

**OKLAHOMA DEPARTMENT OF ENVIRONMENTAL QUALITY
AIR QUALITY DIVISION**

MEMORANDUM

November 13, 2019

TO: Phillip Fielder, P.E., Chief Engineer, Air Quality

THROUGH: Rick Groshong, Compliance and Enforcement Group Manager

THROUGH: Eric L. Milligan, P.E., Engineering Section Manager

THROUGH: David Schutz, P.E., New Source Permit Section

FROM: Ge Li, P.E., Engineering Section

SUBJECT: Evaluation of Permit Renewal Application No. **2010-560-C (M-1)**
Evergy, Inc.
Spring Creek Energy Center (SIC 4911/NAICS 221112)
Facility ID: 4001
Latitude: 35.74160°, Longitude: -97.65603°
Section 29, Township 15N, Range 4W, Logan County, Oklahoma
Driving Directions: Hwy 74 N to Waterloo Rd, turn left and proceed
approximately 4 miles to Council Road and turn right onto gravel road. Go 1 mile
to site. Site is located at Council and Simmons Rd.

SECTION I. INTRODUCTION AND PROJECT DESCRIPTION

Evergy, Inc. (Evergy) operates the Spring Creek Energy Center, an electric generation station located in Logan County, Oklahoma. The facility consists of four (4) electric generating combustion turbines (EU 001 through EU 004) producing a nominal total of 320 MW, one 5.0 MW startup combustion turbine generator (EU 005) and one 750 kW emergency diesel generator (EU 006), and two fuel gas heaters each rated at 4.55MMBtu/hr (EU 007 and EU 008).

With this project, Evergy is proposing to add the capability for combustion turbines EU 001, EU 002, EU 003, and EU 004 to operate in peak firing mode. This is a change of the combustion turbine's operating software and does not require any physical changes. The facility is currently operating under Permit No. 2010-560-TVR issued November 25, 2013, and Permit No. 2013-1573-ARR2, issued May 29, 2014. Since the last permits were issued, the facility is now subject to the Cross State Air Pollution Rule (CSAPR) NO_x Group 2 Ozone Season Trading Program found at 40 CFR Part 97 Subpart EEEE.

The facility is an existing Prevention of Significant Deterioration (PSD) major source. The request for a major source construction permit modification requires that this permit undergo Tier II review.

SECTION II. FACILITY DESCRIPTION

The facility includes four General Electric (GE) 80 MW nominal simple-cycle natural gas-fired combustion turbines (CTs) designed to operate in the dry low-NO_x (lean pre-mix) mode at loads from 50 percent up to full load rating. The CTs operate in simple cycle mode to provide faster response time to meet electrical demands in the market during peak hours. The facility is capable of providing electrical power during periods of high demand and during periods of abnormal weather or power grid equipment failure.

With this project, Evergy is proposing to add the capability for combustion turbines EU 001, EU 002, EU 003, and EU 004 to operate in peak firing mode. EU 001 through EU 004 are GE PG7121EA turbines that currently operate at maximum capacity in a “Base Operating Mode” referred to as Base Mode. Spring Creek is proposing to install an operational software package that will allow these turbines to operate above Base Mode, in a new “Peak Operating Mode” referred to as Peak Mode. Compared with Base Mode, Peak Mode operation results in approximately a 9% increase in megawatt (MW) output at its maximum capability and is considered an alternative operating scenario for these combustion turbines. This software change will track when the units are in Peak Mode and when they are in Base Mode.

The plant is designed for full load (maximum output) operation, but has the capability to cycle. Other than specified maintenance periods, the plant is designed to have an availability of over 90 percent. Emissions estimates for this permit are based on continuous full 100% operations (100% load factor).

In addition, the facility includes a 750 kW diesel-fired emergency generator, a 5.0 MW gas-fired combustion turbine-generator, and two natural gas-fired fuel gas heaters (each rated at 4.55 MMBtu/hr). The emergency diesel generator will operate up to a maximum of 375,000 kW-hours per year (the limit of 375,000 kW-hours per year was derived from the generator’s output of 750 kW multiplied by the annual hourly limit of 500 hours). The 5.0 MW gas-fired combustion turbine generator will burn up to a maximum of 32.14MMscf of natural gas per year. The fuel gas heaters are permitted to operate at full capacity for 8,760 hours per year.

The facility has a main filter separator on the natural gas supply which collects entrained liquids for storage in a condensate tank with a maximum capacity of 600 gallons. The 750 kW emergency generator has a diesel fuel storage tank with a maximum capacity of 5,000 gallons.

EUG 1 Electric Generating Combustion Turbines

EU	Name & Make	Base Mode Heat Capacity (MMBtu/hr)	Peak Mode Heat Capacity (MMBtu/hr)*	Serial #	Installed Date
001	GE PG7121EA	890.8	1,016	297528	2001
002	GE PG7121EA	890.8	1,016	297529	2001
003	GE PG7121EA	890.8	1,016	297530	2001
004	GE PG7121EA	890.8	1,016	297531	2001

*Projected maximum heat input based on performance curves provided by GE for operation in Peak Mode at site elevation and 59°F ambient temperature.

EUG 2 Startup Combustion Turbine Generator

EU	Name & Make	Heat Capacity (MMBtu/hr)	Serial #	Installed Date
005	Solar Centaur Model 50S	58.84	0685H	2001

EUG 3 Emergency Diesel Generator

EU	Name & Make	HP	Serial #	Installed Date
006	Detroit Diesel 800DS-4	1,135	0698955	2001

EUG 4 Fuel Gas Heaters

EU	Name	Heat Capacity (MMBtu/hr)	Serial #	Installed Date
007	Fuel Gas Heater	4.55	NA	2001
008	Fuel Gas Heater	4.55	NA	2001

SECTION III. EMISSIONS

- Although the plant will not likely operate at a 100% capacity factor, nominal long-term emissions for the electric generating combustion turbines are based on 100% load (at 60°F ambient conditions) since this results in the highest emissions based on the appropriate emission factor and on a continuous operating period.

In previous permits, NO_x and CO emissions were based on turbine manufacturer's data. Lead and SO₂ emissions were based on AP-42 (5/98), Table 3.1-2a, with sulfuric acid mist emissions based on AP-42 (9/98), Section 1.3.3.2, with 3% annually converted to sulfuric acid mist. SO₂ emission estimates from the four combustion turbines used a lower heating value (LHV) of 916 Btu/scf which was based on testing of the natural gas supply, in conjunction with the AP-42 emission factor. VOC emissions were based on turbine manufacturer's data that 20% of unburned hydrocarbons were classified as VOCs. Short-term emissions for the combustion turbines (CTs), in lb/hr, were reviewed at four ambient temperatures, and at 50%, 75%, and 100% load in the initial permit.

EU 001 through EU 004 haven currently each been permitted to operate 8,760 hours per year in Base Mode. After the software package is installed, the turbines would also be capable of operating in Peak Mode, which would be any load above the current Base Mode operating condition. To avoid triggering PSD permitting requirements, Spring Creek is requesting an annual limitation of 14,000 Peak Mode operating hours per year, total for all four turbines.

Differences between Base Mode and Peak Mode Operations

EU	Model	Fuel	Design Capacity (MW)	Base Mode * (MMBtu/hr)	Peak Mode ** (MMBtu/hr)	Increase (MMBtu/hr)
001	GE PG7121EA	Natural Gas	80	890.8	1,016	125.2
002	GE PG7121EA	Natural Gas	80	890.8	1,016	125.2
003	GE PG7121EA	Natural Gas	80	890.8	1,016	125.2
004	GE PG7121EA	Natural Gas	80	890.8	1,016	125.2

* Heat input as defined in current Title V permit.

** Projected maximum heat input based on GE's performance curves for Peak Mode operation at site elevation and 59 °F ambient temperature.

To compare the combustion turbines short-term emissions with the current permit limits, the CO, PM₁₀, and PM_{2.5} emissions were calculated using stack test results and VOC emission from AP-42 (4/00) Table 3.1-2a. SO₂ emissions were calculated using mass balance that assumed the natural gas has a sulfur content of 0.9 grains per 100 scf, which was demonstrated via annual fuel sampling. NO_x emission factor of 0.044 lb/MMBtu was calculated based on performance data supplied by GE with units operating at 9 ppmvd but ratioed up to the permitted BACT limit of 12 ppmvd. GE's performance data concludes 9 mmpvd being equivalent to 0.0328 lb/MMBtu (HHV), which extrapolates 12 mmpvd to 0.044 lb/MMBtu.

Short-Term Emissions and Current Permit Limits for EU 001 – EU 004

Pollutant	Emission Factor (lb/MMBtu)	Source of Emission Factor	Base Mode (890.8 MMBtu/hr)	Peak Mode (1,016 MMBtu/hr)	Permit Limit
			lb/hr (each turbine)	lb/hr (each turbine)	lb/hr (each turbine)
NO _x	0.044	BACT	39.20	44.70	178.20
CO	0.021	Stack Test	18.71	21.34	54.00
VOC	0.0021	AP-42	1.87	2.13	2.60
PM ₁₀	0.004	Stack Test	3.56	4.06	5.00
PM _{2.5}	0.004	Stack Test	3.56	4.06	5.00
SO ₂	0.0013	Mass Balance	1.16	1.32	2.24

As seen from the table above, this project will slightly increase the short-term actual emissions from each combustion turbine, but the emission rates will not exceed permitted limits. Please see Section IV. PSD Review for projected annual emissions increase, in TPY.

- The fuel gas heater NO_x, CO, and VOC emissions are based on data provided by a heater vendor; while PM and SO₂ emissions are based on AP-42 (7/98), Section 1.4, Table 1.4-2 in conjunction with a higher heating value (HHV) of 1,020 Btu/scf and 8,760 hours of operation for each heater. VOC emissions were conservatively assumed equal to methane emissions for the two fuel gas heaters.

Emission Factors of Heaters

Point	Description	NO _x (lb/MMBtu)	CO (lb/MMBtu)	VOC (lb/MMBtu)	SO ₂ (lb/MMscf)	PM (lb/MMscf)
007	4.55-MMBtu/hr Fuel Gas Heater	0.092	0.08	0.049	0.6	7.6
008	4.55-MMBtu/hr Fuel Gas Heater	0.092	0.08	0.049	0.6	7.6

- The 5.0-MW gas-fired combustion turbine generator NO_x, CO, and VOC annual emissions are based on data provided by the turbine vendor at the annual average ambient temperature of 59 °F with PM and SO₂ emissions based on AP-42 (5/98) Section 3.1, Table 3.1-2a in conjunction with a low heating value (LHV) of 916 Btu/scf and 32.14 MMscf of natural gas consumption per year. All PM₁₀ emissions are assumed to be PM_{2.5}. Short-term emissions are based on maximum expected emissions at 40 °F.

Emission Factors of Startup Turbine Generator

Point	Description	NO _x (lb/MMBtu)	CO (lb/MMBtu)	VOC (lb/MMBtu)	SO ₂ (lb/MMBtu)	PM (lb/MMBtu)
005	5.0-MW Gas-Fired Combustion Turbine Generator	0.092	0.056	0.034	0.94	0.0066

- The 750 kW (1,135 hp) emergency diesel generator emission estimates are based on data provided by the generator vendor and 375,000 kW hours per year (750 kW per hour).

