



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL
HAMILTON COUNTY**

CERTIFIED MAIL

Street Address:

122 S. Front Street

Lazarus Gov. Center TELE: (614) 644-3020 FAX: (614) 644-2329

Mailing Address:

Lazarus Gov. Center
P.O. Box 1049

Application No: 14-05789

Fac ID: 1431073463

DATE: 2/16/2006

Air Products and Chemicals Inc
George Beris
7201 Hamilton Blvd
Allentown, PA 181951501

Enclosed please find an Ohio EPA Permit to Install which will allow you to install the described source(s) in a manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

The Ohio EPA is urging 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 Pollution Prevention at (614) 644-3469.

You are hereby notified that this action by the Director is final and may be appealed to the Ohio Environmental Review Appeals Commission pursuant to Chapter 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. It must be filed within thirty (30) days after the notice of the Directors action. A copy of the appeal must be served on the Director of the Ohio Environmental Protection Agency within three (3) days of filing with the Commission. 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, Ohio 43215

Sincerely,

Michael W. Ahern, Manager
Permit Issuance and Data Management Section
Division of Air Pollution Control

CC: USEPA

HCDES



**Permit To Install
Terms and Conditions**

**Issue Date: 2/16/2006
Effective Date: 2/16/2006**

FINAL PERMIT TO INSTALL 14-05789

Application Number: 14-05789
Facility ID: 1431073463
Permit Fee: **\$800**
Name of Facility: Air Products and Chemicals Inc
Person to Contact: George Beris
Address: 7201 Hamilton Blvd
Allentown, PA 181951501

Location of proposed air contaminant source(s) [emissions unit(s)]:
**4900 Este Ave
Cincinnati, Ohio**

Description of proposed emissions unit(s):
Hydrogen and Steam Production Process Modification.

The above named entity is hereby granted a Permit to Install for the above described emissions unit(s) 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 above described 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

Director

Part I - GENERAL TERMS AND CONDITIONS

A. Permit to Install General Terms and Conditions

1. Compliance Requirements

The emissions unit(s) identified in this Permit to Install shall remain in full compliance with all applicable State laws and regulations and the terms and conditions of this permit.

2. Reporting Requirements

The permittee shall submit required reports in the following manner:

- a. Reports of any required monitoring and/or recordkeeping information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
- b. Except as otherwise may be provided in the terms and conditions for a specific emissions unit, quarterly written reports of (a) any deviations (excursions) from 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 appropriate Ohio EPA District Office or local air agency. 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., 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.)

3. Records Retention Requirements

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.

4. Inspections and Information Requests

The Director of the Ohio EPA, or an authorized representative of the Director, may, subject to the safety requirements of the permittee and without undue delay, enter upon

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the premises of this source at any reasonable time for purposes of making inspections, conducting tests, examining records or reports pertaining to any emission of air contaminants, and determining compliance with any applicable State air pollution laws and regulations and the terms and conditions of this permit. The permittee shall furnish to the Director of the Ohio EPA, or an authorized representative of the Director, upon receipt of a written request and within a reasonable time, any information that may be requested to determine whether cause exists for modifying, reopening or revoking this permit or to determine compliance with this permit. Upon verbal or written request, the permittee shall also furnish to the Director of the Ohio EPA, or an authorized representative of the Director, copies of records required to be kept by this permit.

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

6. Permit Transfers

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

7. 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.

8. Termination of Permit to Install

This Permit to Install shall terminate within eighteen months of the effective date of the Permit to Install if the owner or operator has not undertaken a continuing program of installation or modification or has not entered into a binding contractual obligation to undertake and complete within a reasonable time a continuing program of installation or modification. 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.

9. Construction of New Sources(s)

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The proposed emissions unit(s) shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the Agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources cannot meet the requirements of this permit or cannot meet applicable standards.

If the construction of the proposed emissions unit(s) has already begun or has been completed prior to the date the Director of the Environmental Protection Agency approves the permit application and plans, the approval does not constitute expressed or implied assurance that the proposed facility has been constructed in accordance with the approved plans. 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 the Permit to Install does not constitute an assurance that the proposed source will operate in compliance with all Ohio laws and regulations. Approval of the plans in any case is not to be construed as an approval of the facility as constructed and/or completed. Moreover, issuance of the Permit to Install 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.

10. 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.

