



**TECHNICAL REVIEW AND EVALUATION  
OF APPLICATION FOR  
AIR QUALITY PERMIT No. 101093**

**I. INTRODUCTION**

This Class I permit renewal is for the continued operation of Arizona Public Service (APS) Company's Fairview Generating Station. Permit No. 101093 renews and supersedes Permit No. 78417.

The facility's potential to emit (PTE) for nitrogen oxides (NO<sub>x</sub>) is greater than the major source threshold in accordance with Arizona Administrative Code (A.A.C.) R18-2-401. Permit No. 78417 has an expiration date of March 10, 2025, and the application for this permit renewal was submitted on November 15, 2023. This submission met the permit condition requiring that a complete and timely application be submitted by the facility at least six (6) months, but no earlier than eighteen (18) months, prior to the expiration date of the current permit.

**A. Company Information**

Facility Name: Fairview Generating Station  
Mailing Address: 400 North 5<sup>th</sup> Street, MS 9303  
Phoenix, AZ 85004  
Facility Location: Sulphur Springs and Lawrence  
Douglas, AZ 85607

**B. Attainment Classification**

The facility is located in Cochise County which is an area that is designated as moderate non-attainment for Particulate Matter less than 10 µm Nominal Aerodynamic Diameter (PM<sub>10</sub>) and in attainment or unclassified for all other criteria air pollutants.

**II. PROCESS DESCRIPTION**

The Fairview Generating Station is a peaking plant and is operated on as-needed basis. The facility consists of a 20.95 megawatt (MW) simple cycle combustion turbine, a 500 horsepower (hp) black start engine which supplies power to the turbine for start-up, and a 157 hp emergency generator. The turbine, the black start engine, and the emergency generator all burn only diesel fuel.

The diesel fuel is delivered to the station by trucks and is kept in a storage tank with a total capacity of 84,000 gallons.

**III. COMPLIANCE HISTORY**

During the previous permit term, the Arizona Department of Environmental Quality (ADEQ) conducted 10 semiannual compliance certification report reviews, 4 physical inspections, and 2 deviation report reviews which did not result in any violations.

**IV. EMISSIONS**

The emissions factors were drawn from EPA's Compilation of Air Pollution Emission Factors, AP-42, and performance testing results.

The facility has the PTE more than the major source threshold of NO<sub>x</sub>. The facility's PTE is provided in Table 1:

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

<b>Pollutant</b>	<b>Previous PTE</b>	<b>Change in PTE</b>	<b>Current PTE</b>	<b>Major NSR Triggered?</b>
NO <sub>x</sub>	795.30	0.00	795.30	No
PM <sub>10</sub>	15.60	0.00	15.60	No
PM <sub>2.5</sub>	15.60	0.00	15.60	No
CO	5.37	0.00	5.37	No
SO <sub>2</sub>	65.57	0.00	65.57	No
VOC	0.53	0.00	0.53	No
Pb	0.02	0.00	0.02	No
HAPs	1.44	0.00	1.44	No
GHG (CO <sub>2</sub> e)	211,398.93	0.00	211,398.93	No

## V. MAJOR NEW SOURCE REVIEW

Major new source review (NSR) is required if a facility has a PTE of any regulated NSR pollutant in an amount greater than 250 tpy, a facility that has a PTE of any regulated NSR pollutant in an amount greater than 100 tpy if it is a categorical source, or if there is a major modification to the facility. A major modification is a physical change, or change in the operation of a major stationary source that would result in a significant increase in emissions of a regulated NSR pollutant and a significant net increase of that pollutant from the stationary source. The facility has not undergone any physical or operational changes, therefore major NSR is not triggered.

## VI. VOLUNTARILY ACCEPTED EMISSION LIMITATIONS

### Simple Cycle Combustion Turbine and Black Start Engine

The facility accepted a voluntary fuel limitation for the simple cycle combustion turbine and the black start engine. Only diesel fuel with sulfur content less than or equal to 0.05 percent shall be combusted.

