TECHNICAL REVIEW AND EVALUATION
FOR
AIR QUALITY PERMIT NO. 48819

El Paso Natural Gas Company--Bowie

I. INTRODUCTION

This Class I, Title V renewal permit is issued to El Paso Natural Gas Company (EPNG) for the operation of the Bowie Compressor Station which is located at Exit 344 off Interstate 10, five miles east on Country Club Road , Willcox in Cochise County, Arizona 85643. This permit renews and supersedes Air Quality Control Permit Number 27933.

A. Company Information

Facility Name:	El Paso Natural Gas Company, Bowie Compressor Station
Facility Address:	Exit 344 off Interstate 10, five miles east on Country Club Road Willcox, Cochise County, Arizona 85643
Mailing Address:	P.O. Box 1087 Colorado Springs, CO 80901-1087

B. Attainment Classification

This area is in attainment status for all criteria pollutants.

C. Learning Sites Evaluation

In accordance with ADEQ's Environmental Permits and Approvals near Learning Sites Policy, the Department conducted an evaluation to determine if any nearby learning sites would be adversely impacted by the facility. Learning sites consist of all existing public schools, charter schools and private schools the K-12 level, and all planned sites for schools approved by the Arizona School Facilities Board. The learning sites policy was established to ensure that the protection of children at learning sites is considered before a permit approval is issued by ADEQ. There are no learning sites within two miles of the facility.

II. PROCESS DESCRIPTION

EPNG provides natural gas transportation services for natural gas suppliers and end users throughout the southwestern United States. EPNG owns and operates a large pipeline network for which the Bowie Compressor Station provides natural gas compression. Compression is needed to maintain enough pressure in the pipeline to keep the natural gas flowing through the pipeline network, and is accomplished by one natural gas-fired General Electric Model M3122R regenerative cycle turbine engine (GE gas turbine engine) that drive the compressor units. An electric generator is attached to the turbine and generates electric power when the turbine is operating. When the turbine is not operating, primary electric power is generated by 226 horsepower Waukesha generator and 96 horsepower Generac generator. The Bowie Compressor Station has been automated and the location is unattended.

From a common pipeline system, natural gas flows into the centrifugal compressor which is driven by the natural-gas fueled turbine engine. The GE gas turbine engine operates depending on the amount of natural gas being transported to various customers along the pipeline system.

The gas turbine stack is the primary source of air pollutant emissions. The facility has a potential to emit greater than the major source thresholds of nitrogen oxides (NO_x), carbon monoxide (CO), and

formaldehyde. Other emissions from the facility include sulfur dioxide (SO_2), particulate matter with an aerodynamic diameter less than 10 microns (PM_{10}) and volatile organic compounds (VOCs).

III. EMISSIONS

The facility is classified as a Major Source pursuant to Arizona Administration Code (A.A.C) R18-2-101.64. The potential emission rates of NOx and CO are greater than the major source threshold as shown in the table below:

Table 1: Facility Wide Emissions

Pollutant	Total Tons per year (tpy)
NO_x	319.09
CO	161.30
VOC	1.24
SO_2	1.37
PM_{10}	1.80
$PM_{2.5}$	1.80
Formaldehyde	2.64
Total HAPs	4.09

IV. COMPLIANCE HISTORY

There have been 28 inspections of this facility since September 21, 1994. No cases or violations have developed as a result of the inspections. There are no current violations associated with this facility.

V. APPLICABLE REGULATIONS

Table 2 identifies applicable regulations and verification as to why that standard applies.

Table 2: Verification of Applicable Regulations

Unit	Date of Manufacture	Control Device	Rule	Verification
GE Turbine	1971	None	***A.A.C.*** R18-2-719.B R18-2-719.C.1 R18-2-719.E R18-2-719.I R18-2-719.J	These standards are applicable to existing stationary rotating machinery. The GE gas turbine was manufactured prior to October 3, 1977, and is therefore not subject to NSPS Subpart GG and is not subject to NSPS subpart KKKK because it was manufactured before February 18, 2005. The turbine is not subject to NESHAP Subpart YYYY. The NESHAP is applicable to stationary sources which are major for HAPs.

