

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

MEMORANDUM

July 12, 2013

TO: Phillip Fielder, P.E., Permits and Engineering Group Manager

THROUGH: Kendal Stegmann, Senior Environmental Manager, Compliance and Enforcement

THROUGH: Phil Martin, P.E., Engineering Manager, Existing Source Permits Section

THROUGH: Peer Review

FROM: Jian Yue, P.E., Engineering Section

SUBJECT: Evaluation of Permit Application No. **2011-1008-TVR2**
Oklahoma Gas & Electric Company (OG&E)
Mustang Generating Station
Section 36, T11N, R5W, Canadian County, Oklahoma
Latitude: 35.47007°, Longitude: -97.67507°
501 S. Mustang Plant Road, Oklahoma City

SECTION I. INTRODUCTION

OG&E has submitted an application to renew their Title V operating permit for its Mustang Generating Station (SIC 4911, NAICS 221112). This facility is currently operating under Permit No. 2004-221-TVR (M-1) issued on May 13, 2011. The facility is an electric generating station (SIC Code 4911) located in an attainment area. The electric generating units in the facility are also acid rain program affected units and Acid Rain Permit No. 2009-452-ARR2 (M-1) will remain a valid permit for the facility.

OG&E is not requesting any additional emission increases with this renewal application. However, there are a few updates as listed below:

1. The 270-hp emergency fire pump engine is now subject to requirements of NESHAP Subpart ZZZZ and is no longer considered insignificant.
2. The fuel oil tanks (4-B-05 and 4-B-06) have been removed from the facility.
3. The facility is now subject to the greenhouse gas permitting requirements. Estimated potential emissions and actual emissions for the 2010 reporting year were provided with this application.

Since the facility emits more than 100 TPY of a regulated pollutant, it is subject to Title V permitting requirements.

SECTION II. FACILITY DESCRIPTION

The facility consists of four electric generating units. The boilers are natural circulation Babcock and Wilcox type boilers capable of producing steam. The thermodynamic energy in the steam is converted to mechanical energy by the steam turbine/generator unit capable of producing electricity. The boiler units 1, 2, 3, and 4 use natural gas as their primary fuel. Other emission units at the facility include a gas-fired house-heat boiler and two storage tanks.

Emission units (EUs) have been arranged into Emission Unit Groups (EUGs) in the following outline.

SECTION III. EQUIPMENT

EUG 1. Electric Generating Boilers

EU ID#	Name/ Make	Heat Capacity (MMBTUH)	Serial #	Construction Date
2-B-01	Babcock & Wilcox	474	RB-76	1949
2-B-02	Babcock & Wilcox	479	RB-79	1950
2-B-03	Babcock & Wilcox	1150	RB-216	1954
2-B-04	Babcock & Wilcox	2220	RB-278	1958

EUG 2. House Heat Boiler

EU ID#	Make/Model	Hp/MMBTUH	Serial #	Construction Date
3-B-01	Superior/Mohawk # 4-5-1505	300/12.6	12453	1994

EUG 3. Storage Tank

EU ID#	Capacity (gallon)	Material Stored	Installed Date
4-B-03	2,142	Diesel Fuel	1955

EUG 4. Emergency Generators

EU ID#	Make/Model	hp	Serial #	Construction Date
6	Generac QT025A (Propane Engine)	40	6215203	2011
7	Caterpillar 320A (Emergency Fire Pump)	270	03Z11636	1993

SECTION IV. EMISSIONS

Criteria Pollutants

Estimated emissions from Boiler Units 1, 2, 3 and 4 are based on the emission factors from AP-42 (7/98), Tables 1.4-1 and 1.4-2, and an average natural gas higher heating value of 1,020 Btu/scf. Emissions from Boiler Units 1 and 2 are estimated based on operating 8,760 hours per

year but on the 20% capacity of the boilers according to definition of peaking units by 40 CFR Part 72, Acid Rain Program. Emissions from Boiler Units 3 and 4 reflect continuous operation. Emissions from the house-heat boiler are based on the emission limitations in Permit No. 94-043-O. Tank emissions are based on the EPA TANKS 3.1 modeling program. Emissions from the Generac QT025A emergency generator is based on EPA emissions requirements of NO_x + HC 10g/hp-hr and CO 387 g/hp-hr. The 270-hp Caterpillar 320A diesel fire pump is for emergency use only. Emissions from the diesel fire pump are estimated based on operating 500 hours per year using AP-42 (10/96), Table 3.3-1.

