TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY PERMIT NO. 75182

El Paso Natural Gas Company, L.L.C.

I. INTRODUCTION

This Class II air quality permit is issued to El Paso Natural Gas Company, the Permittee, for the continued operation of its natural gas compressor station located 8 miles west of Bowie, along Interstate 10, in Cochise County, Arizona.

A. Company Information

1. Facility Name: El Paso Natural Gas Company – Cimarron Generating Station
2. Facility Location: 8 miles west of Bowie, AZ long interstate 10
   Bowie, Cochise County, AZ, 85605
3. Mailing Address: 5151 E. Broadway, Suite 1680
   Tucson, AZ 85711

B. Attainment Classification

Parts of Cochise County are designated nonattainment for particulate matter less than 10 microns in diameter (PM_{10}), and attainment/unclassified for all other criteria pollutants. Cimarron Generating Station is located in an area designated as attainment.

II. PROCESS DESCRIPTION

A. El Paso Natural Gas Company, provides natural gas transportation services for natural gas suppliers and end users throughout the southwestern United States, and owns and operates a large natural gas pipeline network. The Cimarron Compressor Station is one of several such stations that provide natural gas compression to the pipeline network.

Filtered atmosphere air is compressed and then fired with natural gas in the combustor. The hot exhaust gases expand through two turbine stages. The gas producer turbine drives the axial flow air compressor while the power turbine drives the centrifugal pipeline compressor. The pipeline gas compressor moves natural gas through the pipeline by compressing it from an initial state to a discharge state. The turbine engine operates depending on the demand along the pipeline system. A 558 hp emergency generator provides backup electrical power.

The turbine and emergency generator are powered through the combustion of natural gas. This combustion produces VOC, nitrogen oxides (NO_X), carbon monoxide (CO), sulfur dioxide (SO_2), and particulate matter with an aerodynamic diameter less than 10 microns (PM_{10}) emissions.

III. EMISSIONS

Table 1 provides the emissions from the facility. The emissions are for the maximum annual operation of 8,760 hours per year for the turbine and 500 hours per year for the emergency generator.

Table 1: Potential Emissions

Pollutant	Emissions (tons per year)
PM	3.26
PM_{10}	3.26
$PM_{2.5}$	3.26
NO_x	47.79
CO	57.78
SO_2	1.67
VOC	3.03
HAPs	0.59

IV. MINOR NEW SOURCE REVIEW

This renewal permit does not involve any changes to the facility's PTE. As a result, this renewal permit does not trigger minor NSR.

V. APPLICABLE REGULATIONS

Table 2 displays the applicable requirements for each permitted piece of equipment along with an explanation of why the requirement is applicable.

Table 2: Verification of Applicable Regulations

Unit	Control Device	Rule	Discussion
Solar Mars 100S	None	40 CFR 60 Subpart GG	Stationary Rotating Machinery subject to Subpart GG of the NSPS These standards are applicable to stationary gas turbines with heat input at peak load greater than or equal to 10.7 gigajoules per hour.

Unit	Control Device	Rule	Discussion
Emergency Generator	None	A.A.C. R18-2-719 40 CFR Subpart ZZZZ	Standards of Performance for Existing Stationary Rotating Machinery National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocal Internal Combusting Engines.
Fugitive dust sources	Water Trucks Dust Suppressants	A.A.C. R18-2 Article 6 A.A.C. R18-2-702	These standards are applicable to all fugitive dust sources at the facility.
Abrasive Blasting	Wet blasting; Dust collecting equipment; Other approved methods	A.A.C. R-18-2-702 A.A.C. R-18-2-726	These standards are applicable to any abrasive blasting operation.
Spray Painting	Enclosures	A.A.C. R18-2-702 A.A.C. R-18-2-727	This standard is applicable to any spray painting operation.
Demolition/renovation operations	N/A	A.A.C. R18-2-1101.A.8	This standard is applicable to any asbestos related demolition or renovation operations.

VI. PREVIOUS PERMIT CONDITIONS

Permit No. 59373 was issued on August 6, 2014, for the continued operation of this facility. Table 3 below illustrates if a section in Permit No. 59373 was revised or deleted.

Table 3: Permit No. 59373

Section No.	Determination		Comments
	Revised	Delete	
Att. A.	X		General Provisions - Revised to represent most recent template language.
Att. B.			
I	X		Removed requirement to have an on site or on call certified Method 9 observer
II	X		Natural Gas Turbine – Testing requirements for turbine have been updated based on past history.
III	X		Removed Method 9 Opacity Requirements for Emergency generator Removed A.A.C R18-2-719.I & J requirements.
IV	X		Fugitive Dust Requirements - Revised to reflect most recent permitting language.

V		X	Mobile Source Requirements – Removed.
V	X		Other Periodic Activity Requirements - Revised to reflect most recent permitting language.

VII. MODELING RESULTS

Modeling was conducted in July 2003 prior to construction of the Cimarron Station. The Industrial Source Complex Short-Term model (ISCST3 Version 02035) was used to complete EPNG's air dispersion modeling analyses. The ISCST3 model was run using regulatory default options and rural dispersion coefficients.

Table 5: Modeled Emission Rates

Equipment ID	Equipment Type	Stack Height[1] (m)	Stack Diameter (m)	Exit Temp. (deg K)	Exit Velocity (m/s)
TURB1	Combustion Turbine[2]	11.58	2.13	742	33.1
EMERG	Emergency Generator	11.00	0.20	724	19.5

[1] Above plant grade

[2] Combustion turbine parameters represent worst-case exhaust conditions from a loads analysis; stack exhaust flow rates corresponding to 50% load utilized

The results of the model are summarized below. Modeled emissions for the combustion turbine are based on 8,760 hour per year and 24 hour per day operations. Modeled emissions for the emergency generator are based on 1,500 hour per year and 24 hour per day operations.

