

**TECHNICAL REVIEW AND EVALUATION
OF APPLICATION FOR
AIR QUALITY PERMIT No. 92190**

I. INTRODUCTION

This Class II synthetic minor permit is issued to the Arizona Department of Emergency and Military Affairs (ADEMA), the Permittee, for the continued operation of the military installation at Camp Navajo. This permit renews and supersedes Permit No. 65288.

A. Company Information

Facility Name: Camp Navajo

Mailing Address: ADEMA
5636 E. McDowell Road
Phoenix, AZ 85008

Facility Location: 1 Hughes Avenue
Bellemont, AZ 86015

B. Attainment Classification

The facility is located in Coconino County, an area classified as attainment/unclassifiable for all criteria pollutants.

II. PROCESS DESCRIPTION

A. Process Equipment

The military installation at Camp Navajo was originally established as Navajo Ordnance Depot in 1942. In 1993, it was transferred to ADEMA where the following equipment is operated:

1. 142 pieces of equipment, consisting of boilers, heaters, furnaces, etc., between 28,000 Btu/hr and 1,010,000 Btu/hr, for the purpose of producing hot water;
2. 8 stationary compression ignition (CI) internal combustion engines (ICEs), between 25-hp and 568-hp, for the purpose of providing power and water during emergencies;
3. 2 stationary CI ICEs, 116-hp and 260-hp, for the purpose of reducing felled hazard trees;
4. 2 stationary CI ICEs, 25-hp and 200-hp, for the purpose of maintaining roads;
5. 1 stationary CI ICE, 27-hp, for the purpose of screening earthen material;

6. 1 underground storage tank (UST) with a maximum capacity of 15,000 gallons for the purpose of storing and dispensing unleaded gasoline. UST has been closed since 2019;
7. 1 UST with a maximum capacity of 15,000 gallons used for the purpose of storing and dispensing JP-8 fuel. UST has been closed since 2019.

The facility uses low sulfur diesel, pipeline quality natural gas and/or JP-8 fuel to fire their equipment.

III. LEARNING SITE EVALUATION

In accordance with the 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 K-12 levels, 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 the Arizona Department of Environmental Quality (ADEQ).

This permit renewal will not result in an increase in emissions and thus, this permitting action is exempt from a learning site evaluation.

IV. COMPLIANCE HISTORY

Since the issuance of Permit No. 65288, the facility has had two (2) full physical inspections. In addition, ten (10) semiannual compliance certifications have been submitted.

On October 27, 2020, a permit deviation report was submitted by the Permittee. The facility worked diligently to assess equipment changes. Equipment pieces were added, replaced or removed, but the facility's emissions did not increase.

On November 18, 2021, a permit deviation report was submitted by the Permittee. The facility discovered the unpermitted use of equipment. The Permittee immediately addressed the concern by submitting a permit application and thus, ADEQ did not require any further action.

The facility has not had any additional violations since then.

V. EMISSIONS

The facility's potential to emit (PTE) is illustrated in Table 1. PTE was calculated using hours of operation limits including emission factors from AP-42:

Table 1: Facility's PTE (tpy)

Pollutant	Emissions
PM ₁₀	2.71

Pollutant	Emissions
PM _{2.5}	2.71
NO _x	37.51
CO	14.43
SO ₂	1.87
VOCs	2.74
HAPs	1.12

VI. VOLUNTARILY ACCEPTED EMISSION LIMIT AND STANDARDS

The permit contains the following voluntarily accepted emission limit and standards:

A. Boilers, Heaters and Furnaces

Only pipeline quality natural gas can be fired in the boilers, heaters and furnaces.

B. Non-Emergency and Emergency ICEs

Only low sulfur diesel or JP-8 can be fired in the non-emergency and emergency ICEs.

C. Non-Emergency ICEs

On October 3, 2019, the facility accepted a hours of operation limit on their non-emergency ICEs. Non-emergency ICEs are limited to 1,500 hours based on a 12-month rolling total.

VII. APPLICABLE REGULATIONS

Table 2 identifies applicable regulations along with verifications as to why each standard applies:

Table 2: Applicable Regulations

Unit (Year)	Control Device	Rule	Discussion
Boilers, Heaters & Furnaces	N/A	A.A.C. R18-2-724	Boilers, heaters and furnaces are subject to Arizona Administrative Code (A.A.C.) R18-2-724 as identified in Attachment "C" of the permit.