11. Applicability

This Permit To Install is applicable only to the emissions unit(s) identified in the Permit To Install. Separate Permit To Install for the installation or modification of any other emissions unit(s) are required for any emissions unit for which a Permit To Install is required.

12. Best Available Technology

As specified in OAC Rule 3745-31-05, all new sources must employ Best Available Technology (BAT). Compliance with the terms and conditions of this permit will fulfill this requirement.

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13. Source Operation and Operating Permit Requirements After Completion of Construction

This facility is permitted to operate each source described by this Permit to Install for a period of up to one year from the date the source commenced operation. This permission to operate is granted only if the facility complies with all requirements contained in this permit and all applicable air pollution laws, regulations, and policies. Pursuant to OAC Chapter 3745-35, the permittee shall submit a complete operating permit application within ninety (90) days after commencing operation of the emissions unit(s) covered by this permit.

14. Construction Compliance Certification

The applicant shall provide Ohio EPA with a written certification (see enclosed form) that the facility has been constructed in accordance with the Permit to Install application and the terms and conditions of the Permit to Install. The certification shall be provided to Ohio EPA upon completion of construction but prior to startup of the source.

15. 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 this Permit to Install.

B. Permit to Install Summary of Allowable Emissions

The following information summarizes the total allowable emissions, by pollutant, based on the individual allowable emissions of each air contaminant source identified in this permit.

SUMMARY (for informational purposes only)
 TOTAL PERMIT TO INSTALL ALLOWABLE EMISSIONS

Pollutant

Tons Per Year

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PM	3.36
PM-10	3.36
SO2	4.87
VOC	2.45
NOx	44.27
CO	39.66

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
B001 - 71.2 mmBtu/hr Natural Gas and Landfill Gas Fired Flue Gas Boiler	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-17-07(A)(1)
	OAC rule 3745-17-10(B)(1)
	OAC rule 3745-21-08(B)
	OAC rule 3745-23-06(B)
	40 CFR Part 60 Subpart Dc

Applicable Emissions
Limitations/Control Measures

The following emissions limitations shall not be exceeded:

0.098 pound nitrogen oxides (NOx) per million British thermal units and 30.57 tons per year

0.0147 pound sulfur dioxide (SO2) per million British thermal units and 4.58 tons per year

0.0824 pound carbon monoxide (CO) per million British thermal units and 25.68 tons per year

0.0054 pound volatile organic compounds (VOC) per million British thermal units and 1.70 tons per year

0.0075 pound particulate emissions (PE) and particulate matter emissions 10 microns or less in diameter (PM10) per million British thermal units and 2.32 tons per year

See terms and conditions B.1. and B.2.

The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-07(A)(1), OAC rule

3745-21-08(B), OAC rule 3745-23-06(B) and 40 CFR Part 60 Subpart Dc.

Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.

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

See term and condition A.2.c.

See term and condition A.2.d.

See term and condition D.1.

2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the visible emissions limitation, the mass emissions limitations, the use of landfill gas and natural gas and low NOx burners.
- 2.b** The lb/mmBtu and tons per year emissions limitations outlined in term A.1 are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limitations.
- 2.c** The permittee satisfies the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the 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 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

On February 15, 2005, OAC rule 3745-23-06 was rescinded and therefore no longer a part of the State regulations. However, that rule revision has not yet been submitted to the 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 3745-23-06, the requirement to satisfy "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.e** The application and enforcement of the provisions of the New Source Performance Standards (NSPS), as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60, are delegated to the Ohio Environmental Protection Agency. The requirements of 40 CFR Part 60 are

also federally enforceable.

B. Operational Restrictions

1. The permittee shall burn only landfill gas and/or natural gas in this emissions unit.
2. The permittee shall operate and maintain low NOx burners during all periods of operation of this emissions unit.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall record and maintain records of the amount of each fuel combusted in this emissions unit during each day, in mm scf.
2. The permittee shall collect once per month a sample of landfill gas. Each sample shall be analyzed for heat content (Btu/scf).
3. The permittee shall record and maintain records of the type and amount of fuel other than landfill gas or natural gas combusted in this emissions unit during each day.
4. The permit to install for this emissions unit (B001) was evaluated based on the actual materials (typically coatings and cleanup materials) 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 the SCREEN3 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration from the use of the SCREEN3 model was compared to the Maximum Ground-Level Concentration (MAGLC).