Table 5: NAAQS Modeling Analysis Results

Pollutant	Averaging Period	Concentration (µg/m^3)			NAAQS (µg/m^3)	% Of NAAQS
		Modeled	Background	Total		
NO_2	Annual	2	20	22	100	22
CO	1-hour	409	570	979	40,000	2
	8-hour	217	570	787	10,000	8
PM_{10}	24-hour	1.5	44	45.5	150	30
	Annual	0.1	15	15.1	50	30
SO_2	3-hour	2.8	42	44.8	1,300	3
	24-hour	0.5	21	21.5	365	6
	Annual	0.01	6	6.01	80	8

VIII. MONITORING REQUIREMENTS

A. Natural Gas Turbine

1. Sulfur Dioxide

The Permittee shall demonstrate compliance with the sulfur dioxide limit by maintaining a valid purchase contract, tariff sheet, or transportation contract specifying the maximum total sulfur content of the fuel is 20 grains/100 SCF or less.

B. Emergency Generator

1. Particulate Matter

The Permittee must maintain a copy of that part of the Federal Energy Regulatory Commissions (FERC) approved tariff agreement that limits transmission of natural gas to having a heating value greater than or equal to 967 British thermal units per cubic foot. This record will serve as the periodic monitoring for the particulate matter standard.

2. Sulfur Oxides (SO_X)

The Permittee must maintain a copy of that part of the FERC approved tariff agreement that limits transmission of natural gas to sulfur content less than 0.8 percent by weight. This record will serve as the periodic monitoring for the sulfur standard.

3. Hazardous Air Pollutants

a. The Permittee is required to monitor the operating hours of the engine and perform the following maintenance:

(1) Change the oil and filters every 500 hours or annually, whichever comes first; in lieu of oil/filter change, conduct oil analysis procedure as per Subpart ZZZZ regulations;

(2) Inspect the spark plugs every 1000 hours or annually, whichever comes first, and replace as necessary;

(3) Inspect the hoses and belts every 500 hours or annually, whichever comes first, and replace as necessary;

b. Keep records of any deviations from operation and maintenance requirements and provide a timely report to the Department describing the deviation and actions taken to prevent further deviations.

C. Fugitive Dust

1. The Permittee is required to keep record of the dates and types of dust control measures employed.

D. Periodic Activities

1. The Permittee is required to record the date, duration and pollution control measures of any abrasive blasting project.

2. The Permittee is required to record the date, duration, quantity of paint used, any applicable MSDS, and pollution control measures of any spray painting project.

3. The Permittee is required to maintain applicable records of all asbestos related demolition or renovation projects. The required records include the "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents.

IX. TESTING REQUIREMENTS

A. Natural Gas Turbine

Within 180 days of issuance of this permit or between 11 and 13 months from the date of the previous test, the Permittee shall conduct a performance test for NOx to determine compliance with the limit specified in Condition II.C.1 of Attachment "B" in the permit.

If the results the performance test are less than or equal to 50 percent of the applicable emission limits in Condition II.C.1.a of Attachment "B" in the permit, no further testing is required for the gas turbine during the permit term.

If the results of any subsequent performance test required by Condition II.C.2. are greater than 50 percent of the applicable emission limit in Condition II.C.1.a of Attachment "B" in the permit, the Permittee shall conduct subsequent performance test(s) for the gas turbine on an annual basis (between 11 and 13 months from the date of the previous test).

X. PERFORMANCE TEST HISTORY

The following table shows the performance test results for the facility for the past permit term.

Table 6: Performance Test History

Date	Method	Source Tested	Pollutant	Tested Emission Rate (ppmvd @ 15% O2)	Permitted Emission Rate (ppmvd @ 15% O2)
2/7/2018	3A, 7E, 19	Unit A-01	NOx	15	172
4/11/2017	3A, 7E, 19	Unit A-01	NOx	22	205
1/17/2016	3A, 7E, 19, 10	Unit A-01	NOx	14	186
1/15/2015	3A, 7E, 19	Unit A-01	NOx	14.39	193.47
2/4/2014	3A, 7E, 19	Unit A-01	NOx	22.79	204.96

XI. COMPLIANCE HISTORY

The facility has undergone two onsite inspections during the prior permit term and no violations were noted. In addition, the facility has submitted five annual compliance certifications for review by ADEQ. No deficiencies were noted in these reports. The facility reported a lapse in certification for their Method 9 observer in April 2016 and made corrective actions. No case was recommended by ADEQ.

XII. LIST OF ABBREVIATIONS

A.A.C. ..... Arizona Administrative Code
ADEQ ..... Arizona Department of Environmental Quality
CO ..... Carbon Monoxide
CO_2 ..... Carbon Dioxide
FERC ..... Federal Energy Regulatory Commission
HAP ..... Hazardous Air Pollutant
hp ..... Horsepower
NAAQS ..... National Ambient Air Quality Standard
NO_x ..... Nitrogen Oxide
NO_2 ..... Nitrogen Dioxide
O_3 ..... Ozone
Pb ..... Lead
PM ..... Particulate Matter
PM_{10} ..... Particulate Matter Nominally less than 10 Micrometers
PTE ..... Potential-to-Emit
SO_2 ..... Sulfur Dioxide
TPY ..... Tons per Year
VOC ..... Volatile Organic Compound
yr ..... Year