

**TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY PERMIT No. 48822**

I. INTRODUCTION

This Class I Title V operating permit renewal is for the operation of El Paso Natural Gas Company's San Simon Compressor Station which is located on Cavot Road, San Simon in Cochise County, Arizona. Permit #48822 renews and supersedes Permit #27909.

A. Company Information

Facility Name: El Paso Natural Gas Company, San Simon Compressor Station

Mailing Address: 5151 E Broadway Blvd., Suite 1680
Tucson, AZ 85711

Facility Location: Cavot Road, Exit on I-10E of San Simon, Arizona 85623

B. Attainment Classification (Source: 40 CFR §81.303)

El Paso Natural Gas Company, San Simon Compressor Station is located in an area which is in attainment or unclassified for all criteria pollutants.

II. PROCESS DESCRIPTION

El Paso Natural Gas Company (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 San Simon 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 three natural gas fired General Electric regenerative cycle turbine engines that drive the compressor units.

From a common pipeline system, natural gas flows into each of the three centrifugal compressors connected in either parallel or in series. The compressors are driven by three natural gas fueled turbine engines. The turbine engines operate depending on the amount of natural gas being transported to various customers along the pipeline system.

The gas turbine stacks are the primary sources of air pollutant emissions. The primary pollutant present in the stack emissions is nitrogen oxides, which results from the combustion of natural gas. Other pollutants present in the emissions are sulfur dioxide, carbon monoxide, and volatile organic compounds.

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 rate of NO_x is greater than the major source threshold as shown in the table below:

Facility-Wide Emissions of Other Pollutants

Pollutant	Tons per Year
PM	1.55
VOC	1.71
SO ₂	45.65
NO _x	260.74
CO	66.81
Formaldehyde	0.58

IV. COMPLIANCE HISTORY

There have been thirty-two air quality inspections associated with this facility since March 30, 1995. No air quality cases and/or violations appear to have been developed for this facility as a result of inspections.

V. APPLICABLE REGULATIONS

The Permittee has identified the applicable regulations that apply to each unit in its permit application. The following table summarizes the findings of the Department with respect to the regulations that are applicable to each emissions unit. Previous permit conditions are discussed under Section VI of this technical review document.

Applicable Regulations

Unit ID	Year of Manufacture	Control Equipment	Applicable Regulations	Verification
Three General Electric M3972R-A Regenerative Natural Gas-Fired Turbine Engines	1953	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	Stationary Rotating Machinery subject to State rules

Unit ID	Year of Manufacture	Control Equipment	Applicable Regulations	Verification
Fugitive Dust Sources	Not Applicable	Control Measures	<u>A.A.C.</u> R18-2-602 R18-2-604.A R18-2-604.B R18-2-605 R18-2-606 R18-2-607 R18-2-612 R18-2-702	The regulations listed are applicable to fugitive dust sources
Abrasive Blasting	Not Applicable	Wet blasting, enclosure, or equivalent (approved by Director)	<u>A.A.C.</u> R18-2-726 R18-2-702.B	Relevant requirements applicable to abrasive blasting
Spray Painting	Not Applicable	Control measures that attain 96% efficiency	<u>A.A.C.</u> R18-2-727	Relevant requirements applicable to spray painting
Mobile Sources	Not Applicable	Control Measures	<u>A.A.C.</u> R18-2-801 R18-2-802.A R18-2-804	These regulations are applicable to all mobile sources
Demolition/Renovation	Not Applicable	None	<u>A.A.C.</u> R18-2-1101.A.8 (NESHAP for asbestos)	Relevant requirements applicable to demolition and renovation operations

VI. PREVIOUS PERMIT AND CONDITIONS

A. Previous Permit

The following table lists the previous permit that has been issued to El Paso Natural Gas, San Simon Station.

Previous Permits

Date Permit Issued	Permit #	Application Basis
4/21/2004	27909	Class I Permit

B. Previous Permit Conditions

The following is a discussion regarding the previous permit that was issued to the source.

TITLE V OPERATING PERMIT No. 27909

This operating permit was issued to the EPNG, San Simon Compressor Station on April 24, 2004, to operate three natural gas-fired turbine engines.

