



State of Ohio Environmental Protection Agency

**RE: FINAL PERMIT TO INSTALL MODIFICATION
VINTON COUNTY**

CERTIFIED MAIL

Street Address:

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

Mailing Address:

Lazarus Gov.
Center

Application No: 06-06296

DATE: 9/9/2003

Rolling Hills Generating Plant
Heather Schneider
1000 Louisiana St Ste 5800
Houston, TX 77002

Enclosed Please find a modification to the Ohio EPA Permit To Install referenced above which will modify the terms and conditions.

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

Michael W. Ahern, Supervisor
Field Operations and Permit Section
Division of Air Pollution Control

CC: USEPA

SEDO



**Permit To Install
Terms and Conditions**

**Issue Date: 9/9/2003
Effective Date: 9/9/2003**

FINAL ADMINISTRATIVE MODIFICATION OF PERMIT TO INSTALL 06-06296

Application Number: 06-06296
APS Premise Number: 0682000057
Permit Fee: \$0
Name of Facility: Rolling Hills Generating Plant
Person to Contact: Heather Schneider
Address: 1000 Louisiana St Ste 5800
Houston, TX 77002

Location of proposed air contaminant source(s) [emissions unit(s)]:
**State Route 160
Wilkesville, Ohio**

Description of proposed emissions unit(s):
Administrative Modification to allow calculating the mass emissions of NOx and CO using certified fuel flow monitors and exempt startup and shutdown emissions of NOx and CO from short term limits.

The above named entity is hereby granted a modification to the permit to install described above pursuant to Chapter 3745-31 of the Ohio Administrative Code. Issuance of this modification 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 source(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 included in the application, the above described source(s) of pollutants will be granted the necessary operating permits.

This permit is granted subject to the conditions attached hereto.

Ohio Environmental Protection Agency

Director

Part I - GENERAL TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install General Terms and Conditions

1. Monitoring and Related Recordkeeping 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:
 - i. The date, place (as defined in the permit), and time of sampling or measurements.
 - ii. The date(s) analyses were performed.
 - iii. The company or entity that performed the analyses.
 - iv. The analytical techniques or methods used.
 - v. The results of such analyses.
 - vi. 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:
 - i. Reports of any required monitoring and/or recordkeeping of federally enforceable information shall be submitted to the appropriate Ohio EPA District Office or local air agency.
 - ii. 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 appropriate Ohio EPA District Office or local air agency. The written

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. See B.9 below if no deviations occurred during the quarter.

- iii. Written reports, which identify any deviations from the federally enforceable monitoring, recordkeeping, and reporting requirements contained in this permit shall be submitted to the appropriate Ohio EPA District Office or local air agency every six months, i.e., 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.
- iv. 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.

2. 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 appropriate Ohio EPA District Office or local air agency 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).

3. 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.

4. 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.

5. Severability Clause

A determination that any term or condition of this permit is invalid shall not invalidate the force or

effect of any other term or condition thereof, except to the extent that any other term or condition depends in whole or in part for its operation or implementation upon the term or condition declared invalid.

6. General Requirements

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

7. 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.

8. Federal and State Enforceability

Only those terms and conditions designated in this permit as federally enforceable, that are required under the Act, or any of its applicable requirements, including relevant provisions designed to limit the potential to emit of a source, are enforceable by the Administrator of the U.S. EPA, the State, and citizens under the Act. All other terms and conditions of this permit shall not be federally enforceable and shall be enforceable under State law only.

9. Compliance Requirements

- a. 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:
 - i. 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.
 - ii. 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.
 - iii. Inspect at reasonable times any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit.
 - iv. As authorized by the Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit and applicable requirements.
- c. The permittee shall submit progress reports to the appropriate Ohio EPA District Office or local air agency concerning any schedule of compliance for meeting an applicable requirement. Progress reports shall be submitted semiannually, or more frequently if specified in the applicable requirement or by the Director of the Ohio EPA. Progress reports shall contain the following:
 - i. Dates for achieving the activities, milestones, or compliance required in any schedule of compliance, and dates when such activities, milestones, or compliance were achieved.
 - ii. 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.

10. Permit To Operate Application

- a. If 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).
- b. If the permittee is required to apply for permit(s) pursuant to OAC Chapter 3745-35, the source(s) identified in this Permit To Install is (are) permitted to operate for a period of up to one year from the date the source(s) commenced operation. 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 source(s) covered by this permit.

11. 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.

12. 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.

B. State Only Enforceable 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 of state-only enforceable 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 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 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. 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.

4. 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.

5. Construction of New Sources(s)

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.

6. 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.

7. 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.

8. 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.

9. Additional Reporting Requirements When There Are No Deviations of Federally Enforceable Emission Limitations, Operational Restrictions, or Control Device Operating Parameter Limitations (See Section A of This Permit)

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.

C. 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**

<u>Pollutant</u>	<u>Tons Per Year</u>
PM	79.3
VOC	20.1
NOx	245.0
SOx	26.6
CO	245.0
Formaldehyde	6.7
Ammonia	151.6

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Rolling Hills Generating Plant
PTI Application: **06-06296**
Modification Issued: 9/9/2003

Facility ID: **0682000057**

Rolling Hills Generating Plant
PTI Application: **06-06296**
Modification Issued: 9/9/2003

Facility ID: **0682000057**

Part II - FACILITY SPECIFIC TERMS AND CONDITIONS

A. State and Federally Enforceable Permit To Install Facility Specific Terms and Conditions

None.

B. State Only Enforceable Permit To Install Facility Specific Terms and Conditions

None.

Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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 - Seimens Westinghouse Power Corp. W501F, Natural gas fired turbine with dry low-NOx combusters, operating in simple cycle mode.	OAC Rule 3745-31-05 (A)(3)
Modification to allow for using certified fuel flow monitors, exempting SU/SD emissions of NOx and CO from short term limits, modifying the SU/SD limit for CO without increasing the overall facility cap.	OAC rule 3745-31-05(A)(3)

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	<u>Applicable Emissions Limitations/Control Measures</u>	
OAC rule 3745-31-05(D)	<p>The requirements of this rule also include compliance with the requirements of 40 CFR 60 Subpart GG, OAC rule 3745-18-06(F), 3745-17-11(B)(4), OAC rule 3745-17-07(A), and OAC 3745-31-05(D).</p>	<p>STARTUP AND SHUTDOWN EMISSIONS (also see A.II.3.)</p> <p>Nitrogen oxides (NO_x) emissions at startup and shutdown shall be continuously monitored by certified CEMS and included in the facility cap of 245.0 tons per rolling 12-month period.</p>
	<p>Nitrogen oxides (NO_x) emissions shall not exceed 15 ppmvd at 15% Oxygen and 117 lbs /hr, except during periods of startup/shutdown (SU/SD);</p>	<p>Carbon monoxide (CO) emissions shall not exceed 2,087 lbs per startup and shutdown cycle. Each cycle shall be recorded and included in the facility cap of 245.0 tons per rolling 12-month period.</p>
40 CFR part 60, Subpart GG	<p>PM emissions shall not exceed: 0.00838 lb/MMBtu actual heat input, 17.3 lbs/hr;</p> <p>Sulfur dioxide (SO₂) shall not exceed 5.9 lbs/hr;</p>	<p>USE OF HOT SCR CONTROL TECHNOLOGY</p> <p>Ammonia (NH₃) emissions shall not exceed 33.8 lbs/hr if/when Hot SCR (Selective Catalytic Reduction) is employed</p>
OAC rule 3745-18-06(F)	<p>Carbon monoxide (CO) emissions shall not exceed 119 lbs/hr, except during periods of SU/SD;</p>	<p>TOTAL TONS PER ROLLING 12-MONTH PERIOD FACILITY CAP</p>
OAC Rule 3745-17-11 (B)(4)	<p>Volatile organic compounds (VOC) emissions shall not exceed 3.2 lbs/hr;</p>	<p>Ammonia (NH₃) emissions shall not exceed 151.6 tons per rolling 12-month period, if Hot SCR is employed</p>
OAC Rule 3745-17-07(A)	<p>Formaldehyde emissions shall not exceed:</p>	<p>Sulfur dioxide (SO₂) shall not exceed 26.6 tons per rolling 12-month period</p>
40 CFR Part 75	<p>0.00071 lb/MMBtu actual heat input, 1.46 lbs/hr;</p>	<p>Volatile organic compounds (VOC) emissions shall not exceed 20.1 tons per rolling 12-month period</p>
OAC rule 3745-103	<p>Visible particulate emissions from any stack shall not exceed 10 percent opacity as a six-minute average</p>	<p>Nitrogen oxides (NO_x) emissions shall not exceed 245.0 tons per rolling 12-month</p>

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period

PM emissions shall not exceed
79.3 tons per rolling
12-month period

Carbon monoxide (CO)
emissions shall not exceed
245.0 tons per rolling
12-month period

Formaldehyde emissions
shall not exceed
6.7 tons per rolling
12-month period

operational restriction, see
A.II. 1.

see A.I.2.a.

see A.I.2.a.

see A.I.2.a.

See A.I.2.c.

See A.I.2.c.

2. Additional Terms and Conditions

- 2.a** The emissions limit based on this applicable rule is equivalent to or less stringent than the limit established pursuant to OAC rule 3745-31-05.
- 2.b** The emissions limits based on this applicable rule are equivalent to or less stringent than the limits established pursuant to OAC rule 3745-31-05. Except as provided for in the terms and conditions in this permit, the permittee is not exempt from meeting any additional requirements of 40 CFR Part 60, Subpart GG.

Emissions Unit ID: P001

- 2.c** If the permittee is subject to the requirements of 40 CFR Part 75 concerning acid rain, the permittee shall ensure that any effected 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.
- 2.d** The permittee has requested as a voluntary option the ability to employ Hot SCR for the control of NOx emissions. The permittee considers this technology to be innovative but as yet not proven to be economically feasible. If employed, the associated ammonia (NH3) slip will maintain compliance with the Ohio EPA Air Toxics Policy.
- 2.e** In lieu of monitoring the stack gas flowrate as required by 40 CFR Part 60, Appendix B - Performance Specification 6, the permittee shall use certified NOx CEMs in conjunction with a fuel flow monitor as described in 40 CFR Part 75, and certified CO CEMs in conjunction with a fuel flow monitor (in a manner similar to that used for NOx) to meet these requirements. The relative accuracy requirements of Performance Specification 6 shall apply.

II. Operational Restrictions

- The permittee shall burn only natural gas in this emissions unit. The maximum sulfur content of the natural gas shall not exceed 2 grains per 100 standard cubic feet.
- Startup and Shut down shall be defined as when the unit is running at less than 70% of electric load, but under no circumstances shall startups exceed 37 minutes in duration and shutdowns shall not exceed 25 minutes in duration. Emissions of NOx during startup and shutdown shall be continuously monitored and recorded by certified CEMs and totaled towards the facility cap. Emissions of CO during each startup/shutdown cycle shall be recorded and totaled to be included in the facility cap.

Pollutant total lbs per complete startup/shutdown cycle

CO 2087

In order to account for actual operation scenarios where the unit may shutdown before the startup cycle ends, Rolling Hills shall program the CEMs to record and total the CO emissions based on loads actually achieved during the startup/shutdown cycle. These emission limits were established during startup testing at the facility. The programming will be set to record:

<u>Load - Startup Cycle</u>	<u>CO(lbs)</u>
Acceleration and ramp to 10% load	653
10% - 20%	117
20% - 30%	145
30% - 40%	143
40% - 50%	70
50% - 60%	26

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60% - 70%	7
<u>Load - Shutdown Cycle</u>	<u>CO(lbs)</u>
70% - 60%	2
60% - 50%	7
50% - 40%	48
40% - 30%	108
30% - 20%	139
20% - 10%	138
10% - 0%	484

3. To ensure enforceability during the first 12 calendar months following the startup of this facility, the permittee shall not exceed the monthly emissions restrictions specified in the following table:

Month	NO _x TPY/ CO TPY
1	50.0/50.0
1-2	100.0/100.0
1-3	150.0/150.0
1-4	200.0/200.0
1-5	245.0/245.0
1-6	245.0/245.0
1-7	245.0/245.0
1-8	245.0/245.0
1-9	245.0/245.0
1-10	245.0/245.0
1-11	245.0/245.0
1-12	245.0/245.0

After the first 12 calendar months following the startup of the facility, compliance with the annual emissions restriction shall be based on a rolling, 12-month summation.

4. Continuous NO_x Monitoring - Certified Systems
Statement of Certification

Prior to the installation of the continuous NO_x monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2 for approval by the Ohio EPA, Central Office.

Within 60 days of start-up of this emissions unit, the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B,

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Performance Specification 2, and/or 40 CFR Part 75. Personnel from the Ohio EPA, Southeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Ohio EPA, Southeast District Office within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, Southeast District Office. Certification of the continuous NO_x monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of the appropriate sections of ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 2, and/or 40 CFR Part 75.

Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous NO_x monitoring system designed to ensure continuous valid and representative readings of NO_x emissions in units of the applicable standard. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and/or 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x monitoring system must be kept on site and available for inspection during regular office hours.

5. Continuous CO Monitoring - Certified Systems
Statement of Certification

Prior to the installation of the continuous CO monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 4 for approval by the Ohio EPA, Central Office.

Within 60 days of the start-up of this emissions unit, the permittee shall conduct certification tests of the continuous CO monitoring system pursuant to ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 4. Personnel from the Ohio EPA, Southeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Ohio EPA, Southeast District Office within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, Southeast District Office. Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 4.

Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous CO monitoring system designed to ensure continuous valid and representative readings of CO. The plan shall follow the requirements of 40

Emissions Unit ID: P001

CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.

6. Continuous O₂ or CO₂ Monitoring - Certified Systems
Statement of Certification

Prior to the installation of the continuous O₂ or CO₂ monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 3 for approval by the Ohio EPA, Central Office.

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Within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit, the permittee shall conduct certification tests of such equipment pursuant to the appropriate sections of ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 3, and 40 CFR Part 75. Personnel from the Ohio EPA, Southeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Ohio EPA, Southeast District Office within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA District Office. Certification of the continuous O₂ or CO₂ monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of the appropriate sections of ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 3, and 40 CFR Part 75.

Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous O₂ or CO₂ monitoring system designed to ensure continuous valid and representative readings of O₂ or CO₂ emissions in units of the applicable standard. The plan shall follow the requirements of the appropriate sections of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous O₂ or CO₂ monitoring system must be kept on site and available for inspection during regular office hours.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information for each emissions unit:
 - a. The natural gas usage rate for each month (in standard cubic feet).
2. The permittee shall maintain monthly records of the following information for each emissions unit:
 - a. Hours of operation of the turbine.
- b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the hours of operation.

Also, during the first 12 calendar months of operation following issuance of this permit, the permittee shall record the cumulative hours of operation for each calendar month.

3. The permittee shall operate and maintain existing equipment to continuously monitor and record NO_x from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements of the appropriate sections specified in 40 CFR Part 60.13 and/ 40

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Rolling Hills Generating Plant

PTI Application: ~~06 06206~~

Modif

Facility ID: **0682000057**

Emissions Unit ID: P001

CFR Part 75.

Modification Issued: 9/9/2003

The permittee shall maintain records of all data obtained by the continuous NO_x monitoring system including, but not limited to, parts per million NO_x on an instantaneous (one-minute) basis, emissions of NO_x in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

4. The permittee shall operate and maintain equipment to continuously monitor and record CO from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 .

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one minute) basis, emissions of CO in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, annual, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

5. The permittee shall operate and maintain equipment to continuously monitor and record O₂ or CO₂ from this emissions unit in percent O₂ or CO₂. Such continuous monitoring and recording equipment shall comply with the requirements in the appropriate sections specified in 40 CFR Part 60.13 and 40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous O₂ or CO₂ monitoring system including, but not limited to, percent O₂ or CO₂ on an instantaneous (one-minute) basis, emissions of O₂ or CO₂ in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. The permittee shall install, operate and maintain equipment to continuously monitor and record the actual fuel flow to this emissions unit when the emissions unit is in operation. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 75. If the fuel flow monitoring and/or recording equipment is (are) not in service when the emissions unit is in operation, the permittee shall comply with the appropriate missing data procedures specified in 40 CFR Part 75.
7. The permittee shall monitor the sulfur content and gross calorific value of the fuel being fired in the combustion turbine. Fuel sampling and analysis shall be conducted according to the procedures and at the frequency specified by 40 CFR Part 75, Appendix D.
8. The permittee shall determine the hourly heat input rate to the combustion turbine from the fuel flow rate as determined in term A.III.6 and fuel gross calorific value as determined in term A.III.7. The heat input rate shall be calculated in accordance with the procedures in Section 5 of 40 CFR Part 75, Appendix F.

