



1. P042, Pressure Swing Absorption (PSA) purge gas/refinery fuel gas

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 low nitrogen oxide burners, 258.4 million Btu/hr

- 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)(3) and d)(4)
- b) Applicable Emissions Limitations and/or Control Requirements
 - (1) The specific operation(s), property, and/or equipment that constitute each emissions unit along with the applicable rules and/or requirements and with the applicable emissions limitations and/or control measures are identified below. Emissions from each unit shall not exceed the listed limitations, and the listed control measures shall be specified in narrative form following the table.

	Applicable Rules/Requirements	Applicable Emissions Limitations/Control Measures
a.	OAC rule 3745-31-05(A)(3)	<p><u>Emissions from Reformer Heater</u></p> <p>12.04 tons sulfur dioxide (SO₂)/yr</p> <p>0.038 lb nitrogen oxides (NO_x)/mmBTU of actual heat input per rolling, 12-month limit[See b)(2)a.]</p> <p>43.01 tons NO_x/yr</p> <p>4.65 lbs carbon monoxide (CO)/hr; 20.37 tons CO/yr</p> <p>1.63 lbs volatile organic compounds (VOC)/hr; 7.14 tons VOC/yr</p> <p>1.63 lbs particulate matter less than 10 microns in size (PM₁₀)/hr; 7.14 tons PM₁₀/yr</p> <p><u>Emissions from De-aerator</u></p> <p>0.46 lb CO/hr; 2.01 tons CO/yr</p> <p>0.97 lb VOC/hr; 4.25 tons VOC/yr</p> <p>See b)(2)c.</p>



b.	OAC rule 3745-17-07(A)	Visible particulate emissions from any stack shall not exceed 20% opacity as a 6-minute average, except as provided by rule
c.	OAC rule 3745-17-10(B)(1)	See b)(2)d.
d.	OAC rule 3745-18-06(E)	See b)(2)e.
e.	40 CFR 60.104(a)(1)	See b)(2)b.

(2) Additional Terms and Conditions

- a. Best Available Technology (BAT) control requirements for this emissions unit has been determined to be the use of low NOx burners meeting 0.038 lbNOx/mmbTU of actual heat input.
- b. The permittee shall not burn any refinery fuel gas in this emissions unit that contains hydrogen sulfide (H2S) in excess of 230 mg/dscm (162 ppm). This H2S standard in 40 CFR 60.104(a)(1) is also applicable if the permittee combines and combusts natural gas in any proportion with the PSA purge gas and/or refinery fuel gas in this emissions unit, according to the fuel gas definition in 40 CFR 60.101(d); and

The permittee may burn Pressure Swing Absorption (PSA) purge gas in this emissions unit.
- c. The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A) and 40 CFR 60.104(a)(1).
- d. 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).
- e. 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.

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) In order to demonstrate compliance with the requirement not to burn any fuel gas that contains and H₂S concentration in excess of 230 mg/dscm (0.1 gr/dscf) (equivalent to 162 ppm) based on a 3-hour, rolling average in this emissions unit, the permittee shall calculate and record H₂S concentration, in ppm, for each rolling, 3-hour average, based on the data generated from the continuous monitoring system currently required for on the Premcor Refining Group (premise #0302020012) fuel gas system which also serves this emissions unit. The monitoring to show ongoing compliance with the H₂S limitation shall also be adequate to ensure ongoing compliance with the SO₂ emission limitation.

Sulfur monitoring for raw material butane shall be conducted by the appropriate ASTM methods. For butane supplied by Premcor Refining Group, weekly analyses shall be required at a minimum.

- (3) The permit to install for this emissions unit (P042) was evaluated based on the actual emissions and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the permit to install application. The Ohio EPA's "Review of New Sources of Air Toxic Emissions" policy ("Air Toxic Policy") was applied for each pollutant emitted by this emissions unit using data from the permit to install application and SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN 3.0 model was compared to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: Methanol

