



PART 70 PERMIT TO OPERATE

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to operate the air contaminant source(s) described below, in accordance with the laws, rules, and conditions set forth here in.

Operating Permit Number: OP2007-014
Expiration Date: MAY - 9 2012
Installation ID: 037-0003
Project Number: 2003-05-074

Installation Name and Address

Aquila-Ralph Green Plant
101 Front Street
Pleasant Hill, MO 64080
Cass County

Parent Company's Name and Address

Aquila, Inc.
20 W. 9th Street
Kansas City, MO 64105

Installation Description:

The Aquila Ralph Green Plant is an unstaffed remotely controlled electric power generation peaking plant located in Pleasant Hill, Missouri. The primary source of air emissions from this installation is a natural gas fired combustion turbine. Other smaller sources of air emissions at the installation that have been reported as insignificant activities are a turbine lube oil reservoir, a solvent parts washer, fuel powered maintenance equipment and space heaters.

MAY 10 2007

Effective Date

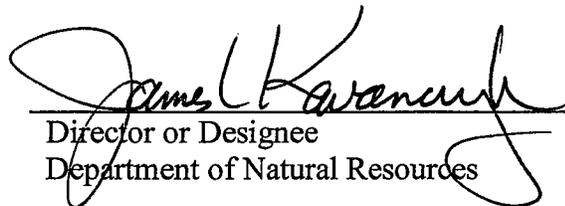

Director or Designee
Department of Natural Resources

Table of Contents

OP2007-014.....	1
I. INSTALLATION DESCRIPTION AND EQUIPMENT LISTING	3
INSTALLATION DESCRIPTION	3
EMISSION UNITS WITH LIMITATIONS	3
EMISSION UNITS WITHOUT LIMITATIONS.....	3
DOCUMENTS INCORPORATED BY REFERENCE.....	3
II. PLANT WIDE EMISSION LIMITATIONS.....	4
III. EMISSION UNIT SPECIFIC EMISSION LIMITATIONS	5
EU0010	5
Permit Condition EU0010-001	5
10 CSR 10-6.060	5
Permit Condition EU0010-002.....	5
10 CSR 10-6.060	5
Permit Condition EU0010-003.....	6
10 CSR 10-6.070	6
40 CFR Part 60, Subpart GG	6
Permit Condition EU0010-004.....	7
10 CSR 10-6.070	7
40 CFR Part 60 Subpart GG	7
Permit Condition EU0010-005.....	8
10 CSR 10-6.350	8
Permit Condition EU0010-006.....	10
40 CFR Part 60	10
SUBPART GG, NEW SOURCE PERFORMANCE STANDARD FOR STATIONARY GAS TURBINES	10
40 CFR Part 64	10
IV. CORE PERMIT REQUIREMENTS	11
V. GENERAL PERMIT REQUIREMENTS.....	17
VI. ATTACHMENTS	23
Attachment B.....	25
Attachment C.....	26
Attachment D.....	27
Attachment E.....	28
Attachment F	29

II. Installation Description and Equipment Listing

III. INSTALLATION DESCRIPTION

The Aquila Ralph Green Plant is an unstaffed remotely controlled electric power generation peaking plant located in Pleasant Hill, Missouri. The primary source of air emissions from this installation is a 74 MW natural gas fired simple-cycle combustion turbine. Other smaller sources of air emissions at the installation that have been reported as insignificant activities are a turbine lube oil reservoir, a solvent parts washer, fuel powered maintenance equipment and space heaters.

Reported Air Pollutant Emissions, tons per year							
Year	Particulate Matter ≤ Ten Microns (PM-10)	Sulfur Oxides (SO _x)	Nitrogen Oxides (NO _x)	Volatile Organic Compounds (VOC)	Carbon Monoxide (CO)	Lead (Pb)	Hazardous Air Pollutants (HAPs)
2005	1.13	0.03	7.27	0.11	1.68	-	-
2004	0.49	0.01	3.16	0.05	0.73	-	-
2003	0.79	0.02	5.08	0.08	1.18	-	-
2002	2.18	0.06	13.93	0.22	3.23	-	-
2001	3.47	0.10	22.24	0.36	5.15	-	-

IV. EMISSION UNITS WITH LIMITATIONS

The following list provides a description of the equipment at this installation which emits air pollutants and which is identified as having unit-specific emission limitations.

Emission Unit #	Description of Emission Unit
EU0010	74 MW Simple-Cycle Combustion Turbine Generator (EP1)

V. EMISSION UNITS WITHOUT LIMITATIONS

The following list provides a description of the equipment which does not have unit specific limitations at the time of permit issuance.

Description of Emission Source

Turbine Lube Oil Reservoir, capacity: 2,400 gallons
 Solvent Parts Washer, capacity 6 gallons
 Fuel Powered Maintenance Equipment
 Space Heaters (less than 10 MMBTU/hour)

VI. DOCUMENTS INCORPORATED BY REFERENCE

These documents have been incorporated by reference into this permit.

- 1) Authority to Construct Permit Number 1280-006
- 2) Letter from USEPA Region VII Granting Permit to Construct Dated January 29, 1981

VII. Plant Wide Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

None.

VIII. Emission Unit Specific Emission Limitations

The installation shall comply with each of the following emission limitations. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

EU0010			
Aquila Ralph Green Plant – Simple-Cycle Combustion Turbine			
EU ID	EIQ Reference # (Year)	General Description	Manufacturer/Model #
EU0010	EP-1 (2002)	74 MW combustion turbine firing natural gas only and operating in simple cycle mode with water injection for NO _x control.	General Electric, Model No. M7001

<p>Permit Condition EU0010-001 10 CSR 10-6.060 Construction Permits Required – Permit No. 1280-006, Issued on October 28, 1980</p>

Work Practice Standard:

The permittee shall burn no more than 1.224 x 10⁹ cubic feet of natural gas this combustion turbine in any consecutive 12-month period.

Recordkeeping:

- 1) The permittee shall maintain an accurate record of the cubic feet of pipeline natural gas combusted by this combustion turbine.
- 2) The permittee shall record the monthly and running 12-month totals of cubic feet of pipeline natural gas burned by this combustion turbine.
- 3) The permittee shall maintain records at the Greenwood Energy Center for the most recent 60 months of all records required by this permit and shall immediately make such records available to any Missouri Department of Natural Resources personnel upon request.

Reporting:

The permittee shall report to the Air Pollution Control Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after the end of each month, if there is an exceedance of the consecutive 12-month fuel use limit.

<p>Permit Condition EU0010-002 10 CSR 10-6.060 Construction Permits Required – Letter Granting Permit to Construct Dated January 29, 1981</p>
--

Work Practice Standard:

The permittee shall not operate this combustion turbine to generate more than 117 million kilowatt-hours in any consecutive 12-month period.

Recordkeeping:

- 1) The permittee shall maintain an accurate record of the electric power (kilowatt-hours) generated and fuel consumed by this combustion turbine.
- 2) The permittee shall record the monthly and running 12-month totals of electric power (kilowatt-hours) generated and fuel consumed by this combustion turbine.
- 3) The permittee shall maintain records at the Greenwood Energy Center for the most recent 60 months of all records required by this permit and shall immediately make such records available to any Missouri Department of Natural Resources personnel upon request.

Reporting:

The permittee shall report to the Air Pollution Control Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after the end of each month, if there is an exceedance of the consecutive 12-month electric power generation limit.

**Permit Condition EU0010-003
10 CSR 10-6.070**

New Source Performance Regulations

40 CFR Part 60, Subpart GG

Standards of Performance for Stationary Gas Turbines – Nitrogen Oxides (NO_x)

Emission Limitation:

- 1) On and after the date of the performance test required by §60.8 is completed, Aquila – Ralph Green Plant shall not cause to be discharged into the atmosphere from EU0010 any gases which contain nitrogen oxides in excess of 90.3 ppmv at 15 percent oxygen and on a dry basis. [40 CFR 60.332(a)(1)]
- 2) Stationary Gas turbines using water or steam injection for control of NO_x emissions are exempt from paragraph (a) when ice fog is deemed a traffic hazard by the owner or operator of the gas turbine. [40 CFR 60.332(f)]

Monitoring:

- 1) The permittee, if using water injection to control NO_x emissions, shall install and operate a continuous monitoring system to monitor and record the fuel consumption and the ratio of water to fuel being fired in the turbine. This system shall be accurate to within ±5.0 percent and shall be approved by the administrator. [40 CFR 60.334(a)]

The permittee shall monitor nitrogen content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows: [40 CFR 60.334(b)]

If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with 40 CFR 60.334(b). [40 CFR 60.334(b)(2)]

To compute the nitrogen oxides emissions, the owner or operator shall use analytical methods and procedures that are accurate to within 5 percent and are approved by the Administrator to determine the nitrogen content of the fuel being fired. [40 CFR 60.335(a)]

The owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency may perform the analysis. [40 CFR 60.335(e)]

Recordkeeping:

The permittee shall maintain records on-site for the most recent 60 months of all records required by this permit and shall immediately make such records available to any Missouri Department of Natural Resources' personnel upon request.