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Rolling Hills Generating Plant

PTI Application: ~~06 06206~~

Modif

Facility ID: **0682000057**

Emissions Unit ID: P001

Emissions Unit ID: P001

9. The permittee shall maintain records of the following information for each emissions unit:
- Number of startups, and the duration of each startup.
 - Number of shutdowns, and the duration of each shutdown.
10. The permittee shall maintain hourly records of the following information for this emissions unit:
- in lb(s)/hr emissions rate for NO_x and CO as obtained from terms III.3. and 4. based upon an hourly averaging period as allowed in the appropriate sections of 40 CFR Part 60.
11. The permittee shall maintain monthly records of the following information for this emissions unit:
- the operating hours;
 - during the first 12 calendar months of operation, the permittee shall record the cumulative operating hours for each calendar month; and
 - beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the operating hours.
 - during the first 12 calendar months of operation, the cumulative NO_x and CO emissions, in tons (i.e., $\frac{b \times \text{term } 10}{2,000}$, for each pollutant); and
 - beginning after the first 12 calendar months of operation, the rolling, 12-month NO_x and CO emissions, in tons (i.e., $\frac{c \times \text{term } 10}{2,000}$, for each pollutant).
12. In accordance with the provisions of 40 CFR Part 60, Subpart GG, the permittee has requested a Custom Fuel Monitoring Schedule (CFMS) for fuel sulfur content. USEPA, Region V granted approval of a CFMS in a letter to the permittee, dated June 17, 2003. The permittee shall comply with either the provisions of the CFMS or the schedule(s) contained in Subpart GG. The permittee shall implement the CFMS with the issuance of this permit as follows:
- Conduct fuel sulfur monitoring twice monthly (bi-weekly) for six months. If bi-weekly fuel sulfur content monitoring indicates compliance with limits at 40 CFR Part 60.333 (0.8 percent sulfur by weight) and shows little or no variability, the permittee may reduce fuel sulfur content monitoring to once per quarter.
 - Conduct fuel sulfur monitoring once per quarter for six quarters. If quarterly fuel sulfur content monitoring indicates compliance with limits at 40 CFR Part 60.333 (0.8 percent sulfur by weight) and shows little or no variability, the permittee may reduce fuel sulfur content monitoring to a semi-annual basis (first and third quarters).

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- c. Conduct semi-annual monitoring of fuel sulfur content.
- d. If sulfur analysis indicates non-compliance with limits at 40 CFR Part 60.333, the permittee must notify USEPA and the Ohio EPA Southeast District Office of the excess emissions. The permittee must also begin fuel sulfur content monitoring on a weekly basis while the CFMS is being reviewed by USEPA and/or Ohio EPA.
- e. If a change in the type of fuel or fuel supply/supplier occurs, the permittee must notify USEPA and the Ohio EPA Southeast District Office of the change(s). The permittee must also begin conducting fuel sulfur content monitoring on a weekly basis while the CFMS is being reviewed by USEPA and/or Ohio EPA.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurred.
2. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month emissions limitations and, for the first 12 calendar months of operation, all exceedances of the maximum allowable cumulative emissions limitations. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(2).
3. Pursuant to OAC rules 3745-15-04, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of NO_x values in excess of the applicable limits specified in 40 CFR Part 76 and any limitations specified in the terms and conditions of this permit or variance. These reports shall also contain the total NO_x emissions for the calendar quarter (in tons), including all data collected during start-up and shutdown periods and all data generated pursuant to the missing data procedures specified in 40 CFR Part 75.

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting any continuous NO_x monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions

unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

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If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

4. Pursuant to OAC rules 3745-15-04, and ORC sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60.7. The summary shall be submitted to the Ohio EPA, Southeast District Office within 30 days following the end of each calendar quarter in a manner prescribed by the Director.
5. Pursuant to OAC rules 3745-15-04, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of all instances of CO values in excess of any applicable limitation(s) specified in OAC Chapter 3745-21, 40 CFR Part 60, or any limitation(s) specified in the terms and conditions of this permit, in units of the standard. These reports shall also contain the total CO emissions for the calendar quarter (in tons), including all data collected during start-up and shutdown periods and all data generated pursuant to the missing data procedures specified in 40 CFR Part 75.

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting any continuous CO monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report. These quarterly excess emission reports shall be submitted by

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January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

6. Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting all instances of continuous O₂ or CO₂ monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly report. 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 the previous calendar quarter.
7. The permittee shall submit deviation (excursion) reports that identify any record which shows that the sulfur content of the natural gas exceeded 2 grains per standard cubic foot. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).
8. The permittee shall submit deviation (excursion) reports that identify each time when this emissions unit was not in compliance with the requirements of condition II.3. above. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).
9. In lieu of the excess emissions reports required under 40 CFR Part 60.334, the permittee shall submit excess emissions reports for emissions unit P001 in accordance with this permit.
10. This emissions unit is subject to the applicable provisions of Subpart GG of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60. The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to 40 CFR Part 60.7, 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. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P. O. Box 163669
Columbus, Ohio 43216-3669

and

Ohio Environmental Protection Agency
Southeast District Office
Division of Air Pollution Control
2195 Front Street
Logan, Ohio 43138

V. 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 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the NO_x,* and CO outlet concentration, and the mass emissions limitations for NO_x, CO, Formaldehyde, VOC and PM.
 - c. The following test method(s) shall be employed to demonstrate compliance with the above emissions limitations: for NO_x, Method 20 of 40 CFR Part 60, Appendix A; for PM, Method 5 of 40 CFR Part 60, Appendix A; for Formaldehyde, EPA Method 316; for VOC Method 25A of 40 CFR Part 60, Appendix A; and for CO Method 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
 - d. The testing shall be conducted while the emissions unit is operating at or near its maximum capacity unless otherwise specified or approved by Ohio EPA or local air agency.
 - e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southeast District Office. The "Intent to Test" notification shall describe in detail the proposed test methods and procedures, the

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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, Southeast District Office refusal to accept the results of the emission test(s).

- f. Personnel from the Ohio EPA, Southeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- 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, Southeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Southeast District Office.

* Using the test methods and procedures required under 40 CFR Part 60.335.

- 2. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

- a. Emission Limitation

NO_x emissions shall not exceed 15 ppmvd at 15% Oxygen
117.0 lbs/hr
245.0 tons per rolling 12-month period, including startups and shutdowns

Applicable Compliance Method

Initial compliance with the allowable outlet concentration, and the lbs/hr emission limitations shall be demonstrated by the performance testing as described in condition V.1 and continual compliance with those limitations shall be demonstrated by the use of the CEM in condition III.3. based upon an hourly averaging period as allowed in 40 CFR Part 60 or as an alternative method, the permittee may calculate the mass emission data for NO_x per 40 CFR Part 75, using heat input data derived from certified fuel flow monitor measurements. Compliance with the annual emission limitation shall be determined by the record keeping required in condition III. 1., 2., and 3, plus any PTE from other DeMinimus or non-permitted sources located at the facility. The 12-month rolling emissions associated with start-up and shut-down shall also be demonstrated by the use of

CEM in condition III.3.

b. Emission Limitation

PM emissions shall not exceed

0.00838 lb/MMBtu actual heat input

17.3 lbs/hr

79.3 tons per rolling 12-month period

Applicable Compliance Method

Compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with the requirements specified in term and condition A.V.1. Compliance with the annual emission limitation shall be demonstrated by multiplying the emission factor (lb(s)/cubic foot of fuel fired) established during the most recent emission tests that demonstrated that the emissions unit was in compliance by the actual quantity of fuel fired in this emissions unit during the 12-month period (from term and condition A. III.1), plus any PTE from other DeMinimus or non-permitted sources located at the facility.

c. Emission Limitation

SO₂ emissions shall not exceed

5.9 lbs/hr

26.6 tons per rolling 12-month period

Applicable Compliance Method

Compliance with the hourly emission limitation shall be determined by the record keeping required in condition III. 1., 2., and 7. If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the 12-month rolling emission limitation shall be determined by multiplying the hourly emission rate by the actual annual hours of operation and dividing by 2000 lbs/ton, plus any PTE from other DeMinimus or non-permitted sources located at the facility.

d. Emission Limitation

VOC emissions shall not exceed

3.2 lbs/hr

20.1 tons per rolling 12-month period

Applicable Compliance Method

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Compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with the requirements specified in term and condition A.V.1. Compliance with the 12-month rolling emission limitation shall be demonstrated by multiplying the emission factor (lb(s)/cubic foot of fuel fired) established during the most recent emission tests that demonstrated that the emissions unit was in compliance by the actual quantity of fuel fired in this emissions unit during the calendar year (from term and condition A. III.1), plus any PTE from other DeMinimus or non-permitted sources located at the facility.

e. Emission Limitation

CO emissions shall not exceed

119.0 lbs/hr

245.0 tons per rolling 12-month period, including 1209.5 lbs per start-up/shutdown cycle

Applicable Compliance Method

Initial compliance with the allowable outlet concentration, and the lbs/hr emission limitations shall be demonstrated by the performance testing as described in condition V.1 and continual compliance with those limitations shall be demonstrated by the use of the CEM in condition III.4. based upon an hourly averaging period as allowed in 40 CFR Part 60 or as an alternative method, the permittee may calculate the mass emission data for CO per 40 CFR Part 75, using heat input data derived from certified fuel flow monitor measurements. Compliance with the annual emission limitation shall be determined by the record keeping required in condition III. 1., 2., and 4, plus any PTE from other DeMinimus sources located at the facility. The 12-month rolling emissions associated with start-up and shut-down shall be determined by the record keeping required in condition III. 9. using the lbs/ start-up and shut-down values in condition II.3.

f. Emission Limitation

ammonia (NH₃) emissions shall not exceed

33.8 lbs/hr

151.6 tons per rolling 12-month period

Applicable Compliance Method

Compliance with the lbs/hr emission limitation shall be demonstrated by multiplying the emission factor of 0.0136 pound of ammonia/MMBtu heat input (emission factor supplied

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by the permittee) by the maximum Btu rating. If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods.

Compliance with the annual emission limitation shall be determined by multiplying the hourly emission rate by the actual annual hours of operation and dividing by 2000 lbs/ton, plus any PTE from other DeMinimus or non-permitted sources located at the facility.

g. Emission Limitation

Formaldehyde emissions shall not exceed
 0.00071 lb/MMBtu actual heat input
 1.46 lbs/hr
 6.7 tons per rolling 12-month period

Applicable Compliance Method

Compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with the requirements specified in term and condition A.V.1. Compliance with the 12-month rolling emission limitation shall be demonstrated by multiplying the emission factor (lb(s)/cubic foot of fuel fired) established during the most recent emission tests that demonstrated that the emissions unit was in compliance by the actual quantity of fuel fired in this emissions unit during the calendar year (from term and condition A. III.1), plus any PTE from other DeMinimus or non-permitted sources located at the facility.

h. Emission Limitation

Visible particulate emissions from any stack shall not exceed 10 percent opacity as a six-minute average.

Applicable Compliance Method

Compliance with the visible emissions limitation established by this permit shall be determined by Method 9, 40 CFR Part 60 Appendix A.

VI. Miscellaneous Requirements

None.

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B. State Only Enforceable Section

I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
P001 - Seimens Westinghouse Power Corp. W501F, Natural gas fired turbine with dry low-NOx combusters, operating in simple cycle mode.	None	None

2. Additional Terms and Conditions

2.a

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install was evaluated based on actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the air 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 SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling:

Pollutant: Formaldehyde

TLV (ug/m³): 273 (Converted from the STEL)

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Maximum Hourly Emission Rate (lbs/hr): 1.46*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 4.01

MAGLC (ug/m³): 9.0

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Pollutant: Ammonia

TLV (ug/m³): 17000

Maximum Hourly Emission Rate (lbs/hr): 33.8*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 13.08

MAGLC (ug/m³): 414

* This was modeled for emissions units P001, P002, P003, P004, P005, and P006, combined.

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 specified in the above table;
- 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), 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,

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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. where 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.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P002 - Seimens Westinghouse Power Corp. W501F, Natural gas fired turbine with dry low-NOx combusters, operating in simple cycle mode.	OAC Rule 3745-31-05 (A)(3)
Modification to allow for using certified fuel flow monitors, exempting SU/SD emissions of NOx and CO from short term limits, modifying the SU/SD limit for CO without increasing the overall facility cap.	OAC rule 3745-31-05(A)(3)

		Applicable Emissions <u>Limitations/Control Measures</u>
	OAC Rule 3745-17-07(A)	
	40 CFR Part 75	
	OAC rule 3745-103	<p>The requirements of this rule also include compliance with the requirements of 40 CFR 60 Subpart GG, OAC rule 3745-18-06(F), 3745-17-11(B)(4), OAC rule 3745-17-07(A), and OAC 3745-31-05(D).</p>
OAC rule 3745-31-05(D)		<p>nitrogen oxides (NO_x) emissions shall not exceed 15 ppmvd at 15% Oxygen and 117 lbs /hr, except during periods of startup/shutdown (SU/SD);</p>
		<p>PM emissions shall not exceed: 0.00838 lb/MMBtu actual heat input, 17.3 lbs/hr;</p>
		<p>Sulfur dioxide (SO₂) shall not exceed 5.9 lbs/hr;</p>
		<p>Carbon monoxide (CO) emissions shall not exceed 119 lbs/hr, except during periods of SU/SD;</p>
		<p>Volatile organic compounds (VOC) emissions shall not exceed 3.2 lbs/hr;</p>
		<p>Formaldehyde emissions shall not exceed: 0.00071 lb/MMBtu actual heat input, 1.46 lbs/hr;</p>
40 CFR part 60, Subpart GG		<p>Visible particulate emissions from any stack shall not exceed 10 percent opacity as a six-minute average</p>
OAC rule 3745-18-06(F)		<p>STARTUP AND SHUTDOWN EMISSIONS (also see A.II.3.)</p>
OAC Rule 3745-17-11 (B)(4)		

Nitrogen oxides (NO_x) emissions at startup and shutdown shall be continuously monitored by certified CEMS and included in the facility cap of 245.0 tons per rolling 12-month period.

Nitrogen oxides (NO_x) emissions shall not exceed 245.0 tons per rolling 12-month period

Carbon monoxide (CO) emissions shall not exceed 2,087 lbs per startup and shutdown cycle. Each cycle shall be recorded and included in the facility cap of 245.0 tons per rolling 12-month period.

PM emissions shall not exceed 79.3 tons per rolling 12-month period

Carbon monoxide (CO) emissions shall not exceed 245.0 tons per rolling 12-month period

Formaldehyde emissions shall not exceed 6.7 tons per rolling 12-month period

operational restriction, see A.II. 1.

USE OF HOT SCR CONTROL TECHNOLOGY

see A.I.2.a.

see A.I.2.a.

Ammonia (NH₃) emissions shall not exceed 33.8 lbs/hr if/when Hot SCR (Selective Catalytic Reduction) is employed

see A.I.2.a.

See A.I.2.c.

See A.I.2.c.

TOTAL TONS PER ROLLING 12-MONTH PERIOD FACILITY CAP

Ammonia (NH₃) emissions shall not exceed 151.6 tons per rolling 12-month period, if Hot SCR is employed

Sulfur dioxide (SO₂) shall not exceed 26.6 tons per rolling 12-month period

Volatile organic compounds (VOC) emissions shall not exceed 20.1 tons per rolling 12-month period

Modification Issued: 9/9/2003**2. Additional Terms and Conditions**

- 2.a** The emissions limit based on this applicable rule is equivalent to or less stringent than the limit established pursuant to OAC rule 3745-31-05.
- 2.b** The emissions limits based on this applicable rule are equivalent to or less stringent than the limits established pursuant to OAC rule 3745-31-05. Except as provided for in the terms and conditions in this permit, the permittee is not exempt from meeting any additional requirements of 40 CFR Part 60, Subpart GG.
- 2.c** If the permittee is subject to the requirements of 40 CFR Part 75 concerning acid rain, the permittee shall ensure that any effected 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.
- 2.d** The permittee has requested as a voluntary option the ability to employ Hot SCR for the control of NO_x emissions. The permittee considers this technology to be innovative but as yet not proven to be economically feasible. If employed, the associated ammonia (NH₃) slip will maintain compliance with the Ohio EPA Air Toxics Policy.
- 2.e** In lieu of monitoring the stack gas flowrate as required by 40 CFR Part 60, Appendix B - Performance Specification 6, the permittee shall use certified NO_x CEMs in conjunction with a fuel flow monitor as described in 40 CFR Part 75, and certified CO CEMs in conjunction with a fuel flow monitor (in a manner similar to that used for NO_x) to meet these requirements. The relative accuracy requirements of Performance Specification 6 shall apply.

