

## TECHNICAL REVIEW AND EVALUATION\

### AIR QUALITY PERMIT NO. 49530

#### El Paso Natural Gas Company- Dutch Flat Compressor Station

## I. INTRODUCTION

This Class I, Title V renewal permit is issued to El Paso Natural Gas Company (EPNG) for operation of the Dutch Flat compressor station located approximately 19 miles from Interstate 40, Exit 23, Gem Acres Road near Kingman in Mohave County, Arizona. This permit renews and supersedes Permit #28051.

### A. Company Information

Facility Name: Dutch Flat Compressor Station

Mailing Address: El Paso Natural Gas Company  
P.O. Box 1087, Colorado Springs, CO 80901-9906

Facility Address: 19 miles from Interstate 40, Exit 23,  
Gem Acres Road near Kingman in Mohave County, Arizona

### B. Attainment Classification

El Paso Natural Gas Company, Dutch Flat Compressor Station is located in an area which is in attainment or unclassified 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 Dutch Flat 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 two gas turbines. Primary electric power for the facility is provided by one of the two auxiliary generators. However, normally only one auxiliary generator can be operating at a time. The Dutch Flat Station has been automated and is unattended.

The facility has a potential to emit greater than the major source thresholds of nitrogen oxides (NO<sub>x</sub>). Other emissions from the facility include carbon monoxide (CO), volatile organic compounds (VOCs), sulfur dioxide (SO<sub>2</sub>), particulate matter with an aerodynamic diameter less than 10 microns (PM<sub>10</sub>) and formaldehyde.

### III. EMISSIONS

The emissions from this facility are the result of the combustion of natural gas in the gas turbine and auxiliary generator. Table 1 below provides the facility's potential to emit (PTE).

**Table 1: PTE of Facility**

<b>Pollutant</b>	<b>Total Tons per year (tpy)</b>
<b>NO<sub>x</sub></b>	212
<b>CO</b>	63
<b>VOC</b>	9
<b>SO<sub>2</sub></b>	2
<b>Formaldehyde</b>	3.76
<b>Total HAPS</b>	4.70

### IV. COMPLIANCE HISTORY

There have been 30 facility inspections of this facility since 1995. No cases or violations have been developed as a result of the inspections.

### V. APPLICABLE REGULATIONS

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

**Table 2: Verification of Applicable Regulations**

<b>Unit</b>	<b>Control Device</b>	<b>Rule</b>	<b>Verification</b>
Solar Gas Turbines, Models- Taurus 60 and Centaur H	None	NSPS Subpart GG 40 CFR 60.332(a)(2) 40 CFR 60.332(c) 40 CFR 60.333(b)	The Solar gas turbines were originally built after October 3, 1977, and have a heat input greater than 10 million Btu per hour and below 100 MMBtu/hr. 40 CFR 60, Subpart GG is applicable to these turbines. There have been some routine component exchanges for these two Solar Gas Turbines in July, 2007 for the Taurus 60 and May, 2006 for the Centaur H. Since the changes did not increase the capacity of the turbines, the projects were not considered modifications under the NSPS program.

Unit	Control Device	Rule	Verification
Auxiliary Generators	None	A.A.C. R18-2-719	<p>These standards are applicable to existing stationary rotating machinery. The auxiliary generators were manufactured prior to 1993, and are therefore not subject to New Source Performance Standard (NSPS) Subpart JJJJ.</p> <p>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 engine located at an area source of HAP emissions does not have to meet the requirements of the subpart.</p>
Fugitive dust sources	Water and other reasonable precautions	A.A.C. R18-2- 604.A,B A.A.C. R18-2-605 A.A.C. R18-2-606 A.A.C. R18-2-607 A.A.C. R18-2-614 A.A.C. R18-2-702.B	These are applicable to fugitive dust sources at the facility.
Mobile sources	Water Sprays/Water Truck for dust control	A.A.C. R18-2-801 A.A.C. R18-2-802 A.A.C. R18-2-804	These 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	A.A.C. R18-2-702.B A.A.C. R-18-2-727	These standards are applicable to any spray painting operation.
Abrasive Blasting	Wet blasting, Dust collecting equipment or other approved methods	A.A.C. R-18-2-702.B A.A.C. R-18-2-726	These standards are applicable to any abrasive blasting operation.
Demolition or 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

Tables 3 to Table 5 compare the substantive conditions in Permit #28051, Significant Revision #37552, and Minor Revision #46348 with the conditions in this renewal permit.