Emission Factors of Emergency Diesel Generator

Point	Description	NO _x (g/hp-hr)	CO (g/hp-hr)	VOC (g/hp-hr)	SO ₂ (g/hp-hr)	PM ₁₀ (g/hp-hr)
006	1,135-hp Emergency Diesel Generator	7.97	0.14	0.22	0.6	0.09

- Tank emissions are based on the EPA Tanks 4.09 program and were determined to be negligible based on the low vapor pressures.

Facility-Wide Emissions

Sources	NO _x		CO		VOC	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EU 001: GE PG7121EA Natural Gas-fired Turbine	178.20	181.04	54.0	223.38	2.60	7.88
EU 002: GE PG7121EA Natural Gas-fired Turbine	178.20	181.04	54.0	223.38	2.60	7.88
EU 003: GE PG7121EA Natural Gas-fired Turbine	178.20	181.04	54.0	223.38	2.60	7.88
EU 004: GE PG7121EA Natural Gas-fired Turbine	178.20	181.04	54.0	223.38	2.60	7.88

Sources	NO _x		CO		VOC	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
EU 005: Solar Centaur Model 50S Startup Combustion Turbine Generator	5.41	1.35	3.32	0.83	2.01	0.50
EU 006: 1,135-hp Detroit Diesel 800DS-4 Emergency Diesel Generator	19.94	4.99	0.35	0.09	0.55	0.14
EU 007: 4.55-MMBtu/hr Fuel Gas Heater	0.42	1.83	0.36	1.59	0.22	0.98
EU 008: 4.55-MMBtu/hr Fuel Gas Heater	0.42	1.83	0.36	1.59	0.22	0.98
Totals	738.99	734.16	962.08	897.62	13.41	34.12

Hazardous Air Pollutants (HAPs) Emissions

HAPs emissions from the turbines are based on AP-42 (5/98), Section 3.1, Table 3.1-3 for all pollutants except formaldehyde. On August 21, 2001, Mr. Sims Roy of the Emissions Standards Division of the USEPA issued a memorandum providing information on HAP emission control technology for new stationary combustion turbines. In that memorandum, it is stated that the formaldehyde emission factor from a lean premix stationary combustion turbine in the range of 10 MW to 170 MW would be 2.02×10^{-4} lbs/MMBtu. HAPs from the fuel gas heaters, which burn exclusively natural gas, are based on AP-42 (7/98), Section 1.4. HAPs from the 5.0 MW gas-fired combustion turbine generator are based on AP-42 (5/98), Section 3.1. The 750 kW emergency diesel fired generator HAPs are estimated from AP-42 (10/96), Section 3.3. Emissions are presented for HAPs in the following table.

Pollutant	CAS #	Emissions	
		lb/hr	TPY
1,3-Butadiene	106990	0.00072	0.007
Acetaldehyde	75070	0.305	1.30
Acrolein	107028	0.03	0.13
Benzene	71432	0.53	2.27
Ethylbenzene	100414	0.09	0.39
Naphthalene	91203	0.523	2.26
PAHs*	**	0.673	2.91
Propylene Oxide	75569	0.108	0.47
Toluene	108883	0.489	2.10
Xylene	1330207	0.103	0.44
Formaldehyde	50000	0.909	3.32
Total HAPs			15.60

* polycyclic aromatic hydrocarbons

** total group

SECTION IV. PSD REVIEW

A project is not a major modification if it does not cause a significant emissions increase or a significant net emissions increase. For existing units, an emissions increase is determined as the sum of the difference between the projected actual emissions and the baseline actual emissions.

In this project, applicant proposed to add the capability for combustion turbines EU 001, EU 002, EU 003, and EU 004 to operate in peak firing mode. This is a change to the combustion turbines' operating software.

Based on the facility's historic Acid Rain reporting data, past annual emission inventories, and monthly fuel use records, a consecutive 24-month period from April 2017 to March 2019 was chosen by the applicant to establish baseline actual emissions for all pollutants. Projected actual emissions for EU 001 through EU 004 are calculated as the product of the projected actual emission factors (lb/MMBtu) and projected annual heat inputs (MMBtu/yr). The emission factors of NO_x and SO₂ are calculated based on historic Acid Rain data for heat inputs and emissions. Emission factors for CO, PM₁₀, and PM_{2.5} are from stack testing. VOC emission factor is from AP-42 (4/00) Section 3.1 Stationary Gas Turbines. The future projected heat inputs of EU 001 through EU 004 are based on Evergy's simulation model for the highest annual heat input over the next ten years.

Forecasted Fuel Inputs

Unit	MMBtu/yr
EU 001	523,943
EU 002	516,893
EU 003	478,743
EU 004	463,207
Total	1,982,786

Emission Factors for Projected Emissions

Pollutant	EU 001	EU 002	EU 003	EU 004	Source
	EF (lb/MMBtu)	EF (lb/MMBtu)	EF (lb/MMBtu)	EF (lb/MMBtu)	
NO _x	0.02	0.019	0.032	0.026	Acid Rain Data
CO	0.015	0.012	0.014	0.021	Stack Test
VOC	0.0021	0.0021	0.0021	0.0021	AP-42 (4/00) Table 3.1-2a
PM ₁₀	0.004	0.003	0.004	0.001	Stack Test
PM _{2.5}	0.004	0.003	0.004	0.001	Stack Test
SO ₂	0.0006	0.0006	0.00061	0.0006	Acid Rain Data

The table below demonstrates the project's baseline actual emissions, projected actual emissions and project emissions increases.

Project Emissions

Sources	NO _x	CO	VOC	SO ₂	PM ₁₀	PM _{2.5}
	TPY	TPY	TPY	TPY	TPY	TPY
EU 001: GE PG7121EA Natural Gas-fired Turbine	6.13	3.93	0.55	0.16	1.05	1.05

Sources	NO _x	CO	VOC	SO ₂	PM ₁₀	PM _{2.5}
	TPY	TPY	TPY	TPY	TPY	TPY
EU 002: GE PG7121EA Natural Gas-fired Turbine	4.79	3.10	0.54	0.15	0.78	0.78
EU 003: GE PG7121EA Natural Gas-fired Turbine	7.72	3.35	0.50	0.15	0.96	0.96
EU 004: GE PG7121EA Natural Gas-fired Turbine	5.98	4.86	0.49	0.14	0.23	0.23
Projected Actual Emissions	24.62	15.25	2.08	0.60	3.01	3.01
Baseline Actual Emissions	15.24	11.16	1.50	0.43	2.11	2.11
Total Project Emissions Increases	9.39	4.09	0.58	0.17	0.91	0.91
PSD SERs	40	100	40	40	15	10
PSD Triggered	No	No	No	No	No	No

As indicated above, the project does not result in a significant emissions increase. Therefore, no further PSD Review is required.

Greenhouse Gases

The estimated emissions increase of greenhouse gases (CO₂-equivalent) at this site is not required since no other pollutant's emissions increase has exceeded the PSD SERs.

SECTION V. BEST AVAILABLE CONTROL TECHNOLOGY BACT

BACT is not required as emission increases are less than the PSD SERs.

SECTION VI. OKLAHOMA AIR POLLUTION CONTROL RULES

OAC 252:100-1 (General Provisions) [Applicable]
Subchapter 1 includes definitions but there are no regulatory requirements.

OAC 252:100-2 (Incorporation by Reference) [Applicable]
This Subchapter incorporates by reference applicable provisions of Title 40 of the Code of Federal Regulations. These requirements are addressed in the "Federal Regulations" section.

OAC 252:100-3 (Air Quality Standards and Increments) [Applicable]
Primary Standards are in Appendix E and Secondary Standards are in Appendix F of the Air Pollution Control Rules. At this time, all of Oklahoma is in attainment of these standards.

OAC 252:100-5 (Registration, Emissions Inventory and Annual Operating Fees) [Applicable]
Subchapter 5 requires sources of air contaminants to register with Air Quality, file emission inventories annually, and pay annual operating fees based upon total annual emissions of regulated pollutants. Emission inventories have been submitted and fees paid for the past years.

OAC 252:100-8 (Permits for Part 70 Sources)

[Applicable]

Part 5 includes the general administrative requirements for Part 70 permits. Any planned changes in the operation of the facility which result in emissions not authorized in the permit and which exceed the “Insignificant Activities” or “Trivial Activities” thresholds require prior notification to AQD and may require a permit modification. Insignificant activities mean individual emission units that either are on the list in Appendix I (OAC 252:100) or whose actual calendar year emissions do not exceed the following limits:

- 5 TPY of any one criteria pollutant
- 2 TPY of any one hazardous air pollutant (HAP) or 5 TPY of multiple HAPs or 20% of any threshold less than 10 TPY for single HAP that the EPA may establish by rule

Emission limitations and operational requirements necessary to assure compliance with all applicable requirements for all sources are taken from the operating permit application, or developed from the applicable requirement.

OAC 252:100-9 (Excess Emission Reporting Requirements)

[Applicable]

Except as provided in OAC 252:100-9-7(a)(1), the owner or operator of a source of excess emissions shall notify the Director as soon as possible but no later than 4:30 p.m. the following working day of the first occurrence of excess emissions in each excess emission event. No later than thirty (30) calendar days after the start of any excess emission event, the owner or operator of an air contaminant source from which excess emissions have occurred shall submit a report for each excess emission event describing the extent of the event and the actions taken by the owner or operator of the facility in response to this event. Request for mitigation, as described in OAC 252:100-9-8, shall be included in the excess emission event report. Additional reporting may be required in the case of ongoing emission events and in the case of excess emissions reporting required by 40 CFR Parts 60, 61, or 63.

OAC 252:100-13 (Open Burning)

[Applicable]

Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in this subchapter.

OAC 252:100-19 (Particulate Matter)

[Applicable]

This subchapter specifies a particulate matter (PM) emission limitation of 0.6 lb/MMBtu from new fuel-burning equipment with a rated heat input of 10 MMBtu/hr or less. For fuel-burning equipment greater than 10 MMBtu/hr, this subchapter specifies a PM emission limitation based upon the heat input of the equipment. At base mode, the turbines are rated at 890.8 MMBtu/hr at the lower heating value and are subject to a PM emission limitation of 0.22 lb/MMBtu; at peak firing mode, the turbines are rated at 1,016 MMBtu/hr at the lower heating value and are subject to a PM emission limitation of 0.20 lb/MMBtu. The permit will require the turbines to be fired with commercial-grade natural gas with an emission limit of 5 lb/hr. Based on these requirements, the turbines will have PM emissions of 0.0056 lb/MMBtu which is below the Subchapter 19 limitation. The 5.0-MW gas-fired combustion turbine generator is rated at 58.84 MMBtu/hr at the lower heating value and is subject to a PM emission limitation of 0.39 lb/MMBtu. The permit will require the 5.0-MW turbine to be fired with commercial-grade natural gas with an emission limit of 0.456 lb/hr. Based on these requirements, the 5.0-MW

turbine will have PM emissions of 0.008 lb/MMBtu which is below the Subchapter 19 limitation. The fuel gas heaters and 750 kW emergency diesel generator are limited to 0.60 lb/MMBtu. AP-42, Table 1.4-2 (7/98), lists PM emissions for the fuel-gas heaters to be 7.6 lb/MMscf or about 0.0075 lb/MMBtu. Based on manufacturer's data, the 750 kW emergency diesel generator (7.58 MMBtu/hr) will have emissions of 0.03 lb/MMBtu. Therefore, all fuel burning equipment will be in compliance with Subchapter 19.