## VII. APPLICABLE REGULATIONS

Table 2 identifies applicable regulations and verifications as to why that standard applies. The table also contains a discussion of any regulations the emission units may be exempt from.

**Table 2: Applicable Regulations**

Unit & year	Control Device	Rule	Discussion
Combustion Turbine 1972	N/A	A.A.C. R18-2-719	The turbine was installed on March 31, 1972. The requirements of NSPS Subpart GG are applicable to turbines installed or reconstructed after October 3, 1977. This turbine has not been modified or reconstructed since 1972. Therefore, NSPS Subpart GG is not applicable. Thus, the engines are subject to A.A.C. R18-2-719, Standards of Performance for Existing Stationary Rotating Machinery.
Black Start Engine 1972	N/A	NESHAP 40 CFR 63 Subpart ZZZZ	The requirements of NESHAP 40 CFR 63 Subpart ZZZZ for National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines are applicable to the black start engine because it is a RICE operating at an area source for HAPS. The startup engine meets the definition of black start engine in 40 CFR 63.6675. NSPS Subpart IIII is not applicable because the engine is older than 2007.
Emergency Generator 2014	N/ANone	NSPS 40 CFR Subpart IIII	The requirements of NSPS 40 CFR 60 Subpart IIII for Standards of Performance for Stationary Compression Ignition Internal Combustion Engines are applicable to the emergency generator because it is a CI ICE.
Diesel Storage Tank	N/A	A.A.C. R18-2-730	The diesel storage tank is an unclassified source and therefore, subject to A.A.C. R18-2-730 for Standards of Performance for Unclassified Sources.

Unit & year	Control Device	Rule	Discussion
Fugitive Dust	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 Collectors; 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	These standards are applicable to any spray painting operation.
Demolition/Renovation	N/A	A.A.C. R18-2-1101.A.12	This standard is applicable to any asbestos related demolition or renovation operations.

### VIII. PREVIOUS PERMIT REVISIONS AND CONDITIONS

Table 3 addresses the changes made to the sections and conditions from Permit No. 78417:

**Table 3: Previous Permit Conditions**

Section No.	Determination			Comments
	Added	Revised	Deleted	
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" Condition II.B.1		X		Simple Cycle Combustion Turbine and Black Start Engine: Updated citations.
Att. "B" Conditions II.F.2.c(1)-(3)		X		Simple Cycle Combustion Turbine and Black Start Engine: Updated to reflect rule changes.
Att. "B" Condition II.F.2.d		X		Simple Cycle Combustion Turbine and Black Start Engine: Updated to reflect rule changes.
Att. "B" Condition II.F.3.a		X		Simple Cycle Combustion Turbine and Black Start Engine: Updated to reflect rule changes.

Section No.	Determination			Comments
	Added	Revised	Deleted	
Att. "B" Condition III.B		X		Emergency Internal Combustion Engine: Updated to reflect rule changes.
Att. "B" Condition III.D.6		X		Emergency Internal Combustion Engine: Updated to reflect rule changes.
Att. "B" Condition III.D.7		X		Emergency Internal Combustion Engine: Revised to represent the most recent template language.
Att. "C"		X		Equipment List: Revised to reflect the most recent equipment operating at the facility and to include equipment information provided.

**IX. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS**

Table 4 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 facility 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 4: Permit No. 101093**

<b>Emission Unit</b>	<b>Pollutant</b>	<b>Emission Limit</b>	<b>Monitoring Requirements</b>	<b>Recordkeeping Requirements</b>	<b>Reporting Requirements</b>
Simple Cycle Combustion Turbine and Black Start Engine	PM	40% Opacity	Conduct a survey for every 80 hours that the simple cycle combustion turbine operates.	N/A	N/A
	NO <sub>x</sub>	N/A	Conduct a one-time performance test for NO <sub>x</sub> after the 12-month rolling total hours of operation exceeds 1,103 hours during the permit term (if applicable).	N/A	N/A
	SO <sub>2</sub>	1.0 lb/MMBtu	N/A	Record daily the sulfur content of the fuel.	Report any daily period during which the sulfur content of the fuel being fired exceeds 0.8%.
	HAPs	N/A	N/A	Keep records of the parameters that are analyzed and the results of the oil analysis, if any, and	Submit required reports along with semiannual compliance certifications.