II. Operational Restrictions

- 1.** The permittee shall burn only natural gas in this emissions unit. The maximum sulfur content of the natural gas shall not exceed 2 grains per 100 standard cubic feet.
- 2.** Startup and Shut down shall be defined as when the unit is running at less than 70% of electric load, but under no circumstances shall startups exceed 37 minutes in duration and shutdowns shall not exceed 25 minutes in duration. Emissions of NO_x during startup and shutdown shall be continuously monitored and recorded by certified CEMs and totaled towards the facility cap. Emissions of CO during each startup/shutdown cycle shall be recorded and totaled to be included in the facility cap.

Pollutant	total lbs per complete startup/shutdown cycle
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In order to account for actual operation scenarios where the unit may shutdown before the startup cycle ends, Rolling Hills shall program the CEMs to record and total the CO emissions based on loads actually achieved during the startup/shutdown cycle. These emission limits were established during startup testing at the facility. The programming will be set to record:

<u>Load - Startup Cycle</u>	<u>CO(lbs)</u>
Acceleration and ramp to 10% load	653
10% - 20%	117
20% - 30%	145
30% - 40%	143
40% - 50%	70
50% - 60%	26
60% - 70%	7
<u>Load - Shutdown Cycle</u>	<u>CO(lbs)</u>
70% - 60%	2
60% - 50%	7
50% - 40%	48
40% - 30%	108
30% - 20%	139
20% - 10%	138
10% - 0%	484

3. To ensure enforceability during the first 12 calendar months following the startup of this facility, the permittee shall not exceed the monthly emissions restrictions specified in the following table:

Month	NO _x TPY/ CO TPY
1	50.0/50.0
1-2	100.0/100.0
1-3	150.0/150.0
1-4	200.0/200.0
1-5	245.0/245.0
1-6	245.0/245.0
1-7	245.0/245.0
1-8	245.0/245.0
1-9	245.0/245.0
1-10	245.0/245.0
1-11	245.0/245.0

1-12	245.0/245.0
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After the first 12 calendar months following the startup of the facility, compliance with the annual emissions restriction shall be based on a rolling, 12-month summation.

4. Continuous NO_x Monitoring - Certified Systems
Statement of Certification

Prior to the installation of the continuous NO_x monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2 for approval by the Ohio EPA, Central Office.

Within 60 days of start-up of this emissions unit, the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 2, and/or 40 CFR Part 75. Personnel from the Ohio EPA, Southeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Ohio EPA, Southeast District Office within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, Southeast District Office. Certification of the continuous NO_x monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of the appropriate sections of ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 2, and/or 40 CFR Part 75.

Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous NO_x monitoring system designed to ensure continuous valid and representative readings of NO_x emissions in units of the applicable standard. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and/or 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x monitoring system must be kept on site and available for inspection during regular office hours.

5. Continuous CO Monitoring - Certified Systems
Statement of Certification

Prior to the installation of the continuous CO monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 4 for approval by the Ohio EPA, Central Office.

Within 60 days of the start-up of this emissions unit, the permittee shall conduct certification tests of the continuous CO monitoring system pursuant to ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 4. Personnel from the Ohio EPA, Southeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to

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examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Ohio EPA, Southeast District Office within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, Southeast District Office. Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 4.

Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous CO monitoring system designed to ensure continuous valid and representative readings of CO. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.

6. Continuous O₂ or CO₂ Monitoring - Certified Systems
Statement of Certification

Prior to the installation of the continuous O₂ or CO₂ monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 3 for approval by the Ohio EPA, Central Office.

Within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit, the permittee shall conduct certification tests of such equipment pursuant to the appropriate sections of ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 3, and 40 CFR Part 75. Personnel from the Ohio EPA, Southeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Ohio EPA, Southeast District Office within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA District Office. Certification of the continuous O₂ or CO₂ monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of the appropriate sections of ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 3, and 40 CFR Part 75.

Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous O₂ or CO₂ monitoring system designed to ensure continuous valid and representative readings of O₂ or CO₂ emissions in units of the applicable standard. The plan shall follow the requirements of the appropriate sections of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a

logbook dedicated to the continuous O₂ or CO₂ monitoring system must be kept on site and available for inspection during regular office hours.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information for each emissions unit:
 - a. The natural gas usage rate for each month (in standard cubic feet).
2. The permittee shall maintain monthly records of the following information for each emissions unit:
 - a. Hours of operation of the turbine.
- b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the hours of operation.

Also, during the first 12 calendar months of operation following issuance of this permit, the permittee shall record the cumulative hours of operation for each calendar month.

3. The permittee shall operate and maintain existing equipment to continuously monitor and record NO_x from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements of the appropriate sections specified in 40 CFR Part 60.13 and/40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous NO_x monitoring system including, but not limited to, parts per million NO_x on an instantaneous (one-minute)

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basis, emissions of NO_x in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

4. The permittee shall operate and maintain equipment to continuously monitor and record CO from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 .

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one minute) basis, emissions of CO in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, annual, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

5. The permittee shall operate and maintain equipment to continuously monitor and record O₂ or CO₂ from this emissions unit in percent O₂ or CO₂. Such continuous monitoring and recording equipment shall comply with the requirements in the appropriate sections specified in 40 CFR Part 60.13 and 40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous O₂ or CO₂ monitoring system including, but not limited to, percent O₂ or CO₂ on an instantaneous (one-minute) basis, emissions of O₂ or CO₂ in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. The permittee shall install, operate and maintain equipment to continuously monitor and record the actual fuel flow to this emissions unit when the emissions unit is in operation. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 75. If the fuel flow monitoring and/or recording equipment is (are) not in service when the emissions unit is in operation, the permittee shall comply with the appropriate missing data procedures specified in 40 CFR Part 75.
7. The permittee shall monitor the sulfur content and gross calorific value of the fuel being fired in the combustion turbine. Fuel sampling and analysis shall be conducted according to the procedures and at the frequency specified by 40 CFR Part 75, Appendix D.
8. The permittee shall determine the hourly heat input rate to the combustion turbine from the fuel flow rate as determined in term A.III.6 and fuel gross calorific value as determined in term A.III.7. The heat input rate shall be calculated in accordance with the procedures in Section 5 of 40 CFR Part 75, Appendix F.

9. The permittee shall maintain records of the following information for each emissions unit:
- Number of startups, and the duration of each startup.
 - Number of shutdowns, and the duration of each shutdown.
10. The permittee shall maintain hourly records of the following information for this emissions unit:
- in lb(s)/hr emissions rate for NO_x and CO as obtained from terms III.3. and 4. based upon an hourly averaging period as allowed in the appropriate sections of 40 CFR Part 60.
11. The permittee shall maintain monthly records of the following information for this emissions unit:
- the operating hours;
 - during the first 12 calendar months of operation, the permittee shall record the cumulative operating hours for each calendar month; and
 - beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the operating hours.
 - during the first 12 calendar months of operation, the cumulative NO_x and CO emissions, in tons (i.e., $\frac{b \times \text{term } 10}{2,000}$, for each pollutant); and
 - beginning after the first 12 calendar months of operation, the rolling, 12-month NO_x and CO emissions, in tons (i.e., $\frac{c \times \text{term } 10}{2,000}$, for each pollutant).
12. In accordance with the provisions of 40 CFR Part 60, Subpart GG, the permittee has requested a Custom Fuel Monitoring Schedule(CFMS) for fuel sulfur content. USEPA, Region V granted approval of a CFMS in a letter to the permittee, dated June 17, 2003. The permittee shall comply with either the provisions of the CMFS or the schedule(s) contained in Subpart GG. The permittee shall implement the CMFS with the issuance of this permit as follows:
- Conduct fuel sulfur monitoring twice monthly (bi-weekly) for six months. If bi-weekly fuel sulfur content monitoring indicates compliance with limits at 40 CFR Part 60.333 (0.8 percent sulfur by weight) and shows little or no variability, the permittee may reduce fuel sulfur content monitoring to once per quarter.
 - Conduct fuel sulfur monitoring once per quarter for six quarters. If quarterly fuel sulfur content monitoring indicates compliance with limits at 40 CFR Part 60.333 (0.8 percent sulfur by weight) and shows little or no variability, the permittee may reduce fuel sulfur content monitoring to a semi-annual basis (first and third quarters).

- c. Conduct semi-annual monitoring of fuel sulfur content.

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- d. If sulfur analysis indicates non-compliance with limits at 40 CFR Part 60.333, the permittee must notify USEPA and the Ohio EPA Southeast District Office of the excess emissions. The permittee must also begin fuel sulfur content monitoring on a weekly basis while the CFMS is being reviewed by USEPA and/or Ohio EPA.
- e. If a change in the type of fuel or fuel supply/supplier occurs, the permittee must notify USEPA and the Ohio EPA Southeast District Office of the change(s). The permittee must also begin conducting fuel sulfur content monitoring on a weekly basis while the CFMS is being reviewed by USEPA and/or Ohio EPA.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurred.
2. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month emissions limitations and, for the first 12 calendar months of operation, all exceedances of the maximum allowable cumulative emissions limitations. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(2).
3. Pursuant to OAC rules 3745-15-04, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of NO_x values in excess of the applicable limits specified in 40 CFR Part 76 and any limitations specified in the terms and conditions of this permit or variance. These reports shall also contain the total NO_x emissions for the calendar quarter (in tons), including all data collected during start-up and shutdown periods and data generated pursuant to the missing data procedures specified in 40 CFR Part 75.

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting any continuous NO_x monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

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If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

4. Pursuant to OAC rules 3745-15-04, and ORC sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60.7. The summary shall be submitted to the Ohio EPA, Southeast District Office within 30 days following the end of each calendar quarter in a manner prescribed by the Director.
5. Pursuant to OAC rules 3745-15-04, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of all instances of CO values in excess of any applicable limitation(s) specified in OAC Chapter 3745-21, 40 CFR Part 60, or any limitation(s) specified in the terms and conditions of this permit, in units of the standard. These reports shall also contain the total CO emissions for the calendar quarter (in tons), including all data collected during start-up and shutdown periods and all data generated pursuant to the missing data procedures specified in 40 CFR Part 75.

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting any continuous CO monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be

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included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

6. Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting all instances of continuous O₂ or CO₂ monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly report. 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 the previous calendar quarter.
7. The permittee shall submit deviation (excursion) reports that identify any record which shows that the sulfur content of the natural gas exceeded 2 grains per standard cubic foot. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).
8. The permittee shall submit deviation (excursion) reports that identify each time when this emissions unit was not in compliance with the requirements of condition II.3. above. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).
9. In lieu of the excess emissions reports required under 40 CFR Part 60.334, the permittee shall submit excess emissions reports for emissions unit P001 in accordance with this permit.
10. This emissions unit is subject to the applicable provisions of Subpart GG of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60. The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to 40 CFR Part 60.7, 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. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

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Rolling Hills Generating Plant

PTI Application: ~~06-06206~~

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Facility ID: **0682000057**

Emissions Unit ID: P002

Ohio Environmental Protection Agency

DAPC - Permit Management Unit

P. O. Box 163669

Columbus, Ohio 43216-3669

and

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Ohio Environmental Protection Agency
Southeast District Office
Division of Air Pollution Control
2195 Front Street
Logan, Ohio 43138

V. 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 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the NO_x * and CO outlet concentration, and the mass emissions limitations for NO_x, CO, Formaldehyde, VOC and PM.
 - c. The following test method(s) shall be employed to demonstrate compliance with the above emissions limitations: for NO_x, Method 20 of 40 CFR Part 60, Appendix A; for PM, Method 5 of 40 CFR Part 60, Appendix A; for Formaldehyde, EPA Method 316; for VOC Method 25A of 40 CFR Part 60, Appendix A; and for CO Method 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
 - d. The testing shall be conducted while the emissions unit is operating at or near its maximum capacity unless otherwise specified or approved by Ohio EPA or local air agency.
 - e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southeast 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, Southeast District Office refusal to accept the results of the emission test(s).
 - f. Personnel from the Ohio EPA, Southeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to

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ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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- 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, Southeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Southeast District Office.

* Using the test methods and procedures required under 40 CFR Part 60.335.

2. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

a. Emission Limitation

NO_x emissions shall not exceed 15 ppmvd at 15% Oxygen
117.0 lbs/hr
245.0 tons per rolling 12-month period, including startups and shutdowns

Applicable Compliance Method

Initial compliance with the allowable outlet concentration, and the lbs/hr emission limitations shall be demonstrated by the performance testing as described in condition V.1 and continual compliance with those limitations shall be demonstrated by the use of the CEM in condition III.3. based upon an hourly averaging period as allowed in 40 CFR Part 60 or as an alternative method, the permittee may calculate the mass emission data for NO_x per 40 CFR Part 75, using heat input data derived from certified fuel flow monitor measurements. Compliance with the annual emission limitation shall be determined by the record keeping required in condition III. 1., 2., and 3, plus any PTE from other DeMinimus or non-permitted sources located at the facility. The 12-month rolling emissions associated with start-up and shut-down shall also be demonstrated by the use of CEM in condition III.3.

b. Emission Limitation

PM emissions shall not exceed

0.00838 lb/MMBtu actual heat input
17.3 lbs/hr
79.3tons per rolling 12-month period

Applicable Compliance Method

Compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with the requirements specified in term and condition A.V.1. Compliance with the annual emission limitation shall be demonstrated by multiplying the emission factor (lb(s)/cubic foot of fuel fired) established during the most recent emission tests that demonstrated that the emissions unit was in compliance by the actual quantity of fuel fired in this emissions unit during the 12-month period (from term and condition A. III.1), plus any PTE from other DeMinimus or non-permitted sources located at the facility.

c. Emission Limitation

SO₂ emissions shall not exceed
5.9 lbs/hr
26.6 tons per rolling 12-month period

Applicable Compliance Method

Compliance with the hourly emission limitation shall be determined by the record keeping required in condition III. 1., 2., and 7. If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the 12-month rolling emission limitation shall be determined by multiplying the hourly emission rate by the actual annual hours of operation and dividing by 2000 lbs/ton, plus any PTE from other DeMinimus or non-permitted sources located at the facility.

d. Emission Limitation

VOC emissions shall not exceed
3.2 lbs/hr
20.1 tons per rolling 12-month period

Applicable Compliance Method

Compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with the requirements specified in term and condition A.V.1. Compliance with the 12-month rolling emission limitation shall be demonstrated by multiplying the emission factor (lb(s)/cubic foot of fuel fired) established during the most recent emission tests that demonstrated that the emissions unit was in compliance by the actual quantity of fuel fired in this emissions unit during the calendar year (from term and condition A. III.1), plus any PTE from other DeMinimus or non-permitted sources located at the facility.

e. Emission Limitation

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CO emissions shall not exceed
119.0 lbs/hr
245.0 tons per rolling 12-month period, including 1209.5 lbs per start-up/shutdown cycle

Applicable Compliance Method

Initial compliance with the allowable outlet concentration, and the lbs/hr emission limitations shall be demonstrated by the performance testing as described in condition V.1 and continual compliance with those limitations shall be demonstrated by the use of the CEM in condition III.4. based upon an hourly averaging period as allowed in 40 CFR Part 60 or as an alternative method, the permittee may calculate the mass emission data for CO per 40 CFR Part 75, using heat input data derived from certified fuel flow monitor measurements. Compliance with the annual emission limitation shall be determined by the record keeping required in condition III. 1., 2., and 4, plus any PTE from other DeMinimus sources located at the facility. The 12-month rolling emissions associated with start-up and shut-down shall be determined by the record keeping required in condition III. 9. using the lbs/ start-up and shut-down values in condition II.3.

f. Emission Limitation

ammonia (NH₃) emissions shall not exceed
33.8 lbs/hr
151.6 tons per rolling 12-month period

Applicable Compliance Method

Compliance with the lbs/hr emission limitation shall be demonstrated by multiplying the emission factor of 0.0136 pound of ammonia/MMBtu heat input (emission factor supplied by the permittee) by the maximum Btu rating. If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the annual emission limitation shall be determined by multiplying the hourly emission rate by the actual annual hours of operation and dividing by 2000 lbs/ton, plus any PTE from other DeMinimus or non-permitted sources located at the facility.

g. Emission Limitation

Formaldehyde emissions shall not exceed
0.00071 lb/MMBtu actual heat input
1.46 lbs/hr

6.7 tons per rolling 12-month period

Applicable Compliance Method

Compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with the requirements specified in term and condition A.V.1. Compliance with the 12-month rolling emission limitation shall be demonstrated by multiplying the emission factor (lb(s)/cubic foot of fuel fired) established during the most recent emission tests that demonstrated that the emissions unit was in compliance by the actual quantity of fuel fired in this emissions unit during the calendar year (from term and condition A. III.1), plus any PTE from other DeMinimus or non-permitted sources located at the facility.

h. Emission Limitation

Visible particulate emissions from any stack shall not exceed 10 percent opacity as a six-minute average.