**Table 3: Comparison of Previous and Current Permit Conditions – Permit #28051**

Condition	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.
Condition I.B		x			The condition to require the reporting of all required monitoring activities has been retained.
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				x	This condition has been written in two parts- first part for the stationary rotating machinery subject to NSPS and second part for stationary rotating machinery not subject to NSPS.
Condition II.B.1.a		x			This condition for operation of auxiliary generators has been retained.
Condition II.B.1.b			x		This condition for fuel limitation for auxiliary generators has been revised from pipeline quality natural gas to natural gas.
Condition II.B.2		x			This condition for PM and opacity for auxiliary generators has been retained.
Condition II.B.3	x				This condition for SO <sub>2</sub> from auxiliary generators has been deleted since natural gas fuel being used in these generators has low sulfur content.
Condition II.B.4	x				This condition for CO testing for auxiliary generators has been deleted because emissions are less than 100 tons per year.
Condition II.C.1			x		This condition for fuel limitation for generators has been revised from pipeline quality natural gas to natural gas.
Condition II.C.2		x			This condition for NO <sub>x</sub> emission from generators has been retained.
Condition II.C.3.a		x			This condition for SO <sub>2</sub> emission from generators has been retained.
Condition II.C.3.b	x				This condition for monitoring requirements of SO <sub>2</sub> from generators has been deleted since the sulfur content of natural gas is low.
Condition III			x		This general condition for non-point sources has been revised with the latest language with title as Fugitive Dust Requirements.
Condition IV			x		This general condition for mobile sources has been revised.

Condition	Determination				Comments
	Deleted	Kept	Revised	Streamlined	
Condition V			x		This general condition for other periodic activity has been revised.

**Table 4: Comparison of Previous and Current Permit Conditions – Significant Revision #37552**

Condition	Determination				Comments
	Deleted	Kept	Revised	Streamlined	
Attachment B					
Condition II.B.1.a		x			This condition for operation of auxiliary generators has been retained.
Condition II.B.2.b.(3)		x			This condition for recordkeeping requirement of auxiliary generators operation has been retained.
Condition II.B.2.b.(1)		x			This condition for opacity survey from the stack of auxiliary generators has been retained.

**Table 5: Comparison of Previous and Current Permit Conditions – Minor Revision #46348**

Condition	Determination				Comments
	Deleted	Kept	Revised	Streamlined	
Attachment C, Equipment List		x			The equipment list has been retained.

## 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 III by having a Certified EPA 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 log of the reason of operation of auxiliary generators.

#### D. 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 IV.B.1.a.(3)(a) through IV.B.1.a.(3)(h) are employed.
2. The Permittee is required to show compliance with the opacity standards in Attachment "B", Section IV 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.

#### E. Mobile Sources

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

#### F. 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 annual Method 20 performance tests for NO<sub>x</sub> on each of the Solar gas turbines.

## 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
NO <sub>x</sub> .....	Nitrogen Oxides
NSPS.....	New Source Performance Standards
NESHAP.....	National Emission Standards for Hazardous Air pollutants
PM.....	Particulate Matter
PM <sub>10</sub> .....	Particulate Matter with an aerodynamic diameter less than 10 microns
PTE.....	Potential-to-Emit
SO <sub>2</sub> .....	Sulfur Dioxide
TPY.....	Tons per Year
VOC.....	Volatile Organic Compound