Emissions from the Unit Boilers

EU ID#	NO _x		CO		VOC		SO ₂		PM	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
2-B-01	130.12	113.99	39.04	34.20	2.56	2.24	0.28	0.24	3.53	3.09
2-B-02	131.49	115.19	39.45	34.56	2.58	2.26	0.28	0.25	3.57	3.13
2-B-03	315.69	1382.72	94.71	414.83	6.20	27.16	0.68	2.96	8.57	37.53
2-B-04	609.41	2669.22	182.82	800.75	11.97	52.43	1.31	5.72	16.54	72.45
Subtotal	1186.71	4281.12	356.02	1284.34	23.31	84.09	2.55	9.17	32.21	116.2

Emissions from the House Heat Boiler

EU ID#	NO _x		CO		VOC		SO ₂		PM	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
3-B-01	1.76	2.82	0.44	0.70	0.04	0.06	0.01	0.02	0.17	0.27

Emissions from the Emergency Generators

EU ID#	NO _x		CO		VOC		SO ₂		PM	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
6	0.01	0.03	0.04	0.19	0.002	0.01	-	-	-	-
7	8.37	2.09	1.80	0.45	0.67	0.17	0.55	0.14	0.59	0.15
Subtotal	8.38	2.12	1.84	0.64	0.672	0.18	0.55	0.14	0.59	0.15

Total Potential Emissions from the Facility

Sources	NO _x		CO		VOC		SO ₂		PM	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
Unit Boilers	1186.71	4281.12	356.02	1284.34	23.31	84.09	2.55	9.17	32.21	116.2
House Heat Boiler	1.76	2.82	0.44	0.70	0.04	0.06	0.01	0.02	0.17	0.27
Emergency Engines	8.38	2.12	1.84	0.64	0.672	0.18	0.55	0.14	0.59	0.15
Total	1196.85	4286.06	358.3	1285.68	24.022	84.33	3.11	9.33	32.97	116.62

Green House Gas Emissions

OG&E has provided CO₂e emission estimates for this facility. Based on a review of these estimates, it has been determined that this facility is a major stationary source for greenhouse gas emissions.

Emissions of Hazardous Air Pollutants (HAPs)

Emissions of benzene and formaldehyde are calculated based on the emission factors from AP-42 (7/98), Table 1.4-3. Emissions of hexane are calculated based on the AB 2588 Combustion Emission Factors (5/17/2001) derived by California Ventura County Air Pollution Control District.

HAP Emissions from the Boilers

Point and EU ID #	Formaldehyde		Benzene		Hexane	
	lb/hr	TPY	lb/hr	TPY	lb/hr	TPY
2-B-01	0.035	0.031	0.001	0.0009	0.0006	0.0005
2-B-02	0.035	0.031	0.001	0.0009	0.0006	0.0005
2-B-03	0.085	0.370	0.002	0.01	0.0015	0.0066
2-B-04	0.163	0.715	0.005	0.02	0.0029	0.0127
Total	0.318	1.147	0.009	0.032	0.0056	0.0203

SECTION V. INSIGNIFICANT ACTIVITIES

The insignificant activities identified and justified in the application are duplicated below. Appropriate record keeping of activities indicated below with a "*" is specified in the Specific Condition No. 9:

1. Space heaters, boilers and emergency flares less than or equal to 5 MMBTU/hr heat input (commercial natural gas). None identified but may occur in the future.
2. * Storage tanks with less than or equal to 10,000 gallons capacity that store volatile organic liquids with a true vapor pressure less than or equal to 1.0 psia at maximum storage temperature. There is one 2,142-gal diesel tank on-site and one 100-gal diesel tank for fire pump engine.
3. Cold degreasing operations utilizing solvents that are denser than air. Cold degreasing occurs in the maintenance shop.
4. Welding and soldering are conducted as part of plant maintenance, which is a listed "trivial activity," therefore, no recordkeeping will be required.
5. Hazardous waste and hazardous materials drum staging areas. The facility maintains a drum storage area.
6. Exhaust systems for chemical, paint, and/or solvent storage rooms or cabinets, including hazardous waste satellite (accumulation) areas. There is a chemical laboratory at the site.
7. Hand wiping and spraying of solvents from containers with less than 1 liter capacity used for spot cleaning and/or degreasing in ozone attainment areas. The facility performs small amounts of hand wiping and spraying of solvents.

