



**TECHNICAL REVIEW AND EVALUATION  
OF APPLICATION FOR  
AIR QUALITY PERMIT No. 103029**

**I. INTRODUCTION**

This new Class II synthetic minor permit is for the construction and operation of El Paso Natural Gas LLC's (EPNG) Haystack Compressor Station.

A Class II synthetic minor permit is required because EPNG has taken voluntarily accepted emission limitation to keep carbon monoxide (CO) emissions from this facility under ~~than~~ the major source thresholds in Arizona Administrative Code (A.A.C.) R18-2-101(75).

**A. Company Information**

Facility Name: Haystack Compressor Station  
Mailing Address: 5151 E Broadway Blvd. Ste. 1680  
Tucson AZ, 85711  
Facility Location: Chino Valley, AZ  
34°47'46.71"N, 112°22'16.04"W

**B. Attainment Classification**

The facility is located in Yavapai County that is in attainment or unclassified for all criteria air pollutants.

**II. PROCESS DESCRIPTION**

EPNG will operate the Haystack Compressor Station to compress natural gas in a transmission pipeline. Long distance pipelines transport gas under pressure. As the gas moves through the pipeline, customers make withdrawals. Natural gas compression is needed to maintain enough pressure in the pipeline to keep the natural gas flowing through the EPNG southwestern natural gas pipeline network.

**A. Process Equipment**

The Haystack Compressor Station will consist of two (2) emission units. One (1) Caterpillar (CAT) G-3616 (5,000 hp) natural gas-fired compressor engine will be located at the facility to power the reciprocating compressor. One (1) 750 kW natural gas-fired emergency generator will supply backup power to the facility during purchased power outage. Construction of the Haystack Compressor Station is scheduled to commence in 2024, and initial start-up is scheduled for November 2025.

**B. Control Devices**

EPNG will install an oxidation catalyst device on the engine exhaust of the Caterpillar engine for control of CO.

**III. EMISSIONS**

Emissions from the facility are calculated using permitted emission limits, emissions factors from Compilation of Air Pollutant Emissions Factors from Stationary Sources AP-42 Section 3.2 titled Natural Gas-fired Reciprocating Engines, and manufacturer data, and emission standards in Table 1 to 40 CFR Part 60 New Source Performance Standards (NSPS) Subpart JJJJ.

The facility has a potential-to-emit (PTE) more than the significant thresholds of CO. The facility's PTE is provided in Table 1 below:

**Table 1: Potential to Emit (tpy)**

<b>Pollutant</b>	<b>PTE</b>	<b>Permitting Exemption Threshold</b>	<b>Significant Thresholds</b>	<b>Minor NSR Triggered?</b>
NO <sub>x</sub>	25.25	20	40	Yes
PM <sub>10</sub>	1.50	7.5	15	No
PM <sub>2.5</sub>	1.50	5	10	No
CO	54.78	50	100	Yes
SO <sub>2</sub>	0.09	20	40	No
VOCs	11.48	20	40	No
HAP (Single Greatest) Formaldehyde	8.03	N/A	10	No
HAPs (Combined)	11.49	N/A	10	No

**IV. MINOR NEW SOURCE REVIEW (NSR)**

Minor new source (NSR) review is required if the emissions of a new source have the potential to emit any regulated air pollutant at an amount greater than or equal to the permitting exemption threshold (PET) in Table 1 above. NO<sub>x</sub> and CO are greater than the PET and trigger minor NSR.

The compressor engine and the emergency engine are both subject NSPS Subpart JJJJ, to an emissions standard established or revised by the Administrator for the same type of source under

section 111 or 112 of the Act after November 15, 1990. Therefore, RACT requirements are met. Additionally, an oxidation catalyst will be installed on the compressor engine to further reduce CO and VOC emissions, which also satisfy RACT requirements.

#### V. VOLUNTARILY ACCEPTED EMISSION LIMITATIONS AND STANDARDS

The permit contains a voluntarily accepted emission limitation of 12 lb/hr of CO emissions from the compressor engine. This voluntarily accepted emission limitation was taken to reduce emissions below major source thresholds and avoid classification as a source that requires a Class I permit. This voluntarily accepted emission limitation requires periodic performance testing to demonstrate compliance.

#### VI. APPLICABLE REGULATIONS

Table 2 identifies applicable regulations and verification as to why that standard applies. The table also contains a discussion of any regulations the emission unit is exempt from.

**Table 2: Applicable Regulations**

Unit	Control Device	Rule	Discussion
Compressor Engine	Oxidation Catalyst	NSPS Subpart JJJJ NESHAP Subpart ZZZZ	NSPS Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines, applies to any owner or operator of a stationary spark ignition (SI) internal combustion engine (ICE) for which construction commenced after June 12, 2006. Therefore, the Haystack Compressor Station is subject NSPS Subpart JJJJ.  The Haystack Compressor Station is subject to NESHAP Subpart ZZZZ. However, the requirements of this subpart are fulfilled by complying with NSPS Subpart JJJJ.