Unit (Year)	Control Device	Rule	Discussion
Non-Emergency and Emergency CI ICEs Subject to State Requirements (Varies)	N/A	A.A.C. R18-2-719	Non-emergency and emergency ICEs are subject to A.A.C. R18-2-719 for Standards of Performance for Existing Stationary Rotating Machinery as identified in Attachment "C" of the permit.
Non-Emergency and Emergency CI ICEs Subject to NESHAP Requirements (Varies)	N/A	40 CFR Part 63 Subpart ZZZZ	Some of the non-emergency and emergency CI ICEs are subject to 40 CFR Part 63 Subpart ZZZZ for Stationary Reciprocating Internal Combustion Engines as identified in Attachment "C" of the permit.
Non-Emergency and Emergency CI ICEs Subject to NSPS Requirements (Varies)	N/A	40 CFR Part 60 Subpart IIII	Some of the non-emergency and emergency CI ICEs are subject to 40 CFR Part 60 Subpart IIII for Stationary Compression Ignition Internal Combustion Engines as identified in Attachment "C" of the permit.
USTs (1988)	N/A	A.A.C. R18-2-710; 40 CFR Part 63 Subpart CCCCCC	USTs are subject to A.A.C. R18-2-710 for Standards of Performance for Existing Storage Vessels for Petroleum Liquids as identified in Attachment "C" of the permit. In addition, gasoline dispensing facilities are subject to 40 CFR Part 63 Subpart CCCCCC for Gasoline Dispensing Facilities in area sources.
Wastewater Treatment Plant	N/A	A.A.C. R18-2-730	The wastewater treatment plant is subject to A.A.C. R18-2-730 for Standards of Performance for Unclassified Sources as identified in Attachment "C" of the permit.

Unit (Year)	Control Device	Rule	Discussion
Fugitive Dust	Water Trucks; Dust Suppressants	A.A.C. R18-2-Article 6	These rules are applicable to any non-point source of fugitive dust in 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 rules are applicable to any abrasive blasting operations.
Use of Paints	Enclosures	A.A.C. R18-2-702; A.A.C. R-18-2-727	These rules are applicable to any architectural coating and spot painting operations.
Demolition/Renovation	N/A	A.A.C. R18-2-1101.A.12	This rule is applicable to any asbestos related demolitions or renovations.

VIII. PREVIOUS PERMIT REVISIONS AND CONDITIONS

A. Previous Permit Revisions

1. Minor Permit Revision No. 78075

On October 3, 2019, Minor Permit Revision No. 78075 was issued which authorized:

- The replacement of non-functional pieces of natural gas-fired equipment, consisting of boilers, heaters, furnaces and other equipment;
- The addition of 2 stationary CI ICEs, a 260-hp wood grinder and a 116-hp brush chipper.
- The replacement of a 265-hp water pump engine to a 282-hp water pump engine.

2. Facility Change Without Revision No. 82353

On May 7, 2020, Facility Change Without Revision No. 82353 was issued which authorized the removal of a non-functional furnace by an identical furnace with a maximum capacity of 125,000 BTU/hr.

B. Changes to Current Renewal

Table 3 addresses the changes that were made to the sections and conditions from Permit No. 65288:

Table 3: Previous Permit Conditions

Section No.	Determination			Comments
	Added	Revised	Deleted	
Att. "A"		X		General Provisions – Revised to reflect the latest template language.
Att. "B", Section I		X		Facility-Wide Requirements – Added additional information regarding opacity requirements.
Att. "B", Section II		X		Boilers, Heaters and Furnaces – Revised subsection heading and applicability statement.
Att. "B", Section III		X		Non-Emergency and Emergency ICEs – Revised subsection headings and applicability statements. Added missing general requirements. Revised emission standards and tables. Added missing operation and maintenance requirements. Updated monitoring, recordkeeping and reporting requirements. Updated cross-references and citations. Added missing permit shields.
Att. "B", Section IV		X		USTs – Revised section heading and applicability statement. Added missing citations.
Att. "B", Section V		X		Gasoline Dispensing Facilities – Revised section heading and applicability statement. Specified monthly throughput of gasoline.
Att. "B", Section VI	X			Wastewater Treatment Plant – Added subsection heading and applicability statement. Added operation limitations. Added control requirement. Included permit shield.
Att. "B", Section VII		X		Fugitive Dust – Updated monitoring and recordkeeping requirements. Updated permit shield.
Att. "B", Section VIII		X		Other Periodic Activities – Updated monitoring and recordkeeping requirements. Updated cross-references and permit shields.
Att. "C"		X		Equipment List – Added and removed pieces of equipment. Revised "A.A.C. / NESHP / NSPS" column.