8. * Activities that have the potential to emit no more than 5 TPY (actual) of any criteria pollutant.

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, Emission 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 a HAP that the EPA may establish by rule

Emissions limitations have not been established for electric generating boilers 2-B-01, 02, 03, and 04 since they are “grandfathered.” One 300-hp natural gas-fired boiler was installed in 1994 and operated under Permit No. 94-043-O. The permit had limits on the emissions and operating hours of the boiler. However, the potential to emit of any criteria pollutant from the boiler is less than 5 TPY based on the emission factor from AP-42 (2/98), Tables 1.4-1 and 1.4-2, and operating 8,760 hours per year. No limit is necessary to assure compliance with other applicable requirements. Thus, these limitations were not carried over into the Title V operating permit. A restriction on the type of the fuel used for the house-heat boiler (Specific Condition #7) was rolled over from Permit No. 94-043-O.

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 affirmative defense, 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 From Fuel-burning Equipment) [Applicable]
This Subchapter specifies maximum allowable emissions of particulate matter (PM). AP-42 (7/98), Table 1.4-2, lists the total PM emissions for natural gas fired boilers to be 7.6 lb/10⁶ scf which is equivalent to 0.0076 lb/MMBTU. The fuel-burning equipment in this facility is rated from 10.03 to 2,220 MMBTU/hr. According to 252:100-19-4, the most stringent limit for fuel-burning equipment is 0.1 lb/MMBTU. Therefore, the natural gas fired boilers comply with the requirement.

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. Since this facility only burns natural gas, compliance with the standards is assured and no specific monitoring is required.

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. For liquid fuels the limit is 0.8 lb/MMBTU. Fuel-burning equipment at this facility uses No. 2 fuel oil, No. 6 fuel oil, used oil and natural gas. Gas turbines 9 & 10 and auxiliary boilers were constructed after July 1, 1972, and therefore are subject to the limitations. For natural gas combustion, AP-42 (7/98), Chapter 1.4, Table 1.4-2 gives an emission factor of 0.6 pound of SO₂ per million cubic feet which equates to approximately 0.0006 lb/MMBTU which is in compliance with this subchapter. The permit will require the use of natural gas for the boilers.

OAC 252:100-33 (Nitrogen Oxides)

[Not Applicable]

This subchapter establishes the standards to control the emission of nitrogen oxides from new fuel-burning equipment with a rated heat input of 50 million BTUs per hour or more. The Unit Boilers in this facility were installed before the effective date of this rule and therefore exempt from the requirement.

OAC 252:100-37 (Volatile Organic Compounds)

[Not Applicable]

Part 3 requires storage tanks constructed after December 28, 1974, with a capacity of 400 gallons or more and storing a VOC with a vapor pressure greater than 1.5 psia to be equipped with a permanent submerged fill pipe or with an organic vapor recovery system. The fuel oil storage tanks at the facility (4-B-0-1 and 4-B-02) are exempt from this subchapter since they were constructed prior to the new source applicable date.

Part 5 limits the VOC content of coatings used in coating lines or operations. Any painting operation will involve maintenance coatings of buildings and equipment and emit less than 100 pounds per day of VOCs and so is exempt.

Part 7 requires fuel-burning and refuse-burning equipment to be operated to minimize emissions of VOC. The equipment at this location is subject to this requirement.

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

[Applicable]

This subchapter regulates toxic air contaminants (TAC) that are emitted into the ambient air in areas of concern (AOC). 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 AOC has been designated 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 Quality 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 252:100-23	Cotton Gins	not type of emission unit
OAC 252:100-24	Feed & Grain Facilities	not in source category
OAC 252:100-33	Nitrogen Dioxides	not in source category
OAC 252:100-35	Carbon Monoxide	not type of emission unit
OAC 252:100-39	Nonattainment Areas	not in a subject area

SECTION VII. FEDERAL REGULATIONS

PSD, 40 CFR Part 52 [Not Applicable]
 Total potential emissions of NO_x and CO are greater than the PSD threshold of 250 TPY. Any future emission increases must be evaluated for PSD if they exceed a significance level (40 TPY NO_x, 100 TPY CO, and 40 TPY VOC).