Reporting:

- 1) For the purposes of reports required under §60.7(c), periods of excess emissions that shall be reported are determined as follows: [40 CFR 60.334(c)]
 - a) *Nitrogen oxides*. Any one-hour period during which the average water-to-fuel ratio, as measured by the continuous monitoring system, falls below the water-to-fuel ratio determined to demonstrate compliance with §60.332 by the performance test required in §60.8 or any period during which the fuel-bound nitrogen of the fuel is greater than the maximum nitrogen content allowance used during the performance test required in §60.8. Each report shall include the average water-to-fuel ratio, average fuel consumption, ambient conditions gas turbine load, and nitrogen content of the fuel during the period of excess emissions, and the graphs or figures developed under §60.335(a). [40 CFR 60.334(c)(1)]
 - b) *Ice fog*. Each period during which an exemption provided in §60.332(g) is in effect shall be reported in writing to the Administrator quarterly. For each period the ambient conditions existing during the period, the date and time the air pollution control system was deactivated, and the date and time air pollution control system was reactivated shall be reported. All quarterly reports shall be postmarked by the 30th day following the end of each calendar quarter. [40 CFR 60.334(c)(3)]
- 2) The permittee shall report to the Air Pollution Control Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any exceedance of any of the terms imposed by this regulation, or any malfunction which causes an exceedance of this regulation.

**Permit Condition EU0010-004
10 CSR 10-6.070**

New Source Performance Regulations

40 CFR Part 60 Subpart GG

Standards of Performance for Stationary Gas Turbines - Sulfur Dioxide (SO₂)

Emission Limitation:

On and after the date of the performance test required by §60.8 is completed, no fuels shall be burned in this combustion turbine which contains sulfur in excess of 0.8 percent by weight. [40 CFR 60.333(b)]

Monitoring:

- 1) The permittee shall monitor sulfur content of the fuel being fired in the turbine. The frequency of determination of these values shall be as follows: [40 CFR 60.334(b)]

If the turbine is supplied its fuel without intermediate bulk storage the values shall be determined and recorded daily. Owners, operators or fuel vendors may develop custom schedules for determination of the values based on the design and operation of the affected facility and the characteristics of the fuel supply. These custom schedules shall be substantiated with data and must be approved by the Administrator before they can be used to comply with 40 CFR 60.334(b). [40 CFR 60.334(b)(2)]

- 2) The owner or operator shall determine compliance with the sulfur content standard in 40 CFR 60.333(b) as follows: [40 CFR 60.335(d)]
 - a) ASTM D 1072-90(94)E-1, D 3031-81(86), D 4084-94, or D 3246-92 shall be used for the sulfur content of gaseous fuels (incorporated by reference-see 40 CFR 60.17).
 - b) The applicable ranges of some ASTM methods mentioned above are not adequate to measure the levels of sulfur in some fuel gases. Dilution of samples before analysis (with verification of the dilution ratio) may be used, subject to the approval of the Administrator.
 - c) The owner or operator, a service contractor retained by the owner or operator, the fuel vendor, or any other qualified agency may perform the analysis. [40 CFR 60.335(e)]

Recordkeeping

- 1) The permittee shall maintain records of reports required under §60.7(c) and §60.334(c)(2), or pursuant to an approved custom fuel schedule.
- 2) The permittee shall maintain records on-site for the most recent 60 months of all records required by this permit and shall immediately make such records available to any Missouri Department of Natural Resources' personnel upon request.

Reporting:

- 1) For the purposes of reports under §60.7(c), periods of excess emissions that shall be reported are defined as follows: [§60.334(c)]
 - a) *Sulfur dioxide.* Any daily period during which the sulfur content of the fuel being fired in the gas turbine exceeds 0.8 percent.
[40 CFR 60.334(c)(2)]
Compliance with the approved custom fuel schedule is said to demonstrate compliance with this applicable standard.
 - b) *Emergency fuel.* Each period during which an exemption provided in 40 CFR 60.332(k) is in effect shall be included in the report required in 40 CFR 60.7(c). For each period, the type, reasons, and duration of the firing of the emergency fuel shall be reported. [40 CFR 60.334(c)(4)]

The permittee shall report to the Air Pollution Control Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten days after any exceedance of any of the terms imposed by this regulation, or any malfunction which causes an exceedance of this regulation.

**Permit Condition EU0010-005
10 CSR 10-6.350**

Emission Limitations and Emission Trading of Oxides of Nitrogen

Emission Limitation:

Beginning May 1, 2004, the permittee shall not emit NO_x in excess of 0.35 pounds per million BTU of heat input during the control period, as defined pursuant to 10 CSR 10-6.350(2)(L). [10 CSR 10-6.350(3)(A)4]

Exception: The permittee, in lieu of complying with the applicable emission limit, may comply through the NO_x emission trading program established under subsection (3)(B) of 10 CSR 10-6.350. Additionally, the emission limitation stated above in no way precludes the permittee from participating in acquiring banked NO_x allowance and early reduction credits as proposed under subsection (3)(B)5.A.-C.

[10 CSR 10-6.350(3)(A)5]

Monitoring:

Compliance shall be measured during the control period; [10 CSR 10-6.350(5)(A)]

All valid data shall be used for calculating NO_x emissions rates; [10 CSR 10-6.350(5)(B)]

Any gas- or oil-fired peaking unit that is subject to the emission limitation or trading aspects of this rule shall:

[10 CSR 10-6.350(5)(D)]

Install, certify, operate, maintain, and quality assure a NO_x and diluent CEMS pursuant to 40 CFR Part 75; or

Install, certify, operate and quality assure fuel-metering equipment pursuant to 40 CFR Part 75, Appendix D and shall establish a NO_x-to-load curve pursuant to 40 CFR Part 75, Appendix E.

The CEMS or alternative procedure shall be capable of monitoring measured parameters at least once every fifteen (15) minutes and shall record and monitor the NO_x emissions (i.e. in tons/hour).

Recordkeeping:

1) Each owner or operator of an affected unit subject to section (3) of this rule shall maintain records of the following (10 CSR 10-6.350 requirements): [10 CSR 10-6.350(4)(B)1]

- a) Total fuel consumed during the control period;
- b) The total heat input for each emissions unit during the control period;
- c) Reports of all stack testing conducted to meet the requirements of this rule;
- d) All other data collected by a CEMS or alternative procedure necessary to convert the monitoring data to the units of the applicable emission limitation;
- e) All performance evaluations conducted in the past year;
- f) All monitoring device calibration checks;
- g) All monitoring system, monitoring device and performance testing measurements;
- h) Records of adjustments and maintenance performed on monitoring systems and devices; and
- i) A log identifying each period during which the CEMS or alternate procedure was inoperative, except for zero and span checks, and the nature of the repairs and adjustments performed to make the system operative.

2) All records must be kept on-site for a period of five (5) years and made available to the department upon request. [10 CSR 10-6.350(5)(B)2]

Reporting:

1) A compliance certification report for each affected unit shall be submitted to the department by October 31 following each control period pursuant to 10 CSR 10-6.350(4) (A). The report shall include: [10 CSR 10-6.350(4)(A)1]

- a) The owner and operator;
- b) The NO_x authorized account representative;
- c) NO_x unit name, compliance and overdraft account numbers;
- d) NO_x emission rate limitation (lb/mmBtu);
- e) Actual NO_x emission rate (lb/mmBtu) for the control period;

- f) Actual heat input (mmBtu) for the control period. The unit's total heat input for the control period in each year will be determined in accordance with Section (5) of this rule; and
 - g) Actual NO_x emissions (tons) for the control period.
- 2) Reporting shall be based on the test methods identified in section (5) of this rule. Any unit with valid continuous emission monitoring system (CEMs) data for the control period must use that data to determine compliance with the provisions of this rule. The owner or operator for each affected unit which performs non-CEMS testing to demonstrate compliance of a unit subject to section (3) of this rule shall submit: [10 CSR 10-6.350(4)(A)2]
- a) A control period report identifying monthly fuel usage and monthly total heat input by December 31 of the same year as the control period; and
 - b) A written report of all stack tests completed after controls are effective to the department within sixty (60) days after completion of sample and data collection.
- 3) For any non-compliance with the provisions of this rule, the permittee shall report to the Air Pollution Control Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, no later than ten (10) days after any exceedance of the terms imposed by this regulation.