The following summarizes the results of the modeling for the "worst case" pollutant(s):

Pollutant: hydrogen chloride

TLV (ug/m3): 2980

Maximum Hourly Emission Rate (lbs/hr): 1.66

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 59.81

MAGLC (ug/m3): 70.95

Physical changes to or 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 Toxics 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 the "Air Toxic Policy" include the following:

- a. changes in the composition of the materials used (typically for coatings or cleanup materials), 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.).

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 satisfy the Air Toxic Policy:"

- a. a description of the parameters changed (composition of materials, new

Emissions Unit ID: **B001**

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. when the 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.

D. Reporting Requirements

1. Pursuant to the NSPS, the permittee is hereby advised of the requirement to report the following at the appropriate times:
 - a. Construction date (no later than 30 days after such date);
 - b. Anticipated start-up date (not more than 60 days or less than 30 days prior to such date);
 - c. Actual start-up date (within 15 days after such date); and
 - d. The design heat input capacity of each emissions unit and the identification of the fuel to be combusted in each emissions unit (no later than 30 days after the construction date).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P. O. Box 1049
Columbus, Ohio 43216-1049

and

Hamilton County Department of Environmental Services
250 William Howard Taft Road
Cincinnati, Ohio 45219

2. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than landfill gas and natural gas. The notification shall include a copy of such record and shall be sent to the

Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

E. Testing Requirements

1. Compliance with the emissions limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):

Emissions Limitation:

20% opacity, as a six-minute average

Applicable compliance method:

If required, compliance shall be determined in accordance with Test Method 9, as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

Emissions Limitations:

0.098 lb/mmBtu NO_x, 30.57 TPY NO_x
0.0147 lb/mmBtu SO₂, 4.58 TPY SO₂
0.0824 lb/mmBtu CO, 25.68 TPY CO
0.0054 lb/mmBtu VOC, 1.70 TPY VOC
0.0075 lb/mmBtu PE*, 2.32 TPY PE*

*It is assumed the PM₁₀ emissions rate is equivalent to the PE emissions rates.

Applicable Compliance Method:

Compliance shall be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4 (revised 7/98) emissions factors using calculation methods provided in the permit to install application 14-05789 submitted on November 21, 2005, the dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr). The actual annual emissions rates shall be calculated by using the actual fuel usage, emissions factors and methodologies specified above.

2. Compliance with the operation restriction in term and condition B.1 shall be

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demonstrated by the record keeping requirement in term and condition C.3.

F. Miscellaneous Requirements

1. The terms and conditions of this permit to install shall supersede the terms and conditions of Permit to Install 14-02410 as issued on February 13, 1992 and Permit to Install 14-02410 as modified on October 12, 2000.

PART II - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. Applicable Emissions Limitations and/or Control Requirements

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

<u>Operations, Property, and/or Equipment</u>	<u>Applicable Rules/Requirements</u>
P001 - Hydrogen Generating Process with 31.9 mmBtu/hr Natural Gas Fired Reformer Furnace	OAC rule 3745-31-05(A)(3)
	OAC rule 3745-17-07(A)(1)
	OAC rule 3745-17-10(B)(1)
	OAC rule 3745-21-08(B)
	OAC rule 3745-23-06(B)

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Emissions Unit ID: P001

Applicable Emissions
 Limitations/Control Measures

The following emissions limitations shall not be exceeded:

0.098 pound nitrogen oxides (NOx) per million British thermal units and 13.7 tons per year NOx

0.002 pound of sulfur dioxide (SO₂) per million British thermal units and 0.285 ton per year SO₂

0.0824 pound carbon monoxide (CO) per million British thermal units and 13.98 tons per year CO

0.0054 pound of volatile organic compounds (VOC) per million British thermal units and 0.753 ton per year VOC

0.0075 pound of particulate emissions (PE) and 0.0075 pound of particulate matter emissions 10 microns or less in diameter (PM₁₀) per million British thermal units and 1.04 tons per year PE/PM₁₀

See terms and conditions A.2.e and B.1.

The requirements of this rule also include compliance with

the requirements of OAC rule 3745-17-07(A)(1), OAC rule 3745-21-08(B) and OAC rule 3745-23-06(B).

Visible particulate emissions from any stack shall not exceed 20 percent opacity, as a six-minute average, except as specified by rule.

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

See term and condition A.2.c.

See term and condition A.2.d.