Unit	Date of Manufacture	Control Device	Rule	Verification
Waukesha Generator Generac Generator	1987 1998	None	***A.A.C.*** R18-2-719.B R18-2-719.C.1 R18-2-719.E R18-2-719.I R18-2-719.J	These standards are applicable to existing stationary rotating machinery. These generators are not subject to NSPS Subpart JJJJ because they were constructed prior to June 12, 2006. Subpart ZZZZ of the NESHAPS is applicable to reciprocating internal combustion engines. These engines were manufactured prior to June 12, 2006, and therefore are existing units. Pursuant to 40 CFR 6590.b.3, an existing 4-stroke spark ignition lean burn engine located at an area source of HAP emissions does not have to meet the requirements of the subpart.
Fugitive dust sources	N/A	Water and other reasonable precautions	***A.A.C.*** R18-2-604.A, B R18-2-605 R18-2-606 R18-2-607 R18-2-614 R18-2-702.B	These standards are applicable to fugitive dust sources at the facility.
Mobile sources	N/A	Water Sprays/Water Truck for dust control	***A.A.C.*** R18-2-801 R18-2-802 R18-2-804	These standards are applicable to off-road mobile sources, which either move while emitting air pollutants or are frequently moved during the course of their utilization.
Spray Painting	N/A	N/A	***A.A.C.*** R18-2-702.B R18-2-727	This standard is applicable to any spray painting operation.
Abrasive Blasting	N/A	Wet blasting, Dust collecting equipment or other approved methods	***A.A.C.*** R18-2-702.B R18-2-726	These standards are applicable to any abrasive blasting operation.
Demolition/renovation Operations	N/A	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

A. Previous Permits

The following table lists the previous permits that have been issued to El Paso Natural Gas Company.

Table 3: Previous Permits

Date Permit Issued	Permit #	Application Basis
April 21, 2004	27933	Operating Permit Renewal

B. Previous Permit Conditions

The following are discussions on the previous permits that have been issued to the source.

CLASS I TITLE V OPERATING PERMIT NO. 27933

Table 4 compares the substantive conditions in Permit No. 27933 with the conditions in this renewal permit.

Table 4: Comparison of Previous and Current Permit Conditions

Condition # in Permit No. 27933	Determination				Comments
	Deleted	Kept	Revised	Streamlined	
Attachment A			x		This Attachment has been revised and the most recent Attachment "A" is used for this permit.
Attachment B					
Condition I.A		x			This condition to have an EPA method 9 certified observer has been retained and renumbered as Condition I.A.1.
Condition I.B		x			The condition to require the reporting of all required monitoring activities has been retained and renumbered as Condition I.B.3.
Condition I.C	x				This recordkeeping requirement for emissions related maintenance activities is unnecessary as Attachment "A" requires the retention of maintenance records. Hence, this is deleted.
Condition II.B		x			This condition for fuel limitation has been retained and renumbered as Condition I.A.2.
Condition II.C.1.a		x			This condition for opacity limitation has been retained and renumbered as Condition II.D.1.