TLV (mg/m³): 262

Maximum Hourly Emission Rate (lb/hr): 0.90

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 251

MAGLC: 6,228

Physical changes to or changes in the method of operation of the emissions unit after its installation or modification could affect the parameters used to determine whether or not the "Air Toxic Policy" is satisfied. Consequently, prior to making a change that could impact such parameters, the permittee shall conduct an evaluation to determine that the "Air Toxic Policy" will still be satisfied. If, upon evaluation, the permittee determines that the "Air Toxic Policy" will not be satisfied, the permittee will not make the change. Changes that can affect the parameters used in applying the "Air Toxic Policy" include 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 compound with a lower Threshold Limit Value (TLV), as indicated in the most recent version of the handbook entitled "American Conference of Governmental Industrial Hygienists (ACGIH)," than the lowest TLV value 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 pollutant with a listed TLV that was proposed in the application and modeled; and
 - c. Physical changes to the emissions unit or its exhaust parameters (e.g., increased/decreased exhaust flow, changes in stack height, changes in stack diameter, etc.).
- (4) If the permittee determines that the “Air Toxic Policy” 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 the emissions of any type of toxic air contaminant not previously emitted, and a modification of the existing permit to install will not be required; even if the toxic air contaminant emissions are greater than the de minimis level in OAC rule 3745-15-05. If the change(s) is (are) defined as a modification under other provisions of the modification definition, then the permittee shall obtain a final permit to install prior to the change.

The permittee shall collect, record and retain the following information when it conducts evaluations to determine that the changed emissions unit will still satisfy the “Air Toxic Policy”

- a. A description of the parameters changed (composition of materials, new pollutants emitted, change in stack/exhaust parameters, etc.);
 - b. Documentation of its evaluation and determination that the changed emissions unit still satisfies the “Air Toxic Policy”; and
 - c. Were computer modeling is performed, a copy of the resulting computer model runs that show the results of the application of the “Air Toxic Policy” for the change.
- 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 submit quarterly deviation (excursion) reports that identify all exceedances of the fuel content restriction of 230 mg H₂S/dscm (equivalent to 162 ppm of H₂S). These reports shall be submitted in accordance with the General Terms and Conditions of this permit.
 - (3) If there were no concentrations of H₂S in the refinery fuel gas (or combined fuel stream, if applicable), that exceeded the value specified in Section b)(2)b. during the calendar quarter, then the permittee shall submit a statement to that effect along with the emissions unit and monitor operating times. These quarterly reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during previous calendar quarters.

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 180 days following start-up of the emissions unit.

b. The emissions testing shall be conducted to demonstrate compliance with the allowable emission rate for the reformer heater of 0.038 lb of NOx per million BTU of actual heat input, and the allowable mass emission rate for CO, which is 4.65 lbs CO/hr.

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

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

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.

Note: This is an administrative modification to the original permit and, as such, the permittee has fulfilled these requirements through testing conducted in November 2006.

(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:

12.04 tons SO₂/yr from reformer heater

Applicable Compliance Method:

The annual emission limitation was established in accordance with the following equation:

Tons SO₂/yr = Tons SO₂/yr from refinery fuel gas (RFG)

$$\begin{aligned} \text{Tons SO}_2/\text{yr (from RFG)} &= [0.10 \text{ gr H}_2\text{S}/\text{scf}] \times [\text{lb H}_2\text{S}/7000 \text{ gr H}_2\text{S}] \times [64.1 \text{ lb SO}_2/34.1 \text{ lb H}_2\text{S}] \\ &\times [102,337 \text{ scf}/\text{hr}] \times [8760 \text{ hrs}/\text{yr}] \times [1 \text{ ton}/2000 \text{ lbs}] \\ &= 12.04 \text{ tons SO}_2/\text{yr} \end{aligned}$$

Where:

[0.10 gr H₂S/scf] = 40 CFR 60.104(a)(1) emission limitation [0.10 gr/scf = 230 mg/dscm = 162 ppm]

[64.1 lb SO₂/34.1 lb H₂S] = conversion of hydrogen sulfide to sulfur dioxide assuming all H₂S is converted to SO₂

[102,337 scf/hr] = maximum fuel flow rate [based on a heating value of 909 BTU/scf]

[8760 hrs/yr] = maximum operating schedule

All other values are conversion factors.

Compliance with the annual emission limitation will be shown as long as the permittee maintains compliance with the H₂S emission limitations of 162 ppm in 40 CFR 60.104(a)(1) for RFG.