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 Permittee is required to demonstrate compliance with Permit No. 92190.

Table 4: Permit No. 92190

Emission Unit	Pollutant	Emission Limit	Monitoring Requirements	Recordkeeping Requirements	Reporting Requirements
Boilers, Heaters and Furnaces	PM	Only pipeline quality natural gas can be fired.	N/A	N/A	Report all six-minute periods in which the opacity of any plume or effluent exceeds 15%.
All Non-Emergency and Emergency ICEs	N/A	Only low sulfur diesel or pipeline quality natural gas can be fired; Non-emergency ICEs are limited to 1,500 hours based on a 12-month rolling total.	N/A	Keep records of fuel supplier certifications or other documentation. Record the date, the starting time, and the stopping time of periods of use. Maintain a monthly record of hours and 12-month rolling totals.	N/A
Non-Emergency and Emergency ICEs Subject to	PM, SO ₂	40% opacity	Conduct a quarterly survey of visible emissions.	Keep daily records of the sulfur content and lower heating value of the fuel being fired.	Report any daily period during which the sulfur content of

State Requirements					the fuel being fired exceeds 0.8%.
Non-Emergency and Emergency CI ICEs Subject to NESHAP Requirements	N/A	N/A	N/A	<p>Keep records of the occurrence and duration of each malfunction.</p> <p>Keep records of all required maintenance performed.</p> <p>Keep records of actions taken during periods of malfunction to minimize emissions.</p> <p>Keep records of the parameters that are analyzed as part of the oil analysis program.</p>	N/A
Non-Emergency and Emergency ICEs Subject to NSPS Requirements	NO _x , CO, VOCs	Emission limits in 40 CFR Part 60 Subpart III.	N/A	<p>Keep records of all required maintenance performed.</p> <p>Keep documentation that the ICEs are certified to meet the emission limits.</p> <p>Keep records of the operation of emergency and non-emergency service that is recorded through the non-resettable hour meter (emergency CI ICEs only).</p>	Submit an annual report to EPA.

				If the ICE is equipped with a diesel particulate filter, keep records of any corrective action taken after the backpressure monitor has notified the facility that the high backpressure limit of the ICE is approached (non-emergency CI ICEs only).	
Fugitive Dust	PM	40% opacity	Conduct a quarterly survey of visible emissions.	Record the dates and types of dust control measures employed.	N/A
Abrasive Blasting	PM	20% opacity	N/A	Record the date, duration and type of control measures employed for any abrasive blasting project.	N/A
Use of Paints	VOCs	20% opacity	Conduct a quarterly survey of visible emissions.	N/A	N/A
Demolition/ Renovation	Asbestos	N/A	N/A	Maintain records of all asbestos related demolitions/renovations including the "NESHAP Notification for Renovation and Demolition Activities" form and all supporting documents.	N/A

X. LIST OF ABBREVIATIONS

A.A.C.	Arizona Administrative Code
ADEMA	Arizona Department of Emergency and Military Affairs
ADEQ	Arizona Department of Environmental Quality
CFR	Code of Federal Regulations
CI	Compression Ignition
CO	Carbon Monoxide
EPA	Environmental Protection Agency
HAPs	Hazardous Air Pollutants
hp	Horsepower
ICEs	Internal Combustion Engines
N/A	Not Applicable
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO _x	Nitrogen Oxides
NSPS	New Source Performance Standards
PM	Particulate Matter
PM ₁₀	Particulate Matter Less Than 10 µm Nominal Aerodynamic Diameter
PM _{2.5}	Particulate Matter Less Than 2.5 µm Nominal Aerodynamic Diameter
PTE	Potential to Emit
SO ₂	Sulfur Dioxide
tpy	Tons per Year
UST	Underground Storage Tank
VOCs	Volatile Organic Compounds
yr	Year