Condition No.	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment.A	x				Revised to represent most recent permitting language.
Att. B. I.A		x			Facility Wide Limitations have been revised to represent most recent permitting language.
Att. B.I.B		x			Facility Wide Limitations now includes a section for monitoring, recordkeeping, and reporting requirements.
Att. B. II		x			Section has been renamed Stationary Rotating Machinery.
Att. B. II.B		x			Fuel Limitation has been retained under Facility Wide Limitations
Att. B. II.C		x			Particulate Matter and Opacity conditions have been retained.
Att. B. II.D			x		Performance test requirements for NOx and CO have been removed. The turbines do not have the potential to emit more than 100 tons per year on an individual basis.
Att. B. II.E		x			Sulfur Dioxide conditions have been revised to represent most recent permit language and are now included in the Facility Wide Limitations.
Att. B. III		x			Nonpoint Source Requirements now included as Fugitive Dust Requirements.
Att. B. IV		x			Mobile Source Requirements now includes most recent permitting language.
Att. B. V		x			Other Periodic Activity Requirements now includes most recent permitting language.

Condition No.	Determination				Comments
	Revise	Keep	Delete	Stream-line	
Attachment C		x			Equipment List

VII. PERIODIC MONITORING

A. Stationary Rotating Machinery

Method 9 observations are required quarterly for visible emissions from the stacks of the stationary rotating machinery when in operation. If the opacity of the emissions observed during the initial survey appears to exceed 40%, the observer is required to conduct a certified EPA Reference Method 9 observation. If the observation shows a Method 9 opacity reading in excess of 40%, the Permittee is required to report this to ADEQ as excess emission and initiate appropriate corrective action to reduce the opacity to a level below 40%.

B. Fugitive Dust

1. The Permittee is required to keep record of the dates on which any of the dust control measures are employed.
2. The Permittee is required to show compliance with the opacity standards in 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.

VIII. INSIGNIFICANT ACTIVITIES

The following table includes a list of activities proposed by EPNG, San Simon Compressor Station to be insignificant. This table includes an evaluation of whether the activity can be deemed as insignificant pursuant to A.A.C. R18-2-101.57.

Insignificant Activities

Equipment/ Activity	Determination	Comment
Internal Combustion engine-driven compressors, IC engine-driven electrical generator sets used only for emergency	Not Insignificant	Subject to R18-2-719

Equipment/ Activity	Determination	Comment
replacement or standby service		
Petroleum-based solvent tanks less than 10,000 gallons (solvent with a vapor pressure less than gasoline)	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.b
Lube oil storage tanks	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.c
Minor natural gas-fired appliances, if the aggregate rate is less than 500,000 Btu/hr (hot water heaters, HVAC, etc.)	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
Temporary hydrostatic test water evaporation ponds	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
Pressure tanks	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
Used oil systems	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
General maintenance of regulated emissions units, including, but not limited to, oil filter replacement (including drainage of oil filters), and work on the engine jacket water system	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
Fan systems	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
Maintenance and use of inertial separators (to filter air intake into the gas turbine engines)	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
Exercise of standby equipment	Not Insignificant	Standby IC engines will be subject to R18-2-719. Other equipment will be evaluated on a case by case basis.
Domestic wastewater systems	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
Plant water and wastewater system	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
Emergency shut down system and pressure relief valves	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
Blowdown activities	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
Scrubber liquid systems	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j

Equipment/ Activity	Determination	Comment
Oil/water separator systems	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
Cathodic protection systems	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
Vents, valves and flanges	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
Solvent degreasing	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
Cooling water systems	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
General plant maintenance, construction and upkeep activities not associated with the Permittee's primary business activity, and not otherwise triggering a permit modification	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
Manually operated equipment used for buffing, polishing, carving, cutting, drilling, machining, routing, sanding, sawing, surface grinding, or turning of precision parts, leather, metals, plastics, fiber board, masonry, carbon, glass or wood	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.f
Use of consumer office products	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
Use and maintenance of electric driven equipment for general location maintenance including but not limited to a bench grinder, drill press, pipe threader and lathe	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
Steam cleaning activities	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
Welding activities	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
Laboratory equipment	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.i
Safety equipment	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
Uninterruptible power supply systems	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j
Utility pumps and systems	Insignificant	Insignificant pursuant to A.A.C.

Equipment/ Activity	Determination	Comment
		R18-2-101.57.j
Use of chlorination systems	Insignificant	Insignificant pursuant to A.A.C. R18-2-101.57.j

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XII. LIST OF ABBREVIATIONS

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
Btu/ft ³	British Thermal Units per Cubic Foot
Btu/hr	British Thermal Units per Hour
CFR	Code of Federal Regulations
CO	Carbon Monoxide
EPNG	El Paso Natural Gas Company
FERC	Federal Energy Regulatory Commissions
HAP	Hazardous Air Pollutant
hp	Horsepower
lb/hr	Pound per Hour
NO _x	Nitrogen Oxides
PM	Particulate Matter
PM ₁₀	Particulate Matter Nominally less than 10 Micrometers
SO _x	Sulfur Oxides
VOC	Volatile Organic Compound