Applicable Compliance Method

Compliance with the visible emissions limitation established by this permit shall be determined by Method 9, 40 CFR Part 60 Appendix A.

VI. Miscellaneous Requirements

None.

Modification Issued: 9/9/2003**B. State Only Enforceable Section****I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
P002 - Seimens Westinghouse Power Corp. W501F, Natural gas fired turbine with dry low-NOx combusters, operating in simple cycle mode.	None	None

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install was evaluated based on actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the air 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 SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling:

Pollutant: Formaldehyde
TLV (ug/m³): 273 (Converted from the STEL)

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Maximum Hourly Emission Rate (lbs/hr): 1.46*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 4.01

MAGLC (ug/m³): 9.0

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Pollutant: Ammonia

TLV (ug/m³): 17000

Maximum Hourly Emission Rate (lbs/hr): 33.8*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 13.08

MAGLC (ug/m³): 414

* This was modeled for emissions units P001, P002, P003, P004, P005, and P006, combined.

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 specified in the above table;
- 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), 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. where 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.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P003 - Seimens Westinghouse Power Corp. W501F, Natural gas fired turbine with dry low-NOx combusters, operating in simple cycle mode.	OAC Rule 3745-31-05 (A)(3)
Modification to allow for using certified fuel flow monitors, exempting SU/SD emissions of NOx and CO from short term limits, modifying the SU/SD limit for CO without increasing the overall facility cap.	OAC rule 3745-31-05(A)(3)

		<u>Applicable Emissions Limitations/Control Measures</u>
	OAC Rule 3745-17-07(A)	
	40 CFR Part 75	
	OAC rule 3745-103	The requirements of this rule also include compliance with the requirements of 40 CFR 60 Subpart GG, OAC rule 3745-18-06(F), 3745-17-11(B)(4), OAC rule 3745-17-07(A), and OAC 3745-31-05(D).
	OAC rule 3745-31-05(D)	nitrogen oxides (NO _x) emissions shall not exceed 15 ppmvd at 15% Oxygen and 117 lbs /hr, except during periods of startup/shutdown (SU/SD);
		PM emissions shall not exceed: 0.00838 lb/MMBtu actual heat input, 17.3 lbs/hr;
		Sulfur dioxide (SO ₂) shall not exceed 5.9 lbs/hr;
		Carbon monoxide (CO) emissions shall not exceed 119 lbs/hr, except during periods of SU/SD;
		Volatile organic compounds (VOC) emissions shall not exceed 3.2 lbs/hr;
		Formaldehyde emissions shall not exceed: 0.00071 lb/MMBtu actual heat input, 1.46 lbs/hr;
	40 CFR part 60, Subpart GG	Visible particulate emissions from any stack shall not exceed 10 percent opacity as a six-minute average
	OAC rule 3745-18-06(F)	STARTUP AND SHUTDOWN EMISSIONS (also see A.II.3.)
	OAC Rule 3745-17-11 (B)(4)	

Nitrogen oxides (NO_x) emissions at startup and shutdown shall be continuously monitored by certified CEMS and included in the facility cap of 245.0 tons per rolling 12-month period.

Nitrogen oxides (NO_x) emissions shall not exceed 245.0 tons per rolling 12-month period

Carbon monoxide (CO) emissions shall not exceed 2,087 lbs per startup and shutdown cycle. Each cycle shall be recorded and included in the facility cap of 245.0 tons per rolling 12-month period.

PM emissions shall not exceed 79.3 tons per rolling 12-month period

Carbon monoxide (CO) emissions shall not exceed 245.0 tons per rolling 12-month period.

Formaldehyde emissions shall not exceed 6.7 tons per rolling 12-month period

operational restriction, see A.II. 1.

USE OF HOT SCR CONTROL TECHNOLOGY

see A.I.2.a.

see A.I.2.a.

Ammonia (NH₃) emissions shall not exceed 33.8 lbs/hr if/when Hot SCR (Selective Catalytic Reduction) is employed

see A.I.2.a.

See A.I.2.c.

See A.I.2.c.

TOTAL TONS PER ROLLING 12-MONTH PERIOD FACILITY CAP

Ammonia (NH₃) emissions shall not exceed 151.6 tons per rolling 12-month period, if Hot SCR is employed

Sulfur dioxide (SO₂) shall not exceed 26.6 tons per rolling 12-month period

Volatile organic compounds (VOC) emissions shall not exceed 20.1 tons per rolling 12-month period

Modification Issued: 9/9/2003**2. Additional Terms and Conditions**

- 2.a** The emissions limit based on this applicable rule is equivalent to or less stringent than the limit established pursuant to OAC rule 3745-31-05.
- 2.b** The emissions limits based on this applicable rule are equivalent to or less stringent than the limits established pursuant to OAC rule 3745-31-05. Except as provided for in the terms and conditions in this permit, the permittee is not exempt from meeting any additional requirements of 40 CFR Part 60, Subpart GG.
- 2.c** If the permittee is subject to the requirements of 40 CFR Part 75 concerning acid rain, the permittee shall ensure that any effected 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.
- 2.d** The permittee has requested as a voluntary option the ability to employ Hot SCR for the control of NO_x emissions. The permittee considers this technology to be innovative but as yet not proven to be economically feasible. If employed, the associated ammonia (NH₃) slip will maintain compliance with the Ohio EPA Air Toxics Policy.
- 2.e** In lieu of monitoring the stack gas flowrate as required by 40 CFR Part 60, Appendix B - Performance Specification 6, the permittee shall use certified NO_x CEMs in conjunction with a fuel flow monitor as described in 40 CFR Part 75, and certified CO CEMs in

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conjunction with a fuel flow monitor (in a manner similar to that used for NOx) to meet these requirements. The relative accuracy requirements of Performance Specification 6 shall apply.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit. The maximum sulfur content of the natural gas shall not exceed 2 grains per 100 standard cubic feet.
2. Startup and Shut down shall be defined as when the unit is running at less than 70% of electric load, but under no circumstances shall startups exceed 37 minutes in duration and shutdowns shall not exceed 25 minutes in duration. Emissions of NOx during startup and shutdown shall be continuously monitored and recorded by certified CEMs and totaled towards the facility cap. Emissions of CO during each startup/shutdown cycle shall be recorded and totaled to be included in the facility cap.

Pollutant	total lbs per complete startup/shutdown cycle
CO	2087

In order to account for actual operation scenarios where the unit may shutdown before the startup cycle ends, Rolling Hills shall program the CEMs to record and total the CO emissions based on loads actually achieved during the startup/shutdown cycle. These emission limits were established during startup testing at the facility. The programming will be set to record:

<u>Load - Startup Cycle</u>	<u>CO(lbs)</u>
Acceleration and ramp to 10% load	653
10% - 20%	117
20% - 30%	145
30% - 40%	143
40% - 50%	70
50% - 60%	26
60% - 70%	7
<u>Load - Shutdown Cycle</u>	<u>CO(lbs)</u>
70% - 60%	2
60% - 50%	7
50% - 40%	48
40% - 30%	108
30% - 20%	139
20% - 10%	138

10% - 0%

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3. To ensure enforceability during the first 12 calendar months following the startup of this facility, the permittee shall not exceed the monthly emissions restrictions specified in the following table:

Month	NO _x TPY/ CO TPY
1	50.0/50.0
1-2	100.0/100.0
1-3	150.0/150.0
1-4	200.0/200.0
1-5	245.0/245.0
1-6	245.0/245.0
1-7	245.0/245.0
1-8	245.0/245.0
1-9	245.0/245.0
1-10	245.0/245.0
1-11	245.0/245.0
1-12	245.0/245.0

After the first 12 calendar months following the startup of the facility, compliance with the annual emissions restriction shall be based on a rolling, 12-month summation.

4. Continuous NO_x Monitoring - Certified Systems
Statement of Certification

Prior to the installation of the continuous NO_x monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2 for approval by the Ohio EPA, Central Office.

Within 60 days of start-up of this emissions unit, the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 2, and/or 40 CFR Part 75. Personnel from the Ohio EPA, Southeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Ohio EPA, Southeast District Office within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, Southeast District Office. Certification of the continuous NO_x monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of the appropriate sections of ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 2, and/or 40 CFR Part 75.

Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous NO_x monitoring system designed to ensure

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continuous valid and representative readings of NO_x emissions in units of the applicable standard. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and/or 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x monitoring system must be kept on site and available for inspection during regular office hours.

5. Continuous CO Monitoring - Certified Systems
Statement of Certification

Prior to the installation of the continuous CO monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 4 for approval by the Ohio EPA, Central Office.

Within 60 days of the start-up of this emissions unit, the permittee shall conduct certification tests of the continuous CO monitoring system pursuant to ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 4. Personnel from the Ohio EPA, Southeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Ohio EPA, Southeast District Office within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, Southeast District Office. Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 4.

Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous CO monitoring system designed to ensure continuous valid and representative readings of CO. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.

6. Continuous O₂ or CO₂ Monitoring - Certified Systems
Statement of Certification

Prior to the installation of the continuous O₂ or CO₂ monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 3 for approval by the Ohio EPA, Central Office.

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Facility ID: **0682000057**

Emissions Unit ID: P003

Modification Issued: 9/9/2003

Within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit, the permittee shall conduct certification tests of such equipment pursuant to the appropriate sections of ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 3, and 40 CFR Part 75. Personnel from the Ohio EPA, Southeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Ohio EPA, Southeast District Office within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA District Office. Certification of the continuous O₂ or CO₂ monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of the appropriate sections of ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 3, and 40 CFR Part 75.

Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous O₂ or CO₂ monitoring system designed to ensure continuous valid and representative readings of O₂ or CO₂ emissions in units of the applicable standard. The plan shall follow the requirements of the appropriate sections of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous O₂ or CO₂ monitoring system must be kept on site and available for inspection during regular office hours.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information for each emissions unit:
 - a. The natural gas usage rate for each month (in standard cubic feet).
2. The permittee shall maintain monthly records of the following information for each emissions unit:
 - a. Hours of operation of the turbine.
- b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the hours of operation.

Also, during the first 12 calendar months of operation following issuance of this permit, the permittee shall record the cumulative hours of operation for each calendar month.

3. The permittee shall operate and maintain existing equipment to continuously monitor and record NO_x from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements of the appropriate sections specified in 40 CFR Part 60.13 and 40

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CFR Part 75.

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The permittee shall maintain records of all data obtained by the continuous NO_x monitoring system including, but not limited to, parts per million NO_x on an instantaneous (one-minute) basis, emissions of NO_x in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

4. The permittee shall operate and maintain equipment to continuously monitor and record CO from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 .

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one minute) basis, emissions of CO in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, annual, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

5. The permittee shall operate and maintain equipment to continuously monitor and record O₂ or CO₂ from this emissions unit in percent O₂ or CO₂. Such continuous monitoring and recording equipment shall comply with the requirements in the appropriate sections specified in 40 CFR Part 60.13 and 40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous O₂ or CO₂ monitoring system including, but not limited to, percent O₂ or CO₂ on an instantaneous (one-minute) basis, emissions of O₂ or CO₂ in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. The permittee shall install, operate and maintain equipment to continuously monitor and record the actual fuel flow to this emissions unit when the emissions unit is in operation. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 75. If the fuel flow monitoring and/or recording equipment is (are) not in service when the emissions unit is in operation, the permittee shall comply with the appropriate missing data procedures specified in 40 CFR Part 75.
7. The permittee shall monitor the sulfur content and gross calorific value of the fuel being fired in the combustion turbine. Fuel sampling and analysis shall be conducted according to the procedures and at the frequency specified by 40 CFR Part 75, Appendix D.
8. The permittee shall determine the hourly heat input rate to the combustion turbine from the fuel flow rate as determined in term A.III.6 and fuel gross calorific value as determined in term A.III.7. The heat input rate shall be calculated in accordance with the procedures in Section 5 of 40 CFR Part 75, Appendix F.

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Facility ID: **0682000057**

Emissions Unit ID: P003

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9. The permittee shall maintain records of the following information for each emissions unit:
 - a. Number of startups, and the duration of each startup.
 - b. Number of shutdowns, and the duration of each shutdown.
10. The permittee shall maintain hourly records of the following information for this emissions unit: in lb(s)/hr emissions rate for NO_x and CO as obtained from terms III.3. and 4. based upon an hourly averaging period as allowed in the appropriate sections of 40 CFR Part 60.
11. The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the operating hours;
 - b. during the first 12 calendar months of operation, the permittee shall record the cumulative operating hours for each calendar month; and
 - c. beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the operating hours.
 - d. during the first 12 calendar months of operation, the cumulative NO_x and CO emissions, in tons (i.e., $\frac{b \times \text{term } 10}{2,000}$, for each pollutant); and
 - e. beginning after the first 12 calendar months of operation, the rolling, 12-month NO_x and CO emissions, in tons (i.e., $\frac{c \times \text{term } 10}{2,000}$, for each pollutant).
12. In accordance with the provisions of 40 CFR Part 60, Subpart GG, the permittee has requested a Custom Fuel Monitoring Schedule(CFMS) for fuel sulfur content. USEPA, Region V granted approval of a CFMS in a letter to the permittee, dated June 17, 2003. The permittee shall comply with either the provisions of the CMFS or the schedule(s) contained in Subpart GG. The permittee shall implement the CMFS with the issuance of this permit as follows:
 - a. Conduct fuel sulfur monitoring twice monthly (bi-weekly) for six months. If bi-weekly fuel sulfur content monitoring indicates compliance with limits at 40 CFR Part 60.333 (0.8 percent sulfur by weight) and shows little or no variability, the permittee may reduce fuel sulfur content monitoring to once per quarter.
 - b. Conduct fuel sulfur monitoring once per quarter for six quarters. If quarterly fuel sulfur

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content monitoring indicates compliance with limits at 40 CFR Part 60.333 (0.8 percent sulfur by weight) and shows little or no variability, the permittee may reduce fuel sulfur content monitoring to a semi-annual basis (first and third quarters).

- c. Conduct semi-annual monitoring of fuel sulfur content.
- d. If sulfur analysis indicates non-compliance with limits at 40 CFR Part 60.333, the permittee must notify USEPA and the Ohio EPA Southeast District Office of the excess emissions. The permittee must also begin fuel sulfur content monitoring on a weekly basis while the CFMS is being reviewed by USEPA and/or Ohio EPA.
- e. If a change in the type of fuel or fuel supply/supplier occurs, the permittee must notify USEPA and the Ohio EPA Southeast District Office of the change(s). The permittee must also begin conducting fuel sulfur content monitoring on a weekly basis while the CFMS is being reviewed by USEPA and/or Ohio EPA.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurred.
2. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month emissions limitations and, for the first 12 calendar months of operation, all exceedances of the maximum allowable cumulative emissions limitations. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(2).
3. Pursuant to OAC rules 3745-15-04, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of NO_x values in excess of the applicable limits specified in 40 CFR Part 76 and any limitations specified in the terms and conditions of this permit or variance. These reports shall also contain the total NO_x emissions for the calendar quarter (in tons), including all data collected during start-up and shutdown periods and data generated pursuant to the missing data procedures specified in 40 CFR Part 75.