This subchapter also limits emissions of PM from industrial processes. Per AP-42 factors, there are no significant PM emissions from any industrial activities at this facility.

OAC 252:100-25 (Visible Emissions and Particulates)

[Applicable]

No discharge of greater than 20% opacity is allowed except for short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case, shall the average of any six-minute period exceed 60% opacity. EU subject to an opacity limit under NSPS are exempt from the requirements of this subchapter. Continuous monitoring of opacity (COM) is required for fluid bed catalytic cracking unit catalyst regenerators at petroleum refineries and fossil fuel-fired steam generators in accordance with 40 CFR Part 51, Appendix P. 40 CFR Part 51, Appendix P establishes a de minimis level of 250 MMBtu/hr for COM. The turbines have a heat input greater than 250 MMBtu/hr. Appendix P exempts from these requirements when gaseous fuel is the only fuel burned. Since the combustion turbines will only burn natural gas they are exempt from the opacity monitor requirements.

OAC 252:100-29 (Fugitive Dust)

[Applicable]

No person shall cause or permit the discharge of any visible fugitive dust emissions beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. Under normal operating conditions, this facility will not cause a problem in this area, therefore it is not necessary to require specific precautions to be taken.

OAC 252:100-31(Sulfur Compounds)

[Applicable]

Part 5 limits sulfur dioxide emissions from new equipment (constructed after July 1, 1972). For gaseous fuels the limit is 0.2 lb/MMBTU heat input, three-hour average. The permit will require the turbines to be fired with commercial-grade natural gas with SO₂ emissions of 2.24 lb/hr, based on AP-42 (5/98), Section 3.1, Table 3.1-2a, which is equivalent to 0.0025 lb/MMBTU. The permit will also require the fuel gas heaters to be fired with commercial-grade natural gas. Based on AP-42 (7/98), Section 1.4, Table 1.4-2, estimated emissions will be 0.0006 lb/MMBTU. The permit will also require the 5.0 MW gas-fired combustion turbine generator to be fired with commercial-grade natural gas. Based on AP-42 (5/98), Section 3.1, Table 3.1-2a, estimated emissions will be 0.0025 lbs/MMBtu. Thus, the limitation to combust commercial-grade natural gas will provide compliance for the turbines, fuel gas heaters, and the 5.0 MW gas-fired combustion turbine generator. Liquid fuels are limited to 0.8 lb/MMBTU heat input. The permit will require the 750 kW emergency diesel generator to be fired with diesel fuel with an emissions limitation of 1.501 lb/hr based on manufacturer's data. At a heat input rate of 7.58 MMBtu/hr, emissions will be 0.20 lb/MMBtu, which is in compliance with the limitation.

OAC 252:100-33 (Nitrogen Oxides)

[Applicable]

This subchapter limits nitrogen oxides calculated as nitrogen dioxide from any new gas-fired fuel-burning equipment with a rated heat input of 50 MMBtu/hr or greater to a three-hour maximum average of 0.20 lb/MMBTU. The four CTs are subject, but no other emission unit has a heat input of 50 MMBtu/hr or greater. Based on the 0.20 lb/MMBTU maximum three-hour average emission rate limit, each CT will be limited to 178.20 lb/hr three-hour average.

OAC 252:100-35 (Carbon Monoxide)

[Not Applicable]

None of the following affected processes are located at this facility: gray iron cupola, blast furnace, basic oxygen furnace, petroleum catalytic cracking unit, or petroleum catalytic reforming unit.

OAC 252:100-37 (Volatile Organic Compounds)

[Applicable]

Part 3 requires organic material storage tanks constructed after December 28, 1974, with a capacity of 400 gallons or more to be equipped with a permanent submerged fill pipe or with an organic vapor recovery system. The tank on-site is equipped with a submerged fill pipe

Part 5 limits the VOC content of coating or other operations. This facility does not normally conduct coating or painting operations except for routine maintenance of the facility and equipment, which is exempt.

Part 7 requires fuel-burning equipment to be operated and maintained so as to minimize emissions. Temperature and available air must be sufficient to provide essentially complete combustion. Combustion control is a requirement to minimize emissions.

OAC 252:100-42 (Toxic Air Contaminants (TAC))

[Applicable]

Part 5 of OAC 252:100-41 was superseded by this subchapter. Any work practice, material substitution, or control equipment required by the Department prior to June 11, 2004, to control a TAC, shall be retained unless a modification is approved by the Director. Since no Area of Concern (AOC) has been designated anywhere in the state, there are no specific requirements for this facility at this time.

OAC 252:100-43 (Testing, Monitoring, and Recordkeeping)

[Applicable]

This subchapter provides general requirements for testing, monitoring and recordkeeping and applies to any testing, monitoring or recordkeeping activity conducted at any stationary source. To determine compliance with emissions limitations or standards, the Air Quality Director may require the owner or operator of any source in the state of Oklahoma to install, maintain and operate monitoring equipment or to conduct tests, including stack tests, of the air contaminant source. All required testing must be conducted by methods approved by the Air Quality Director and under the direction of qualified personnel. A notice-of-intent to test and a testing protocol shall be submitted to Air Quality at least 30 days prior to any EPA Reference Method stack tests. Emissions and other data required to demonstrate compliance with any federal or state emission limit or standard, or any requirement set forth in a valid permit shall be recorded, maintained, and submitted as required by this subchapter, an applicable rule, or permit requirement. Data from any required testing or monitoring not conducted in accordance with the provisions of this subchapter shall be considered invalid. Nothing shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in

compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

The following Oklahoma Air Pollution Control Rules are not applicable to this facility:

OAC 252:100-11	Alternative Emissions Reduction	not requested
OAC 252:100-15	Mobile Sources	not in source category
OAC 252:100-17	Incinerators	not type of emission unit
OAC 252:100-21	Wood-Waste Burning Equipment	not type of emission unit
OAC 252:100-23	Cotton Gins	not type of emission unit
OAC 252:100-24	Grain Elevators	not in source category
OAC 252:100-35	Carbon Monoxide	not type of emission unit
OAC 252:100-39	Nonattainment Areas	not in area category
OAC 252:100-47	Landfills	not in source category

SECTION VII. FEDERAL REGULATIONS

PSD, 40 CFR Part 52

[Not Applicable to This Modification]

The facility is a listed source as a fossil fuel-fired electric plant of more than 250 MMBTU heat input with emissions greater than 250 TPY. Future emissions increases must be evaluated for PSD if they exceed a significance level (100 TPY CO, 40 TPY NO_x, 40 TPY SO₂, 40 TPY VOC, 25 TPY PM, 15 TPY PM₁₀, 10 TPY PM_{2.5}, 0.6 TPY lead, or 75,000 TPY GHG). This modification does not trigger a PSD review.

NSPS, 40 CFR Part 60

[Subpart GG Applicable]

Subpart Dc, Small Industrial-Commercial-Institutional Steam Generating Units. This subpart affects each steam generating unit for which construction, modification, or reconstruction is commenced after June 9, 1989 and that has a maximum design heat input capacity of 100 MMBtu/hr or less, but greater than or equal to 10 MMBtu/hr. The fuel gas heaters (EU 007 and EU 008) have a heat capacity of 4.55 MMBtu/hr. The applicability threshold for Subpart Dc is 10 MMBtu/hr. Therefore, this subpart is not applicable.

Subpart GG, Stationary Gas Turbines. This subpart affects stationary gas turbines which commenced construction, reconstruction, or modification after October 3, 1977, with a heat input at peak load of greater than or equal to 10 MMBtu/hr based on the lower heating value of the fuel. The four 80 MW turbines have heat input capacities at peak load of 890.8 MMBtu/hr and the 5.0 MW turbine has a heat input capacity of 58.84 MMBtu/hr and are, therefore, affected sources. Standards specified in Subpart GG limit NO_x emissions to 96 ppmvd or less for the 80 MW turbines and 176 ppmvd for the 5.0 MW turbine. Monitoring of the fuel sulfur content is not required when a gaseous fuel is fired in the turbine and the owner or operator demonstrates that the gaseous fuel meets the definition of “natural gas” using one of the methods in §60.334(h)(3)(i) or (ii). §60.331 defines natural gas as containing 20 grains or less of total sulfur per 100 standard cubic feet and is either composed of at least 70 percent methane by volume or has a gross caloric value between 950 and 1100 Btu/scf. Per §60.333(a), monitoring of the fuel nitrogen content is not required if the owner or operator does not take a NO_x allowance for fuel-bound nitrogen. For the NO_x emissions, the BACT requirements of 12 ppm for the 80 MW turbines and 5.41 lb/hr (29 ppm approximately) for the 5.0 MW turbine are more stringent than Subpart GG.

Subpart IIII, Stationary Compression Ignition Internal Combustion Engines. This subpart affects stationary compression ignition (CI) internal combustion engines (ICE) based on power and displacement ratings, depending on date of construction, beginning with those constructed after July 11, 2005. The emergency diesel engine was manufactured prior to 2005, so it is not subject to Subpart IIII.

Subpart KKKK, Stationary Combustion Turbines. This subpart affects stationary combustion turbines with a heat input at peak load equal to or greater than 10.7 GJ (10 MMBtu) per hour that commence construction, modification, or reconstruction after February 18, 2005. The turbines at this facility were constructed before February 18, 2005; therefore, the facility is not subject to Subpart KKKK.

NESHAP, 40 CFR Part 61

[Not Applicable]

There are no emissions of any of the regulated pollutants: arsenic, asbestos, beryllium, coke oven emissions, radionuclides or vinyl chloride. The facility emits mercury and benzene but it is not one of the applicable sources and is, therefore, exempt from this part.

NESHAP, 40 CFR Part 63

[Subpart ZZZZ Applicable]

Subpart YYYY, Stationary Combustion Turbines. This subpart affects stationary combustion turbines that are located at major source of HAPs. This facility is a minor source of HAPs and is not subject to this subpart.

Subpart ZZZZ, Reciprocating Internal Combustion Engines (RICE). This subpart affects any existing, new, or reconstructed stationary RICE located at a major or area source of HAP emissions. The emergency diesel generator EU 006 is subject to Subpart ZZZZ. A summary of the requirements for the emergency generator engine located at this facility are shown below.

Engine Category	Requirements
Existing Emergency CI & Black Start CI	Change oil and filter every 500 hours of operation or annually, whichever one comes first; Inspect air cleaner every 1,000 hours of operation or annually, whichever one comes first; and Inspect all hoses and belts every 500 hours of operation or annually, whichever one comes first and replace as necessary.*

* If the emergency engine is operating during an emergency and it is not possible to shut down the engine to perform the management practice, the required practice can be delayed until the emergency is over.

Sources have the option to utilize an oil analysis program in order to extend the specified oil change requirements of this subpart. There are no initial compliance demonstration or initial performance testing requirements for engines in this category. (40 CFR 63.6612(a) – no requirements in Tables 4 or 5 for this category.)