Permit Condition EU0010-006

40 CFR Part 60

IX. Subpart GG, New Source Performance Standard for Stationary Gas Turbines

40 CFR Part 64

Compliance Assurance Monitoring

Emission Limitation:

The facility must demonstrate that the Nitrogen Oxide emissions are maintained below 90.33 ppmv NO_x at 15% O₂ dry basis.

Monitoring Basis:

The Department of Natural Resources, Air Pollution Control Program, Compliance/Enforcement Section has approved a Compliance Assurance Monitoring (CAM) Plan provided by the facility. The CAM approach is as follows:

The injection of water into the combustor lowers the flame temperature and thereby reduces thermal NO_x formation. To meet the emission limitation the water injection rate was determined through testing. The tests varied fuel throughput (load) at different ambient temperatures to produce a series of water versus fuel throughput curves (W/F Curves).

The CAM approach is tabularized in Appendix E. The W/F Curve data are presented in Appendix F.

IV. Core Permit Requirements

The installation shall comply with each of the following requirements. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued.

10 CSR 10-6.050 Start-up, Shutdown and Malfunction Conditions

- 1) In the event of a malfunction, which results in excess emissions that exceed one hour, the permittee shall submit to the director within two business days, in writing, the following information:
 - a) Name and location of installation;
 - b) Name and telephone number of person responsible for the installation;
 - c) Name of the person who first discovered the malfunction and precise time and date that the malfunction was discovered.
 - d) Identity of the equipment causing the excess emissions;
 - e) Time and duration of the period of excess emissions;
 - f) Cause of the excess emissions;
 - g) Air pollutants involved;
 - h) Best estimate of the magnitude of the excess emissions expressed in the units of the applicable requirement and the operating data and calculations used in estimating the magnitude;
 - i) Measures taken to mitigate the extent and duration of the excess emissions; and
 - j) Measures taken to remedy the situation that caused the excess emissions and the measures taken or planned to prevent the recurrence of these situations.
- 2) The permittee shall submit the paragraph 1 information list to the director in writing at least ten days prior to any maintenance, start-up or shutdown, which is expected to cause an excessive release of emissions that exceed one hour. If notice of the event cannot be given ten days prior to the planned occurrence, it shall be given as soon as practicable prior to the release. If an unplanned excess release of emissions exceeding one hour occurs during maintenance, start-up or shutdown, the director shall be notified verbally as soon as practical during normal working hours and no later than the close of business of the following working day. A written notice shall follow within ten working days.
- 3) Upon receipt of a notice of excess emissions issued by an agency holding a certificate of authority under section 643.140, RSMo, the permittee may provide information showing that the excess emissions were the consequence of a malfunction, start-up or shutdown. The information, at a minimum, should be the paragraph 1 list and shall be submitted not later than 15 days after receipt of the notice of excess emissions. Based upon information submitted by the permittee or any other pertinent information available, the director or the commission shall make a determination whether the excess emissions constitute a malfunction, start-up or shutdown and whether the nature, extent and duration of the excess emissions warrant enforcement action under section 643.080 or 643.151, RSMo.
- 4) Nothing in this rule shall be construed to limit the authority of the director or commission to take appropriate action, under sections 643.080, 643.090 and 643.151, RSMo to enforce the provisions of the Air Conservation Law and the corresponding rule.
- 5) Compliance with this rule does not automatically absolve the permittee of liability for the excess emissions reported.

10 CSR 10-6.060 Construction Permits Required

The permittee shall not commence construction, modification, or major modification of any installation subject to this rule, begin operation after that construction, modification, or major modification, or begin operation of any installation which has been shut down longer than five years without first obtaining a permit from the permitting authority.

10 CSR 10-6.065 Operating Permits

The permittee shall file a complete application for renewal of this operating permit at least six months before the date of permit expiration. In no event shall this time be greater than eighteen months. [10 CSR 10-6.065(6)(B)1.A(V)] The permittee shall retain the most current operating permit issued to this installation on-site. [10 CSR 10-6.065(6)(C)1.C(II)] The permittee shall immediately make such permit available to any Missouri Department of Natural Resources personnel upon request. [10 CSR 10-6.065(6)(C)3.B]

10 CSR 10-6.110 Submission of Emission Data, Emission Fees and Process Information

- 1) The permittee shall complete and submit an Emission Inventory Questionnaire (EIQ) in accordance with the requirements outlined in this rule.
- 2) The permittee shall pay an annual emission fee per ton of regulated air pollutant emitted according to the schedule in the rule. This fee is an emission fee assessed under authority of RSMo. 643.079 to satisfy the requirements of the Federal Clean Air Act, Title V.
- 3) The fees shall be due April 1 each year for emissions produced during the previous calendar year. The fees shall be payable to the Department of Natural Resources and shall be accompanied by the Emissions Inventory Questionnaire (EIQ) form or equivalent approved by the director.

10 CSR 10-6.130 Controlling Emissions During Episodes of High Air Pollution Potential

This rule specifies the conditions that establish an air pollution alert (yellow/orange/red/purple), or emergency (maroon) and the associated procedures and emission reduction objectives for dealing with each. The permittee shall submit an appropriate emergency plan if required by the Director.

10 CSR 10-6.150 Circumvention

The permittee shall not cause or permit the installation or use of any device or any other means which, without resulting in reduction in the total amount of air contaminant emitted, conceals or dilutes an emission or air contaminant which violates a rule of the Missouri Air Conservation Commission.

10 CSR 10-6.170 Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin

- 1) The permittee shall not cause or allow to occur any handling, transporting or storing of any material; construction, repair, cleaning or demolition of a building or its appurtenances; construction or use of a road, driveway or open area; or operation of a commercial or industrial installation without applying reasonable measures as may be required to prevent, or in a manner which allows or may allow, fugitive particulate matter emissions to go beyond the premises of origin in quantities that the particulate matter may be found on surfaces beyond the property line of origin. The nature or origin of the particulate matter shall be determined to a reasonable degree of certainty by a technique proven to be accurate and approved by the director.
- 2) The permittee shall not cause nor allow to occur any fugitive particulate matter emissions to remain visible in the ambient air beyond the property line of origin.

- 3) Should it be determined that noncompliance has occurred, the director may require reasonable control measures as may be necessary. These measures may include, but are not limited to, the following:
 - a) Revision of procedures involving construction, repair, cleaning and demolition of buildings and their appurtenances that produce particulate matter emissions;
 - b) Paving or frequent cleaning of roads, driveways and parking lots;
 - c) Application of dust-free surfaces;
 - d) Application of water; and
 - e) Planting and maintenance of vegetative ground cover.

10 CSR 10-6.180 Measurement of Emissions of Air Contaminants

- 1) The director may require any person responsible for the source of emission of air contaminants to make or have made tests to determine the quantity or nature, or both, of emission of air contaminants from the source. The director may specify testing methods to be used in accordance with good professional practice. The director may observe the testing. Qualified personnel shall perform all tests.
- 2) The director may conduct tests of emissions of air contaminants from any source. Upon request of the director, the person responsible for the source to be tested shall provide necessary ports in stacks or ducts and other safe and proper sampling and testing facilities, exclusive of instruments and sensing devices as may be necessary for proper determination of the emission of air contaminants.
- 3) The director shall be given a copy of the test results in writing and signed by the person responsible for the tests.