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting any continuous NO_x monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be

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included in the quarterly report.

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If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

4. Pursuant to OAC rules 3745-15-04, and ORC sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60.7. The summary shall be submitted to the Ohio EPA, Southeast District Office within 30 days following the end of each calendar quarter in a manner prescribed by the Director.
5. Pursuant to OAC rules 3745-15-04, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of all instances of CO values in excess of any applicable limitation(s) specified in OAC Chapter 3745-21, 40 CFR Part 60, or any limitation(s) specified in the terms and conditions of this permit, in units of the standard. These reports shall also contain the total CO emissions for the calendar quarter (in tons), including all data collected during start-up and shutdown periods and data generated pursuant to the missing data procedures specified in 40 CFR Part 75.

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting any continuous CO monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report. These quarterly excess emission reports shall be submitted by

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January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

6. Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting all instances of continuous O₂ or CO₂ monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly report. 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 the previous calendar quarter.
7. The permittee shall submit deviation (excursion) reports that identify any record which shows that the sulfur content of the natural gas exceeded 2 grains per standard cubic foot. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).
8. The permittee shall submit deviation (excursion) reports that identify each time when this emissions unit was not in compliance with the requirements of condition II.3. above. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).
9. In lieu of the excess emissions reports required under 40 CFR Part 60.334, the permittee shall submit excess emissions reports for emissions unit P001 in accordance with this permit.
10. This emissions unit is subject to the applicable provisions of Subpart GG of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60. The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to 40 CFR Part 60.7, 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. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P. O. Box 163669
Columbus, Ohio 43216-3669

and

Ohio Environmental Protection Agency
Southeast District Office
Division of Air Pollution Control
2195 Front Street
Logan, Ohio 43138

V. 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 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the NO_x and CO outlet concentration, and the mass emissions limitations for NO_x, * CO, Formaldehyde, VOC and PM.
 - c. The following test method(s) shall be employed to demonstrate compliance with the above emissions limitations: for NO_x, Method 20 of 40 CFR Part 60, Appendix A; for PM, Method 5 of 40 CFR Part 60, Appendix A; for Formaldehyde, EPA Method 316; for VOC Method 25A of 40 CFR Part 60, Appendix A; and for CO Method 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
 - d. The testing shall be conducted while the emissions unit is operating at or near its maximum capacity unless otherwise specified or approved by Ohio EPA or local air agency.
 - e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southeast 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, Southeast District Office refusal to accept the results of the emission test(s).

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- f. Personnel from the Ohio EPA, Southeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- 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, Southeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Southeast District Office.

* Using the test methods and procedures required under 40 CFR Part 60.335.

- 2. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

- a. Emission Limitation

NO_x emissions shall not exceed 15 ppmvd at 15% Oxygen
117.0 lbs/hr
245.0 tons per rolling 12-month period, including startups and shutdowns

Applicable Compliance Method

Initial compliance with the allowable outlet concentration, and the lbs/hr emission limitations shall be demonstrated by the performance testing as described in condition V.1 and continual compliance with those limitations shall be demonstrated by the use of the CEM in condition III.3. based upon an hourly averaging period as allowed in 40 CFR Part 60 or as an alternative method, the permittee may calculate the mass emission data for NO_x per 40 CFR Part 75, using heat input data derived from certified fuel flow monitor measurements. Compliance with the annual emission limitation shall be determined by the record keeping required in condition III. 1., 2., and 3, plus any PTE from other DeMinimus or non-permitted sources located at the facility. The 12-month rolling emissions associated with start-up and shut-down shall also be demonstrated by the use of CEM in condition III.3.

- b. Emission Limitation

PM emissions shall not exceed

0.00838 lb/MMBtu actual heat input
17.3 lbs/hr
79.3tons per rolling 12-month period

Applicable Compliance Method

Compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with the requirements specified in term and condition A.V.1. Compliance with the annual emission limitation shall be demonstrated by multiplying the emission factor (lb(s)/cubic foot of fuel fired) established during the most recent emission tests that demonstrated that the emissions unit was in compliance by the actual quantity of fuel fired in this emissions unit during the 12-month period (from term and condition A. III.1), plus any PTE from other DeMinimus or non-permitted sources located at the facility.

c. Emission Limitation

SO₂ emissions shall not exceed
5.9 lbs/hr
26.6 tons per rolling 12-month period

Applicable Compliance Method

Compliance with the hourly emission limitation shall be determined by the record keeping required in condition III. 1., 2., and 7. If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the 12-month rolling emission limitation shall be determined by multiplying the hourly emission rate by the actual annual hours of operation and dividing by 2000 lbs/ton, plus any PTE from other DeMinimus or non-permitted sources located at the facility.

d. Emission Limitation

VOC emissions shall not exceed
3.2 lbs/hr
20.1 tons per rolling 12-month period

Applicable Compliance Method

Compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with the requirements specified in term and condition A.V.1. Compliance with the 12-month rolling emission limitation shall be demonstrated by multiplying the emission factor (lb(s)/cubic foot of fuel fired) established during the most recent emission tests that demonstrated that the emissions unit was in compliance by the

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actual quantity of fuel fired in this emissions unit during the calendar year (from term and condition A. III.1), plus any PTE from other DeMinimus or non-permitted sources located at the facility.

e. Emission Limitation

CO emissions shall not exceed

119.0 lbs/hr

245.0 tons per rolling 12-month period, including 1209.5 lbs per start-up/shutdown cycle

Modification Issued: 9/9/2003Applicable Compliance Method

Initial compliance with the allowable outlet concentration, and the lbs/hr emission limitations shall be demonstrated by the performance testing as described in condition V.1 and continual compliance with those limitations shall be demonstrated by the use of the CEM in condition III.4. based upon an hourly averaging period as allowed in 40 CFR Part 60 or as an alternative method, the permittee may calculate the mass emission data for CO per 40 CFR Part 75, using heat input data derived from certified fuel flow monitor measurements. Compliance with the annual emission limitation shall be determined by the record keeping required in condition III. 1., 2., and 4, plus any PTE from other DeMinimus sources located at the facility. The 12-month rolling emissions associated with start-up and shut-down shall be determined by the record keeping required in condition III. 9. using the lbs/ start-up and shut-down values in condition II.3.

f. Emission Limitation

ammonia (NH₃) emissions shall not exceed
33.8 lbs/hr
151.6 tons per rolling 12-month period

Applicable Compliance Method

Compliance with the lbs/hr emission limitation shall be demonstrated by multiplying the emission factor of 0.0136 pound of ammonia/MMBtu heat input (emission factor supplied by the permittee) by the maximum Btu rating. If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the annual emission limitation shall be determined by multiplying the hourly emission rate by the actual annual hours of operation and dividing by 2000 lbs/ton, plus any PTE from other DeMinimus or non-permitted sources located at the facility.

g. Emission Limitation

Formaldehyde emissions shall not exceed
0.00071 lb/MMBtu actual heat input
1.46 lbs/hr
6.7 tons per rolling 12-month period

Applicable Compliance Method

Compliance with the hourly emission limitation shall be demonstrated through emission

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tests performed in accordance with the requirements specified in term and condition A.V.1. Compliance with the 12-month rolling emission limitation shall be demonstrated by multiplying the emission factor (lb(s)/cubic foot of fuel fired) established during the most recent emission tests that demonstrated that the emissions unit was in compliance by the actual quantity of fuel fired in this emissions unit during the calendar year (from term and condition A. III.1), plus any PTE from other DeMinimus or non-permitted sources located at the facility.

h. Emission Limitation

Visible particulate emissions from any stack shall not exceed 10 percent opacity as a six-minute average.

Applicable Compliance Method

Compliance with the visible emissions limitation established by this permit shall be determined by Method 9, 40 CFR Part 60 Appendix A.

VI. Miscellaneous Requirements

None.

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B. State Only Enforceable Section

I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
P003 - Seimens Westinghouse Power Corp. W501F, Natural gas fired turbine with dry low-NOx combusters, operating in simple cycle mode.	None	None

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install was evaluated based on actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the air 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 SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling:

Pollutant: Formaldehyde
TLV (ug/m³): 273 (Converted from the STEL)

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Maximum Hourly Emission Rate (lbs/hr): 1.46*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 4.01

MAGLC (ug/m³): 9.0

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Pollutant: Ammonia

TLV (ug/m3): 17000

Maximum Hourly Emission Rate (lbs/hr): 33.8*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 13.08

MAGLC (ug/m3): 414

* This was modeled for emissions units P001, P002, P003, P004, P005, and P006, combined.

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 specified in the above table;
- 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), 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,

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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. where 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.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P004 - Seimens Westinghouse Power Corp. W501F, Natural gas fired turbine with dry low-NOx combusters, operating in simple cycle mode.	OAC Rule 3745-31-05 (A)(3)
Modification to allow for using certified fuel flow monitors, exempting SU/SD emissions of NOx and CO from short term limits, modifying the SU/SD limit for CO without increasing the overall facility cap.	OAC rule 3745-31-05(A)(3)

		<u>Applicable Emissions Limitations/Control Measures</u>
	OAC Rule 3745-17-07(A)	
	40 CFR Part 75	
	OAC rule 3745-103	The requirements of this rule also include compliance with the requirements of 40 CFR 60 Subpart GG, OAC rule 3745-18-06(F), 3745-17-11(B)(4), OAC rule 3745-17-07(A), and OAC 3745-31-05(D).
OAC rule 3745-31-05(D)		Nitrogen oxides (NO _x) emissions shall not exceed 15 ppmvd at 15% Oxygen and 117 lbs /hr, except during periods of startup/shutdown (SU/SD);
		PM emissions shall not exceed: 0.00838 lb/MMBtu actual heat input, 17.3 lbs/hr;
		Sulfur dioxide (SO ₂) shall not exceed 5.9 lbs/hr;
		Carbon monoxide (CO) emissions shall not exceed 119 lbs/hr, except during periods of SU/SD;
		Volatile organic compounds (VOC) emissions shall not exceed 3.2 lbs/hr;
		Formaldehyde emissions shall not exceed: 0.00071 lb/MMBtu actual heat input, 1.46 lbs/hr;
40 CFR part 60, Subpart GG		Visible particulate emissions from any stack shall not exceed 10 percent opacity as a six-minute average
OAC rule 3745-18-06(F)		STARTUP AND SHUTDOWN EMISSIONS (also see A.II.3.)
OAC Rule 3745-17-11 (B)(4)		

Nitrogen oxides (NO_x) emissions at startup and shutdown shall be continuously monitored by certified CEMS and included in the facility cap of 245.0 tons per rolling 12-month period.

Carbon monoxide (CO) emissions shall not exceed 2,087 lbs per startup and shutdown cycle. Each cycle shall be recorded and included in the facility cap of 245.0 tons per rolling 12-month period.

USE OF HOT SCR CONTROL TECHNOLOGY

Ammonia (NH₃) emissions shall not exceed 33.8 lbs/hr if/when Hot SCR (Selective Catalytic Reduction) is employed

TOTAL TONS PER ROLLING 12-MONTH PERIOD FACILITY CAP

Ammonia (NH₃) emissions shall not exceed 151.6 tons per rolling 12-month period, if Hot SCR is employed

Sulfur dioxide (SO₂) shall not exceed 26.6 tons per rolling 12-month period

Volatile organic compounds (VOC) emissions shall not exceed 20.1 tons per rolling 12-month period

Nitrogen oxides (NO_x) emissions shall not exceed 245.0 tons per rolling 12-month period

PM emissions shall not exceed 79.3 tons per rolling 12-month period

Carbon monoxide (CO) emissions shall not exceed 245.0 tons per rolling 12-month period

Formaldehyde emissions shall not exceed 6.7 tons per rolling 12-month period

operational restriction, see A.II. 1.

see A.I.2.a.

see A.I.2.a.

see A.I.2.a.

See A.I.2.c.

See A.I.2.c.

Modification Issued: 9/9/2003**2. Additional Terms and Conditions**

- 2.a** The emissions limit based on this applicable rule is equivalent to or less stringent than the limit established pursuant to OAC rule 3745-31-05.
- 2.b** The emissions limits based on this applicable rule are equivalent to or less stringent than the limits established pursuant to OAC rule 3745-31-05. Except as provided for in the terms and conditions in this permit, the permittee is not exempt from meeting any additional requirements of 40 CFR Part 60, Subpart GG.
- 2.c** If the permittee is subject to the requirements of 40 CFR Part 75 concerning acid rain, the permittee shall ensure that any effected 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.
- 2.d** The permittee has requested as a voluntary option the ability to employ Hot SCR for the control of NO_x emissions. The permittee considers this technology to be innovative but as yet not proven to be economically feasible. If employed, the associated ammonia (NH₃) slip will maintain compliance with the Ohio EPA Air Toxics Policy.
- 2.e** In lieu of monitoring the stack gas flowrate as required by 40 CFR Part 60, Appendix B - Performance Specification 6, the permittee shall use certified NO_x CEMs in conjunction with a fuel flow monitor as described in 40 CFR Part 75, and certified CO CEMs in

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conjunction with a fuel flow monitor (in a manner similar to that used for NOx) to meet these requirements. The relative accuracy requirements of Performance Specification 6 shall apply.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit. The maximum sulfur content of the natural gas shall not exceed 2 grains per 100 standard cubic feet.
2. Startup and Shut down shall be defined as when the unit is running at less than 70% of electric load, but under no circumstances shall startups exceed 37 minutes in duration and shutdowns shall not exceed 25 minutes in duration. Emissions of NOx during startup and shutdown shall be continuously monitored and recorded by certified CEMs and totaled towards the facility cap. Emissions of CO during each startup/shutdown cycle shall be recorded and totaled to be included in the facility cap.

Pollutant	total lbs per complete startup/shutdown cycle
CO	2087

In order to account for actual operation scenarios where the unit may shutdown before the startup cycle ends, Rolling Hills shall program the CEMs to record and total the CO emissions based on loads actually achieved during the startup/shutdown cycle. These emission limits were established during startup testing at the facility. The programming will be set to record:

<u>Load - Startup Cycle</u>	<u>CO(lbs)</u>
Acceleration and ramp to 10% load	653
10% - 20%	117
20% - 30%	145
30% - 40%	143
40% - 50%	70
50% - 60%	26
60% - 70%	7
<u>Load - Shutdown Cycle</u>	<u>CO(lbs)</u>
70% - 60%	2
60% - 50%	7
50% - 40%	48
40% - 30%	108
30% - 20%	139
20% - 10%	138

10% - 0%

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3. To ensure enforceability during the first 12 calendar months following the startup of this facility, the permittee shall not exceed the monthly emissions restrictions specified in the following table:

Month	NO _x TPY/ CO TPY
1	50.0/50.0
1-2	100.0/100.0
1-3	150.0/150.0
1-4	200.0/200.0
1-5	245.0/245.0
1-6	245.0/245.0
1-7	245.0/245.0
1-8	245.0/245.0
1-9	245.0/245.0
1-10	245.0/245.0
1-11	245.0/245.0
1-12	245.0/245.0

After the first 12 calendar months following the startup of the facility, compliance with the annual emissions restriction shall be based on a rolling, 12-month summation.

4. Continuous NO_x Monitoring - Certified Systems
Statement of Certification

Prior to the installation of the continuous NO_x monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2 for approval by the Ohio EPA, Central Office.

Within 60 days of start-up of this emissions unit, the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 2, and/or 40 CFR Part 75. Personnel from the Ohio EPA, Southeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Ohio EPA, Southeast District Office within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, Southeast District Office. Certification of the continuous NO_x monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of the appropriate sections of ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 2, and/or 40 CFR Part 75.

Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous NO_x monitoring system designed to ensure

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continuous valid and representative readings of NO_x emissions in units of the applicable standard. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and/or 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x monitoring system must be kept on site and available for inspection during regular office hours.

5. Continuous CO Monitoring - Certified Systems
Statement of Certification

Prior to the installation of the continuous CO monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 4 for approval by the Ohio EPA, Central Office.