Other applicable requirements include:

- 1) The owner/operator must operate and maintain the stationary RICE and after-treatment control device (if any) according to the manufacturer's emission-related written instructions or develop their own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

- 2) Existing emergency stationary RICE located at an area source of HAP emissions must install a non-resettable hour meter if one is not already installed.

Existing stationary CI RICE located at an area source of HAP emissions must comply with the applicable emission limitations and operating limitations no later than May 3, 2013. The permit requires the facility to comply with all applicable requirements.

CAM, 40 CFR Part 64

[Not Applicable]

Compliance Assurance Monitoring (CAM) as published in the Federal Register on October 22, 1997, applies to any pollutant specific emission unit at a major source that is required to obtain a Title V permit, if it meets all of the following criteria:

- It is subject to an emission limit or standard for an applicable regulated air pollutant.
- It uses a control device to achieve compliance with the applicable emission limit or standard.
- It has potential emissions, prior to the control device, of the applicable regulated air pollutant of 100 TPY.

The turbines are not subject to CAM monitoring since the low-NO_x burners are not considered add-on control devices.

Chemical Accident Prevention Provisions, 40 CFR Part 68

[Not Applicable]

Flammable substances used as a fuel are not considered when determining if a threshold quantity of a substance is stored on-site. This facility does not store any regulated substance above the applicable threshold limits. More information on this federal program is available on the web page: www.epa.gov/rmp.

Acid Rain, 40 CFR Part 72 (Permit Requirements)

[Applicable]

This facility is an affected source since the simple cycle turbines commenced operation after November 15, 1990, and they serve generators with a nameplate capacity above the 25 MW threshold. The facility must submit an Acid Rain permit application in accordance with the requirements in 40 CFR §72.30. Paragraph 72.30(b)(2)(ii) requires a new source to submit an application for an Acid Rain permit at least 24 months prior to the start of operations. The facility has obtained and is operating under an Acid Rain permit.

Acid Rain Program, 40 CFR Part 73 (SO₂ Requirements)

[Applicable]

This Part provides for allocation, tracking, holding, and transferring of SO₂ allowances.

Acid Rain Program, 40 CFR Part 75 (Monitoring Requirements)

[Applicable]

The facility shall comply with the emission monitoring and reporting requirements of Appendix E, provided the units continue to meet the definition of peaking units as defined by this Part.

Acid Rain Program, 40 CFR Part 76 (NO_x Emission Reduction Program)

[Not Applicable]

This Part applies to each coal-fired utility unit that is subject to an Acid Rain emissions limitation for NO_x or reduction requirement for SO₂ under Phase I or Phase II pursuant to

sections 404, 405, or 409 of the Act. This facility is not a coal-fired utility unit and therefore is not subject to this part.

Stratospheric Ozone Protection, 40 CFR Part 82

[Subparts A and F Applicable]

These standards require phase out of Class I & II substances, reductions of emissions of Class I & II substances to the lowest achievable level in all use sectors, and banning use of nonessential products containing ozone-depleting substances (Subparts A & C); control servicing of motor vehicle air conditioners (Subpart B); require Federal agencies to adopt procurement regulations which meet phase out requirements and which maximize the substitution of safe alternatives to Class I and Class II substances (Subpart D); require warning labels on products made with or containing Class I or II substances (Subpart E); maximize the use of recycling and recovery upon disposal (Subpart F); require producers to identify substitutes for ozone-depleting compounds under the Significant New Alternatives Program (Subpart G); and reduce the emissions of halons (Subpart H).

Subpart A identifies ozone-depleting substances and divides them into two classes. Class I controlled substances are divided into seven groups; the chemicals typically used by the manufacturing industry include carbon tetrachloride (Class I, Group IV) and methyl chloroform (Class I, Group V). A complete phase-out of production of Class I substances is required by January 1, 2000 (January 1, 2002, for methyl chloroform). Class II chemicals, which are hydrochlorofluorocarbons (HCFCs), are generally seen as interim substitutes for Class I CFCs. Class II substances consist of 33 HCFCs. A complete phase-out of Class II substances, scheduled in phases starting by 2002, is required by January 1, 2030.

Subpart F requires that any persons servicing, maintaining, or repairing appliances except for motor vehicle air conditioners; persons disposing of appliances, including motor vehicle air conditioners; refrigerant reclaimers, appliance owners, and manufacturers of appliances and recycling and recovery equipment comply with the standards for recycling and emissions reduction.

Conditions are included in the standard conditions of the permit to address the requirements specified at §82.156 for persons opening appliances for maintenance, service, repair, or disposal; §82.158 for equipment used during the maintenance, service, repair, or disposal of appliances; §82.161 for certification by an approved technician certification program of persons performing maintenance, service, repair, or disposal of appliances; §82.166 for recordkeeping; § 82.158 for leak repair requirements; and §82.166 for refrigerant purchase records for appliances normally containing 50 or more pounds of refrigerant.

Federal NO_x and SO₂ Trading Programs, 40 CFR Part 97

[Subpart EEEEE Applicable]

Subpart EEEEE, Cross-State Air Pollution Rule (CSAPR) NO_x Ozone Season Group 2 Trading Program. This subpart establishes various provisions for the CSAPR NO_x Ozone Season Group 2 Trading Program, under Section 110 of the Clean Air Act and under the Federal Implementation Plan (FIP) codified under 40 CFR § 52.38. Under this subpart, the permittee is required to designate an official representative, monitor emissions, keep records, and make reports in accordance with §§ 97.830 through 97.835. The monitoring program must comply with 40 CFR Part 75 or an alternative monitoring program must be requested and approved. CSAPR NO_x Ozone Season Group 2 allowances are periodically allocated to the facility and at the completion of the allowance transfer deadline for the control period in a given year the

permittee is required to hold, in the source's compliance account administered by the EPA Clean Air Markets Division (CAMD), sufficient allowances available for deduction for such control period under § 97.824(a) in an amount not less than the tons of total NO_x emissions for the control period from all CSAPR NO_x Ozone Season Group 2 units at the facility. The control period starts on May 1 of a calendar year, except as provided in § 97.806(c)(3), and ends on September 30 of the same year. For the CSAPR NO_x Ozone Season Group 2 Trading Program, the deadline for obtaining sufficient allowances is midnight of November 1 (if November 1 is a business day) or midnight of the first business day after November 1 (if November 1 is not a business day). Fines and future allowance deductions will be levied as described in § 97.806 if the permittee holds insufficient allowances at the completion of the allowance transfer deadline. The process of establishing an allowance account and requirements for administering an account are included in § 97.820. The recording of allowance allocations is described in § 97.821. Submission and recording of allowance transfers is described in §§ 97.822 and 97.823. Compliance with ozone season emissions limitations and assurance provisions are described in §§ 97.824 and 97.825. Extra allowances may be banked (see § 97.826) and these vintage allowances may be used in later years with certain restrictions. These allowances do not constitute a property right. No Title V permit revision is required for any allocation, holding, deduction, or transfer of allowances in accordance with this subpart. The four simple-cycle natural gas-fired combustion turbines (EU 001 through EU004: GE PG7121EA) are CSAPR NO_x Ozone Season Group 2 units subject to the requirements of this subpart. The permit includes the requirement to comply with all applicable requirements of this subpart.

SECTION VIII. COMPLIANCE

A. Tier Classification and Public Review

The applicant is proposing to limit the operation in Peak Mode to 14,000 hours per year for the four combustion turbines (EU 001 through EU 004) to avoid the potential of exceeding any Prevention of Significant Deterioration (PSD) significant emission rates (SER). Therefore, this application has been classified as Tier II based on the request for a Part 70 construction permit modification considered significant under OAC 252:100-8-7.2(b)(2). Public and EPA review of the application and permit are required.

The permittee has submitted an affidavit that they are not seeking a permit for land use or for any operation upon land owned by others without their knowledge. The affidavit certifies that the applicant is the sole owner of the land involved. Information on all permit actions is available for review by the public on the Air Quality section of the DEQ web page at <http://www.deq.ok.gov>.

B. State Review

This facility is not located within 50 miles of the Oklahoma border. Therefore, no bordering states will be notified of the draft permit.

C. EPA Review

The proposed permit will be sent to the EPA Region VI for a 45-day review.

D. Fees Paid

\$5,000 fee for modification of Part 70 Construction Permit has been received.

SECTION IX. SUMMARY

The facility was constructed as described in the permit application. Ambient air quality standards are not threatened at this site. There are no active compliance or enforcement Air Quality issues concerning this facility. Issuance of the permit is recommended, contingent upon the concurrent EPA Region VI and public review.

**PERMIT TO CONSTRUCT
AIR POLLUTION CONTROL FACILITY
SPECIFIC CONDITIONS**

**Evergy, Inc.
Spring Creek Energy Center
Logan County**

Permit No. 2010-560-C (M-1)

The permittee is authorized to construct in conformity with the specifications submitted to Air Quality on April 1, 2019, and subsequent submission on June 19, 2019. The Evaluation Memorandum dated November 13, 2019, is attached to this permit to explain the derivation of applicable permit requirements and estimates of emissions; however, it does not contain operating limitations or permit requirements. Continuing operations under this permit constitutes acceptance of, and consent to, the conditions contained herein:

1. Points of emissions and emissions limitations for each point: [OAC 252:100-8-6(a)]

EUG 1 Electric Generating Combustion Turbines. Emission limits and standards for Emission Units (EUs) 001, 002, 003, and 004 include but are not limited to the following:

Each of Four Combustion Turbines (EU 001, 002, 003, 004) is limited to the following:

Pollutant	lb/hr	TPY	ppmvd^a	Compliance Demonstration Method
NO_x	178.20	181.04	12	c,e,f
SO₂	2.24	9.29	N/A	f,g
PM₁₀/PM_{2.5} ^j	5.00	21.90	N/A	d,f,h
VOC	2.6	7.88	N/A	d,f
CO	54.00	223.38	25	c,f,i

^a NO_x and CO concentrations: parts per million by volume, dry basis, corrected to 15% oxygen. These are the BACT levels

^c Current compliance based upon previously submitted Permit No. 99-312C (PSD) "Compliance Emission Testing Report" (June 26 – July 16, 2001) for lb/hr, ppm, and lb/MMBtu. Upon completion of performance testing as specified in Specific Condition 7, compliance will be based upon the new performance testing.

^d lb/hr compliance based on previously submitted Permit No. 99-312C (PSD) "Compliance Emission Testing Report" (June 26 – July 16, 2001)

^e Compliance with 12 ppmvd limit also demonstrates compliance with the 0.2 lb/MMBtu limit under OAC 252:100-33-2 and the 178.20 lb/hr limit

^f Compliance with TPY limit based on emission calculations

^g Compliance with the 2.24 lb/hr limit is demonstrated via annual fuel sampling demonstrating that the sulfur content is less than 0.9 grains per 100 scf

^h Compliance with the 5 lb/hr limit demonstrates compliance with 0.22 lb/MMBtu limit under OAC 252:100-19-12.

ⁱ Compliance with 25 ppmvd limit also demonstrates compliance with 54.0 lb/hr limit

^j PM₁₀ limits include "front half (filterable) and back half (condensable)." All PM₁₀ is assumed to be PM_{2.5}.