10 CSR 10-3.030 Open Burning Restrictions

- 1) The permittee shall not conduct, cause, permit or allow a salvage operation, the disposal of trade wastes or burning of refuse by open burning.
- 2) Exception - Open burning of trade waste or vegetation may be permitted only when it can be shown that open burning is the only feasible method of disposal or an emergency exists which requires open burning.
- 3) Any person intending to engage in open burning shall file a request to do so with the director. The request shall include the following:
 - a) The name, address and telephone number of the person submitting the application; The type of business or activity involved; A description of the proposed equipment and operating practices, the type, quantity and composition of trade wastes and expected composition and amount of air contaminants to be released to the atmosphere where known;
 - b) The schedule of burning operations;
 - c) The exact location where open burning will be used to dispose of the trade wastes;
 - d) Reasons why no method other than open burning is feasible; and
 - e) Evidence that the proposed open burning has been approved by the fire control authority which has jurisdiction.
- 4) Upon approval of the open burning permit application by the director, the person may proceed with the operation under the terms of the open burning permit. Be aware that such approval shall not exempt Aquila-Ralph Green Plant from the provisions of any other law, ordinance or regulation.
- 5) The permittee shall maintain files with letters from the director approving the open burning operation and previous DNR inspection reports.

10 CSR 10-3.090 Restriction of Emission of Odors

No person may cause, permit or allow the emission of odorous matter in concentrations and frequencies or for durations that odor can be perceived when one volume of odorous air is diluted with seven volumes of odor-free air for two separate trials not less than 15 minutes apart within the period of one hour.

This requirement is not federally enforceable.

**10 CSR 10-6.080 Emission Standards for Hazardous Air Pollutants and 40 CFR Part 61
Subpart M National Emission Standard for Asbestos**

- 1) The permittee shall follow the procedures and requirements of 40 CFR Part 61, Subpart M for any activities occurring at this installation which would be subject to provisions for 40 CFR Part 61, Subpart M, National Emission Standard for Asbestos.
- 2) The permittee shall conduct monitoring to demonstrate compliance with registration, certification, notification, and Abatement Procedures and Practices standards as specified in 40 CFR Part 61, Subpart M.

10 CSR 10-6.250 Asbestos Abatement Projects – Certification, Accreditation, and Business Exemption Requirements

The permittee shall conduct all asbestos abatement projects within the procedures established for certification and accreditation by 10 CSR 10-6.250. This rule requires individuals who work in asbestos abatement projects to be certified by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires training providers who offer training for asbestos abatement occupations to be accredited by the Missouri Department of Natural Resources Air Pollution Control Program. This rule requires persons who hold exemption status from certain requirements of this rule to allow the department to monitor training provided to employees. Each individual who works in asbestos abatement projects must first obtain certification for the appropriate occupation from the department. Each person who offers training for asbestos abatement occupations must first obtain accreditation from the department. Certain business entities that meet the requirements for state-approved exemption status must allow the department to monitor training classes provided to employees who perform asbestos abatement.

Title VI – 40 CFR Part 82 Protection of Stratospheric Ozone

- 1) The permittee shall comply with the standards for labeling of products using ozone-depleting substances pursuant to 40 CFR Part 82, Subpart E:
 - a) All containers in which a class I or class II substance is stored or transported, all products containing a class I substance, and all products directly manufactured with a class I substance must bear the required warning statement if it is being introduced into interstate commerce pursuant to §82.106.
 - b) The placement of the required warning statement must comply with the requirements pursuant to §82.108.
 - c) The form of the label bearing the required warning statement must comply with the requirements pursuant to §82.110.
 - d) No person may modify, remove, or interfere with the required warning statement except as described in §82.112.
- 2) The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR Part 82, Subpart F, except as provided for motor vehicle air conditioners (MVACs) in Subpart B:

- a) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to §82.156.
 - b) Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to §82.158.
 - c) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to §82.161.
 - d) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with recordkeeping requirements pursuant to §82.166. ("MVAC-like" appliance as defined at §82.152).
 - e) Persons owning commercial or industrial process refrigeration equipment must comply with the leak repair requirements pursuant to §82.156.
 - f) Owners/operators of appliances normally containing 50 or more pounds of refrigerant must keep records of refrigerant purchased and added to such appliances pursuant to §82.166.
- 3) If the permittee manufactures, transforms, imports, or exports a class I or class II substance, the permittee is subject to all the requirements as specified in 40 CFR part 82, Subpart A, Production and Consumption Controls.
 - 4) If the permittee performs a service on motor (fleet) vehicles when this service involves ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all the applicable requirements as specified in 40 CFR part 82, Subpart B, Servicing of Motor Vehicle Air conditioners. The term "motor vehicle" as used in Subpart B does not include a vehicle in which final assembly of the vehicle has not been completed. The term "MVAC" as used in Subpart B does not include the air-tight sealed refrigeration system used as refrigerated cargo, or system used on passenger buses using HCFC-22 refrigerant.

The permittee shall be allowed to switch from any ozone-depleting substance to any alternative that is listed in the Significant New Alternatives Program (SNAP) promulgated pursuant to 40 CFR part 82, Subpart G, Significant New Alternatives Policy Program. *Federal Only - 40 CFR part 82*

10 CSR 10-6.280 Compliance Monitoring Usage

- 1) The permittee is not prohibited from using the following in addition to any specified compliance methods for the purpose of submission of compliance certificates:
 - a) Monitoring methods outlined in 40 CFR Part 64;
 - b) Monitoring method(s) approved for the permittee pursuant to 10 CSR 10-6.065, "*Operating Permits*", and incorporated into an operating permit; and
 - c) Any other monitoring methods approved by the director.
- 2) Any credible evidence may be used for the purpose of establishing whether a permittee has violated or is in violation of any such plan or other applicable requirement. Information from the use of the following methods is presumptively credible evidence of whether a violation has occurred by a permittee:
 - a) Monitoring methods outlined in 40 CFR Part 64;
 - b) A monitoring method approved for the permittee pursuant to 10 CSR 10-6.065, "*Operating Permits*", and incorporated into an operating permit; and
 - c) Compliance test methods specified in the rule cited as the authority for the emission limitations.
- 3) The following testing, monitoring or information gathering methods are presumptively credible testing, monitoring, or information gathering methods:
 - a) Applicable monitoring or testing methods, cited in:
 - i) 10 CSR 10-6.030, "*Sampling Methods for Air Pollution Sources*";

- ii) 10 CSR 10-6.040, "*Reference Methods*";
 - iii) 10 CSR 10-6.070, "New Source Performance Standards";
 - iv) 10 CSR 10-6.080, "*Emission Standards for Hazardous Air Pollutants*"; or
- b) Other testing, monitoring, or information gathering methods, if approved by the director, that produce information comparable to that produced by any method listed above.

V. General Permit Requirements

The installation shall comply with each of the following requirements. Consult the appropriate sections in the Code of Federal Regulations (CFR) and Code of State Regulations (CSR) for the full text of the applicable requirements. All citations, unless otherwise noted, are to the regulations in effect as of the date that this permit is issued,

10 CSR 10-6.065(6)(C)1.B Permit Duration

This permit is issued for a term of five years, commencing on the date of issuance. This permit will expire at the end of this period unless renewed.

10 CSR 10-6.065(6)(C)1.C General Recordkeeping and Reporting Requirements

- 1) Recordkeeping
 - a) All required monitoring data and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report or application.
 - b) Copies of all current operating and construction permits issued to this installation shall be kept on-site for as long as the permits are in effect. Copies of these permits shall be made immediately available to any Missouri Department of Natural Resources' personnel upon request.
- 2) Reporting
 - a) All reports shall be submitted to the Air Pollution Control Program, Enforcement Section, P. O. Box 176, Jefferson City, MO 65102.
 - b) The permittee shall submit a report of all required monitoring by:
 - i) October 1st for monitoring which covers the January through June time period, and
 - ii) April 1st for monitoring which covers the July through December time period.
 - iii) Exception. Monitoring requirements which require reporting more frequently than semi annually shall report no later than 30 days after the end of the calendar quarter in which the measurements were taken.
 - c) Each report shall identify any deviations from emission limitations, monitoring, recordkeeping, reporting, or any other requirements of the permit, this includes deviations or Part 64 exceedances.
 - d) Submit supplemental reports as required or as needed. Supplemental reports are required no later than ten days after any exceedance of any applicable rule, regulation or other restriction. All reports of deviations shall identify the cause or probable cause of the deviations and any corrective actions or preventative measures taken.
 - i) Notice of any deviation resulting from an emergency (or upset) condition as defined in paragraph (6)(C)7.A of 10 CSR 10-6.065 (*Emergency Provisions*) shall be submitted to the permitting authority either verbally or in writing within two working days after the date on which the emission limitation is exceeded due to the emergency, if the permittee wishes to assert an affirmative defense. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that indicate an emergency occurred and the permittee can identify the cause(s) of the emergency. The permitted installation must show that it was operated properly at the time and that during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or requirements in the permit. The notice must contain a description of the emergency, the steps taken to mitigate emissions, and the corrective actions taken.
 - ii) Any deviation that poses an imminent and substantial danger to public health, safety or the environment shall be reported as soon as practicable.