2. Additional Terms and Conditions

- 2.a** Compliance with OAC rule 3745-31-05(A)(3) shall be demonstrated by the visible emissions limitation, the mass emissions limitations and the use of natural gas.
- 2.b** The lb/mmBtu emission limitations outlined in term A.1 are based upon the emissions unit's potential to emit. Therefore, no records are required to demonstrate compliance with these emission limitations.
- 2.c** The permittee satisfies the "best available control techniques and operating practices" and "latest available control techniques and operating practices" required pursuant to OAC rule 3745-21-08 by complying with the best available technology requirements of OAC rule 3745-31-05(A)(3).

On November 5, 2002, OAC rule 3745-21-08 was revised to delete paragraph (B); therefore, paragraph (B) is no longer part of the State regulations. However, that rule revision has not yet been submitted to the 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 3745-21-08, the requirement to satisfy the "best available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.d** The permittee has satisfied the "latest available control techniques and operating practices" required pursuant to OAC rule 3745-23-06(B) by committing to comply with the best available technology requirements established pursuant to OAC rule 3745-31-05(A)(3).

On February 15, 2005, OAC rule 3745-23-06 was rescinded and therefore no longer a part of the State regulations. However, that rule revision has not yet been submitted to the 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 3745-23-06, the requirement to satisfy "latest available control techniques and operating practices" still exists as part of the federally-approved SIP for Ohio.

- 2.e** Total annual CO emissions limitation specified in term and condition A.1 shall include startup emissions of process syngas and PSA purge gas as provided in the permit to install application 14-05789 submitted on November 21, 2005. The short term CO emissions rate specified in term and condition A.1 shall be

exclusive of the process syngas and PSA purge gas emissions during the startup of the hydrogen plant.

B. Operational Restrictions

1. The permittee shall burn only natural gas and purge gas in this emissions unit.

C. Monitoring and/or Recordkeeping Requirements

1. The permittee shall collect once per month a sample of purge gas. Each sample shall be analyzed for heat content (Btu/scf).
2. The permittee shall record the heat content of the purge gas on a monthly basis (BTU/scf).
3. The permittee shall record the type and amount of each fuel combusted each day.

D. Reporting Requirements

1. The permittee shall notify the Hamilton County Department of Environmental Services in writing of any fuel burned in this emissions unit other than natural gas and purge gas. The notification shall include a copy of such record and shall be sent to the Hamilton County Department of Environmental Services within 45 days after the deviation occurs.

E. Testing Requirements

1. Compliance with the emission limitations in Section A.1 of these terms and conditions shall be determined in accordance with the following method(s):

Emissions Limitation:

20% opacity, as a six-minute average

Applicable compliance method:

If required, compliance shall be determined in accordance with Test Method 9, as set forth in "Appendix on Test Methods" in 40 CFR Part 60 ("Standards of Performance for New Stationary Sources"), as such Appendix existed on July 1, 2002, except as specified by rule.

Emissions Limitations:

0.098 lb/mmBtu NO_x, 13.7 TPY
0.002 lb/mmBtu SO₂, 0.285 TPY SO₂
0.0824 lb/mmBtu CO, 13.98 TPY CO*
0.0054 lb/mmBtu VOC, 0.753 TPY VOC
0.0075 lb/mmBtu PE*, 1.04 TPY PE**

*Total annual CO emissions include startup emissions of process syngas and PSA purge gas as provided in the permit to install application 14-05789 submitted on November 21, 2005.

**It is assumed the PM₁₀ emissions rate is equivalent to the PE emissions rates.

Applicable Compliance Method:

Compliance shall be determined by multiplying the hourly gas burning capacity of the emissions unit (mm cu. ft/hr) by the AP-42, Fifth Edition, Section 1.4 (revised 7/98) emissions factors using calculation methods provided in the permit to install application 14-05789 submitted on November 21, 2005, the dividing by the maximum hourly heat input of the emissions unit (mmBtu/hr). The actual annual emissions rates shall be calculated by using the actual fuel usage, emissions factors and methodologies specified above.

2. Compliance with the operation restriction in term and condition B.1 shall be demonstrated by the record keeping requirement in term and condition C.3.

F. Miscellaneous Requirements

1. The terms and conditions of this permit to install shall supersede the terms and conditions of Permit to Install 14-02410 as issued on February 13, 1992 and Permit to Install 14-02410 as modified on October 12, 2000.