NSPS, 40 CFR Part 60 [Only Dc Applicable]
Subpart D, Standards of Performance for Fossil-Fuel-Fired Steam Generators for Which Construction is Commenced after August 17, 1971. It regulates steam generating unit with more than 250 MMBTU/hr heat input rate. The electric generating boilers at the facility were constructed before 1971 and therefore are exempt from the requirements of subpart D.

Subpart Da, Standards of Performance for Electric Utility Steam Generating Units for Which Construction is Commenced after September 18, 1978. It regulates electric generating unit capable of combusting more than more 250 MMBTU/hr heat input of fossil fuel. The electric generating boilers at the facility were constructed before 1978 and therefore are exempt from the requirements of subpart Da.

Subpart Db, Standards of Performance for Industrial-Commercial-Institutional Steam Generaating Units. It regulates steam generating unit that commences construction, modification, or reconstruction after June 19, 1984, and that has a heat input capacity from fuels combusted in the steam generating unit of greater than 100 MMBTU/hr. The electric generating boilers at the facility were constructed before 1984 and therefore are exempt from the requirements of subpart Db.

Subpart Dc, Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units regulates 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 per hour or less, but greater than or equal to 10 MMBTU per hour. House heat boiler (3-B-01) is rated at 10.03 MMBTU/hr and was installed in 1994 and therefore is subject to the applicable requirements of this subpart.

Subparts K, Ka, Kb, VOL Storage Vessels. All tanks on-site are exempt from these subparts since they were installed before the effective date of these regulations.

Subpart GG, Standards of Performance for Stationary Gas Turbines regulates gas turbines which commence construction, modification, or reconstruction after October 3, 1977. There is no gas turbine at this facility.

Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines (SI-ICE). It promulgates emission standards for new SI engines ordered after June 12, 2006 and all SI engines modified or reconstructed after June 12, 2006, regardless of size. The specific emission standards (either in g/hp-hr or as a concentration limit) vary based on engine class, engine power rating, lean-burn or rich-burn, fuel type, duty (emergency or non-emergency), and manufacture date. Engine manufacturers are required to certify certain engines to meet the emission standards and may voluntarily certify other engines. An initial notification is only required for owners and operators of engines greater than 500 HP that are non-certified. The new propane-fired emergency generator (EU 4-3) is certified to meet the standards of Subpart JJJJ: 10 g/hp-hr NO_x+HC and 387 g/hp-hr CO.

NESHAP, 40 CFR Part 61 [Not Applicable]
 There are no emissions of any of the regulated pollutants: arsenic, asbestos, beryllium, benzene, coke oven emissions, mercury, radionuclides or vinyl chloride except for trace amounts of benzene. Subpart J affects process streams which contain more than 10% benzene by weight. Analysis of Oklahoma natural gas indicates a maximum benzene content of less than 1%.

NESHAP, 40 CFR Part 63 [Subpart ZZZZ Applicable]
Subpart YYYYY, Stationary Combustion Turbines. This subpart was promulgated on March 5, 2004 and affects stationary combustion turbines that are located at major source of HAP. There are no gas turbines at this facility and the facility is a minor source of HAPs.
Subpart ZZZZ, Reciprocating Internal Combustion Engines (RICE). This subpart affects any existing, new, or reconstructed stationary RICE at a major or area source of HAP emissions, except if the stationary RICE is being tested at a stationary RICE test cell/stand. This facility is not a major source of HAPs. The 40-hp Generac QT025A emergency generator is a new source and will comply all requirements of this subpart by complying with NSPS Subpart JJJJ requirements. The 270-hp Caterpillar 320A emergency fire pump is an existing source and shall comply with applicable emission limitations and operating limitations no later than October 19, 2013. Initial performance test or other initial compliance demonstration according to Tables 4 and 5 to this subpart shall be conducted within 180 days after the compliance date. Specific requirements in §63.6603 are listed in the following table.