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
				the oil changes for the engine.	
Emergency Internal Combustion Engine	NO <sub>x</sub> +HC	4.0 g/kWH-hr	Conduct an initial performance test to demonstrate compliance with the applicable emission standards within 1 year of startup, or within 1 year after changing any non-permitted emission-related setting (if applicable).	<p>Maintain a copy of the engine certification.</p> <p>Record the hours of operation and the reason the engine was in operation during that time.</p> <p>Keep records of the fuel supplier specifications.</p>	N/A
	CO	5.0 g/kWH-hr			
	PM	0.3 g/kWH-hr			
Fugitive Dust	PM	40% Opacity	Conduct a monthly survey of visible emissions.	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	N/A
Abrasive Blasting	PM	20% Opacity	N/A	Record the date, duration and pollution control measures of any abrasive blasting project.	N/A
Spray Painting	VOC	20% Opacity	N/A	Maintain records of the date, duration, quantity of paint used, any applicable	N/A

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
		Control 96% of the overspray		material data safety sheets, and pollution control measures of any spray painting project.	
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



---

**X. COMPLIANCE ASSURANCE MONITORING (CAM)**

The CAM rule applies to pollutant-specific emission units (PSEU) at a major Title V source if the unit meets all of the following criteria:

- A. The unit is subject to an emission limit or standard for the applicable regulated air pollutant;
- B. The unit uses a control device to achieve compliance with the emission limit or standard; and
- C. The unit has "potential pre-control device emissions" of the applicable regulated air pollutant equal to or greater than 100% of the amount (tons/year) required for a source to be classified as a major source. "Potential pre-control device emissions" means potential to emit (PTE, as defined in Title V) except emissions reductions achieved by the applicable control device are not taken into account.

The general purpose of monitoring required by the CAM rule is to assure compliance with emission standards by ensuring that control devices meet and maintain the assumed control efficiencies. Compliance is ensured through requiring monitoring of the operation and maintenance of the control equipment and, if applicable, operating conditions of the pollutant-specific emissions unit. For the PSEUs that have post control potential to emit equal to or greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source, for each parameter monitored, the owner shall collect four or more data values equally spaced over each hour. Such units are defined as "large" PSEUs. For all other PSEUs ("small" PSEUs), the monitoring shall include some data collection at least once per 24-hour period. The simple cycle combustion turbine's PTE of NO<sub>x</sub> is greater than 100 percent of the amount, in tons per year, required for a source to be classified as a major source. However, the simple cycle combustion turbine does not have any add-on control devices. Therefore, CAM does not apply as it only applies to emission units with add-on control devices.

**XI. 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.

This permit renewal will not result in an increase in emissions as there are no changes to any equipment and thus, the facility is exempt from a learning sites evaluation.

**XII. 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 permit renewal will not result in an increase in emissions as there are no changes to any equipment and thus, the facility is exempt from a learning sites evaluation.

### XIII. LIST OF ABBREVIATIONS

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
APS	Arizona Public Service
CAM	Compliance Assurance Monitoring
CO	Carbon Monoxide
CO <sub>2e</sub>	CO <sub>2</sub> Equivalent Basis
EJ	Environmental Justice
EPA	Environmental Protection Agency
GHG	Greenhouse Gases
HAPs	Hazardous Air Pollutants
hp	Horsepower
hr	Hour
ICE	Internal Combustion Engine
kW	Kilowatt
MW	Megawatts
NO <sub>x</sub>	Nitrogen Oxides
NSPS	New Source Performance Standards
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
PSEU	Pollutant-Specific Emission Units
PTE	Potential to Emit
SO <sub>2</sub>	Sulfur Dioxide
TPY	Tons per Year
VOCs	Volatile Organic Compounds
yr	Year