- a. The turbines shall only be fired with commercial-grade natural gas. Compliance can be shown by a current gas company bill, valid purchase contract, tariff sheet, or transportation contract or representative fuel sampling. Compliance shall be demonstrated at least once per calendar year. [OAC 252:100-31 & 8-34]
- b. The turbine units shall be equipped with dry low-NO_x burners.
[OAC 252:100-8-34]
- c. The turbine units are limited to 14,000 Peak Mode operating hours per year, total for four turbines.
- d. Each turbine is subject to the federal New Source Performance Standards (NSPS) for Stationary Gas Turbines, 40 CFR 60, Subpart GG, and shall comply with all applicable requirements. [40 CFR §60.330 to §60.335]
 - i. §60.332: Standard for nitrogen oxides
 - ii. §60.333: Standard for sulfur dioxide
 - iii. §60.334: Monitoring of operations
 - iv. §60.335: Test methods and procedures
 - v. Monitoring of the fuel sulfur content is not required if the permittee can demonstrate that the gaseous fuel meets the definition of “natural gas” with a maximum total sulfur content of less than 20 grains/100 SCF (680 ppmw or 338 ppmv) or less using either a current valid purchase contract, tariff sheet, or transportation contract or representative fuel sampling. Monitoring of fuel nitrogen content under NSPS Subpart GG shall not be required unless the permittee claims an allowance for fuel bound nitrogen.
- e. Each turbine is subject to the Cross-State Air Pollution Rule (CSAPR) NO_x Ozone Season Group 2 Trading Program. The permittee shall comply with all applicable requirements, including but not limited to:
[40 CFR § 97.801 to § 97.835]
 - i. §97.801 Purpose.
 - ii. §97.802 Definitions.
 - iii. §97.803 Measurements, abbreviations, and acronyms.
 - iv. §97.804 Applicability.
 - v. §97.805 Retired unit exemption.
 - vi. §97.806 Standard requirements.
 - vii. §97.807 Computation of time.
 - viii. §97.808 Administrative appeal procedures.
 - ix. §97.810 State NO_x Ozone Season Group 2 trading budgets, new unit set-asides, Indian country new unit set-aside, and variability limits.
 - x. §97.811 Timing requirements for CSAPR NO_x Ozone Season Group 2 allowance allocations.
 - xi. §97.812 CSAPR NO_x Ozone Season Group 2 allowance allocations to new units.
 - xii. §97.813 Authorization of designated representative and alternate designated representative.

- xiii. §97.814 Responsibilities of designated representative and alternate designated representative.
- xiv. §97.815 Changing designated representative and alternate designated representative; changes in owners and operators; changes in units at the source.
- xv. §97.816 Certificate of representation.
- xvi. §97.817 Objections concerning designated representative and alternate designated representative.
- xvii. §97.818 Delegation by designated representative and alternate designated representative.
- xviii. §97.820 Establishment of compliance accounts, assurance accounts, and general accounts.
- xix. §97.821 Recordation of CSAPR NO_x Ozone Season Group 2 allowance allocations and auction results.
- xx. §97.822 Submission of CSAPR NO_x Ozone Season Group 2 allowance transfers.
- xxi. §97.823 Recordation of CSAPR NO_x Ozone Season Group 2 allowance transfers.
- xxii. §97.824 Compliance with CSAPR NO_x Ozone Season Group 2 emissions limitation.
- xxiii. §97.825 Compliance with CSAPR NO_x Ozone Season Group 2 assurance provisions.
- xxiv. §97.826 Banking.
- xxv. §97.827 Account error.
- xxvi. §97.828 Administrator's action on submissions.
- xxvii. §97.830 General monitoring, recordkeeping, and reporting requirements.
- xxviii. §97.831 Initial monitoring system certification and recertification procedures.
- xxix. §97.832 Monitoring system out-of-control periods.
- xxx. §97.833 Notifications concerning monitoring.
- xxxi. §97.834 Recordkeeping and reporting.
- xxxii. §97.835 Petitions for alternatives to monitoring, recordkeeping, or reporting requirements.

EUG 2 Startup Combustion Turbine Generator. Emission limits and standards for Emission Unit (EU) 005 include but are not limited to the following: [OAC 252:100-8-6(a)]

Startup Combustion Turbine Generator (EU 005) is limited to the following:

Pollutant	lb/hr	Compliance Demonstration Method
NO _x	5.41	a, d
CO	3.32	a
SO ₂	0.139	b
PM ₁₀ /PM _{2.5}	0.456	c
VOC	2.009	a

^a Compliance demonstrated in previously submitted “Emission Compliance Test EPA 40 CFR Part 60 Subpart GG from the Solar Centaur Turbine” (April 2, 2002)

^b Compliance with the 0.139 lb/hr limit is demonstrated via annual fuel sampling demonstrating that the sulfur content is less than 0.9 grains per 100 scf

^c Based on AP-42 Emission Factors, compliant when burning commercial-grade natural gas

^d Compliance with lb/hr limit demonstrates compliance with 0.20 lb/MMBtu limit under OAC 252:100-33-2

- a. The turbine shall only be fired with commercial-grade natural gas. Compliance can be shown by a current gas company bill, valid purchase contract, tariff sheet, or transportation contract or representative fuel sampling. Compliance shall be demonstrated at least once per calendar year. The amount of natural gas burned in EU 005 is limited to 32.14 MMscf in any 12-month period. . [OAC 252:100-31 & 8-34]
- b. The turbine unit shall be equipped with SoLoNO_x burners. [OAC 252:100-8-34]
- c. The turbine is subject to the federal New Source Performance Standards (NSPS) for Stationary Gas Turbines, 40 CFR 60, Subpart GG, and shall comply with all applicable requirements. [40 CFR §60.330 to §60.335]
 - i. §60.332: Standard for nitrogen oxides
 - ii. §60.333: Standard for sulfur dioxide
 - iii. §60.334: Monitoring of operations
 - iv. §60.335: Test methods and procedures
 - v. Monitoring of the fuel sulfur content is not required if the permittee can demonstrate that the gaseous fuel meets the definition of “natural gas” with a maximum total sulfur content of less than 20 grains/100 SCF (680 ppmw or 338 ppmv) or less using either a current valid purchase contract, tariff sheet, or transportation contract or representative fuel sampling. Monitoring of fuel nitrogen content under NSPS Subpart GG shall not be required unless the permittee claims an allowance for fuel bound nitrogen.

EUG 3 Emergency Diesel Generator. Emission limits and standards for Emission Unit (EU) 006 include but are not limited to the following: [OAC 252:100-8-6(a)]

Emergency Diesel Generator (EU 006) is limited to the following:

Pollutant	lb/hr	Compliance Demonstration Method
NO _x	19.94	a
CO	0.35	a
SO ₂	1.50	a
PM ₁₀ /PM _{2.5}	0.23	a
VOC	0.55	a

^a Compliant when burning No. 2 fuel oil.

- a. The emergency diesel generator shall not operate more than 375,000 kW-hours in any 12-month period.

- b. The emergency diesel generator shall be fitted with a non-resettable hour-meter.
[OAC 252:100-8-6(a)(3)]
- c. The emergency diesel generator shall only be fired with diesel or No. 2 fuel oil with a maximum sulfur content of 0.5% S by weight. Any existing diesel fuel purchased (or otherwise obtained) prior to November 13, 2019, may be used until depleted. Compliance can be shown by a fuel delivery bill or lab analysis. Compliance shall be demonstrated at least once per calendar year.
[OAC 252:100-31 & 8-34]
- d. Replacement (including temporary periods of 6 months or less for maintenance purposes), of the internal combustion engine associated with the emergency diesel generator with an engine of lesser or equal emissions of each pollutant (in lbs/hr) are authorized under the following conditions:
 - i. The permittee shall notify AQD in writing not later than 7 days in advance of the start-up of the replacement engine. Said notice shall identify the equipment removed and shall include the new engine make, model, and horsepower; date of the change, fuel usage, stack flow (ACFM), stack temperature (°F), stack height (feet), stack diameter (inches), and pollutant emission rates (g/hp-hr and lbs/hr) at maximum rated horsepower for the altitude/location and any change in emissions.
 - ii. Replacement equipment and emissions are limited to equipment and emissions which are not a modification under NSPS or NESHAP, or a significant modification under PSD. For existing PSD facilities, the permittee shall calculate the PTE or the net emissions increase resulting from the replacement to document that it does not exceed significance levels and submit the results with the notice required by i. of this Specific Condition.
 - iii. Engines installed as allowed under the replacement allowances in this Specific Condition that are subject to 40 CFR Part 63, Subpart ZZZZ and/or 40 CFR Part 60, Subpart IIII shall comply with all applicable requirements. [OAC 252:100-8-6 (f)]
- e. The facility is subject to 40 CFR Part 63, Subpart ZZZZ, and shall comply with all applicable requirements. [40 CFR §63.6580 – §6675]
 - i. §63.6580: What is the purpose of Subpart ZZZZ?
 - ii. §63.6585: Am I subject to this subpart?
 - iii. §63.6590: What parts of my plant does this subpart cover?
 - iv. §63.6595: When do I have to comply with this subpart?
 - v. §63.6600: What emissions limitations and operating limitations must I meet?
 - vi. §63.6605: What are my general requirements for complying with this subpart?
 - vii. §63.6610: By what date must I conduct the initial performance tests or other initial compliance demonstrations?
 - viii. §63.6615: When must I conduct subsequent performance tests?
 - ix. §63.6620: What performance tests and other procedures must I use?
 - x. §63.6625: What are my monitoring, installation, operation, and maintenance requirements?
 - xi. §63.6630: How do I demonstrate initial compliance with the emission limitations and operating limitations?

- xii. §63.6635: How do I monitor and collect data to demonstrate continuous compliance?
- xiii. §63.6640: How do I demonstrate continuous compliance with the emission limitations and operating limitations?
- xiv. §63.6645: What notifications must I submit and when?
- xv. §63.6650: What reports must I submit and when?
- xvi. §63.6655: What records must I keep?
- xvii. §63.6660: In what form and how long must I keep my records?
- xviii. §63.6665: What parts of the General Provisions apply to me?
- xix. §63.6670: Who implements and enforces this subpart?
- xx. §63.6675: What definitions apply to this subpart?

EUG 4 Fuel Gas Heaters. Emission limits and standards for Emission Units (EUs) 007 and 008 include but are not limited to the following: [OAC 252:100-8-6(a)]

Each of the Two Fuel Gas Heaters (EUs 007 and 008) are limited to the following:

Pollutant	lb/hr	Compliance Demonstration Method
NO_x	0.42	a
CO	0.364	a
PM₁₀/PM_{2.5}	0.034	a

^a Compliant when burning commercial-grade natural gas.