- iii) Any other deviations identified in the permit as requiring more frequent reporting than the permittee's semiannual report shall be reported on the schedule specified in this permit, and no later than ten days after any exceedance of any applicable rule, regulation, or other restriction.
- e) Every report submitted shall be certified by the responsible official, except that, if a report of a deviation must be submitted within ten days after the deviation, the report may be submitted without a certification if the report is resubmitted with an appropriate certification within ten days after that, together with any corrected or supplemental information required concerning the deviation.
- f) The permittee may request confidential treatment of information submitted in any report of deviation.

10 CSR 10-6.065(6)(C)1.D Risk Management Plan Under Section 112(r)

The permittee shall comply with the requirements of 40 CFR Part 68, Accidental Release Prevention Requirements. If the permittee has more than a threshold quantity of a regulated substance in process, as determined by 40 CFR Section 68.115, the permittee shall submit a Risk Management Plan in accordance with 40 CFR Part 68 no later than the latest of the following dates:

- 1) June 21, 1999;
- 2) Three years after the date on which a regulated substance is first listed under 40 CFR Section 68.130;
or
- 3) The date on which a regulated substance is first present above a threshold quantity in a process.

10 CSR 10-6.065(6)(C)1.F Severability Clause

In the event of a successful challenge to any part of this permit, all uncontested permit conditions shall continue to be in force. All terms and conditions of this permit remain in effect pending any administrative or judicial challenge to any portion of the permit. If any provision of this permit is invalidated, the permittee shall comply with all other provisions of the permit.

10 CSR 10-6.065(6)(C)1.G General Requirements

- 1) The permittee must comply with all of the terms and conditions of this permit. Any noncompliance with a permit condition constitutes a violation and is grounds for enforcement action, permit termination, permit revocation and re-issuance, permit modification or denial of a permit renewal application.
- 2) The permittee may not use as a defense in an enforcement action that it would have been necessary for the permittee to halt or reduce the permitted activity in order to maintain compliance with the conditions of the permit
- 3) The permit may be modified, revoked, reopened, reissued or terminated for cause. Except as provided for minor permit modifications, the filing of an application or request for a permit modification, revocation and reissuance, or termination, or the filing of a notification of planned changes or anticipated noncompliance, does not stay any permit condition.
- 4) This permit does not convey any property rights of any sort, nor grant any exclusive privilege.
- 5) The permittee shall furnish to the Air Pollution Control Program, upon receipt of a written request and within a reasonable time, any information that the Air Pollution Control Program reasonably may require to determine whether cause exists for modifying, reopening, reissuing or revoking the permit or to determine compliance with the permit. Upon request, the permittee also shall furnish to the Air Pollution Control Program copies of records required to be kept by the permittee. The

permittee may make a claim of confidentiality for any information or records submitted pursuant to 10 CSR 10-6.065(6)(C)1.

10 CSR 10-6.065(6)(C)1.H Incentive Programs Not Requiring Permit Revisions

No permit revision will be required for any installation changes made under any approved economic incentive, marketable permit, emissions trading, or other similar programs or processes provided for in this permit.

10 CSR 10-6.065(6)(C)1.I Reasonably Anticipated Operating Scenarios

None.

10 CSR 10-6.065(6)(C)3 Compliance Requirements

- 1) Any document (including reports) required to be submitted under this permit shall contain a certification signed by the responsible official.
- 2) Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized officials of the Missouri Department of Natural Resources, or their authorized agents, to perform the following (subject to the installation's right to seek confidential treatment of information submitted to, or obtained by, the Air Pollution Control Program):
 - a) Enter upon the premises where a permitted installation is located or an emissions-related activity is conducted, or where records must be kept under the conditions of this permit;
 - b) Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c) Inspect, at reasonable times and using reasonable safety practices, any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under this permit; and
 - d) As authorized by the Missouri Air Conservation Law, Chapter 643, RSMo or the Act, sample or monitor, at reasonable times, substances or parameters for the purpose of assuring compliance with the terms of this permit, and all applicable requirements as outlined in this permit.
- 3) All progress reports required under an applicable schedule of compliance shall be submitted semiannually (or more frequently if specified in the applicable requirement). These progress reports shall contain the following:
 - a) Dates for achieving the activities, milestones or compliance required in the schedule of compliance, and dates when these activities, milestones or compliance were achieved, and
 - b) An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measures adopted.
- 4) The permittee shall submit an annual certification that it is in compliance with all of the federally enforceable terms and conditions contained in this permit, including emissions limitations, standards, or work practices. These certifications shall be submitted annually by April 1st, unless the applicable requirement specifies more frequent submission. These certifications shall be submitted to EPA Region VII, 901 North 5th Street, Kansas City, Kansas 66101, as well as the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102. All deviations and Part 64 exceedances and excursions must be included in the compliance certifications. The compliance certification shall include the following:
 - a) The identification of each term or condition of the permit that is the basis of the certification;
 - b) The current compliance status, as shown by monitoring data and other information reasonably available to the installation;
 - c) Whether compliance was continuous or intermittent;

- d) The method(s) used for determining the compliance status of the installation, both currently and over the reporting period; and
- e) Such other facts as the Air Pollution Control Program will require in order to determine the compliance status of this installation.

10 CSR 10-6.065(6)(C)6 Permit Shield

- 1) Compliance with the conditions of this permit shall be deemed compliance with all applicable requirements as of the date that this permit is issued, provided that:
 - a) The application requirements are included and specifically identified in this permit, or
 - b) The permitting authority, in acting on the permit revision or permit application, determines in writing that other requirements, as specifically identified in the permit, are not applicable to the installation, and this permit expressly includes that determination or a concise summary of it.
- 2) Be aware that there are exceptions to this permit protection. The permit shield does not affect the following:
 - a) The provisions of section 303 of the Act or section 643.090, RSMo concerning emergency orders,
 - b) Liability for any violation of an applicable requirement which occurred prior to, or was existing at, the time of permit issuance,
 - c) The applicable requirements of the acid rain program,
 - d) The authority of the Environmental Protection Agency and the Air Pollution Control Program of the Missouri Department of Natural Resources to obtain information, or
 - e) Any other permit or extra-permit provisions, terms or conditions expressly excluded from the permit shield provisions.

10 CSR 10-6.065(6)(C)7 Emergency Provisions

- 1) An emergency or upset as defined in 10 CSR 10-6.065(6)(C)7.A shall constitute an affirmative defense to an enforcement action brought for noncompliance with technology-based emissions limitations. To establish an emergency- or upset-based defense, the permittee must demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence, the following:
 - a) That an emergency or upset occurred and that the permittee can identify the source of the emergency or upset,
 - b) That the installation was being operated properly,
 - c) That the permittee took all reasonable steps to minimize emissions that exceeded technology-based emissions limitations or requirements in this permit, and
 - d) That the permittee submitted notice of the emergency to the Air Pollution Control Program within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, any steps taken to mitigate emissions, and any corrective actions taken.
- 2) Be aware that an emergency or upset shall not include noncompliance caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

10 CSR 10-6.065(6)(C)8 Operational Flexibility

An installation that has been issued a Part 70 operating permit is not required to apply for or obtain a permit revision in order to make any of the changes to the permitted installation described below if the changes are not Title I modifications, the changes do not cause emissions to exceed emissions allowable under the permit, and the changes do not result in the emission of any air contaminant not

previously emitted. The permittee shall notify the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 901 North 5th Street, Kansas City, Kansas 66101, at least seven days in advance of these changes, except as allowed for emergency or upset conditions. Emissions allowable under the permit means a federally enforceable permit term or condition determined at issuance to be required by an applicable requirement that establishes an emissions limit (including a work practice standard) or a federally enforceable emissions cap that the source has assumed to avoid an applicable requirement to which the source would otherwise be subject.