Within 60 days of the start-up of this emissions unit, the permittee shall conduct certification tests of the continuous CO monitoring system pursuant to ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 4. Personnel from the Ohio EPA, Southeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Ohio EPA, Southeast District Office within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, Southeast District Office. Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 4.

Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous CO monitoring system designed to ensure continuous valid and representative readings of CO. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.

6. Continuous O₂ or CO₂ Monitoring - Certified Systems
Statement of Certification

Prior to the installation of the continuous O₂ or CO₂ monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 3 for approval by the Ohio EPA, Central Office.

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Facility ID: **0682000057**

Emissions Unit ID: P004

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Within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit, the permittee shall conduct certification tests of such equipment pursuant to the appropriate sections of ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 3, and 40 CFR Part 75. Personnel from the Ohio EPA, Southeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Ohio EPA, Southeast District Office within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA District Office. Certification of the continuous O₂ or CO₂ monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of the appropriate sections of ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 3, and 40 CFR Part 75.

Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous O₂ or CO₂ monitoring system designed to ensure continuous valid and representative readings of O₂ or CO₂ emissions in units of the applicable standard. The plan shall follow the requirements of the appropriate sections of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous O₂ or CO₂ monitoring system must be kept on site and available for inspection during regular office hours.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information for each emissions unit:
 - a. The natural gas usage rate for each month (in standard cubic feet).
2. The permittee shall maintain monthly records of the following information for each emissions unit:
 - a. Hours of operation of the turbine.
- b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the hours of operation.

Also, during the first 12 calendar months of operation following issuance of this permit, the permittee shall record the cumulative hours of operation for each calendar month.

3. The permittee shall operate and maintain existing equipment to continuously monitor and record NO_x from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements of the appropriate sections specified in 40 CFR Part 60.13 and 40

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CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous NO_x monitoring system including, but not limited to, parts per million NO_x on an instantaneous (one-minute) basis, emissions of NO_x in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

4. The permittee shall operate and maintain equipment to continuously monitor and record CO from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 .

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one minute) basis, emissions of CO in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, annual, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

5. The permittee shall operate and maintain equipment to continuously monitor and record O₂ or CO₂ from this emissions unit in percent O₂ or CO₂. Such continuous monitoring and recording equipment shall comply with the requirements in the appropriate sections specified in 40 CFR Part 60.13 and 40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous O₂ or CO₂ monitoring system including, but not limited to, percent O₂ or CO₂ on an instantaneous (one-minute) basis, emissions of O₂ or CO₂ in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. The permittee shall install, operate and maintain equipment to continuously monitor and record the actual fuel flow to this emissions unit when the emissions unit is in operation. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 75. If the fuel flow monitoring and/or recording equipment is (are) not in service when the emissions unit is in operation, the permittee shall comply with the appropriate missing data procedures specified in 40 CFR Part 75.
7. The permittee shall monitor the sulfur content and gross calorific value of the fuel being fired in the combustion turbine. Fuel sampling and analysis shall be conducted according to the procedures and at the frequency specified by 40 CFR Part 75, Appendix D.
8. The permittee shall determine the hourly heat input rate to the combustion turbine from the fuel flow rate as determined in term A.III.6 and fuel gross calorific value as determined in term

A.III.7. The heat input rate shall be calculated in accordance with the procedures in Section 5 of 40 CFR Part 75, Appendix F.

9. The permittee shall maintain records of the following information for each emissions unit:
 - a. Number of startups, and the duration of each startup.
 - b. Number of shutdowns, and the duration of each shutdown.
10. The permittee shall maintain hourly records of the following information for this emissions unit: in lb(s)/hr emissions rate for NO_x and CO as obtained from terms III.3. and 4. based upon an hourly averaging period as allowed in the appropriate sections of 40 CFR Part 60.
11. The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the operating hours;
 - b. during the first 12 calendar months of operation, the permittee shall record the cumulative operating hours for each calendar month; and
 - c. beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the operating hours.
 - d. during the first 12 calendar months of operation, the cumulative NO_x and CO emissions, in tons (i.e., $\frac{b \times \text{term } 10}{2,000}$, for each pollutant); and
 - e. beginning after the first 12 calendar months of operation, the rolling, 12-month NO_x and CO emissions, in tons (i.e., $\frac{c \times \text{term } 10}{2,000}$, for each pollutant).
12. In accordance with the provisions of 40 CFR Part 60, Subpart GG, the permittee has requested a Custom Fuel Monitoring Schedule(CFMS) for fuel sulfur content. USEPA, Region V granted approval of a CFMS in a letter to the permittee, dated June 17, 2003. The permittee shall comply with either the provisions of the CMFS or the schedule(s) contained in Subpart GG. The permittee shall implement the CMFS with the issuance of this permit as follows:
 - a. Conduct fuel sulfur monitoring twice monthly (bi-weekly) for six months. If bi-weekly fuel sulfur content monitoring indicates compliance with limits at 40 CFR Part 60.333 (0.8 percent sulfur by weight) and shows little or no variability, the permittee may reduce fuel sulfur content monitoring to once per quarter.
 - b. Conduct fuel sulfur monitoring once per quarter for six quarters. If quarterly fuel sulfur content monitoring indicates compliance with limits at 40 CFR Part 60.333 (0.8 percent sulfur by weight) and shows little or no variability, the permittee may reduce fuel sulfur

content monitoring to a semi-annual basis (first and third quarters).

- c. Conduct semi-annual monitoring of fuel sulfur content.
- d. If sulfur analysis indicates non-compliance with limits at 40 CFR Part 60.333, the permittee must notify USEPA and the Ohio EPA Southeast District Office of the excess emissions. The permittee must also begin fuel sulfur content monitoring on a weekly basis while the CFMS is being reviewed by USEPA and/or Ohio EPA.
- e. If a change in the type of fuel or fuel supply/supplier occurs, the permittee must notify USEPA and the Ohio EPA Southeast District Office of the change(s). The permittee must also begin conducting fuel sulfur content monitoring on a weekly basis while the CFMS is being reviewed by USEPA and/or Ohio EPA.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurred.
2. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month emissions limitations and, for the first 12 calendar months of operation, all exceedances of the maximum allowable cumulative emissions limitations. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(2).
3. Pursuant to OAC rules 3745-15-04, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of NO_x values in excess of the applicable limits specified in 40 CFR Part 76 and any limitations specified in the terms and conditions of this permit or variance. These reports shall also contain the total NO_x emissions for the calendar quarter (in tons), including all data collected during start-up and shutdown periods and data generated pursuant to the missing data procedures specified in 40 CFR Part 75.

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting any continuous NO_x monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

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If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

4. Pursuant to OAC rules 3745-15-04, and ORC sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60.7. The summary shall be submitted to the Ohio EPA, Southeast District Office within 30 days following the end of each calendar quarter in a manner prescribed by the Director.
5. Pursuant to OAC rules 3745-15-04, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of all instances of CO values in excess of any applicable limitation(s) specified in OAC Chapter 3745-21, 40 CFR Part 60, or any limitation(s) specified in the terms and conditions of this permit, in units of the standard. These reports shall also contain the total CO emissions for the calendar quarter (in tons), including all data collected during start-up and shutdown periods and data generated pursuant to the missing data procedures specified in 40 CFR Part 75.

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting any continuous CO monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report. These quarterly excess emission reports shall be submitted by

Emissions Unit ID: P004

January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

6. Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting all instances of continuous O₂ or CO₂ monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit

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malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly report. 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 the previous calendar quarter.

7. The permittee shall submit deviation (excursion) reports that identify any record which shows that the sulfur content of the natural gas exceeded 2 grains per standard cubic foot. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).
8. The permittee shall submit deviation (excursion) reports that identify each time when this emissions unit was not in compliance with the requirements of condition II.3. above. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).
9. In lieu of the excess emissions reports required under 40 CFR Part 60.334, the permittee shall submit excess emissions reports for emissions unit P001 in accordance with this permit.
10. This emissions unit is subject to the applicable provisions of Subpart GG of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60. The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to 40 CFR Part 60.7, 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. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P. O. Box 163669
Columbus, Ohio 43216-3669

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Rolling Hills Generating Plant

PTI Application: ~~06 06206~~

Modif

Facility ID: **0682000057**

Emissions Unit ID: P004

and

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Ohio Environmental Protection Agency
Southeast District Office
Division of Air Pollution Control
2195 Front Street
Logan, Ohio 43138

V. 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 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the NO_x and CO outlet concentration, and the mass emissions limitations for NO_x, * CO, Formaldehyde, VOC and PM.
 - c. The following test method(s) shall be employed to demonstrate compliance with the above emissions limitations: for NO_x, Method 20 of 40 CFR Part 60, Appendix A; for PM, Method 5 of 40 CFR Part 60, Appendix A; for Formaldehyde, EPA Method 316; for VOC Method 25A of 40 CFR Part 60, Appendix A; and for CO Method 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
 - d. The testing shall be conducted while the emissions unit is operating at or near its maximum capacity unless otherwise specified or approved by Ohio EPA or local air agency.
 - e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southeast 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, Southeast District Office refusal to accept the results of the emission test(s).
 - f. Personnel from the Ohio EPA, Southeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to

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ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.

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- 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, Southeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Southeast District Office.

* Using the test methods and procedures required under 40 CFR Part 60.335.

2. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

a. Emission Limitation

NO_x emissions shall not exceed 15 ppmvd at 15% Oxygen
117.0 lbs/hr
245.0 tons per rolling 12-month period, including startups and shutdowns

Applicable Compliance Method

Initial compliance with the allowable outlet concentration, and the lbs/hr emission limitations shall be demonstrated by the performance testing as described in condition V.1 and continual compliance with those limitations shall be demonstrated by the use of the CEM in condition III.3. based upon an hourly averaging period as allowed in 40 CFR Part 60 or as an alternative method, the permittee may calculate the mass emission data for NO_x per 40 CFR Part 75, using heat input data derived from certified fuel flow monitor measurements. Compliance with the annual emission limitation shall be determined by the record keeping required in condition III. 1., 2., and 3, plus any PTE from other DeMinimus or non-permitted sources located at the facility. The 12-month rolling emissions associated with start-up and shut-down shall also be demonstrated by the use of CEM in condition III.3..3.

b. Emission Limitation

PM emissions shall not exceed

0.00838 lb/MMBtu actual heat input
17.3 lbs/hr
79.3tons per rolling 12-month period

Applicable Compliance Method

Compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with the requirements specified in term and condition A.V.1. Compliance with the annual emission limitation shall be demonstrated by multiplying the emission factor (lb(s)/cubic foot of fuel fired) established during the most recent emission tests that demonstrated that the emissions unit was in compliance by the actual quantity of fuel fired in this emissions unit during the 12-month period (from term and condition A. III.1), plus any PTE from other DeMinimus or non-permitted sources located at the facility.

c. Emission Limitation

SO₂ emissions shall not exceed
5.9 lbs/hr
26.6 tons per rolling 12-month period

Applicable Compliance Method

Compliance with the hourly emission limitation shall be determined by the record keeping required in condition III. 1., 2., and 7. If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the 12-month rolling emission limitation shall be determined by multiplying the hourly emission rate by the actual annual hours of operation and dividing by 2000 lbs/ton, plus any PTE from other DeMinimus or non-permitted sources located at the facility.

d. Emission Limitation

VOC emissions shall not exceed
3.2 lbs/hr
20.1 tons per rolling 12-month period

Applicable Compliance Method

Compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with the requirements specified in term and condition A.V.1. Compliance with the 12-month rolling emission limitation shall be demonstrated by multiplying the emission factor (lb(s)/cubic foot of fuel fired) established during the most recent emission tests that demonstrated that the emissions unit was in compliance by the actual quantity of fuel fired in this emissions unit during the calendar year (from term and condition A. III.1), plus any PTE from other DeMinimus or non-permitted sources located at the facility.

e. Emission Limitation

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CO emissions shall not exceed

119.0 lbs/hr

245.0 tons per rolling 12-month period, including 1209.5 lbs per start-up/shutdown cycle

Modification Issued: 9/9/2003Applicable Compliance Method

Initial compliance with the allowable outlet concentration, and the lbs/hr emission limitations shall be demonstrated by the performance testing as described in condition V.1 and continual compliance with those limitations shall be demonstrated by the use of the CEM in condition III.4. based upon an hourly averaging period as allowed in 40 CFR Part 60 or as an alternative method, the permittee may calculate the mass emission data for CO per 40 CFR Part 75, using heat input data derived from certified fuel flow monitor measurements. Compliance with the annual emission limitation shall be determined by the record keeping required in condition III. 1., 2., and 4, plus any PTE from other DeMinimus sources located at the facility. The 12-month rolling emissions associated with start-up and shut-down shall be determined by the record keeping required in condition III. 9. using the lbs/ start-up and shut-down values in condition II.3.

f. Emission Limitation

ammonia (NH₃) emissions shall not exceed
33.8 lbs/hr
151.6 tons per rolling 12-month period

Applicable Compliance Method

Compliance with the lbs/hr emission limitation shall be demonstrated by multiplying the emission factor of 0.0136 pound of ammonia/MMBtu heat input (emission factor supplied by the permittee) by the maximum Btu rating. If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the annual emission limitation shall be determined by multiplying the hourly emission rate by the actual annual hours of operation and dividing by 2000 lbs/ton, plus any PTE from other DeMinimus or non-permitted sources located at the facility.

g. Emission Limitation

Formaldehyde emissions shall not exceed
0.00071 lb/MMBtu actual heat input
1.46 lbs/hr
6.7 tons per rolling 12-month period

Applicable Compliance Method

Compliance with the hourly emission limitation shall be demonstrated through emission

Emissions Unit ID: P004

tests performed in accordance with the requirements specified in term and condition A.V.1. Compliance with the 12-month rolling emission limitation shall be demonstrated by multiplying the emission factor (lb(s)/cubic foot of fuel fired) established during the most recent emission tests that demonstrated that the emissions unit was in compliance by the actual quantity of fuel fired in this emissions unit during the calendar year (from term and condition A. III.1), plus any PTE from other DeMinimus or non-permitted sources located at the facility.

h. Emission Limitation

Visible particulate emissions from any stack shall not exceed 10 percent opacity as a six-minute average.

Applicable Compliance Method

Compliance with the visible emissions limitation established by this permit shall be determined by Method 9, 40 CFR Part 60 Appendix A.

VI. Miscellaneous Requirements

None.

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B. State Only Enforceable Section

I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
P004 - Seimens Westinghouse Power Corp. W501F, Natural gas fired turbine with dry low-NOx combusters, operating in simple cycle mode.	None	None

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install was evaluated based on actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the air 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 SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling:

Pollutant: Formaldehyde
TLV (ug/m³): 273 (Converted from the STEL)

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Maximum Hourly Emission Rate (lbs/hr): 1.46*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 4.01
MAGLC (ug/m3): 9.0

Pollutant: Ammonia
TLV (ug/m3): 17000
Maximum Hourly Emission Rate (lbs/hr): 33.8*
Predicted 1-Hour Maximum Ground-Level Concentration (ug/m3): 13.08
MAGLC (ug/m3): 414

* This was modeled for emissions units P001, P002, P003, P004, P005, and P006, combined.

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 still 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 specified in the above table;
- 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), 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. where 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.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>
P005 - Seimens Westinghouse Power Corp. W501F, Natural gas fired turbine with dry low-NOx combusters, operating in simple cycle mode.	OAC Rule 3745-31-05 (A)(3)
Modification to allow for using certified fuel flow monitors, exempting SU/SD emissions of NOx and CO from short term limits, modifying the SU/SD limit for CO without increasing the overall facility cap.	OAC rule 3745-31-05(A)(3)

Modif

Emissions Unit ID: P005

nitrogen oxides (NO_x) emissions at startup and shutdown shall be continuously monitored by certified CEMS and included in the facility cap of 245.0 tons per rolling 12-month period.

nitrogen oxides (NO_x) emissions shall not exceed 245.0 tons per rolling 12-month period

carbon monoxide (CO) emissions shall not exceed 2,087 lbs per startup and shutdown cycle. Each cycle shall be recorded and included in the facility cap of 245.0 tons per rolling 12-month period.