- a. The fuel gas heaters shall only be fired with commercial-grade natural gas. Compliance can be shown by a current gas company bill, valid purchase contract, tariff sheet, or transportation contract or representative fuel sampling. Compliance shall be demonstrated at least once per calendar year. [OAC 252:100-31 & 8-34]
2. A serial number or another acceptable form of permanent (non-removable) identification shall be on each turbine. [OAC 252:100-8-6(a)]
3. The permittee shall be authorized to operate turbines EU 001, EU 002, EU 003, & EU 004 and the fuel gas heaters EU 007 & EU 008 continuously (24 hours per day, every day of the year). The turbine units Peak Firing mode, 750 kW diesel emergency generator, and 5.0 MW gas-fired combustion turbine generator shall be limited as listed in Specific Condition No. 1. [OAC 252:100-8-6(a)]
4. The permittee shall comply with all acid rain control permitting requirements and SO₂ emission requirements as applicable in 40 CFR Parts 72 - 75.
5. The permittee shall follow the 40 CFR Part 75 Appendix E Measurement Requirements of NO_x in the Gas Stream - Optional NO_x Emissions Estimation Protocol for peaking units until such time the units are operated above the levels defining peaking load units. At such time, the permittee shall follow the 40 CFR Part 75 monitoring guidelines for non-peaking units and will

install NO_x CEMs no later than December 31st of the following calendar year per 40 CFR Part 75.12 (c)(2).

6. When monitoring shows emissions in excess of the lb/hr or ppm limits of Specific Condition No. 1, the permittee shall comply with the provisions of OAC 252:100-9 for excess emissions. Requirements of OAC 252:100-9 include immediate notification and written notification of Air Quality and demonstrations that the excess emissions meet the criteria specified in OAC 252:100-9. [OAC 252:100-9]

7. At least once during the term of the Title V operating permit, the permittee shall conduct emissions testing of turbines EU 001, EU 002, EU 003, & EU 004 and furnish a written report to DEQ documenting compliance with emissions limitations for NO_x and CO for these emission units as stated in Specific Condition No. 1¹. Performance testing by the permittee shall use the following test methods specified in 40 CFR Part 60 Appendix A as applicable: [OAC 252:100-8-6(a)]

- Method 1: Sample and Velocity Traverses for Stationary Sources.
- Method 2: Determination of Stack Gas Velocity and Volumetric Flow Rate.
- Method 3: Gas Analysis for Carbon Dioxide, Excess Air, and Dry Molecular Weight.
- Method 4: Determination of Moisture in Stack Gases.
- Method 10: Determination of Carbon Monoxide Emissions from Stationary Sources.
- Method 19: Determination of Sulfur Dioxide Removal Efficiency and Particulate, Sulfur Dioxide and Nitrogen Oxides Emission Rates.
- Method 20: Determination of Nitrogen Oxides and Oxygen Emissions from Stationary Gas Turbines.

Performance testing shall be conducted while the units are operating within 10% of the maximum capable operating rate for current ambient conditions.

8. The permittee shall maintain records as listed below. These records shall be maintained on-site or at a local field office for at least five years after the date of recording and shall be provided to regulatory personnel upon request. [OAC 252:100-8-6(a)]

- a. Monitoring data as required by the Acid Rain program.
 - 1) SO₂ emissions to be monitored according to the protocol in Appendix D to 40 CFR Part 75.
 - 2) CO₂ emissions to be monitored according to the procedures in Section 2.3 of Appendix G to 40 CFR Part 75.
 - 3) NO_x related monitoring data as determined from the procedures in 40 CFR Part 75 Appendix E for gas fired peaking units through the use of a predictive emissions monitoring system (PEMs). This permit condition applies until such time the units are operated above the levels defining peaking load units. At such time, the permittee shall follow the 40 CFR Part 75 monitoring guidelines for non-peaking units and will install NO_x CEMs no later than December 31st of the following calendar year per 40 CFR Part 75.12 (c)(2).

¹ Testing performed to satisfy 40 CFR 75, Appendix E for NO_x satisfies the testing requirement for NO_x.

- b. For the electric generating combustion turbine units (EUG 1): calculated NO_x, SO₂, CO, VOC and PM₁₀ total annual emissions based on a 12 month rolling total; and operating hours under Peak Firing mode (monthly and 12-month rolling total).
 - c. Fuel usage for the 5.0 MW gas-fired combustion turbine generator (monthly and 12-month rolling total).
 - d. kW-hrs produced by the 750 kW emergency diesel generator (monthly and 12-month rolling total).
 - e. Sulfur content of natural gas (current gas company bill, valid purchase contract, tariff sheet, or transportation contract or representative fuel sampling).
 - f. Records required by NSPS, Subpart GG.
 - g. Records required by NESHAP, Subpart ZZZZ.
 - h. Records required by CSAPR.
9. The permittee shall apply for a modified operating permit within 180 days of implementing the changes authorized by this permit.

**MAJOR SOURCE AIR QUALITY PERMIT
STANDARD CONDITIONS
(June 21, 2016)**

SECTION I. DUTY TO COMPLY

A. This is a permit to operate / construct this specific facility in accordance with the federal Clean Air Act (42 U.S.C. 7401, et al.) and under the authority of the Oklahoma Clean Air Act and the rules promulgated there under. [Oklahoma Clean Air Act, 27A O.S. § 2-5-112]

B. The issuing Authority for the permit is the Air Quality Division (AQD) of the Oklahoma Department of Environmental Quality (DEQ). The permit does not relieve the holder of the obligation to comply with other applicable federal, state, or local statutes, regulations, rules, or ordinances. [Oklahoma Clean Air Act, 27A O.S. § 2-5-112]

C. The permittee shall comply with all conditions of this permit. Any permit noncompliance shall constitute a violation of the Oklahoma Clean Air Act and shall be grounds for enforcement action, permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application. All terms and conditions are enforceable by the DEQ, by the Environmental Protection Agency (EPA), and by citizens under section 304 of the Federal Clean Air Act (excluding state-only requirements). This permit is valid for operations only at the specific location listed.

[40 C.F.R. §70.6(b), OAC 252:100-8-1.3 and OAC 252:100-8-6(a)(7)(A) and (b)(1)]

D. It shall not be a defense for a 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 conditions of the permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in assessing penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continuing operations. [OAC 252:100-8-6(a)(7)(B)]

SECTION II. REPORTING OF DEVIATIONS FROM PERMIT TERMS

A. Any exceedance resulting from an emergency and/or posing an imminent and substantial danger to public health, safety, or the environment shall be reported in accordance with Section XIV (Emergencies). [OAC 252:100-8-6(a)(3)(C)(iii)(I) & (II)]

B. Deviations that result in emissions exceeding those allowed in this permit shall be reported consistent with the requirements of OAC 252:100-9, Excess Emission Reporting Requirements. [OAC 252:100-8-6(a)(3)(C)(iv)]

C. Every written report submitted under this section shall be certified as required by Section III (Monitoring, Testing, Recordkeeping & Reporting), Paragraph F. [OAC 252:100-8-6(a)(3)(C)(iv)]

SECTION III. MONITORING, TESTING, RECORDKEEPING & REPORTING

A. The permittee shall keep records as specified in this permit. These records, including monitoring data and necessary support information, shall be retained on-site or at a nearby field office for a period of at least five years from the date of the monitoring sample, measurement, report, or application, and shall be made available for inspection by regulatory personnel upon request. Support information includes all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by this permit. Where appropriate, the permit may specify that records may be maintained in computerized form.

[OAC 252:100-8-6 (a)(3)(B)(ii), OAC 252:100-8-6(c)(1), and OAC 252:100-8-6(c)(2)(B)]

B. Records of required monitoring shall include:

- (1) the date, place and time of sampling or measurement;
- (2) the date or dates analyses were performed;
- (3) the company or entity which performed the analyses;
- (4) the analytical techniques or methods used;
- (5) the results of such analyses; and
- (6) the operating conditions existing at the time of sampling or measurement.

[OAC 252:100-8-6(a)(3)(B)(i)]

C. No later than 30 days after each six (6) month period, after the date of the issuance of the original Part 70 operating permit or alternative date as specifically identified in a subsequent Part 70 operating permit, the permittee shall submit to AQD a report of the results of any required monitoring. All instances of deviations from permit requirements since the previous report shall be clearly identified in the report. Submission of these periodic reports will satisfy any reporting requirement of Paragraph E below that is duplicative of the periodic reports, if so noted on the submitted report.

[OAC 252:100-8-6(a)(3)(C)(i) and (ii)]

D. If any testing shows emissions in excess of limitations specified in this permit, the owner or operator shall comply with the provisions of Section II (Reporting Of Deviations From Permit Terms) of these standard conditions.

[OAC 252:100-8-6(a)(3)(C)(iii)]

E. In addition to any monitoring, recordkeeping or reporting requirement specified in this permit, monitoring and reporting may be required under the provisions of OAC 252:100-43, Testing, Monitoring, and Recordkeeping, or as required by any provision of the Federal Clean Air Act or Oklahoma Clean Air Act.

[OAC 252:100-43]

F. Any Annual Certification of Compliance, Semi Annual Monitoring and Deviation Report, Excess Emission Report, and Annual Emission Inventory submitted in accordance with this permit shall be certified by a responsible official. This certification shall be signed by a responsible official, and shall contain the following language: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete."

[OAC 252:100-8-5(f), OAC 252:100-8-6(a)(3)(C)(iv), OAC 252:100-8-6(c)(1), OAC 252:100-9-7(e), and OAC 252:100-5-2.1(f)]

G. Any owner or operator subject to the provisions of New Source Performance Standards (“NSPS”) under 40 CFR Part 60 or National Emission Standards for Hazardous Air Pollutants (“NESHAPs”) under 40 CFR Parts 61 and 63 shall maintain a file of all measurements and other information required by the applicable general provisions and subpart(s). These records shall be maintained in a permanent file suitable for inspection, shall be retained for a period of at least five years as required by Paragraph A of this Section, and shall include records of the occurrence and duration of any start-up, shutdown, or malfunction in the operation of an affected facility, any malfunction of the air pollution control equipment; and any periods during which a continuous monitoring system or monitoring device is inoperative.

[40 C.F.R. §§60.7 and 63.10, 40 CFR Parts 61, Subpart A, and OAC 252:100, Appendix Q]

H. The permittee of a facility that is operating subject to a schedule of compliance shall submit to the DEQ a progress report at least semi-annually. The progress reports shall contain dates for achieving the activities, milestones or compliance required in the schedule of compliance and the dates when such activities, milestones or compliance was achieved. The progress reports shall also contain an explanation of why any dates in the schedule of compliance were not or will not be met, and any preventive or corrective measures adopted. [OAC 252:100-8-6(c)(4)]

I. All testing must be conducted under the direction of qualified personnel by methods approved by the Division Director. All tests shall be made and the results calculated in accordance with standard test procedures. The use of alternative test procedures must be approved by EPA. When a portable analyzer is used to measure emissions it shall be setup, calibrated, and operated in accordance with the manufacturer’s instructions and in accordance with a protocol meeting the requirements of the “AQD Portable Analyzer Guidance” document or an equivalent method approved by Air Quality.

[OAC 252:100-8-6(a)(3)(A)(iv), and OAC 252:100-43]

J. The reporting of total particulate matter emissions as required in Part 7 of OAC 252:100-8 (Permits for Part 70 Sources), OAC 252:100-19 (Control of Emission of Particulate Matter), and OAC 252:100-5 (Emission Inventory), shall be conducted in accordance with applicable testing or calculation procedures, modified to include back-half condensables, for the concentration of particulate matter less than 10 microns in diameter (PM₁₀). NSPS may allow reporting of only particulate matter emissions caught in the filter (obtained using Reference Method 5).