- 1) Section 502(b)(10) changes. Changes that, under section 502(b)(10) of the Act, contravene an express permit term may be made without a permit revision, except for changes that would violate applicable requirements of the Act or contravene federally enforceable monitoring (including test methods), recordkeeping, reporting or compliance requirements of the permit.
 - a) Before making a change under this provision, The permittee shall provide advance written notice to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 901 North 5th Street, Kansas City, Kansas 66101, describing the changes to be made, the date on which the change will occur, and any changes in emission and any permit terms and conditions that are affected. The permittee shall maintain a copy of the notice with the permit, and the APCP shall place a copy with the permit in the public file. Written notice shall be provided to the EPA and the APCP as above at least seven days before the change is to be made. If less than seven days notice is provided because of a need to respond more quickly to these unanticipated conditions, the permittee shall provide notice to the EPA and the APCP as soon as possible after learning of the need to make the change.
 - b) The permit shield shall not apply to these changes.

10 CSR 10-6.065(6)(C)9 Off-Permit Changes

- 1) Except as noted below, the permittee may make any change in its permitted operations, activities or emissions that is not addressed in, constrained by or prohibited by this permit without obtaining a permit revision. Insignificant activities listed in the application, but not otherwise addressed in or prohibited by this permit, shall not be considered to be constrained by this permit for purposes of the off-permit provisions of this section. Off-permit changes shall be subject to the following requirements and restrictions:
 - a) The change must meet all applicable requirements of the Act and may not violate any existing permit term or condition; the permittee may not change a permitted installation without a permit revision if this change is subject to any requirements under Title IV of the Act or is a Title I modification;
 - b) The permittee must provide written notice of the change to the Air Pollution Control Program, Enforcement Section, P.O. Box 176, Jefferson City, MO 65102, as well as EPA Region VII, 901 North 5th Street, Kansas City, Kansas 66101, no later than the next annual emissions report. This notice shall not be required for changes that are insignificant activities under 10 CSR 10-6.065(6)(B)3. This written notice shall describe each change, including the date, any change in emissions, pollutants emitted and any applicable requirement that would apply as a result of the change.
 - c) The permittee shall keep a record describing all changes made at the installation that result in emissions of a regulated air pollutant subject to an applicable requirement and the emissions resulting from these changes; and
 - d) The permit shield shall not apply to these changes.

10 CSR 10-6.020(2)(R)12 Responsible Official

The application utilized in the preparation of this permit was signed by Glenn Keefe, Operating Vice President. Mr. Glenn Keefe retired and Mr. Scott Heidtbrink, Vice President-Power Generation and Energy Resources was designated to be the new Responsible Official. If Mr. Heidtbrink terminates employment, or is reassigned different duties such that a different person becomes the responsible person to represent and bind the installation in environmental permitting affairs, the owner or operator of this air contaminant source shall notify the Director of the Air Pollution Control Program of the change. Said notification shall be in writing and shall be submitted within 30 days of the change. The notification shall include the name and title of the new person assigned by the source owner or operator to represent and bind the installation in environmental permitting affairs. All representations, agreement to terms and conditions and covenants made by the former responsible person that were used in the establishment of limiting permit conditions on this permit will continue to be binding on the installation until such time that a revision to this permit is obtained that would change said representations, agreements and covenants.

10 CSR 10-6.065(6)(E)6 Reopening-Permit for Cause

This permit may be reopened for cause if:

- 1) The Missouri Department of Natural Resources (MDNR) receives notice from the Environmental Protection Agency (EPA) that a petition for disapproval of a permit pursuant to 40 CFR § 70.8(d) has been granted, provided that the reopening may be stayed pending judicial review of that determination,
- 2) MDNR or EPA determines that the permit contains a material mistake or that inaccurate statements were made which resulted in establishing the emissions limitation standards or other terms of the permit,
- 3) Additional applicable requirements under the Act become applicable to the installation; however, reopening on this ground is not required if—:
 - a) The permit has a remaining term of less than three years;
 - b) The effective date of the requirement is later than the date on which the permit is due to expire;
or
 - c) The additional applicable requirements are implemented in a general permit that is applicable to the installation and the installation receives authorization for coverage under that general permit,
- 4) The installation is an affected source under the acid rain program and additional requirements (including excess emissions requirements), become applicable to that source, provided that, upon approval by EPA, excess emissions offset plans shall be deemed to be incorporated into the permit;
or
- 5) MDNR or EPA determines that the permit must be reopened and revised to assure compliance with applicable requirements.

10 CSR 10-6.065(6)(E)1.C Statement of Basis

This permit is accompanied by a statement setting forth the legal and factual basis for the draft permit conditions (including references to applicable statutory or regulatory provisions). This Statement of Basis, while referenced by the permit, is not an actual part of the permit.

VI. Attachments

Attachments follow.

Attachment B
10 CSR 10-2.040 Compliance Demonstration

10 CSR 10-3.060, *Maximum Allowable Emission of Particulate Matter from Fuel Burning Equipment Used for Indirect Heating*

Compliance demonstration for the facility propane-fired space heaters.

Note: Existing Units: Installed before February 24, 1979. New Units are all units that are not existing.

Per 10 CSR 10-2.040 (3)(B)1, the allowable particulate matter (PM) emission rate for new indirect heating sources totaling less than 10 MMBTU/hour heat input is:

$$E_{\text{allowable}} = 0.40 \text{ lb/MMBTU}$$

From AP-42 Section 1.5, Liquefied Petroleum Gas Combustion, Table 1.5-1:

$$\text{PM Emission Factor} = 0.6 \text{ lb}/10^3 \text{ gal}$$

From AP-42, Appendix A, the heating value of liquid petroleum gas is:

$$94,000 \text{ BTU/gal} = 94 \text{ MMBTU}/10^3 \text{ gal}$$

Therefore, the PM emission factor for the propane-fired space heaters is:

$$\text{Emission Factor} = (0.6 \text{ lb}/10^3 \text{ gal}) / (94 \text{ MMBTU}/10^3 \text{ gal}) = 0.0064 \text{ lb/MMBTU}$$

$0.0064 \text{ lb/MMBTU} < 0.40 \text{ lb/MMBTU} \therefore$ **subject equipment is in compliance**

$\text{Emission Factor} < E_{\text{allowable}} \therefore$ **subject equipment is in compliance**

Attachment C
10 CSR 10-6.260 Compliance Demonstration

Compliance demonstration for the facility propane-fired space heaters.

10 CSR 10-3.060, *Restrictions of Emission of Sulfur Compounds*

By 10 CSR 10-3.060(5)(B)1, the allowable emissions of sulfur dioxide emissions from each indirect heating source at this facility is 8 lb/MMBTU.

From AP-42 Section 1.5, Liquefied Petroleum Gas Combustion, Table 1.5-1:

SO₂ Emission Factor = 0.10S

Where S = the sulfur content expressed in gr/100 ft³ gas vapor.

And the SO₂ emission factor is in units of lb/10³ gal

From the **Santa Barbara County Air Pollution Control District, Technical Information and References, Gaseous Fuel SO_x Emission Factor (Version 1.0, 1/31/97)**: The sulfur concentration of commercial propane is given as 15 gr/100 scf.

Therefore, for propane-fired space heaters, the SO₂ Emission Factor = 0.10 x 15 gr/100 scf = 1.5 lb/10³ gal
From AP-42, Appendix A, the heating value of liquid petroleum gas is 94,000 Btu/gal = 94 MMBTU/10³ gal
Therefore, the SO₂ emission factor = (1.5 lb/10³ gal)/(94 MMBTU/10³ gal) = 0.016 lb/MMBTU

0.016 lb/MMBTU < 8 lb/MMBTU ∴ **subject equipment is in compliance**

Emission Factor < E_{allowable} ∴ **subject equipment is in compliance**

Attachment D

Estimated Potential HAP Emissions from Combustion Turbine EU0010

Fuel		NATURAL GAS	
Heat Input Rate (MMBTU/hr)		1187	
12-Month Heat Input Limit (MMCF)		1.24E+09	
Equivalent 12-Month Heat Input (MMBTU)⁽²⁾		1.31E+06	
NATURAL GAS FIRED TURBINE EMISSIONS			
Pollutant	Emission factor⁽¹⁾	Emissions	Emissions
	lb/MMBtu	lb/hr	Tons/yr
1,3 Butadiene	4.30E-07	5.10E-04	0.000
Acetaldehyde	4.00E-05	4.75E-02	0.026
Acrolein	6.40E-06	7.60E-03	0.004
Benzene	1.20E-05	1.42E-02	0.008
Ethylbenzene	3.20E-05	3.80E-02	0.021
Formaldehyde	7.10E-04	8.43E-01	0.464
Naphthalene	1.30E-06	1.54E-03	0.001
PAH	2.20E-06	2.61E-03	0.001
Propylene oxide	2.90E-05	3.44E-02	0.019
Toluene	1.30E-04	1.54E-01	0.085
Xylenes	6.40E-05	7.60E-02	0.042
		Total HAP Emissions (tpy)	0.671

⁽¹⁾ Emission factors from AP-42 Section 3.1 (dated 4/00), Table 3.1-3.