Unit	Control Device	Rule	Discussion
Reciprocating Compressor	N/A	NSPS Subpart OOOOb	NSPS Subpart OOOOb, Standards of Performance for Crude Oil and Natural Gas Facilities for Which Construction, Modification or Reconstruction Commenced After December 6, 2022, applies to reciprocating compressors the commenced construction after December 6, 2022. Therefore, the Haystack Compressor Station is subject NSPS Subpart OOOOb.
Emergency Engine	N/A	NSPS Subpart JJJJ NESHAP Subpart ZZZZ	<p>NSPS Subpart JJJJ, Standards of Performance for Stationary Spark Ignition Internal Combustion Engines, applies to any owner or operator of a stationary spark ignition (SI) internal combustion engine (ICE) for which construction commenced after June 12, 2006. Therefore, the Haystack Compressor Station is subject NSPS Subpart JJJJ.</p> <p>The Haystack Compressor Station is subject to NESHAP Subpart ZZZZ. However, the requirements of this subpart are fulfilled by complying with NSPS Subpart JJJJ.</p>
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.

---

<b>Unit</b>	<b>Control Device</b>	<b>Rule</b>	<b>Discussion</b>
Spray Painting	Enclosures	A.A.C. R18-2-702 A.A.C. R-18-2-727	These standards are 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.

## VII. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

Table 3 contains an inclusive but not an exhaustive list of the monitoring, recordkeeping and reporting requirements prescribed by the air quality permit. The table below is intended to provide insight to the public for how the Permittee is required to demonstrate compliance with the emission limits in the permit. Records are required be kept for a minimum of 5 years as outlined in Section XII of Attachment “A” of the permit.

**Table 3: Permit No. 103029**

<b>Emission Unit</b>	<b>Pollutant</b>	<b>Emission Limit</b>	<b>Monitoring Requirements</b>	<b>Recordkeeping Requirements</b>	<b>Reporting Requirements</b>
Compressor Engine	CO	12 lb/hr	Conduct performance testing at least once per permit term.	Keep data and test reports for monitoring.	Report test results. Report excess emissions and deviations if applicable.
Reciprocating Compressor (Rod Packing)	Total Volume	2 scfm Per Cylinder	Conduct volumetric flow rate measurements from the reciprocating compressor rod packing vent on or before every 8,760 hours of operation.	Keep data and reports for monitoring.	Report test results. Report excess emissions and deviations if applicable.
Process Controllers	Methane & VOCs	No Identifiable Emissions	Conduct periodic no identifiable emissions inspections of application sources.	Keep data and reports for monitoring.	Report test results. Report excess emissions and deviations if applicable.

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Fugitive Emissions Components	N/A	N/A	Develop a fugitive emissions monitoring plan that covers all fugitive emissions components and repair each identified source of fugitive emissions.	Keep data and reports for monitoring.	Report test results. Report excess emissions and deviations if applicable.
Cover and Closed Vent Systems	N/A	No Identifiable Emissions	Conduct periodic no identifiable emissions inspections of application sources.	Keep data and reports for monitoring.	Report test results. Report excess emissions and deviations if applicable.
Fugitive Dust	PM	40% Opacity	N/A	Record of the dates and types of dust control measures employed, and if applicable, the results of any Method 9 observations, and any corrective action taken to lower the opacity of any excess emissions.	Report excess emissions and deviations if applicable.
Abrasive Blasting	PM	20% Opacity	N/A	Record the date, duration and pollution control measures of any abrasive blasting project.	N/A

---

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Spray Painting	VOC	20% Opacity Control 96% of the overspray	N/A	Maintain records of the date, duration, quantity of paint used, any applicable MSDS, and pollution control measures of any spray painting project.	N/A
Demolition/ Renovation	Asbestos	N/A	N/A	Maintain records of all asbestos related demolition or renovation projects including the "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents	N/A