K. The permittee shall submit to the AQD a copy of all reports submitted to the EPA as required by 40 C.F.R. Part 60, 61, and 63, for all equipment constructed or operated under this permit subject to such standards. [OAC 252:100-8-6(c)(1) and OAC 252:100, Appendix Q]

SECTION IV. COMPLIANCE CERTIFICATIONS

A. No later than 30 days after each anniversary date of the issuance of the original Part 70 operating permit or alternative date as specifically identified in a subsequent Part 70 operating permit, the permittee shall submit to the AQD, with a copy to the US EPA, Region 6, a certification of compliance with the terms and conditions of this permit and of any other applicable requirements which have become effective since the issuance of this permit.

[OAC 252:100-8-6(c)(5)(A), and (D)]

B. The compliance certification shall describe the operating permit term or condition that is the basis of the certification; the current compliance status; whether compliance was continuous or intermittent; the methods used for determining compliance, currently and over the reporting period. The compliance certification shall also include such other facts as the permitting authority may require to determine the compliance status of the source.

[OAC 252:100-8-6(c)(5)(C)(i)-(v)]

C. The compliance certification shall contain a certification by a responsible official as to the results of the required monitoring. This certification shall be signed by a responsible official, and shall contain the following language: "I certify, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete."

[OAC 252:100-8-5(f) and OAC 252:100-8-6(c)(1)]

D. Any facility reporting noncompliance shall submit a schedule of compliance for emissions units or stationary sources that are not in compliance with all applicable requirements. This schedule shall include a schedule of remedial measures, including an enforceable sequence of actions with milestones, leading to compliance with any applicable requirements for which the emissions unit or stationary source is in noncompliance. This compliance schedule shall resemble and be at least as stringent as that contained in any judicial consent decree or administrative order to which the emissions unit or stationary source is subject. Any such schedule of compliance shall be supplemental to, and shall not sanction noncompliance with, the applicable requirements on which it is based, except that a compliance plan shall not be required for any noncompliance condition which is corrected within 24 hours of discovery.

[OAC 252:100-8-5(e)(8)(B) and OAC 252:100-8-6(c)(3)]

SECTION V. REQUIREMENTS THAT BECOME APPLICABLE DURING THE PERMIT TERM

The permittee shall comply with any additional requirements that become effective during the permit term and that are applicable to the facility. Compliance with all new requirements shall be certified in the next annual certification.

[OAC 252:100-8-6(c)(6)]

SECTION VI. PERMIT SHIELD

A. Compliance with the terms and conditions of this permit (including terms and conditions established for alternate operating scenarios, emissions trading, and emissions averaging, but excluding terms and conditions for which the permit shield is expressly prohibited under OAC 252:100-8) shall be deemed compliance with the applicable requirements identified and included in this permit.

[OAC 252:100-8-6(d)(1)]

B. Those requirements that are applicable are listed in the Standard Conditions and the Specific Conditions of this permit. Those requirements that the applicant requested be determined as not applicable are summarized in the Specific Conditions of this permit.

[OAC 252:100-8-6(d)(2)]

SECTION VII. ANNUAL EMISSIONS INVENTORY & FEE PAYMENT

The permittee shall file with the AQD an annual emission inventory and shall pay annual fees based on emissions inventories. The methods used to calculate emissions for inventory purposes shall be based on the best available information accepted by AQD.

[OAC 252:100-5-2.1, OAC 252:100-5-2.2, and OAC 252:100-8-6(a)(8)]

SECTION VIII. TERM OF PERMIT

A. Unless specified otherwise, the term of an operating permit shall be five years from the date of issuance. [OAC 252:100-8-6(a)(2)(A)]

B. A source's right to operate shall terminate upon the expiration of its permit unless a timely and complete renewal application has been submitted at least 180 days before the date of expiration. [OAC 252:100-8-7.1(d)(1)]

C. A duly issued construction permit or authorization to construct or modify will terminate and become null and void (unless extended as provided in OAC 252:100-8-1.4(b)) if the construction is not commenced within 18 months after the date the permit or authorization was issued, or if work is suspended for more than 18 months after it is commenced. [OAC 252:100-8-1.4(a)]

D. The recipient of a construction permit shall apply for a permit to operate (or modified operating permit) within 180 days following the first day of operation. [OAC 252:100-8-4(b)(5)]

SECTION IX. SEVERABILITY

The provisions of this permit are severable and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

[OAC 252:100-8-6 (a)(6)]

SECTION X. PROPERTY RIGHTS

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

[OAC 252:100-8-6(a)(7)(D)]

B. This permit shall not be considered in any manner affecting the title of the premises upon which the equipment is located and does not release the permittee from any liability for damage to persons or property caused by or resulting from the maintenance or operation of the equipment for which the permit is issued. [OAC 252:100-8-6(c)(6)]

SECTION XI. DUTY TO PROVIDE INFORMATION

A. The permittee shall furnish to the DEQ, upon receipt of a written request and within sixty (60) days of the request unless the DEQ specifies another time period, any information that the DEQ may request to determine whether cause exists for modifying, reopening, revoking,

reissuing, terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the DEQ copies of records required to be kept by the permit.

[OAC 252:100-8-6(a)(7)(E)]

B. The permittee may make a claim of confidentiality for any information or records submitted pursuant to 27A O.S. § 2-5-105(18). Confidential information shall be clearly labeled as such and shall be separable from the main body of the document such as in an attachment.

[OAC 252:100-8-6(a)(7)(E)]

C. Notification to the AQD of the sale or transfer of ownership of this facility is required and shall be made in writing within thirty (30) days after such sale or transfer.

[Oklahoma Clean Air Act, 27A O.S. § 2-5-112(G)]

SECTION XII. REOPENING, MODIFICATION & REVOCATION

A. The permit may be modified, revoked, reopened and reissued, or terminated for cause. Except as provided for minor permit modifications, the filing of a request by the permittee for a permit modification, revocation and reissuance, termination, notification of planned changes, or anticipated noncompliance does not stay any permit condition.

[OAC 252:100-8-6(a)(7)(C) and OAC 252:100-8-7.2(b)]

B. The DEQ will reopen and revise or revoke this permit prior to the expiration date in the following circumstances:

[OAC 252:100-8-7.3 and OAC 252:100-8-7.4(a)(2)]

- (1) Additional requirements under the Clean Air Act become applicable to a major source category three or more years prior to the expiration date of this permit. No such reopening is required if the effective date of the requirement is later than the expiration date of this permit.
- (2) The DEQ or the EPA determines that this permit contains a material mistake or that the permit must be revised or revoked to assure compliance with the applicable requirements.
- (3) The DEQ or the EPA determines that inaccurate information was used in establishing the emission standards, limitations, or other conditions of this permit. The DEQ may revoke and not reissue this permit if it determines that the permittee has submitted false or misleading information to the DEQ.
- (4) DEQ determines that the permit should be amended under the discretionary reopening provisions of OAC 252:100-8-7.3(b).

C. The permit may be reopened for cause by EPA, pursuant to the provisions of OAC 100-8-7.3(d).

[OAC 100-8-7.3(d)]

D. The permittee shall notify AQD before making changes other than those described in Section XVIII (Operational Flexibility), those qualifying for administrative permit amendments, or those defined as an Insignificant Activity (Section XVI) or Trivial Activity (Section XVII). The notification should include any changes which may alter the status of a “grandfathered source,” as defined under AQD rules. Such changes may require a permit modification.

[OAC 252:100-8-7.2(b) and OAC 252:100-5-1.1]

E. Activities that will result in air emissions that exceed the trivial/insignificant levels and that are not specifically approved by this permit are prohibited. [OAC 252:100-8-6(c)(6)]

SECTION XIII. INSPECTION & ENTRY

A. Upon presentation of credentials and other documents as may be required by law, the permittee shall allow authorized regulatory officials to perform the following (subject to the permittee's right to seek confidential treatment pursuant to 27A O.S. Supp. 1998, § 2-5-105(17) for confidential information submitted to or obtained by the DEQ under this section):

- (1) enter upon the permittee's premises during reasonable/normal working hours where a source is located or emissions-related activity is conducted, or where records must be kept under the conditions of the permit;
- (2) have access to and copy, at reasonable times, any records that must be kept under the conditions of the permit;
- (3) 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 the permit; and
- (4) as authorized by the Oklahoma Clean Air Act, sample or monitor at reasonable times substances or parameters for the purpose of assuring compliance with the permit.

[OAC 252:100-8-6(c)(2)]

SECTION XIV. EMERGENCIES

A. Any exceedance resulting from an emergency shall be reported to AQD promptly but no later than 4:30 p.m. on the next working day after the permittee first becomes aware of the exceedance. This notice shall contain a description of the emergency, the probable cause of the exceedance, any steps taken to mitigate emissions, and corrective actions taken.

[OAC 252:100-8-6 (a)(3)(C)(iii)(I) and (IV)]

B. Any exceedance that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to AQD as soon as is practicable; but under no circumstance shall notification be more than 24 hours after the exceedance. [OAC 252:100-8-6(a)(3)(C)(iii)(II)]

C. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under this permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance, careless or improper operation, or operator error. [OAC 252:100-8-2]

D. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs or other relevant evidence that: [OAC 252:100-8-6 (e)(2)]

- (1) an emergency occurred and the permittee can identify the cause or causes of the emergency;
- (2) the permitted facility was at the time being properly operated;
- (3) during the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards or other requirements in this permit.

E. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof. [OAC 252:100-8-6(e)(3)]

F. Every written report or document submitted under this section shall be certified as required by Section III (Monitoring, Testing, Recordkeeping & Reporting), Paragraph F. [OAC 252:100-8-6(a)(3)(C)(iv)]

SECTION XV. RISK MANAGEMENT PLAN

The permittee, if subject to the provision of Section 112(r) of the Clean Air Act, shall develop and register with the appropriate agency a risk management plan by June 20, 1999, or the applicable effective date. [OAC 252:100-8-6(a)(4)]

SECTION XVI. INSIGNIFICANT ACTIVITIES

Except as otherwise prohibited or limited by this permit, the permittee is hereby authorized to operate individual emissions units that are either on the list in Appendix I to OAC Title 252, Chapter 100, or whose actual calendar year emissions do not exceed any of the limits below. Any activity to which a State or Federal applicable requirement applies is not insignificant even if it meets the criteria below or is included on the insignificant activities list.

- (1) 5 tons per year of any one criteria pollutant.
- (2) 2 tons per year for any one hazardous air pollutant (HAP) or 5 tons per year for an aggregate of two or more HAP's, or 20 percent of any threshold less than 10 tons per year for single HAP that the EPA may establish by rule.

[OAC 252:100-8-2 and OAC 252:100, Appendix I]

SECTION XVII. TRIVIAL ACTIVITIES

Except as otherwise prohibited or limited by this permit, the permittee is hereby authorized to operate any individual or combination of air emissions units that are considered inconsequential and are on the list in Appendix J. Any activity to which a State or Federal applicable requirement applies is not trivial even if included on the trivial activities list.