⁽²⁾ The operation of EU0010 during any 12-month period is limited to 1.244×10^9 cubic feet of natural gas. At a natural gas heating value of 1,050 BTU/scf (AP-42, Appendix A), this limit equates to 1,306,200 MMBTU per consecutive 12-month period. The maximum HAP emissions account for these operating limits.

Attachment E

Aquila – Ralph Green Plant (037-0003)			
	NO _x Limit		SO ₂ Limit
	Indicator #1	Indicator #2	Indicator
Indicator	Water-to-Fuel (W/F) Ratio	Nitrogen Content of Fuel	Sulfur Content of Fuel
Measurement Approach	Water Flow Monitor Fuel Flow Monitor	Fuel Supplier Certification	Fuel Supplier Certification
Indicator Range	% Load	W/F Ratio	Pipeline-Grade Natural Gas Pipeline Grade Natural Gas
	50	See Tables	
	51 – 75	See Tables	
	76 - 90	See Tables	
	91 – 100	See Tables	
QA/QC Practices and Criteria	Minimum Accuracy of Flow Monitors Not To Exceed ±5% Calibrated Annually	None	None
Monitoring Frequency	Continuous (i.e., water flow and fuel flow is sampled, analyzed, and recorded approximately every second. Hardcopy of instantaneous measurements at 15-minute intervals will be kept for a minimum of 5 years.)	Annually	Annually
Data Collection Procedure			
Averaging Period	1-Hour averages will be calculated, maintained and submitted with quarterly Excess Emissions Report in the event of an exceedance of the W/F compliance curve	NA	NA
Recordkeeping	Maintain records for the most recent five (5) years	Maintain records for the most recent five (5) years	Maintain records for the most recent five (5) years

Attachment F

RG3 NOX COMPLIANCE TABLES				
Compliance Curve: $(5.73 * \text{Gas Flow}) + (.103 * \text{Ta}) - 57.24 + \text{adj. H}_2\text{O}$				
Control Curve: $(5.73 * \text{Gas Flow}) + (.103 * \text{Ta}) - 55.24 + \text{adj. H}_2\text{O}$				
Gas Fuel Flow in lbs./sec.	Ta		Control Curve (GPM H2O)	Compliance Curve (GPM H2O)
8.91	70		3.0243	1.0243
9	70		3.54	1.54
10.5	70		12.135	10.135
11.5	70		17.865	15.865
12	70		20.73	18.73
13	70		26.46	24.46
13.5	70		29.325	27.325
14	70		32.19	30.19
14.5	70		35.055	33.055
15	70		37.92	35.92
15.5	70		40.785	38.785
16	70		43.65	41.65
16.5	70		46.515	44.515
17	70		49.38	47.38
17.5	70		52.245	50.245
18	70		55.11	53.11
18.5	70		57.975	55.975
19	70		60.84	58.84
19.5	70		63.705	61.705
20	70		66.57	64.57
20.5	70		69.435	67.435
8.91	75		3.5393	1.5393
9	75		4.055	2.055
10.5	75		12.65	10.65
11.5	75		18.38	16.38
12	75		21.245	19.245
13	75		26.975	24.975
13.5	75		29.84	27.84
14	75		32.705	30.705
14.5	75		35.57	33.57
15	75		38.435	36.435
15.5	75		41.3	39.3
16	75		44.165	42.165
16.5	75		47.03	45.03
17	75		49.895	47.895

Gas Fuel Flow in lbs./sec.	Ta	Control Curve (GPM H2O)	Compliance Curve (GPM H2O)
17.5	75	52.76	50.76
18	75	55.625	53.625
18.5	75	58.49	56.49
19	75	61.355	59.355
19.5	75	64.22	62.22
20	75	67.085	65.085
20.5	75	69.95	67.95
8.91	80	4.0543	2.0543
9	80	4.57	2.57
10.5	80	13.165	11.165
11.5	80	18.895	16.895
12	80	21.76	19.76
13	80	27.49	25.49
13.5	80	30.355	28.355
14	80	33.22	31.22
14.5	80	36.085	34.085
15	80	38.95	36.95
15.5	80	41.815	39.815
16	80	44.68	42.68
16.5	80	47.545	45.545
17	80	50.41	48.41
17.5	80	53.275	51.275
18	80	56.14	54.14
18.5	80	59.005	57.005
19	80	61.87	59.87
19.5	80	64.735	62.735
20	80	67.6	65.6
20.5	80	70.465	68.465
8.91	85	4.5693	2.5693
9	85	5.085	3.085
10.5	85	13.68	11.68
11.5	85	19.41	17.41
12	85	22.275	20.275
13	85	28.005	26.005
13.5	85	30.87	28.87
14	85	33.735	31.735
14.5	85	36.6	34.6
15	85	39.465	37.465
15.5	85	42.33	40.33
16	85	45.195	43.195
16.5	85	48.06	46.06
17	85	50.925	48.925
17.5	85	53.79	51.79
18	85	56.655	54.655
18.5	85	59.52	57.52

19	85		62.385	60.385
19.5	85		65.25	63.25
Gas Fuel Flow in lbs./sec.	Ta		Control Curve	Compliance Curve
			(GPM H2O)	(GPM H2O)
20	85		68.115	66.115
20.5	85		70.98	68.98
8.91	90		5.0843	3.0843
9	90		5.6	3.6
10.5	90		14.195	12.195
11	90		17.06	15.06
11.5	90		19.925	17.925
12	90		22.79	20.79
13	90		28.52	26.52
13.5	90		31.385	29.385
14	90		34.25	32.25
14.5	90		37.115	35.115
15	90		39.98	37.98
15.5	90		42.845	40.845
16	90		45.71	43.71
16.5	90		48.575	46.575
17	90		51.44	49.44
17.5	90		54.305	52.305
18	90		57.17	55.17
18.5	90		60.035	58.035
19	90		62.9	60.9
19.5	90		65.765	63.765
20	90		68.63	66.63
20.5	90		71.495	69.495
8.91	95		5.5993	3.5993
9	95		6.115	4.115
10.5	95		14.71	12.71
11.5	95		20.44	18.44
12	95		23.305	21.305
13	95		29.035	27.035
13.5	95		31.9	29.9
14	95		34.765	32.765
14.5	95		37.63	35.63
15	95		40.495	38.495
15.5	95		43.36	41.36
16	95		46.225	44.225
16.5	95		49.09	47.09
17	95		51.955	49.955
17.5	95		54.82	52.82
18	95		57.685	55.685
18.5	95		60.55	58.55
19	95		63.415	61.415
19.5	95		66.28	64.28

20	95		69.145	67.145
20.5	95		72.01	70.01
Gas Fuel Flow in lbs./sec.	Ta		Control Curve	Compliance Curve
			(GPM H20)	(GPM H20)
8.91	100		6.1143	4.1143
9	100		6.63	4.63
10.5	100		15.225	13.225
11.5	100		20.955	18.955
12	100		23.82	21.82
13	100		29.55	27.55
13.5	100		32.415	30.415
14	100		35.28	33.28
14.5	100		38.145	36.145
15	100		41.01	39.01
15.5	100		43.875	41.875
16	100		46.74	44.74
16.5	100		49.605	47.605
17	100		52.47	50.47
17.5	100		55.335	53.335
18	100		58.2	56.2
18.5	100		61.065	59.065
19	100		63.93	61.93
19.5	100		66.795	64.795
20	100		69.66	67.66
20.5	100		72.525	70.525

STATEMENT OF BASIS

VII.

Permit Reference Documents

These documents were relied upon in the preparation of the operating permit. Because they are not incorporated by reference, they are not an official part of the operating permit.

