



**TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY PERMIT No. 77575**

I. INTRODUCTION

This Class I, Title V renewal permit is issued to El Paso Natural Gas Company (EPNG) for the continued operation of the Williams Compressor station in Williams, Coconino County, Arizona. This permit supersedes Operating Permit No. 60997.

A. Company Information

Facility Name: Williams Compressor Station

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

Facility Address: Exit 171 off I-40, 3 miles north, Williams, AZ 86046

B. Attainment Classification

The facility is located in an area classified as attainment area for all criteria pollutants.

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 Williams 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 five (5) natural gas fired reciprocating engines and one (1) natural gas fired turbine that drives the compressor units. Purchased power is the primary source of electric power. The Solar gas turbine provides supplemental electric power to the station. An Ingersoll-Rand emergency generator provides emergency power supply during outages. The Williams Compressor Station has been automated and is, therefore, an unattended facility.

There is no air pollution control equipment installed on the turbines or engines at the Williams Compressor Station.

III. LEARNING SITE EVALUATION

In accordance with ADEQ's Environmental Permits and Approvals near Learning Sites Policy, the Department is required to conduct 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.

This Class I renewal permit will not result in any increase in emissions as there are no changes to any equipment. Hence the facility is exempt from the learning sites evaluations.

IV. COMPLIANCE HISTORY

Since the issuance of Permit #60997, the facility is in compliance with applicable permit conditions. No air quality cases or violations were issued during the permit term.

V. EMISSIONS

The facility has a potential-to-emit (PTE) more than the major source thresholds of nitrogen oxides (NO_x), carbon monoxide (CO) and volatile organic compounds (VOC). The facility has a PTE of more than 10 tons of formaldehyde per year and more than 25 tons per year of total hazardous air pollutants (HAPs). The facility's PTE is provided in Table 1 below:

Table 1: Potential to Emit

Pollutant	Emissions (tons per year)
NO _x	3,176.22
PM ₁₀	22.82
CO	473.66
SO ₂	3.31
VOC	169.36
Total HAPs	28.87
Formaldehyde	19.93

VI. APPLICABLE REGULATIONS

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

Table 2: Applicable Regulations

Unit	Year	Control Device	Rule	Discussion
Clark Reciprocating Engines (2-Stroke Lean Burn engines) B-1 to B-5	1956 1960	None	A.A.C. R18-2-719	These standards are applicable to existing stationary rotating machinery.
Ingersoll Rand Reciprocating Engine Generator (4-Stroke, Rich Burn Engine) Aux-1	1953		NSPS Subpart IIII NSPS Subpart JJJJ 40 CFR §63 Subpart ZZZZ	<p>The engines and generators are not subject to NSPS Subpart IIII because they are not compression ignition engines.</p> <p>The engines and generators are not subject to NSPS Subpart JJJJ because they were constructed prior to July 1, 2008.</p> <p>The National Emission Standard for Hazardous Air Pollutants (NESHAP) Subpart ZZZZ is applicable to reciprocating internal combustion engines located at major and area sources of HAPs. Existing 2-stroke lean burn stationary RICE (Clark engines) with a rating more than 500 HP located at a major source of HAPs are exempt from the requirements of NESHAP Subpart ZZZZ, 40 CFR 63.6590.(b)(3)(i)</p> <p>Existing emergency stationary RICE with a rating of more than 500 HP (Ingersoll-Rand emergency generator; Aux-1) located at a major source of HAPs that does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in 40 CFR 63.6640(f)(2)(ii) and (iii) is exempt from the requirements of NESHAP Subpart ZZZZ, 40 CFR §63.6590(b)(3)(iii)</p>

Unit	Year	Control Device	Rule	Discussion
GE gas turbine engine, C-1 and Solar gas turbine generator Aux-2	1993 1988	None	40 CFR 60 Subpart GG NSPS Subpart KKKK NESHAP Subpart YYYY	The gas turbines are constructed after October 3, 1977, and are therefore subject to New Source Performance Standard (NSPS) Subpart GG. NSPS Subpart KKKK is applicable to stationary combustion turbines that commenced construction, modification or reconstruction after February 18, 2005. Both the GE and Solar turbines were constructed prior to this date and, hence, are not subject to NSPS Subpart KKKK. (In May 2008, the Solar turbine component was exchanged with like component. There was no increase in capacity or emissions due to this component exchange. Thus, it is not considered a modification, and hence, this turbine is not subject to NSPS Subpart KKKK) NESHAP Subpart YYYY is applicable to stationary combustion turbines located at major sources of HAPs. The GE turbine and the Solar turbine are exempt from these requirements as these were constructed before January 14, 2003.
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.

Unit	Year	Control Device	Rule	Discussion
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.

VII. PREVIOUS PERMIT AND CONDITIONS

A. Previous Permit Conditions

Table 3 compares the sections in Permit #60997 with the conditions in this renewal permit:

Table 3: Conditions for Permit No. 60997

Section No.	Determination			Comments
	Revised	Keep	Delete	
Att. "A"	X			General Provisions: Revised to represent the most recent template language
Att. "B" Section I	X			Facility Wide Requirements: Revised to represent the most recent template language
Att. "B" Section II	X			Reciprocating Engines Subject to State Regulations: Revised opacity language to avoid redundancy with Facility Wide Requirements.
Att. "B" Section III		X		Gas Turbine Engines
Att. "B" Section IV	X			Fugitive Dust Requirements: Revised to represent the most recent template language. Removed requirement for quarterly visible emissions survey.
Att. "B" Section V			X	Mobile Source Requirements: No longer included in air quality individual permits
Att. "C"	X			Equipment List: Revised to use SKID or Serial Number, instead of just the Serial Number, to allow the company to change like-kind components without having to change the equipment list.

VIII. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

A. Gas Turbine engines

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

B. Fugitive Dust

The Permittee must keep record of the dates on which any of the dust control measures are employed.

C. Periodic Activities

1. The Permittee must record the date, duration, and pollution control measures of any abrasive blasting project.
2. The Permittee must record the date, duration, quantity of paint used, any applicable MSDS, and pollution control measures of any spray painting project.
3. The Permittee must 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.

IX. TESTING REQUIREMENTS

- A. The Permittee must conduct performance tests on reciprocating engines B-1 to B-5 for nitrogen oxide within the first year of the permit term. If an engine is not operated in the first year of the permit term, the Permittee must conduct the performance test within 6 months of startup.
- B. The Permittee must conduct performance tests on GE turbine and Solar turbine engine for NOx to determine compliance with the applicable emission limits as per the procedures outlined in 40 CFR 60.335, and using EPA Reference Method 20 or 7E to determine NOx emissions.

X. 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