Condition # in Permit No. 27933	Determination				Comments
	Deleted	Kept	Revised	Streamlined	
Condition II.C.1.b & c		x			This condition for PM emission limit has been retained and renumbered as Condition II.C.1.a & b.
Condition II.C.2.a & b		x			This condition for monitoring, recordkeeping, and reporting requirements for opacity has been retained and renumbered as Condition II.D.2.a & b.
Condition II.C.2.c			x		This condition for monitoring, recordkeeping, and reporting requirements for fuel has been streamlined with the type of fuel used and renumbered as Condition I.B.1.
Condition II.D			x		This condition for testing of NO_x and CO has been revised and renumbered as Condition II.E. The testing for CO has been removed since the emissions of CO from the GE turbine are below the major source threshold.
Condition II.E	x				This condition for sulfur dioxide has been deleted since the source is using natural gas as fuel. Sulfur content in natural gas is very low compared to diesel fuel.
Condition II.E.2		x			This fuel sulfur content monitoring requirement has been moved to II.E.2
Condition III			x		This general condition for non-point sources has been revised with the latest language and titled as Fugitive Source Requirements.
Condition IV		x			This general condition for mobile sources has been retained.
Condition V			x		This general condition for other periodic activity has been revised with the latest language.

VII. MONITORING AND RECORDKEEPING REQUIREMENTS

A. Facility Wide

1. The Permittee is required to maintain records of the gas quality characteristics in a current, valid purchase contract, tariff sheet or transportation contract for the gaseous fuel.

2. The Permittee is required to maintain, on-site, records of the manufacturer's specifications or an Operation and Maintenance Plan for all equipment listed in the permit.

B. Stationary Rotating Machinery

1. The Permittee is required to show compliance with the opacity standard in Attachment "B', Section II by having a Method 9 certified observer perform a quarterly survey of visible emissions from the stacks of the stationary rotating machinery. The observer is

required to conduct a 6-minute Method 9 observation if the results of the initial survey appear on an instantaneous basis to exceed the applicable standard.

2. The Permittee is required to keep records of the name of the observer, the time, date, and location of the observation and the results of all surveys and observations.

3. The Permittee is required to keep records of any corrective action taken to lower the opacity of any emission point and any excess emission reports.

4. The Permittee is required to maintain appropriate documentation to demonstrate compliance with the fuel sulfur requirements and fuel heating value monitoring requirements.

5. The Permittee is required to keep a rolling 12-month total of hours of Generac generator usage.

C. Fugitive Dust

1. The Permittee is required to keep record of the dates on which any of the dust control measures contained in Attachment "B", Conditions III.B.1.a.iii.(a) through III.B.1.a.iii.(h) are employed.

2. The Permittee is required to show compliance with the opacity standards in Attachment "B', Section III by having a Method 9 certified observer perform a quarterly survey of visible emission from fugitive dust sources. The observer is required to conduct a 6-minute Method 9 observation if the results of the initial survey appear on an instantaneous basis to exceed the applicable standard.

3. The Permittee is required to keep records of the name of the observer, the time, date, and location of the observation and the results of all surveys and observations.

4. The Permittee is required to keep records of any corrective action taken to lower the opacity of any emission point and any excess emission reports.

D. Mobile Sources

The Permittee is required to keep records of all emission related maintenance performed on the mobile sources.

E. 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, and quantity of paint used, any applicable MSDS, and pollution control measures of any spray painting project.

3. The Permittee is required to maintain 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.

VIII. TESTING REQUIREMENTS

The Permittee is required to conduct performance test for NO_x on the GE gas turbine engine once in the

permit term using EPA Reference Method 20.

IX. LIST OF ABBREVIATIONS

A.A.C. ..... Arizona Administrative Code
ADEQ ..... Arizona Department of Environmental Quality
CFR ..... Code of Federal Regulations
CO ..... Carbon Monoxide
EPA ..... Environmental Protection Agency
EPNG ..... El Paso Natural Gas Company
HAPS ..... Hazardous Air Pollutants
MSDS ..... Material Safety Data Sheet
NESHAP ..... National Emission Standards for Hazardous Air Pollutants
NO_x ..... Nitrogen Oxides
NSPS ..... New Source Performance Standards
PM ..... Particulate Matter
PM_{10} ..... Particulate Matter with an aerodynamic diameter less than 10 microns
PTE ..... Potential-to-Emit
SO_2 ..... Sulfur Dioxide
TPY ..... Tons per Year
VOC ..... Volatile Organic Compound