- 1) Part 70 Operating Permit Application, received May 14, 2003;
- 2) 2002 Emissions Inventory Questionnaire;
- 3) Part 70 Operating Permit Number 037-0003-0001, issue date November 12, 1998;
- 4) U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*; Volume I, Stationary Point and Area Sources, Fifth Edition.

Applicable Requirements Included in the Operating Permit but Not in the Application or Previous Operating Permits

In the operating permit application, the installation indicated they were not subject to the following regulation(s). However, in the review of the application, the agency has determined that the installation is subject to the following regulation(s) for the reasons stated.

Other Air Regulations Determined Not to Apply to the Operating Permit

The Air Pollution Control Program (APCP) has determined the following requirements to not be applicable to this installation at this time for the reasons stated.

- 1) 10 CSR 10-2.040, *Maximum Allowable Emission of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating*.
Because EU0010 does not fall under the definition of indirect heating equipment it is not subject to this regulation. Also, per 10 CSR 10-2.040(1)(F), this regulation does not apply to sources subject to the provisions of 10 CSR 10-6.070 and because EU0010 is subject to a standard covered under 10 CSR 10-6.070, it is not subject to 10 CSR 10-2.040. Propane-fired space heating equipment at this facility does fall under the definition of indirect heating equipment. However, these space heaters are all under 10 MMBTU/hour and as such are considered insignificant activities. Because the space heaters are considered insignificant activities and APCP has determined that their emissions are below the Standards of 10 CSR 10-2.040, this permit does not include requirements pertaining to this regulation for the facility space heaters. See attachment B.
- 2) 10 CSR 10-2.080, *Emission of Visible Air Contaminants From Internal Combustion Engines (Rescinded November 30, 2002)*.
Part 70 Operating Permit Number 037-0003-0001, issue date November 12, 1998 includes emission unit specific conditions regarding this regulation for EU0010. Because this regulation was rescinded on November 30, 2002, these conditions are no longer applicable to the facility and conditions related to this regulation are not included in this permit.
- 3) 10 CSR 10-2.210, *Control of Emissions From Solvent Metal Cleaning* and 10 CSR 10-2.215, *Control of Emissions from Solvent Cleanup Operations*.
Both of these regulations apply throughout Clay, Jackson and Platte Counties and are therefore not applicable to this facility, which is located in Cass County.
- 4) 10 CSR 10-6.220, *Restriction of Emission of Visible Air Contaminants*,
This rule does not apply to internal combustion engines operated outside the Kansas City or St. Louis metropolitan areas and stationary internal combustion engines operating in the Kansas City or St. Louis

metropolitan areas. As such, this rule does not apply to EU0010. This rule also does not apply to the other emission sources at the facility.

- 5) 10 CSR 10-6.260, *Restriction of Emission of Sulfur compounds*. Part 70 Operating Permit Number 037-0003-0001, issue date November 12, 1998 includes emission unit specific conditions regarding this regulation for EU0010. However, per 10 CSR 10-6.260(1)(A) this rule applies to any installation that is an emission source of sulfur compounds, except where 10 CSR 10-6.070 applies. Because EU0010 is subject to an NSPS under 10 CSR 10-6.070, it is not subject to this regulation and emission unit specific conditions for EU0010 pertaining to this regulation are not included in this permit. Because the space heaters at this facility are considered insignificant activities and APCP has determined that their emissions are below the Standards of 10 CSR 10-6.260, this operating permit does not include requirements pertaining to this regulation for the facility space heaters. See attachment C.
- 6) 10 CSR 10-6.400, *Restriction of Emission of Particulate Matter From Industrial Processes*, This regulation defines process weight to “exclude liquids and gases used solely as fuels and air introduced for purposes of combustion” under 10 CSR 10-6.400(2)(A). For the combustion turbine (EU0010) at this installation, the throughputs only consist of gas fuels and combustion air. Therefore, there are no applicable throughputs for the combustion turbine and the other emission sources at this installation have no or insignificant particulate emissions. Therefore, no emission sources at this installation were considered to be applicable to this regulation and it was not included in the operating permit.

Construction Permit Revisions

The following revisions were made to construction permits for this installation:

- 1) As with Operating Permit 037-0003-0001, the format of the original process limitation as established in the EPA’s PSD letter dated January 29, 1981 has been altered from determining compliance with the limitation on a one-year basis to a consecutive 12-month basis. As with Operating Permit 037-0003-0001, standard recordkeeping and reporting requirements are also included in the applicable requirements for this existing limitation.
- 2) As with Operating Permit 037-0003-0001, the format of the original process limitation as established in Permit #1280-006 has been altered from determining compliance with the limitation on a one-year basis to a consecutive 12-month basis. As with Operating Permit 037-0003-0001, standard recordkeeping and reporting requirements are also included in the applicable requirements for this existing limitation.

New Source Performance Standards (NSPS) Applicability

- 1) 10 CSR 10-6.070, *New Source Performance Regulations*
40 CFR Part 60, Subpart GG, *Standards of Performance for Stationary Gas Turbines*
The provisions of this subpart are applicable to all stationary gas turbines, which commence construction, modification, or reconstruction after October 3, 1977, with a heat input at peak load equal to or greater than 10.7 gigajoules per hour, based on the lower heating value of the fuel fired. The combustion turbine (EU0010) was constructed in 1981 and has a peak load greater than 10.7 gigajoules per hour. Therefore, NSPS Subpart GG applies to the combustion turbine (EU0010).
- 2) 10 CSR 10-6.070, *New Source Performance Regulations*
40 CFR Part 60, Subpart Ka, *Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978 and Prior to July 23, 1984*

The lube oil tank is less than the minimum size specified in the rule and as such is not subject to this regulation.

Maximum Available Control Technology (MACT) Applicability

- 1) There are no MACT standards that are currently applicable to this facility.
- 2) The Combustion Turbine MACT Subpart YYYY is yet to be finalized. The APCP has determined that the potential to emit of HAPs from this facility is less than 25 tons per year and the potential emissions of all individual HAPs are less than 10 tons per year. As proposed, the Combustion Turbine MACT will not be applicable to area sources, and as such, would not be applicable to this facility.
- 3) 40 CFR Part 63, Subpart B, *Requirements for Control Technology Determinations for Major Sources in Accordance with Clean Air Act Sections, Sections 112(g) and 112(j)*
While the facility did submit a Part 1 application, the APCP has determined that the potential to emit of HAPs from this facility is less than 25 tons per year and the potential emissions of all individual HAPs are less than 10 tons per year. Therefore, the combined facility is an area source for HAPs and a Part 1 application is not required.

National Emission Standards for Hazardous Air Pollutants (NESHAP) Applicability

None.

Compliance Assurance Monitoring (CAM) Applicability

40 CFR Part 64, *Compliance Assurance Monitoring (CAM)*

The CAM rule applies to each pollutant specific emission unit that:

- Is subject to an emission limitation or standard, and
- Uses a control device to achieve compliance, and
- Has pre-control emissions that exceed or are equivalent to the major source threshold.

Because the facility combustor turbine (EU0010) uses a control device to achieve compliance with an emission limitation and the pre-control emissions are greater than the major source threshold level, 40 CFR Part 64 is applicable to this emissions unit and CAM requirements are included in the permit.

Other Regulatory Determinations

None.

Other Regulations Not Cited in the Operating Permit or the Above Statement of Basis

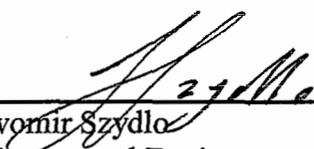
Any regulation which is not specifically listed in either the Operating Permit or in the above Statement of Basis does not appear, based on this review, to be an applicable requirement for this installation for one or more of the following reasons:

- 1) The specific pollutant regulated by that rule is not emitted by the installation;
- 2) The installation is not in the source category regulated by that rule;
- 3) The installation is not in the county or specific area that is regulated under the authority of that rule;
- 4) The installation does not contain the type of emission unit which is regulated by that rule;
- 5) The rule is only for administrative purposes.

Should a later determination conclude that the installation is subject to one or more of the regulations cited in this Statement of Basis or other regulations which were not cited, the installation shall determine and demonstrate, to the APCP's satisfaction, the installation's compliance with that regulation(s). If the

installation is not in compliance with a regulation which was not previously cited, the installation shall submit to the APCP a schedule for achieving compliance for that regulation(s).

Prepared by:



Slawomir Szydło
Environmental Engineer