Engine Category	Requirements From Table 2d to Subpart ZZZZ of Part 63
Existing Non-Emergency, Non-Black Start, 2SLB	Change oil and filter, inspect spark plugs, and inspect all hoses and belts every 4,320 hours of operation or annually, whichever comes first.
Emergency stationary SI RICE	a. Change oil and filter every 500 hours of operation or annually, whichever comes first; ¹ b. Inspect spark plugs every 1,000 hours of operation or annually, whichever comes first; and c. Inspect all hoses and belts every 500 hours of operation or annually, whichever comes first, and replace as necessary.

Subpart DDDDD, National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial and Institutional Boilers and Process Heaters at major sources of HAPs. Subpart DDDDD was published in the Federal Register on January 31, 2012. This facility is a minor source of HAPs.

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, which 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

None of the emission units use a control device to achieve compliance with an applicable emission limit; therefore, CAM does not apply.

Chemical Accident Prevention Provisions, 40 CFR Part 68 [Not Applicable]
The definition of a stationary source does not apply to transportation, including storage incident to transportation, of any regulated substance or any other extremely hazardous substance under the provisions of this part. The definition of a stationary source also does not include naturally occurring hydrocarbon reservoirs. Naturally occurring hydrocarbon mixtures, prior to entry into a natural gas processing plant or a petroleum refining process unit, including: condensate, crude oil, field gas, and produced water, are exempt for the purpose of determining whether more than a threshold quantity of a regulated substance is present at the stationary source.

Acid Rain Program, 40 CFR Part 72 (Permit Requirements) [Applicable]
Acid Rain Permit No. 2009-452-ARR2 (M-1) was issued on April 26, 2010, and remains effective.

Acid Rain Program, 40 CFR Part 73 (SO₂ Requirements) [Applicable]
SO₂ initial allowances as published in 40 CFR 73.10 are listed in Acid Rain Permit No. 2004-187-ARR. However, all allowances can be traded, bought, and sold. Therefore, the actual allowances held by an affected unit may change which will not necessitate a revision to the permit.

Acid Rain program, 40 CFR Part 75 (Monitoring Requirements) [Applicable]
Certification testing has been completed for the CEM systems required for units 3 and 4, and the EPA has issued approval of certification on September 22, 1997 for these two boilers. Units 1 and 2 are peaking units and are not required to have CEM systems.

Acid Rain Program, 40 CFR Part 76 (NO_x Emission Reduction Program) [Not Applicable]
40 CFR Part 76 establishes NO_x emission limitations for coal-fired electric utility units. The boilers at the facility are not coal-fired and therefore are exempt from the requirements of this Part.

Stratospheric Ozone Protection, 40 CFR Part 82 [Subpart 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.

SECTION VIII. COMPLIANCE

Inspection

A compliance inspection was conducted on June 6, 2013. The inspection was conducted by Keely Dolan of Air Quality. No violations or deviations were reported.

Testing

The facility continues to monitor emissions as required by 40 CFR 75 (Acid Rain Program) and conducts annual testing of the equipment for verification. Air Quality observations have shown testing of the continuous emission monitors have been conducted properly. CEMS data is submitted to Headquarters EPA on a quarterly basis as required by the Acid Rain Program.

Tier Classification and Public Review

This application has been determined to be a Tier II based on the request for renewal of a Part 70 operating permit.

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 owns the property.

The applicant will publish a "Notice of Filing a Tier II Application" and a "Notice of Tier II Draft Permit" in a local newspaper for a 30 day public review. The draft permit is also available on the DEQ web at <http://www.deq.state.ok.us>. This facility is not located within 50 miles of the

Oklahoma border with another state. This draft permit is also proposed to EPA for a concurrent review.

Fees Paid

Title V operating permit renewal fee of \$2,000.

SECTION IX. SUMMARY

The facility was constructed and is operating 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 on public and EPA reviews.

