

TECHNICAL REVIEW AND EVALUATION

U.S. ARMY FORT HUACHUCA

AIR QUALITY PERMIT NO. 53503

AS REVISED BY SIGNIFICANT REVISION NUMBER 62833

I. INTRODUCTION

This Significant Permit Revision No. 62833 to Operating Permit No. 53503:

- A. Revises the voluntarily accepted natural gas consumption limit for external combustion sources (boilers and heaters) from 1,000,000,000 cubic feet to 860,000,000 cubic feet;
- B. Revises the voluntarily accepted hp-hr limit on internal combustion sources (generators) ≤ 600 hp from 1,800,00 hp-hr to 2,350,000 hp-hr;
- C. Revises the voluntarily accepted hp-hr limit on internal combustion sources (generators) > 600 hp from 1,000,000 hp-hr to 900,000 hp-hr;
- D. Incorporates the applicable requirements of 40 CFR 63 Subpart ZZZZ for non-emergency generator G-111; and
- E. Updates the equipment list to reflect the current configuration of equipment.

Company Information

Facility Name: U.S. ARMY FORT HUACHUCA
Mailing Address: CDR, U.S. Army Garrison
Attn: IMHU-PWB
3040 Butler Road
Fort Huachuca, AZ 85613-5021

Attainment Classification:

This facility is located in an area that is in attainment or unclassified for all criteria pollutants.

II. PROCESS DESCRIPTION

Fort Huachuca is the headquarters of the U.S. Army Intelligence Center of Excellence, which is

the training center for U.S. Army Training and Doctrine Command. The U.S. Army Intelligence Center of Excellence and Fort Huachuca occupy approximately 73,000 acres in Cochise County, Arizona, north and west of the city of Sierra Vista. The installation includes the U.S. Army Garrison and Fort Huachuca, the U.S. Army Intelligence Center of Excellence, and more than 50 tenant organizations.

Fort Huachuca operates numerous natural gas (NG)-fired external combustion sources (boilers and heaters). These boilers and heaters generate hot water and/or heat for the buildings in which they are located.

Fort Huachuca operates numerous stationary internal combustion engines which are used for emergency and non-emergency purposes.

III. EMISSIONS

The emission calculations are based on a total fuel consumption limit for the external combustion engines (boilers/heater); a horse power-hour (hp-hr) limit on internal combustion engines \leq 600 hp; and a horse power-hour (hp-hr) limit on the internal combustion engines $>$ 600 hp.

The synthetic minor limit is set at 90.2 tons per year (tpy) of NO_x. The synthetic minor limit is designed to restrict the emissions of NO_x to 90.2 tpy in order to stay below the major source threshold of 100 tpy of NO_x. Table 1, below, represents the facility's controlled potential to emit of criteria pollutants and HAPs.

**TABLE 1
CONTROLLED POTENTIAL TO EMIT**

Source Category	PM10 tons/yr	PM2.5 tons/yr	SO2 tons/yr	CO tons/yr	VOC tons/yr	NO _x tons/yr	HAP tons/yr
Boilers & Heaters ²	3.27	3.27	0.26	36.12	2.37	43.00	2.57
Internal Combustion ³	2.91	2.91	3.13	10.33	3.22	47.20	0.22
Fuel Storage & Dispensing	0.00	0.00	0.00	0.00	0.49	0.00	0.00
Paint Booths	0.46	0.00	0.00	0.00	9.79	0.00	0.0009
Waste Water Treatment	0.00	0.00	0.00	0.00	12.85	0.00	0.0085
Degreasers	0.00	0.00	0.00	0.00	8.76	0.00	0.00
Abrasive Blasting	0.02	0.01	0.00	0.00	0.00	0.00	0.00
TOTAL¹	6.64	6.19	3.39	46.45	37.48	90.20	2.80

Note 1: Because of rounding, totals may not be exact.

Note 2: Boilers and Heaters are limited to an annual fuel consumption limit of 860,000,000 cubic feet per year.

Note 3: Generators less than or equal to 600 hp are limited to 2,350,000 hp-hr based on a rolling 12-month total and generators greater than 600 hp are limited to 900,000 hp-hr based on a rolling 12-month total.

IV. APPLICABLE REGULATIONS

The applicable requirements of 40 CFR 63 Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines, are incorporated into the permit for the subject non-emergency generator (G-111).

V. MONITORING/RECORD KEEPING/REPORTING REQUIREMENTS

A. BOILERS AND HEATERS

1. The Permittee must maintain records of the monthly invoices which document the amount of natural gas that was fired in the boilers and heaters. Using the monthly invoices, a rolling twelve month total of the cumulative amount of natural gas consumed will be maintained.
2. The Permittee will record and maintain records of the natural gas combusted daily in boilers subject to New Source Performance Standards (NSPS) requirements. As an alternative to this requirement, the Permittee is allowed to maintain records of fuel combusted or delivered to the facility each month. Boilers affected are H-157 (12.6 MMBtu/hr), H-186 (12.6 MMBtu/hr) and H-200 (12.6 MMBtu/hr).

B. INTERNAL COMBUSTION ENGINE REQUIREMENTS

1. General Requirements
 - a. The Permittee is required to maintain a monthly record of horse power-hours and a rolling 12 month total of horse power-hours for all internal combustion engines (generators).
 - b. The Permittee is required to record the date, the starting time (in hours and minutes), and the stopping time (in hours and minutes) of periods of generator use. The Permittee is allowed to use the meters associated with the equipment to maintain records of operating hours instead of recordkeeping the starting and stopping times of use.
2. Non-NSPS Generators
 - a. The Permittee must record the monthly horsepower – hours and maintain a rolling 12-month total horsepower - hours.
 - b. Records of operating hours can be maintained using the hour meters provided on the equipment.
3. NESHAP Generators
 - a. The Permittee must keep records of the occurrence and duration of each malfunction of process equipment or air pollution control (if any) and monitoring equipment.

- b. The Permittee must keep records of all performance tests and performance evaluations.
 - c. The Permittee must keep records of all required maintenance performed on the air pollution control (if any) and monitoring equipment.
4. NSPS Compression Ignition Internal Combustion Engines
- a. The Permittee is required to record the time of operation and reason the engine was operated during that time.
5. NSPS Spark Ignition Internal Combustion Engines
- a. The Permittee must keep records of all maintenance conducted on the engine.

X. LIST OF ABBREVIATIONS

A.A.C.	Arizona Administrative Code
ADEQ	Arizona Department of Environmental Quality
CFR	Code of Federal Regulations
CO	Carbon Monoxide
EPA	Environmental Protection Agency
HAP	Hazardous Air Pollutants
hr	hour
hp	Horsepower
MMBtu	Million British Thermal Units
MMBtu/hr	Million British Thermal Units per Hour
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NO _x	Nitrogen Oxides
NSPS	New Source Performance Standard
PM ₁₀	Particulate Matter Nominally less than 10 Micrometers
PTE	Potential-to-Emit
SO ₂	Sulfur Dioxide
TPY	Ton per Year
TSP	Total Suspended Particulates
VOC	Volatile Organic Compound
yr	year