## VIII. LEARNING SITE EVALUTATION

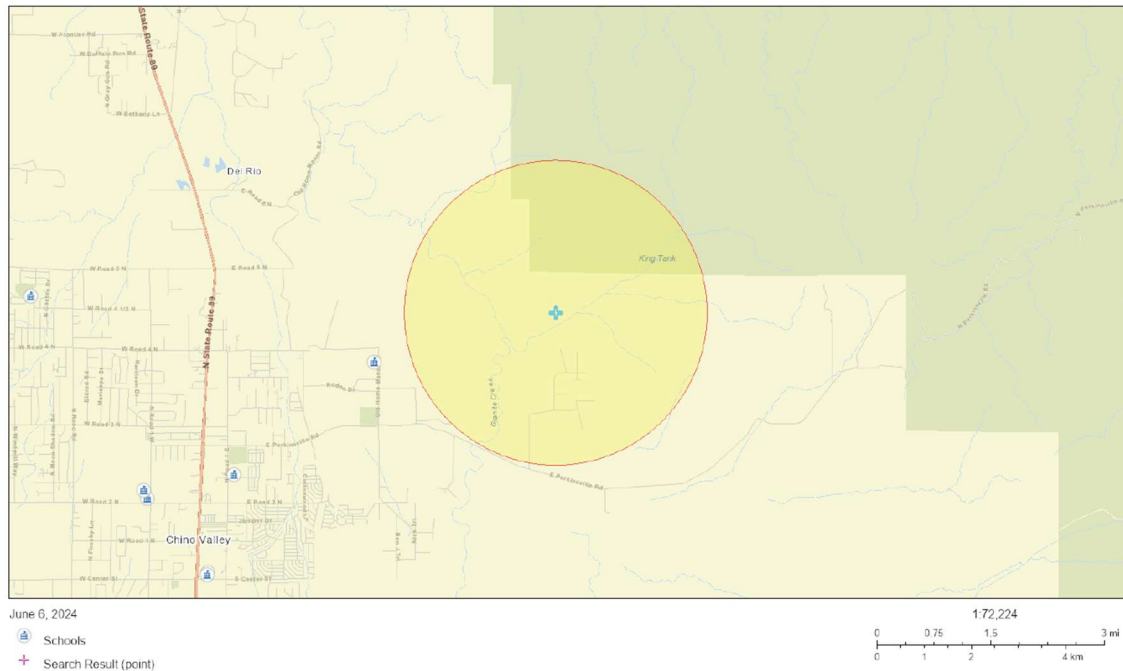
In accordance with ADEQ's Environmental Permits and Approvals near Learning Sites Policy, the Department is required to conduct an evaluation to determine if any nearby learning sites would be adversely impacted by the facility. Learning sites consist of all existing public schools, charter schools and private schools in 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 2 miles of the facility. Therefore, it is exempt from a learning sites evaluation.

## IX. ENVIRONMENTAL JUSTICE ANALYSIS

The EPA (Environmental Protection Agency) defines Environmental Justice (EJ) to include the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and polices. The goal of completing an EJ assessment in permitting is to provide an opportunity for overburdened populations or communities to allow for meaningful participation in the permitting process. Overburdened is used to describe the minority, low-income, tribal and indigenous populations or communities that potentially experience disproportionate environmental harms and risks due to exposures or cumulative impacts or greater vulnerability to environmental hazards.

The EPA developed EJSCREEN, a publicly available tool that uses nationally consistent data, to produce maps and reports detailing environmental and demographic indicators that can be used to evaluate EJ concerns. The EPA selected an 90<sup>th</sup> percentile threshold for this action to evaluate the potential for EJ concerns in a community, meaning that if the area of interest exceeds the 90<sup>th</sup> percentile for one or more of the EJ indexes, the EPA considers that area to have a high potential for EJ concerns. The ADEQ mapped the location of the Haystack Compressor Station and reviewed a two-mile radius around the facility for potential environmental justice concerns (see Figure 1 below).



**Figure 1: 2-Mile Radius from the Haystack Compressor Station**

**A. Demographics**

The ADEQ relied on data from the EPA EJ Screen tool to assess the demographics of the communities near the initial location for this proposed facility. The EJSCREEN report shows that the Demographic Indicators; Minority Population, Low Income Population, Linguistically Isolated Population, and Population Under 5 years of age, and Population over 64 years of age, are all below the 90<sup>th</sup> percentile threshold. Additionally, ADEQ posts a notice in two newspapers of general circulation within the surrounding community, as well as publishes the notice electronically to ensure that the community has ample opportunity to provide comments on the draft documents prior to a final permitting decision.

**B. Summary of Air Quality**

All air quality related environmental indicators within a 2-miles radius of the facility were below the 90<sup>th</sup> percentile for both Arizona and the USA averages.

**C. Conclusion**

The ADEQ concludes that the protections afforded by Arizona Revised Statutes (A.R.S.) § 49-426, which is imposed through the permit, ensure that the public health and environment in Arizona are protected and that the public notice and comment

opportunities afforded to the community on this new permit application satisfy the public participation component of the EPA EJ Guidance.

## X. LIST OF ABBREVIATIONS

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
AQD	Air Quality Division
A.R.S.	Arizona Revised Statutes
CFR	Code of Federal Regulations
CAT	Caterpillar
CO	Carbon Monoxide
CO <sub>2</sub>	Carbon Dioxide
EJ	Environmental Justice
EPA	Environmental Protection Agency
EPNG	El Paso Natural Gas, LLC
ft	Feet
g	Gram
HAP	Hazardous Air Pollutant
hp	Horsepower
hr	Hour
NAAQS	National Ambient Air Quality Standard
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO <sub>x</sub>	Nitrogen Oxides
NSPS	New Source Performance Standards
O <sub>3</sub>	Ozone
Pb	Lead
PM	Particulate Matter
PM <sub>10</sub>	Particulate Matter less than 10 µm nominal aerodynamic diameter
PM <sub>2.5</sub>	Particulate Matter less than 2.5 µm nominal aerodynamic diameter
PTE	Potential to Emit
SO <sub>2</sub>	Sulfur Dioxide Significant Impact Levels
TPY	Tons per Year
VOC	Volatile Organic Compound
yr	Year