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

**Oklahoma Gas & Electric Company
Mustang Generating Station**

Permit Number 2011-1008-TVR2

The permittee is authorized to operate in conformity with the specifications submitted to Air Quality dated November 30, 2011, with supplemental information received on April 27, 2012. The Evaluation Memorandum dated July 12, 2013, explains 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 Boilers

EU ID#	Make/Model	Heat Capacity (MMBTUH)	Serial #	Construction Date
2-B-01	Babcock & Wilcox	474	RB-76	1949
2-B-02	Babcock & Wilcox	479	RB-79	1950
2-B-03	Babcock & Wilcox	1150	RB-216	1954
2-B-04	Babcock & Wilcox	2220	RB-278	1958

There are no emission limits applied to these units under Title V, but they are limited to the existing equipment as they are.

EUG 2. House Heat Boiler

EU ID#	Make/Model*	hp	Serial #	Construction Date
3-B-01	Superior/Mohawk # 4-5-1505	300	12453	1994

There are no emission limits applied to this unit under Title V, but it is limited to the existing equipment as it is.

EUG 3. Storage Tanks

Point and EU ID#	Capacity (gallon)	Material Stored	Installed Date
4-B-03	2,142	Diesel Fuel	1955

There are no emission limits applied to these tanks under this permit but they are limited to the existing equipment as they are.

EUG 4. Emergency Generators

EU ID#	Make/Model	hp	Serial #	Construction Date
6	Generac QT025A (Propane Engine)	40	6215203	2011
7	Caterpillar 320A (Emergency Fire Pump)	270	03Z11636	1993

These two emergency engines are limited to 500 hours of operation per year.

- i.) Engine EU 6 is subject to 40 CFR Part 60, Subpart JJJJ, and shall comply with all applicable standards for owners or operators of stationary spark ignition internal combustion engines:
- A. 60.4230: Am I subject to this subpart?
 - B. 60.4231: What emission standards must I meet if I am a manufacturer of stationary SI internal combustion engines?
 - C. 60.4232: How long must my engines meet the emissions standards if I am a manufacturer of stationary SI internal combustion engines?
 - D. 60.4233: What emission standards must I meet if I am an owner or operator of a stationary SI internal combustion engine?
 - E. 60.4234: How long must I meet the emissions standards if I am an owner or operator of a stationary SI internal combustion engine?
 - F. 60.4235: What fuel requirements must I meet if I am an owner or operator of a stationary SI internal combustion engine?
 - G. 60.4236: What is the deadline for importing or installing stationary SI ICE produced in the previous model year?
 - H. 60.4237: What are the monitoring requirements if I am an owner or operator of a stationary SI internal combustion engine?
 - I. 60.4238: What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines \leq 19 KW (25 HP).
 - J. 60.4239: What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines \geq 19 KW (25 HP) that use gasoline?
 - K. 60.4240: What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines \geq 19 KW (25 HP) that use LPG?
 - L. 60.4241: What are my compliance requirements if I am a manufacturer of stationary SI internal combustion engines participating in the voluntary certification program?
 - M. 60.4242: What other requirement must I meet if I am a manufacturer of stationary SI internal combustion engines?
 - N. 60.4243: What are my compliance requirements if I am an owner or operator of a stationary SI internal combustion engine?
 - O. 60.4244: What test methods and other procedures must I use if I am an owner or operator of a stationary SI internal combustion engine?
 - P. 60.4245: What are my notification, reporting, and recordkeeping requirements if I am an owner or operator of a stationary SI internal combustion engine?
 - Q. 60.4246: What parts of the General Provisions apply to me?