PM emissions shall not exceed 79.3 tons per rolling 12-month period

carbon monoxide (CO) emissions shall not exceed 245.0 tons per rolling 12-month period

formaldehyde emissions shall not exceed 6.7 tons per rolling 12-month period

USE OF HOT SCR CONTROL TECHNOLOGY

operational restriction, see A.II. 1.

ammonia (NH₃) emissions shall not exceed 33.8 lbs/hr if/when Hot SCR (Selective Catalytic Reduction) is employed

see A.I.2.a.

see A.I.2.a.

see A.I.2.a.

See A.I.2.c.

See A.I.2.c.

TOTAL TONS PER ROLLING 12-MONTH PERIOD FACILITY CAP

ammonia (NH₃) emissions shall not exceed 151.6 tons per rolling 12-month period, if Hot SCR is employed

sulfur dioxide (SO₂) shall not exceed 26.6 tons per rolling 12-month period

volatile organic compounds (VOC) emissions shall not exceed 20.1 tons per rolling 12-month period

Modification Issued: 9/9/2003**2. Additional Terms and Conditions**

- 2.a** The emissions limit based on this applicable rule is equivalent to or less stringent than the limit established pursuant to OAC rule 3745-31-05.
- 2.b** The emissions limits based on this applicable rule are equivalent to or less stringent than the limits established pursuant to OAC rule 3745-31-05. Except as provided for in the terms and conditions in this permit, the permittee is not exempt from meeting any additional requirements of 40 CFR Part 60, Subpart GG.
- 2.c** If the permittee is subject to the requirements of 40 CFR Part 75 concerning acid rain, the permittee shall ensure that any effected 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.
- 2.d** The permittee has requested as a voluntary option the ability to employ Hot SCR for the control of NO_x emissions. The permittee considers this technology to be innovative but as yet not proven to be economically feasible. If employed, the associated ammonia (NH₃) slip will maintain compliance with the Ohio EPA Air Toxics Policy.

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- 2.e In lieu of monitoring the stack gas flowrate as required by 40 CFR Part 60, Appendix B - Performance Specification 6, the permittee shall use certified NO_x CEMs in conjunction with a fuel flow monitor as described in 40 CFR Part 75, and certified CO CEMs in conjunction with a fuel flow monitor (in a manner similar to that used for NO_x) to meet these requirements. The relative accuracy requirements of Performance Specification 6 shall apply.

II. Operational Restrictions

1. The permittee shall burn only natural gas in this emissions unit. The maximum sulfur content of the natural gas shall not exceed 2 grains per 100 standard cubic feet.
2. Startup and Shut down shall be defined as when the unit is running at less than 70% of electric load, but under no circumstances shall startups exceed 37 minutes in duration and shutdowns shall not exceed 25 minutes in duration. Emissions of NO_x during startup and shutdown shall be continuously monitored and recorded by certified CEMs and totaled towards the facility cap. Emissions of CO during each startup/shutdown cycle shall be recorded and totaled to be included in the facility cap.

Pollutant	total lbs per complete startup/shutdown cycle
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CO	2087
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In order to account for actual operation scenarios where the unit may shutdown before the startup cycle ends, Rolling Hills shall program the CEMs to record and total the CO emissions based on loads actually achieved during the startup/shutdown cycle. These emission limits were established during startup testing at the facility. The programming will be set to record:

<u>Load - Startup Cycle</u>	<u>CO(lbs)</u>
Acceleration and ramp to 10% load	653
10% - 20%	117
20% - 30%	145
30% - 40%	143
40% - 50%	70
50% - 60%	26
60% - 70%	7
<u>Load - Shutdown Cycle</u>	<u>CO(lbs)</u>
70% - 60%	2
60% - 50%	7
50% - 40%	48

40% - 30%	108
30% - 20%	139
20% - 10%	138
10% - 0%	484

3. To ensure enforceability during the first 12 calendar months following the startup of this facility, the permittee shall not exceed the monthly emissions restrictions specified in the following table:

Month	NO _x TPY/ CO TPY
1	50.0/50.0
1-2	100.0/100.0
1-3	150.0/150.0
1-4	200.0/200.0
1-5	245.0/245.0
1-6	245.0/245.0
1-7	245.0/245.0
1-8	245.0/245.0
1-9	245.0/245.0
1-10	245.0/245.0
1-11	245.0/245.0
1-12	245.0/245.0

After the first 12 calendar months following the startup of the facility, compliance with the annual emissions restriction shall be based on a rolling, 12-month summation.

4. Continuous NO_x Monitoring - Certified Systems
Statement of Certification

Prior to the installation of the continuous NO_x monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 2 for approval by the Ohio EPA, Central Office.

Within 60 days of start-up of this emissions unit, the permittee shall conduct certification tests of such equipment pursuant to ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 2, and/or 40 CFR Part 75. Personnel from the Ohio EPA, Southeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Ohio EPA, Southeast District

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Office within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, Southeast District Office . Certification of the continuous NO_x monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of the appropriate sections of ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 2, and/or 40 CFR Part 75.

Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous NO_x monitoring system designed to ensure continuous valid and representative readings of NO_x emissions in units of the applicable standard. The plan shall follow the requirements of 40 CFR Part 60, Appendix F and/or 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous NO_x monitoring system must be kept on site and available for inspection during regular office hours.

5. Continuous CO Monitoring - Certified Systems
Statement of Certification

Prior to the installation of the continuous CO monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 4 for approval by the Ohio EPA, Central Office.

Within 60 days of the start-up of this emissions unit , the permittee shall conduct certification tests of the continuous CO monitoring system pursuant to ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 4 . Personnel from the Ohio EPA, Southeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Ohio EPA, Southeast District Office within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA, Southeast District Office . Certification of the continuous CO monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of ORC section 3704.03(I) and 40 CFR Part 60, Appendix B, Performance Specification 4.

Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous CO monitoring system designed to ensure continuous valid and representative readings of CO. The plan shall follow the requirements of 40 CFR Part 60, Appendix F. The quality assurance/quality control plan and a logbook dedicated to the continuous CO monitoring system must be kept on site and available for inspection during regular office hours.

6. Continuous O₂ or CO₂ Monitoring - Certified Systems
Statement of Certification

Prior to the installation of the continuous O₂ or CO₂ monitoring system, the permittee shall submit information detailing the proposed location of the sampling site in accordance with the siting requirements in 40 CFR Part 60, Appendix B, Performance Specification 3 for approval by the Ohio EPA, Central Office.

Within 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit, the permittee shall conduct certification tests of such equipment pursuant to the appropriate sections of ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 3, and 40 CFR Part 75. Personnel from the Ohio EPA, Southeast District Office shall be notified 30 days prior to initiation of the applicable tests and shall be permitted to examine equipment and witness the certification tests. In accordance with OAC rule 3745-15-04, all copies of the test results shall be submitted to the Ohio EPA, Southeast District Office within 30 days after the test is completed. Copies of the test results shall be sent to the Ohio EPA District Office. Certification of the continuous O₂ or CO₂ monitoring system shall be granted upon determination by the Ohio EPA, Central Office that the system meets all requirements of the appropriate sections of ORC section 3704.03(I), 40 CFR Part 60, Appendix B, Performance Specification 3, and 40 CFR Part 75.

Within 180 days of the effective date of this permit, the permittee shall develop a written quality assurance/quality control plan for the continuous O₂ or CO₂ monitoring system designed to ensure continuous valid and representative readings of O₂ or CO₂ emissions in units of the applicable standard. The plan shall follow the requirements of the appropriate sections of 40 CFR Part 60, Appendix F and 40 CFR Part 75, Appendix B. The quality assurance/quality control plan and a logbook dedicated to the continuous O₂ or CO₂ monitoring system must be kept on site and available for inspection during regular office hours.

III. Monitoring and/or Recordkeeping Requirements

1. The permittee shall maintain monthly records of the following information for each emissions unit:
 - a. The natural gas usage rate for each month (in standard cubic feet).
2. The permittee shall maintain monthly records of the following information for each emissions unit:
 - a. Hours of operation of the turbine.
- b. Beginning after the first 12 calendar months of operation following issuance of this permit, the rolling, 12-month summation of the hours of operation.

Also, during the first 12 calendar months of operation following issuance of this permit, the permittee shall record the cumulative hours of operation for each calendar month.

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3. The permittee shall operate and maintain existing equipment to continuously monitor and record NO_x from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements of the appropriate sections specified in 40 CFR Part 60.13 and 40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous NO_x monitoring system including, but not limited to, parts per million NO_x on an instantaneous (one-minute) basis, emissions of NO_x in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

4. The permittee shall operate and maintain equipment to continuously monitor and record CO from this emissions unit in units of the applicable standard. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 60.13 .

The permittee shall maintain records of all data obtained by the continuous CO monitoring system including, but not limited to, parts per million CO on an instantaneous (one minute) basis, emissions of CO in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, annual, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

5. The permittee shall operate and maintain equipment to continuously monitor and record O₂ or CO₂ from this emissions unit in percent O₂ or CO₂. Such continuous monitoring and recording equipment shall comply with the requirements in the appropriate sections specified in 40 CFR Part 60.13 and 40 CFR Part 75.

The permittee shall maintain records of all data obtained by the continuous O₂ or CO₂ monitoring system including, but not limited to, percent O₂ or CO₂ on an instantaneous (one-minute) basis, emissions of O₂ or CO₂ in units of the applicable standard in the appropriate averaging period (e.g., hourly, hourly rolling, 3-hour, daily, 30-day rolling, etc.), results of daily zero/span calibration checks, and magnitude of manual calibration adjustments.

6. The permittee shall install, operate and maintain equipment to continuously monitor and record the actual fuel flow to this emissions unit when the emissions unit is in operation. Such continuous monitoring and recording equipment shall comply with the requirements specified in 40 CFR Part 75. If the fuel flow monitoring and/or recording equipment is (are) not in service when the emissions unit is in operation, the permittee shall comply with the appropriate missing data procedures specified in 40 CFR Part 75.
7. The permittee shall monitor the sulfur content and gross calorific value of the fuel being fired in the combustion turbine. Fuel sampling and analysis shall be conducted according to the procedures and at the frequency specified by 40 CFR Part 75, Appendix D.

8. The permittee shall determine the hourly heat input rate to the combustion turbine from the fuel flow rate as determined in term A.III.6 and fuel gross calorific value as determined in term A.III.7. The heat input rate shall be calculated in accordance with the procedures in Section 5 of 40 CFR Part 75, Appendix F.
9. The permittee shall maintain records of the following information for each emissions unit:
 - a. Number of startups, and the duration of each startup.
 - b. Number of shutdowns, and the duration of each shutdown.
10. The permittee shall maintain hourly records of the following information for this emissions unit: in lb(s)/hr emissions rate for NO_x and CO as obtained from terms III.3. and 4. based upon an hourly averaging period as allowed in the appropriate sections of 40 CFR Part 60.
11. The permittee shall maintain monthly records of the following information for this emissions unit:
 - a. the operating hours;
 - b. during the first 12 calendar months of operation, the permittee shall record the cumulative operating hours for each calendar month; and
 - c. beginning after the first 12 calendar months of operation, the rolling, 12-month summation of the operating hours.
 - d. during the first 12 calendar months of operation, the cumulative NO_x and CO emissions, in tons (i.e., $\frac{b \times \text{term } 10}{2,000}$, for each pollutant); and
 - e. beginning after the first 12 calendar months of operation, the rolling, 12-month NO_x and CO emissions, in tons (i.e., $\frac{c \times \text{term } 10}{2,000}$, for each pollutant).
12. In accordance with the provisions of 40 CFR Part 60, Subpart GG, the permittee has requested a Custom Fuel Monitoring Schedule(CFMS) for fuel sulfur content. USEPA, Region V granted approval of a CFMS in a letter to the permittee, dated June 17, 2003. The permittee shall comply with either the provisions of the CMFS or the schedule(s) contained in Subpart GG. The permittee shall implement the CMFS with the issuance of this permit as follows:
 - a. Conduct fuel sulfur monitoring twice monthly (bi-weekly) for six months. If bi-weekly fuel sulfur content monitoring indicates compliance with limits at 40 CFR Part 60.333 (0.8 percent sulfur by weight) and shows little or no variability, the permittee may reduce fuel sulfur content monitoring to once per quarter.

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- b. Conduct fuel sulfur monitoring once per quarter for six quarters. If quarterly fuel sulfur content monitoring indicates compliance with limits at 40 CFR Part 60.333 (0.8 percent sulfur by weight) and shows little or no variability, the permittee may reduce fuel sulfur content monitoring to a semi-annual basis (first and third quarters).
- c. Conduct semi-annual monitoring of fuel sulfur content.
- d. If sulfur analysis indicates non-compliance with limits at 40 CFR Part 60.333, the permittee must notify USEPA and the Ohio EPA Southeast District Office of the excess emissions. The permittee must also begin fuel sulfur content monitoring on a weekly basis while the CFMS is being reviewed by USEPA and/or Ohio EPA.
- e. If a change in the type of fuel or fuel supply/supplier occurs, the permittee must notify USEPA and the Ohio EPA Southeast District Office of the change(s). The permittee must also begin conducting fuel sulfur content monitoring on a weekly basis while the CFMS is being reviewed by USEPA and/or Ohio EPA.

IV. Reporting Requirements

1. The permittee shall submit deviation (excursion) reports that identify each day when a fuel other than natural gas was burned in this emissions unit. Each report shall be submitted within 30 days after the deviation occurred.
2. The permittee shall submit deviation (excursion) reports which identify all exceedances of the rolling, 12-month emissions limitations and, for the first 12 calendar months of operation, all exceedances of the maximum allowable cumulative emissions limitations. These reports are due by the date described in Part 1 - General Terms and Conditions of this permit under section (A)(2).
3. Pursuant to OAC rules 3745-15-04, 3745-35-02, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any), of all instances of NO_x values in excess of the applicable limits specified in 40 CFR Part 76 and any limitations specified in the terms and conditions of this permit or variance. These reports shall also contain the total NO_x emissions for the calendar quarter (in tons), including all data collected during start-up and shutdown periods and data generated pursuant to the missing data procedures specified in 40 CFR Part 75.

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting any continuous NO_x monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions

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unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control equipment, and/or monitoring system malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line also shall be included in the quarterly report. These quarterly excess emission reports shall be submitted by January 30, April 30, July 30, and October 30 of each year and shall address the data obtained during the previous calendar quarter.

4. Pursuant to OAC rules 3745-15-04, and ORC sections 3704.03(I) and 3704.031, the permittee shall submit a summary of the excess emission report pursuant to 40 CFR Part 60.7. The summary shall be submitted to the Ohio EPA, Southeast District Office within 30 days following the end of each calendar quarter in a manner prescribed by the Director.
5. Pursuant to OAC rules 3745-15-04, and ORC sections 3704.03(I) and 3704.031 and 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting the date, commencement and completion times, duration, magnitude, reason (if known), and corrective actions taken (if any) of all instances of CO values in excess of any applicable limitation(s) specified in OAC Chapter 3745-21, 40 CFR Part 60, or any limitation(s) specified in the terms and conditions of this permit, in units of the standard. These reports shall also contain the total CO emissions for the calendar quarter (in tons), including all data collected during start-up and shutdown periods and data generated pursuant to the missing data procedures specified in 40 CFR Part 75.

The permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting any continuous CO monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit and control equipment malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall also be included in the quarterly report.

If there are no excess emissions during the calendar quarter, the permittee shall submit a statement to that effect along with the emissions unit operating time during the reporting period and the date, time, reason, and corrective action(s) taken for each time period of emissions unit, control

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

6. Pursuant to 40 CFR Parts 60.7 and 60.13(h), the permittee shall submit reports within 30 days following the end of each calendar quarter to the Ohio EPA, Southeast District Office documenting all instances of continuous O₂ or CO₂ monitoring system downtime while the emissions unit was on line (date, time, duration and reason) along with any corrective action(s) taken. The permittee shall provide the emissions unit operating time during the reporting period and the date, time, reason and corrective action(s) taken for each time period of emissions unit malfunctions. The total operating time of the emissions unit and the total operating time of the analyzer while the emissions unit was on line shall be included in the quarterly report. 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 the previous calendar quarter.
7. The permittee shall submit deviation (excursion) reports that identify any record which shows that the sulfur content of the natural gas exceeded 2 grains per standard cubic foot. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).
8. The permittee shall submit deviation (excursion) reports that identify each time when this emissions unit was not in compliance with the requirements of condition II.3. above. These reports are due by the date described in Part I - General Terms and Conditions of this permit under section (A)(2).
9. In lieu of the excess emissions reports required under 40 CFR Part 60.334, the permittee shall submit excess emissions reports for emissions unit P001 in accordance with this permit.
10. This emissions unit is subject to the applicable provisions of Subpart GG of the New Source Performance Standards (NSPS) as promulgated by the United States Environmental Protection Agency, 40 CFR Part 60. The application and enforcement of these standards are delegated to the Ohio EPA. The requirements of 40 CFR Part 60 are also federally enforceable.