Note: The sulfur limits from PSA purge gas are negligible and do not contribute to any SO₂ emission limitations.

b. Emission Limitation:

0.038 lbNO_x per million BTU of actual heat input; 43.01 tons NO_x/yr from reformer heater

Applicable Compliance Method:

The lbNO_x/mmBTU limitation is based on stack testing conducted in November 2006.

The annual emission limitation was developed by multiplying the 0.038 lbNO_x/mmBTU emission limitation by the maximum firing rate of 258.4 mmBTU/hr for the process heater by a maximum operating schedule of 8760 hrs/yr, then dividing by 2000 lb/ton. Therefore, provided compliance is shown

with the 0.038 lbNO_x/mmBTU emission limitation, compliance with the annual emission limitation shall also be demonstrated.

c. Emission Limitation:

4.65 lbs CO/hr; 20.37 tons CO/yr from reformer heater

Applicable Compliance Method:

If required, the permittee shall demonstrate compliance with the hourly emission limitation by the performance testing required in f)(1).

The annual emission limitation was developed by multiplying the hourly emission limitation by a maximum operating schedule of 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

d. Emission Limitation:

1.63 lbs VOC/hr; 7.14 tons VOC/yr from reformer heater

Applicable Compliance Method:

The emission limitation is based on the burner manufacturer's guaranteed emission rate of 0.0063 lb VOC/mmBTU heat input. The permittee shall demonstrate compliance with this emissions limitation by multiplying the emission rate of 0.0063 lb VOC/mmBTU by the average rolling, 12-month firing rate of 238 mmBTU/hr for the process heater.

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

The annual emission limitation was developed by multiplying the hourly emission limitation by a maximum operating schedule of 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

e. Emission Limitation:

1.63 lbs PM₁₀/hr; 7.14 tons PM₁₀/yr from reformer heater

Applicable Compliance Method:

The emission limitation is based on the burner manufacturer's guaranteed emission rate of 0.0063 lb PM₁₀/mmBTU heat input. The permittee shall demonstrate compliance with this emissions limitation by multiplying the emission rate of 0.0063 lb PM₁₀/mmBTU by the average rolling, 12-month firing rate of 238 mmBTU/hr for the process heater.

If required, the permittee shall demonstrate compliance with the hourly emission limitation shall be demonstrated in accordance with Methods 1 through 5 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by a maximum operating schedule of 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

f. Emission Limitation:

0.46 lb CO/hr; 2.01 tons CO/yr from de-aerator

Applicable Compliance Method:

The emission limitation is based on the manufacturer's emission rate warranty of 0.39 lb CO/hr at a normal operating mode of 221 mmBTU/hr for the reformer heater multiplied by a conversion factor of 1.17, derived from the maximum firing rate of 258.4 mmBTU/hr for the reformer heater.

If required, the permittee shall demonstrate compliance with the hourly emission limitation shall be demonstrated in accordance with Methods 1 through 4 and 10 of 40 CFR, Part 60, Appendix A.

The annual emission limitation was developed by multiplying the hourly emission limitation by a maximum operating schedule of 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

g. Emission Limitation:

0.97 lb VOC/hr; 4.25 tons VOC/yr from de-aerator

Applicable Compliance Method:

The emission limitation is based on the manufacturer's emission rate warranty of 0.831 lb VOC/hr (total) at a normal operating mode of 221 mmBTU/hr for the reformer heater multiplied by a conversion factor of 1.17, derived from the maximum firing rate of 258.4 mmBTU/hr for the reformer heater.

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

The annual emission limitation was developed by multiplying the hourly emission limitation by a maximum operating schedule of 8760 hrs/yr, then dividing by 2000 lbs/ton. Therefore, provided compliance is shown with the hourly emission limitation, compliance with the annual emission limitation shall also be demonstrated.

h. Emission Limitation:

Visible particulate emissions 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 demonstrated compliance with the visible particulate emission 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).

i. Emission Limitation:

The permittee shall not burn any PSA purge gas or refinery fuel gas in this emissions unit that contains H₂S in excess of 230 mg/dscm (162 ppm).

Applicable Compliance Method:

Compliance with this emission limitation shall be demonstrated in accordance with the continuous emission monitoring requirements specified in d)(1) through d)(3).

g) Miscellaneous Requirements

(1) None.