- R. 60.4247: What parts of the mobile source provisions apply to me if I am a manufacturer of stationary SI internal combustion engines?
 - S. 60.4248: What definitions apply to this subpart?
- ii.) Engines EU 6 and EU 7 are subject to NESHAP, 40 CFR Part 63, Subpart ZZZZ, and shall comply with all applicable requirements, including, but not limited to, the following.
[40 CFR 63.6585 through 63.6675]
- A. § 63.6585 Am I subject to this subpart?
 - B. § 63.6590 What parts of my plant does this subpart cover?
 - C. § 63.6595 When do I have to comply with this subpart?
 - D. § 63.6605 What are my general requirements for complying with this subpart?
 - E. § 63.6645 What notifications must I submit and when?
 - F. § 63.6650 What reports must I submit and when?
 - G. § 63.6655 What records must I keep?
 - H. § 63.6660 In what form and how long must I keep my records?
 - I. § 63.6665 What parts of the General Provisions apply to me?
 - J. § 63.6675 What definitions apply to this subpart?
2. No later than October 19, 2013, the owner/operator shall comply with all applicable requirements of the NESHAP: Reciprocating Internal Combustion Engines, Subpart ZZZZ, for each affected facility:
[40 CFR 63.6580 through 63.6675]
- a). Work Practice Standards
 - i). Change oil and filter every 500 hours of operation or annually, whichever one comes first. May use alternative option to conduct an oil analysis program instead of changing the oil annually (63.6625(i));
 - ii). Inspect air cleaner and spark plugs (when used) every 1,000 hours of operation or annually, whichever one comes first; and
 - 1). Inspect all hoses and belts every 500 hours of operation or annually, whichever one comes first and replace as necessary.
 - 2). If the emergency engine is operating during an emergency and it is not possible to shutdown the engine to do the work practice requirements or it would pose an unacceptable risk then the work can be delayed and performed as soon as practicable after the emergency has ended.
 - b). Operating Limitations
 - i). Maintenance and readiness checks limited to 100 hours/years,
 - ii). Can operate engine for 50 hours/year for non-emergency purposes, but counted toward 100 hours above. The 50 hours cannot be used to generate income for a facility, except 15 hours/year is allowed as part of an emergency response program;
 - iii). Can operate engine for unlimited number of hours for emergency purposes.
 - c). Demonstrating Compliance
 - i). Operate & maintain the stationary RICE according to manufacturer's emission-related written instructions or implement your own maintenance plan and provides to the extent practicable for maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions,
 - ii). Install a non-resettable hour meter, if not already installed.

3. The permittee shall be allowed to utilize natural gas as fuel in electric generating boilers 2-B-01, 2-B-02, 2-B-03 and 2-B-04. [OAC 252:100-31]
4. Each boiler at the facility shall have a permanent identification plate attached. [OAC 252:100-8-6(a)]
5. The permittee shall be authorized to operate the electric generating boilers (2-B-03 and 2-B-04) and associated equipment continuously (24 hours per day, every day of the year). Boilers 2-B-01 and 2-B-02 are authorized to operate as peaking units as defined in 40 CFR part 72. [OAC 252:100-8-6(a)]
6. All fuel-burning or refuse-burning equipment shall be operated to minimize emissions of VOC. Among other things, such operation shall assure that the equipment is not overloaded; that it is properly cleaned, operated, and maintained; and that temperature and available air are sufficient to provide essentially complete combustion. [OAC 252:100-37-36]
7. The electric generating boilers (2-B-01, 2-B-02, 2-B-03 and 2-B-04) are subject to the Acid Rain Program and shall comply with all applicable requirements including the following:
 - a. SO₂ allowances
 - b. Monitoring as required by 40 CFR Part 75
 - c. Report quarterly emissions to EPA
 - d. Conduct RATA tests
 - e. QA/QC plan for maintenance of the CEMS[40 CFR Part 72, 73, and 75]
8. The house heat boiler (3-B-01) is subject to 40 CFR Part 60 Subpart Dc and shall comply with the following requirements:
 - a. The permittee shall maintain records of the amounts of fuel combusted (monthly and cumulative annual). [NSPS §60.48c(g) and 60.13(i)]
9. The following records shall be maintained on-site or at a local field office to verify insignificant activities. [OAC 252:100-43]
 - a. For storage tanks containing volatile organic liquids with vapor pressures less than 1.0 psia and having capacities less than 10,000 gallons: Capacity of the tanks, and contents.
 - b. For activities that have the potential to emit less than 5 TPY (actual) of any criteria pollutant: Type of activity and the amount of emissions from that activity (cumulative annual).
10. The permittee shall maintain the following records of operations. 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 personal upon request. [OAC 252: 100-43]
 - a. Operation and Maintenance records for boilers

- b. Emission data as required by the Acid Rain Program
- c. RATA test results from periodic CEMS certification tests
- d. Records required by 40 CFR Part 60 Subpart Dc (fuel combusted by calendar month)
- e. Sulfur content of natural gas (using either the gas quality characteristics in a current, valid purchase contract, tariff sheet, or transportation contract, or using representative fuel sampling data as per 40 CFR Part 75 Appendix D).
- f. Records as required by 40 CFR Part 63, Subpart ZZZZ commencing on the compliance date.
- g. Records as required by 40 CFR Part 60, Subpart JJJJ.