Pursuant to 40 CFR Part 60.7, 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. date of performance testing (if required, at least 30 days prior to testing).

Reports are to be sent to:

Ohio Environmental Protection Agency
DAPC - Permit Management Unit
P. O. Box 163669
Columbus, Ohio 43216-3669

and

Ohio Environmental Protection Agency
Southeast District Office
Division of Air Pollution Control
2195 Front Street
Logan, Ohio 43138

V. 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 60 days after achieving the maximum production rate at which the emissions unit will be operated, but not later than 180 days after initial startup of such emissions unit.
 - b. The emission testing shall be conducted to demonstrate compliance with the NO_x * and CO outlet concentration, and the mass emissions limitations for NO_x, CO, Formaldehyde, VOC and PM.
 - c. The following test method(s) shall be employed to demonstrate compliance with the above emissions limitations: for NO_x, Method 20 of 40 CFR Part 60, Appendix A; for PM, Method 5 of 40 CFR Part 60, Appendix A; for Formaldehyde, EPA Method 316; for VOC Method 25A of 40 CFR Part 60, Appendix A; and for CO Method 10 of 40 CFR Part 60, Appendix A. Alternative U.S. EPA approved test methods may be used with prior approval from the Ohio EPA.
 - d. The testing shall be conducted while the emissions unit is operating at or near its maximum capacity unless otherwise specified or approved by Ohio EPA or local air agency.

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- e. Not later than 30 days prior to the proposed test date(s), the permittee shall submit an "Intent to Test" notification to the Ohio EPA, Southeast 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, Southeast District Office refusal to accept the results of the emission test(s).
- f. Personnel from the Ohio EPA, Southeast District Office shall be permitted to witness the test(s), examine the testing equipment, and acquire data and information necessary to ensure that the operation of the emissions unit and the testing procedures provide a valid characterization of the emissions from the emissions unit and/or the performance of the control equipment.
- 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, Southeast District Office within 30 days following completion of the test(s). The permittee may request additional time for the submittal of the written report, where warranted, with prior approval from the Ohio EPA, Southeast District Office.

* Using the test methods and procedures required under 40 CFR Part 60.335.

2. Compliance with the allowable emission limitations in this permit shall be determined according to the following methods:

- a. Emission Limitation

NO_x emissions shall not exceed 15 ppmvd at 15% Oxygen
117.0 lbs/hr
245.0 tons per rolling 12-month period, including startups and shutdowns

Applicable Compliance Method

Initial compliance with the allowable outlet concentration, and the lbs/hr emission limitations shall be demonstrated by the performance testing as described in condition V.1 and continual compliance with those limitations shall be demonstrated by the use of the CEM in condition III.3. based upon an hourly averaging period as allowed in 40 CFR Part 60 or as an alternative method, the permittee may calculate the mass emission data for NO_x per 40 CFR Part 75, using heat input data derived from certified fuel flow monitor measurements. Compliance with the annual emission limitation shall be determined by the

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record keeping required in condition III. 1., 2., and 3, plus any PTE from other DeMinimus or non-permitted sources located at the facility. The 12-month rolling emissions associated with start-up and shut-down shall also be demonstrated by the use of CEM in condition III.3..3.

b. Emission Limitation

PM emissions shall not exceed

0.00838 lb/MMBtu actual heat input

17.3 lbs/hr

79.3tons per rolling 12-month period

Applicable Compliance Method

Compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with the requirements specified in term and condition A.V.1. Compliance with the annual emission limitation shall be demonstrated by multiplying the emission factor (lb(s)/cubic foot of fuel fired) established during the most recent emission tests that demonstrated that the emissions unit was in compliance by the actual quantity of fuel fired in this emissions unit during the 12-month period (from term and condition A. III.1), plus any PTE from other DeMinimus or non-permitted sources located at the facility.

c. Emission Limitation

SO2 emissions shall not exceed

5.9 lbs/hr

26.6 tons per rolling 12-month period

Applicable Compliance Method

Compliance with the hourly emission limitation shall be determined by the record keeping required in condition III. 1., 2., and 7. If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the 12-month rolling emission limitation shall be determined by multiplying the hourly emission rate by the actual annual hours of operation and dividing by 2000 lbs/ton, plus any PTE from other DeMinimus or non-permitted sources located at the facility.

d. Emission Limitation

VOC emissions shall not exceed

3.2 lbs/hr

20.1 tons per rolling 12-month period

Applicable Compliance Method

Compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with the requirements specified in term and condition A.V.1. Compliance with the 12-month rolling emission limitation shall be demonstrated by multiplying the emission factor (lb(s)/cubic foot of fuel fired) established during the most recent emission tests that demonstrated that the emissions unit was in compliance by the actual quantity of fuel fired in this emissions unit during the calendar year (from term and condition A. III.1), plus any PTE from other DeMinimus or non-permitted sources located at the facility.

e. Emission Limitation

CO emissions shall not exceed

119.0 lbs/hr

245.0 tons per rolling 12-month period, including 1209.5 lbs per start-up/shutdown cycle

Applicable Compliance Method

Initial compliance with the allowable outlet concentration, and the lbs/hr emission limitations shall be demonstrated by the performance testing as described in condition V.1 and continual compliance with those limitations shall be demonstrated by the use of the CEM in condition III.4. based upon an hourly averaging period as allowed in 40 CFR Part 60 or as an alternative method, the permittee may calculate the mass emission data for CO per 40 CFR Part 75, using heat input data derived from certified fuel flow monitor measurements. Compliance with the annual emission limitation shall be determined by the record keeping required in condition III. 1., 2., and 4, plus any PTE from other DeMinimus sources located at the facility. The 12-month rolling emissions associated with start-up and shut-down shall be determined by the record keeping required in condition III. 9. using the lbs/ start-up and shut-down values in condition II.3.

f. Emission Limitation

ammonia (NH₃) emissions shall not exceed

33.8 lbs/hr

151.6 tons per rolling 12-month period

Applicable Compliance Method

Compliance with the lbs/hr emission limitation shall be demonstrated by multiplying the

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emission factor of 0.0136 pound of ammonia/MMBtu heat input (emission factor supplied by the permittee) by the maximum Btu rating. If required, the permittee shall demonstrate compliance by emission testing in accordance with approved US EPA test methods. Compliance with the annual emission limitation shall be determined by multiplying the hourly emission rate by the actual annual hours of operation and dividing by 2000 lbs/ton, plus any PTE from other DeMinimus or non-permitted sources located at the facility.

g. Emission Limitation

Formaldehyde emissions shall not exceed
0.00071 lb/MMBtu actual heat input
1.46 lbs/hr
6.7 tons per rolling 12-month period

Applicable Compliance Method

Compliance with the hourly emission limitation shall be demonstrated through emission tests performed in accordance with the requirements specified in term and condition A.V.1. Compliance with the 12-month rolling emission limitation shall be demonstrated by multiplying the emission factor (lb(s)/cubic foot of fuel fired) established during the most recent emission tests that demonstrated that the emissions unit was in compliance by the actual quantity of fuel fired in this emissions unit during the calendar year (from term and condition A. III.1), plus any PTE from other DeMinimus or non-permitted sources located at the facility.

h. Emission Limitation

Visible particulate emissions from any stack shall not exceed 10 percent opacity as a six-minute average.

Applicable Compliance Method

Compliance with the visible emissions limitation established by this permit shall be determined by Method 9, 40 CFR Part 60 Appendix A.

VI. Miscellaneous Requirements

None.

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B. State Only Enforceable Section

I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
P005 - Seimens Westinghouse Power Corp. W501F, Natural gas fired turbine with dry low-NOx combusters, operating in simple cycle mode.	None	None

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

1. The permit to install was evaluated based on actual materials and the design parameters of the emissions unit's exhaust system, as specified by the permittee in the air 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 SCREEN 3.0 model (or other Ohio EPA approved model). The predicted 1-hour maximum ground-level concentration to the Maximum Acceptable Ground-Level Concentration (MAGLC). The following summarizes the results of the modeling:

Pollutant: Formaldehyde
TLV (ug/m³): 273 (Converted from the STEL)

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Maximum Hourly Emission Rate (lbs/hr): 1.46*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 4.01

MAGLC (ug/m³): 9.0

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Pollutant: Ammonia

TLV (ug/m³): 17000

Maximum Hourly Emission Rate (lbs/hr): 33.8*

Predicted 1-Hour Maximum Ground-Level Concentration (ug/m³): 13.08

MAGLC (ug/m³): 414

* This was modeled for emissions units P001, P002, P003, P004, P005, and P006, combined.

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 specified in the above table;
- 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(VV)(1)(a)(ii), and a modification of the existing permit to install will not be required. If the change(s) is (are) defined as a modification under other provisions of the modification definition (other than (VV)(1)(a)(ii)), 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. where 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.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.

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Part III - SPECIAL TERMS AND CONDITIONS FOR SPECIFIC EMISSIONS UNIT(S)

A. State and Federally Enforceable Section

I. 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>	
P006 - 23.1 MMBtu Fuel gas heater.	OAC rule 3745-31-05(A)(3)	OAC rule 3745-17-07(A)
		OAC rule 3745-31-05(A)(3)
		OAC rule 3745-31-05(D)

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Applicable Emissions <u>Limitations/Control</u> <u>Measures</u>	ROLLING 12-MONTH PERIOD FACILITY CAP
The requirements of this rule also include compliance with the requirements of OAC rule 3745-17-10(B)(1), OAC rule 1745-17-07(A), and OAC rule 3745-31-05(D).	ammonia (NH ₃) emissions shall not exceed 151.6 tons per rolling 12-month period
Particulate emissions shall not exceed 0.020 lb per million Btu of actual heat input. See A.I.2.a.	sulfur dioxide (SO ₂) shall not exceed 26.6 tons per rolling 12-month period
Carbon monoxide emissions shall not exceed 2.0 lbs/hr.	volatile organic compounds (VOC) emissions shall not exceed 20.1 tons per rolling 12-month period
Sulfur dioxide emissions shall not exceed 0.014 lb/hr.	nitrogen oxides (NO _x) emissions shall not exceed 245.0 tons per rolling 12-month period
Nitrogen oxides emissions shall not exceed 0.10 lb per million Btu of actual heat input.	PM emissions shall not exceed 79.3 tons per rolling 12-month period
VOC emissions shall not exceed 1.3 lbs/hr.	carbon monoxide (CO) emissions shall not exceed 245.0 tons per rolling 12-month period
Formaldehyde emissions shall not exceed 0.017 lb/hr.	formaldehyde emissions shall not exceed 6.7 tons per rolling 12-month period
Visible particulate emissions shall not exceed 20% opacity, as a 6-minute average, except as provided by rule.	
TOTAL TONS PER	

2. Additional Terms and Conditions

- 2.a** The emission limit for particulates established pursuant to OAC rule 3745-31-05 (0.020 lb per million Btu of actual heat input) is equivalent to the particulate limit from OAC rule 3745-17-10(B)(1).

II. Operational Restrictions

- 1.** The permittee shall burn only natural gas in this emissions unit.

III. Monitoring and/or Recordkeeping Requirements

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

Modification Issued: 9/9/2003**IV. Reporting Requirements**

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

V. Testing Requirements

1. Compliance with the emission limitation of 0.020 pound particulate matter per million Btu actual heat input is demonstrated as follows:

Divide the applicable AP-42, 5th Edition (supplement D) emission factor for filterable particulate matter from table 1.4-2 by the assumed heat content of natural gas (1000 Btu/cubic foot):

$(5 \text{ lbs particulate matter/million cubic feet}) \times (\text{cubic foot}/1000 \text{ Btu}) = 0.005 \text{ lb particulate matter/million Btu}$

Emission tests also may be required in accordance with 40 CFR Part 60, Appendix A, Methods 1-5 and the procedures specified in OAC rule 3745-17-03. No emission testing is specifically required to demonstrate compliance with this limit but, if appropriate, may be requested pursuant to OAC rule 3745-15-04(A).

2. Compliance with the emission limitation 2.0 lbs carbon monoxide/hr is demonstrated by dividing the maximum hourly natural gas usage of 22,000 cubic feet by 1,000,000 and then multiplying by the applicable AP-42, 5th Edition (supplement D) emission factor for carbon monoxide from table 1.4-1 (for units less than 100 million Btu/hr) as follows:

$22,000 \text{ cu ft/hr}/(1,000,000) = 0.022 \times (84 \text{ lbs carbon monoxide/million cubic feet}) = 1.848 \text{ \#/hr}$

Emission tests also may be required in accordance with 40 CFR Part 60, Appendix A, Method 10. No emission testing is specifically required to demonstrate compliance with this limit but, if appropriate, may be requested pursuant to OAC rule 3745-15-04(A).

3. Compliance with the emission limitation of 0.014 lb sulfur dioxide/hr is demonstrated by dividing the maximum hourly natural gas usage of 22,000 cubic feet by 1,000,000 and then multiplying by the applicable AP-42, 5th Edition (supplement D) emission factor for carbon monoxide from table 1.4-2 (for units less than 100 million Btu/hr) as follows:

$22,000 \text{ cu ft/hr}/(1,000,000) = 0.022 \times (0.6 \text{ lb sulfur dioxide/million cubic feet}) = 0.0132 \text{ lb/hr}$

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Emissions Unit ID: P006

Emission tests also may be required in accordance with 40 CFR Part 60, Appendix A, Method 6. No emission testing is specifically required to demonstrate compliance with this limit but, if appropriate, may be requested pursuant to OAC rule 3745-15-04(A).

Modification Issued: 9/9/2003

4. Compliance with the emission limitation of 0.10 pound nitrogen oxides per million Btu actual heat input is demonstrated as follows:

Divide the applicable AP-42, 5th Edition (supplement D) emission factor for nitrogen oxides from table 1.4-1 by the assumed heat content of natural gas (1000 Btu/cubic foot):

$(32 \text{ lbs nitrogen oxides/million cubic feet}) \times (\text{cubic foot}/1000 \text{ Btu}) = 0.032 \text{ lb nitrogen oxides/million Btu}$

Emission tests also may be required in accordance with 40 CFR Part 60, Appendix A, Methods 1-5 and the procedures specified in OAC rule 3745-17-03. No emission testing is specifically required to demonstrate compliance with this limit but, if appropriate, may be requested pursuant to OAC rule 3745-15-04(A).

5. Compliance with the emission limitation of 1.3 lbs/hr VOC's (as CH₄) is demonstrated by dividing the maximum hourly natural gas usage of 22,000 cubic feet by 1,000,000 and then multiplying by the applicable AP-42, 5th Edition (supplement D) emission factor for carbon monoxide from table 1.4-2 (for units less than 100 million Btu/hr) as follows:

$22,000 \text{ cu ft/hr}/(1,000,000) = 0.022 \times (5.5 \text{ lbs sulfur dioxide/million cubic feet}) = 0.121 \text{ lb/hr}$

Emission tests also may be required in accordance with 40 CFR Part 60, Appendix A, Method 6. No emission testing is specifically required to demonstrate compliance with this limit but, if appropriate, may be requested pursuant to OAC rule 3745-15-04(A)

6. Compliance with the opacity limitation specified in Section A.I shall be determined through visible emissions observations performed in accordance with 40 CFR Part 60, Appendix A, Method 9 and the procedures specified in OAC rule 3745-17-03(B)(1).

VI. Miscellaneous Requirements

None.

B. State Only Enforceable Section

I. 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>	<u>Applicable Emissions Limitations/Control Measures</u>
P006 - 23.1 MMBtu Fuel gas heater.	None	None

2. Additional Terms and Conditions

- 2.a None.

II. Operational Restrictions

None.

III. Monitoring and/or Recordkeeping Requirements

None.

IV. Reporting Requirements

None.

V. Testing Requirements

None.

VI. Miscellaneous Requirements

None.