[OAC 252:100-8-2 and OAC 252:100, Appendix J]

SECTION XVIII. OPERATIONAL FLEXIBILITY

A. A facility may implement any operating scenario allowed for in its Part 70 permit without the need for any permit revision or any notification to the DEQ (unless specified otherwise in the

permit). When an operating scenario is changed, the permittee shall record in a log at the facility the scenario under which it is operating. [OAC 252:100-8-6(a)(10) and (f)(1)]

B. The permittee may make changes within the facility that:

- (1) result in no net emissions increases,
- (2) are not modifications under any provision of Title I of the federal Clean Air Act, and
- (3) do not cause any hourly or annual permitted emission rate of any existing emissions unit to be exceeded;

provided that the facility provides the EPA and the DEQ with written notification as required below in advance of the proposed changes, which shall be a minimum of seven (7) days, or twenty four (24) hours for emergencies as defined in OAC 252:100-8-6 (e). The permittee, the DEQ, and the EPA shall attach each such notice to their copy of the permit. For each such change, the written notification required above shall include a brief description of the change within the permitted facility, the date on which the change will occur, any change in emissions, and any permit term or condition that is no longer applicable as a result of the change. The permit shield provided by this permit does not apply to any change made pursuant to this paragraph. [OAC 252:100-8-6(f)(2)]

SECTION XIX. OTHER APPLICABLE & STATE-ONLY REQUIREMENTS

A. The following applicable requirements and state-only requirements apply to the facility unless elsewhere covered by a more restrictive requirement:

- (1) Open burning of refuse and other combustible material is prohibited except as authorized in the specific examples and under the conditions listed in the Open Burning Subchapter. [OAC 252:100-13]
- (2) No particulate emissions from any fuel-burning equipment with a rated heat input of 10 MMBtu/hr or less shall exceed 0.6 lb/MMBTU. [OAC 252:100-19]
- (3) For all emissions units not subject to an opacity limit promulgated under 40 C.F.R., Part 60, NSPS, no discharge of greater than 20% opacity is allowed except for: [OAC 252:100-25]
 - (a) Short-term occurrences which consist of not more than one six-minute period in any consecutive 60 minutes, not to exceed three such periods in any consecutive 24 hours. In no case shall the average of any six-minute period exceed 60% opacity;
 - (b) Smoke resulting from fires covered by the exceptions outlined in OAC 252:100-13-7;
 - (c) An emission, where the presence of uncombined water is the only reason for failure to meet the requirements of OAC 252:100-25-3(a); or
 - (d) Smoke generated due to a malfunction in a facility, when the source of the fuel producing the smoke is not under the direct and immediate control of the facility and the immediate constriction of the fuel flow at the facility would produce a hazard to life and/or property.

- (4) No visible fugitive dust emissions shall be discharged beyond the property line on which the emissions originate in such a manner as to damage or to interfere with the use of adjacent properties, or cause air quality standards to be exceeded, or interfere with the maintenance of air quality standards. [OAC 252:100-29]
- (5) No sulfur oxide emissions from new gas-fired fuel-burning equipment shall exceed 0.2 lb/MMBTU. No existing source shall exceed the listed ambient air standards for sulfur dioxide. [OAC 252:100-31]
- (6) Volatile Organic Compound (VOC) storage tanks built after December 28, 1974, and with a capacity of 400 gallons or more storing a liquid with a vapor pressure of 1.5 psia or greater under actual conditions shall be equipped with a permanent submerged fill pipe or with a vapor-recovery system. [OAC 252:100-37-15(b)]
- (7) All fuel-burning equipment shall at all times be properly operated and maintained in a manner that will minimize emissions of VOCs. [OAC 252:100-37-36]

SECTION XX. STRATOSPHERIC OZONE PROTECTION

A. The permittee shall comply with the following standards for production and consumption of ozone-depleting substances: [40 CFR 82, Subpart A]

- (1) Persons producing, importing, or placing an order for production or importation of certain class I and class II substances, HCFC-22, or HCFC-141b shall be subject to the requirements of §82.4;
- (2) Producers, importers, exporters, purchasers, and persons who transform or destroy certain class I and class II substances, HCFC-22, or HCFC-141b are subject to the recordkeeping requirements at §82.13; and
- (3) Class I substances (listed at Appendix A to Subpart A) include certain CFCs, Halons, HBFCs, carbon tetrachloride, trichloroethane (methyl chloroform), and bromomethane (Methyl Bromide). Class II substances (listed at Appendix B to Subpart A) include HCFCs.

B. If the permittee performs a service on motor (fleet) vehicles when this service involves an ozone-depleting substance refrigerant (or regulated substitute substance) in the motor vehicle air conditioner (MVAC), the permittee is subject to all applicable requirements. Note: 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 the system used on passenger buses using HCFC-22 refrigerant. [40 CFR 82, Subpart B]

C. The permittee shall comply with the following standards for recycling and emissions reduction except as provided for MVACs in Subpart B: [40 CFR 82, Subpart F]

- (1) Persons opening appliances for maintenance, service, repair, or disposal must comply with the required practices pursuant to § 82.156;
- (2) 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;
- (3) Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to § 82.161;
 - (4) Persons disposing of small appliances, MVACs, and MVAC-like appliances must comply with record-keeping requirements pursuant to § 82.166;
 - (5) Persons owning commercial or industrial process refrigeration equipment must comply with leak repair requirements pursuant to § 82.158; and
 - (6) 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.

SECTION XXI. TITLE V APPROVAL LANGUAGE

A. DEQ wishes to reduce the time and work associated with permit review and, wherever it is not inconsistent with Federal requirements, to provide for incorporation of requirements established through construction permitting into the Source's Title V permit without causing redundant review. Requirements from construction permits may be incorporated into the Title V permit through the administrative amendment process set forth in OAC 252:100-8-7.2(a) only if the following procedures are followed:

- (1) The construction permit goes out for a 30-day public notice and comment using the procedures set forth in 40 C.F.R. § 70.7(h)(1). This public notice shall include notice to the public that this permit is subject to EPA review, EPA objection, and petition to EPA, as provided by 40 C.F.R. § 70.8; that the requirements of the construction permit will be incorporated into the Title V permit through the administrative amendment process; that the public will not receive another opportunity to provide comments when the requirements are incorporated into the Title V permit; and that EPA review, EPA objection, and petitions to EPA will not be available to the public when requirements from the construction permit are incorporated into the Title V permit.
- (2) A copy of the construction permit application is sent to EPA, as provided by 40 CFR § 70.8(a)(1).
- (3) A copy of the draft construction permit is sent to any affected State, as provided by 40 C.F.R. § 70.8(b).
- (4) A copy of the proposed construction permit is sent to EPA for a 45-day review period as provided by 40 C.F.R. § 70.8(a) and (c).
- (5) The DEQ complies with 40 C.F.R. § 70.8(c) upon the written receipt within the 45-day comment period of any EPA objection to the construction permit. The DEQ shall not issue the permit until EPA's objections are resolved to the satisfaction of EPA.
- (6) The DEQ complies with 40 C.F.R. § 70.8(d).
- (7) A copy of the final construction permit is sent to EPA as provided by 40 CFR § 70.8(a).
- (8) The DEQ shall not issue the proposed construction permit until any affected State and EPA have had an opportunity to review the proposed permit, as provided by these permit conditions.
- (9) Any requirements of the construction permit may be reopened for cause after incorporation into the Title V permit by the administrative amendment process, by

DEQ as provided in OAC 252:100-8-7.3(a), (b), and (c), and by EPA as provided in 40 C.F.R. § 70.7(f) and (g).

- (10) The DEQ shall not issue the administrative permit amendment if performance tests fail to demonstrate that the source is operating in substantial compliance with all permit requirements.

B. To the extent that these conditions are not followed, the Title V permit must go through the Title V review process.

SECTION XXII. CREDIBLE EVIDENCE

For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any provision of the Oklahoma implementation plan, nothing shall preclude the use, including the exclusive use, of any credible evidence or information, relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or compliance test or procedure had been performed.

[OAC 252:100-43-6]

Evergy, Inc.
Attn: Stephanie Hirner
Manager, Air Permitting and Compliance
818 South Kansas Avenue, PO Box 889
Topeka, KS 66601

SUBJECT: Permit No. **2010-560-C (M-1)**
Spring Creek Energy Center
Facility ID: 4001
Edmond, Logan County, Oklahoma

Dear Ms. Hirner:

Enclosed is the Part 70 construction modification permit authorizing modification of the referenced facility. Please note that this permit is issued subject to certain standard and specific conditions, which are attached. These conditions must be carefully followed since they define the limits of the permit and will be confirmed by periodic inspections.

Also note that you are required to annually submit an emission inventory for this facility. An emission inventory must be completed on approved AQD forms and submitted (hardcopy or electronically) by April 1st of every year. Any questions concerning the form or submittal process should be referred to the Emission Inventory Staff at (405) 702-4100.

Thank you for your cooperation. If you have any questions, please refer to the permit number above and contact the permit writer at Ge.Li@deq.ok.gov or (405) 702-4200.

Sincerely,

Phillip Fielder, P.E.
Chief Engineer
AIR QUALITY DIVISION



PART 70 PERMIT

AIR QUALITY DIVISION
STATE OF OKLAHOMA
DEPARTMENT OF ENVIRONMENTAL QUALITY
707 N. ROBINSON, SUITE 4100
P.O. BOX 1677
OKLAHOMA CITY, OKLAHOMA 73101-1677

Permit No. 2010-560-C (M-1)

Evergy, Inc. ,

having complied with the requirements of the law, is hereby granted permission to operate the Spring Creek Energy Center, located in Section 29, Township 15N, Range 4W, Logan County, Oklahoma, subject to standard conditions dated June 21, 2016, and specific conditions, both attached.

In the absence of commencement of construction, this permit shall expire 18 months from the issuance date, except as authorized under Section VIII of the Standard Conditions.

Division Director
Air Quality Division

Date

Evergy, Inc.
Attn: Stephanie Hirner
Manager, Air Permitting and Compliance
818 South Kansas Avenue, PO Box 889
Topeka, KS 66601

SUBJECT: Permit No. **2010-560-C (M-1)**
Spring Creek Energy Center
Facility ID: 4001
Edmond, Logan County, Oklahoma

Dear Ms. Hirner:

Air Quality Division has completed the initial review of your permit application referenced above. This application has been determined to be a **Tier II**. In accordance with 27A O.S. § 2-14-301 & 302 and OAC 252:4-7-13(c) the application and enclosed draft permit are now ready for public review. The requirements for public review include the following steps which you must accomplish:

1. Publish at least one legal notice (one day) of a “Notice of Filing a Tier II Application” and a “Notice of Tier II Draft Permit” in at least one newspaper of general circulation within the county where the facility is located. (Instructions enclosed)
2. Provide for public review (for a period of 30 days following the date of the newspaper announcement) a copy of this draft permit and a copy of the application at a convenient location (preferably a public location) within the county of the facility.
3. Send to AQD a copy of the proof of publication notice from Item#1 above together with any additional comments or requested changes which you may have on the draft permit.

Thank you for your cooperation. If you have any questions, please refer to the permit number above and contact me at (405) 702-4100 or the permit writer, Ge Li, at (405) 702-4200.

Sincerely,

Phillip Fielder, P.E.
Chief Engineer
AIR QUALITY DIVISION