11. No later than 30 days after each anniversary date of the issuance of original Title V operating permit (2/15/2000), the permittee shall submit to Air Quality Division of DEQ, with a copy to the US EPA, Region 6, a certification of compliance with the terms and conditions of this permit. [OAC 252:100-8-6 (c)(5)(A) & (D)]

12. No later than 30 days after each six (6) month period, after the date of the issuance of the original 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. The following specific information will satisfy any required monitoring: [OAC 252:100-8-6 (a)(3)(C)(i) and (ii)]

- a. House heat boiler (3-B-01) records of the amounts of fuel combusted (monthly and cumulative annual).
- b. For stationary reciprocating engines burning natural gas, gasoline, aircraft fuels, or diesel which are either used exclusively for emergency power generation or for peaking service. (Operating hours per calendar year).
- c. Sulfur content of natural gas (using either the gas quality characteristics in a current, valid purchase contract, tariff sheet, or transportation contract, or using representative fuel sampling data as per 40 CFR Part 75 Appendix D).
- d. Materials incinerated (type and volume by calendar year).

13. The permittee shall have the discretion of determining which records will be maintained in digital format.

14. The permittee shall be allowed to incinerate company-generated non-hazardous materials. The permittee shall also be allowed to incinerate used oil that is company employee generated or company retiree generated. Materials allowed to be incinerated may include, but are not limited to: used oil, used solvent and antifreeze. Additionally, materials incinerated shall not be classified RCRA "hazardous waste" according to 40 CFR 261 except as allowed by 40 CFR 266.108. [OAC252:100-8-(a)]

15. The Permit Shield (Standard Conditions, Section VI) is extended to the following requirements that have been determined to be inapplicable to this facility. [OAC 252:100-8-6(d)(2)]

- A. OAC 252:100-11 Alternative Emissions Reduction

- B. OAC 252:100-15 Mobile Sources
- C. OAC 252:100-23 Cotton Gins
- D. OAC 252:100-24 Grain Elevators
- E. OAC 252:100-39 Nonattainment Areas
- F. OAC 252:100-47 Landfills

16. This permit supersedes all previous air quality permits for this facility, except Acid Rain Permit No. 2009-452-ARR2 (M-1), which are now null and void.

Ms. Laura Herron
OG&E Electric Services
P.O. Box 321
Oklahoma City, OK 73101-0321

Subject: Title V Renewal Permit No. 2011-1008-TVR2
Mustang Generating Station
Mustang, Canadian County

Dear Ms. Herron:

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 “Notice of Filing a Tier II Permit Application” and “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, Jian Yue, at (405) 702-4205.

Sincerely,

Phillip Fielder, P.E., Permits and Engineering Group Manager
AIR QUALITY DIVISION
Enclosures

Ms. Laura Herron
OG&E Electric Services
321 N. Harvey, MC610
Oklahoma City, OK 73101-0321

Subject: Title V Renewal Permit No. 2011-1008-TVR2
Mustang Generating Station
Mustang, Canadian County

Dear Ms. Laura:

Enclosed is the permit authorizing operation of the referenced facility. Please note that this permit is issued subject to the certain standards 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 emissions inventory for this facility. An emissions 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 Emissions 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 (405) 702-4100.

Sincerely,

Jian Yue, P.E.
Engineering Section
AIR QUALITY DIVISION

Enclosures



PART 70 PERMIT

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

Permit Number: 2011-1008-TVR2

Oklahoma Gas & Electric Company,
having complied with the requirements of the law, is hereby granted permission to operate
all the sources within the boundaries of the Mustang Generating Station, Section 36, T12N,
R5W, Canadian County, Oklahoma, subject to standard conditions dated July 21, 2009,
and specific conditions, both attached.

This permit shall expire five (5) years from the date below, except as authorized under Section VIII of the Standard Conditions.

Division Director, Air Quality Division

Date