

**GUAM EPA
TITLE V FEDERAL OPERATING PERMIT
STATEMENT OF BASIS**

**Naval Facilities Engineering Command Marianas
Orote Point, SIC Code 49**

Permit No. FO-015F

Facility ID: FO-015

Facility Name: Naval Facilities Engineering Command Marianas, Orote Point,
SIC Code 49

Mailing Address: PSC 455, Box 195
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Title:
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I. Purpose

The purpose of this engineering evaluation is to identify all applicable requirements, determine if the facility will comply with those applicable requirements, and provide the legal and factual basis for proposed permit conditions.

II. Facility Location

Naval Facilities Engineering Command Marianas, Orote Point facilities are located inside Main Base, Naval Station, Guam.

III. Description of Facility Operations

The facilities consist of three large stationary generators for providing emergency backup power, one black-start generator, one diesel engine-driven tire shredder, and a sanitary landfill.

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IV. Equipment Listing and Permitting History**IV.A. Significant Emission Units**

A listing of all permitted equipment at the facility is presented in the table below. This table also includes the Guam EPA (GEPA) permit number for those emission units with existing permits. The conditions from these permits have been incorporated into the Title V permit, which supercedes the existing GEPA permits.

Emission Unit Number	Unit Description	Associated Control Equipment	Guam EPA Permit Number
278	6,600 kilowatt (kW) diesel-fired emergency generator	N/A	ORT-614P
279	6,600 kW diesel-fired emergency generator	N/A	ORT-614P
280	6,600 kW diesel-fired emergency generator	N/A	ORT-614P
335	Sanitary landfill (196,000 yd ³ /yr)	N/A	N/A
342	210 kW diesel-fired tire shredder	N/A	N/A
424	300 kW diesel-fired black-start emergency generator	N/A	N/A

IV.B. Insignificant Emission Units

The following list of insignificant activities provided by the applicant in the permit application for this facility has been approved by GEPA. This equipment is not exempt from facility-wide requirements.

Description of Activities or Emission Units
1.046 MMBtu/hr heater-digester system
30 kW diesel-fired emergency generator (Security ATS)

V. Potential to Emit

The annual potential to emit for each significant emission unit is presented below.

Emission Unit	Potential to Emit (tons/year)						
	NO_x	CO	SO₂	PM₁₀	VOC	Lead	HAPs
ID 278	32.00	2.03	7.65	0.23	2.48	0	2.08E-02
ID 279	32.00	2.03	7.65	0.23	2.48	0	2.08E-02
ID 280	32.00	2.03	7.65	0.23	2.48	0	2.08E-02
ID 335	0	0	0	0	118.00	0	10.13
ID 342	6.55	1.41	0.43	0.47	0.53	0	5.60E-03
ID 424	9.35	2.02	0.62	0.66	0.76	0	8.00E-03
TOTAL	111.90	9.52	24.00	1.80	126.73	0	10.21

VI. Guam Requirements

The following table lists the applicable requirements from the Guam Air Pollution Control Standards and Regulations (GAPCSR) and from the approved Guam State Implementation Plan (SIP). For rules where an applicability determination was required, a discussion is included below.

Section 1103.2	Guam Ambient Air Quality Standards
Section 1103.3	Visible Emissions
Section 1103.4	Fugitive Dust
Section 1103.10	Sulfur Oxides from Fuel Combustion
Section 1103.11	Open Burning
Section 1103.12	Control of Odors in Ambient Air
Section 1103.13	Asbestos
Section 1104	Permit Program Regulations
SIP, Section 7.5	Particulate Emissions from Fuel Combustion

VI.A. Particulate Matter (PM) Limits for Fuel Burning Equipment

Section 7.5 of the GEPA SIP requires that for fuel burning equipment between 1 MMBtu/hr and 1,000 MMBtu/hr in size, the allowable particulate emissions shall be calculated using the following equation:

$$Y = 1.02 X^{-0.231}$$

Where:

Y = Allowable particulate emission rate (lb/MMBtu)

X = Operating rate (MMBtu/hr)

Assuming an engine efficiency of 40%, and using a conversion factor of 3.41 MMBtu/hr per MW, this limit would be required for engines between 0.12 MW and 117 MW. Therefore, the tire shredder (Unit 342), black-start generator (Unit 424), and emergency generators (Units 278, 279, and 280) are all subject to this limit. The allowable PM emission rate must be determined depending on the operating load for each unit.

VII. Federal Requirements

The following table lists the applicable requirements from United States Environmental Protection Agency (USEPA) regulations. For rules where an applicability determination was required, a discussion is included below.

40 CFR Part 61, Subpart M	Asbestos
40 CFR Part 69	Special Exemptions

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VII.A. New Source Performance Standards (NSPS)

The diesel engines at the facility were commissioned prior to June 11, 2005 and, therefore, are not subject to requirements pursuant to NSPS for stationary compression ignition internal combustion engines (71 FR 39154).

VII.B. Compliance Assurance Monitoring (CAM)

Compliance Assurance Monitoring (CAM) is intended to provide a reasonable assurance of compliance with applicable requirements for large emission units that rely on pollution control device equipment to achieve compliance. The CAM regulations can be found in 40 CFR Part 64. CAM applicability is determined on a pollutant-specific basis. According to these regulations, an emission unit that meets all of the following criteria is subject to CAM:

1. The unit is located at major source required to obtain Part 70 or 71 permit;
2. The unit is subject to an emission limitation for the applicable pollutant;
3. The unit uses a control device (as defined by 40 CFR 64.1) to achieve compliance;
4. The potential precontrolled emissions of an applicable pollutant from the unit are equal to or greater than the major source threshold for that pollutant; and
5. The unit is not otherwise exempted by the CAM regulations.

Regarding the first requirement, the CAM rule (in 40 CFR 64.1) states that “*Part 70 or 71 permit* shall have the same meaning as provided under [40 CFR 70 or 71] provided that it shall also refer to a permit issued, renewed, amended, revised, or modified under any federal permit program promulgated under Title V [of the Clean Air] Act.”

After receiving a special exemption from USEPA, GEPA has adopted an “alternate operating permit program” according to the requirements of 40 CFR 69.13. As a result, it was not immediately clear whether this program satisfied the definition in the CAM rule. USEPA Region 9 was consulted on this matter, and made a determination that GEPA’s alternate operating permit program was promulgated under Title V of the Clean Air Act, so facilities located on Guam are potentially subject to CAM.

Emissions from the point sources at the facility are not controlled and individually emit less than major source pollutant thresholds.

Conclusion: None of the emission units at the facility are subject to CAM.

VIII. Periodic Monitoring and Recordkeeping

Requirement	Requirement Condition #	Existing Monitoring/ Recordkeeping	Monitoring/ Recordkeeping Added to Permit	Monitoring/ Recordkeeping Condition #
PM emission limit for fuel burning equipment	II.B.1.a		Opacity monitoring	II.D.6
Opacity limits for fuel burning equipment	II.B.1.b		Opacity monitoring	II.D.6
SO _x emission limit for generators	II.B.2.a	Annual SO _x test for generators		II.D.7, II.D.8.a and II.D.9
CO emission limit for generators	II.B.2.b	Annual CO test for generators		II.D.7, II.D.8.b and II.D.9
NO _x emission limit for generators	II.B.2.c	Annual NO _x test for generators		II.D.7, II.D.8.c, II.D.9, II.D.10.a and II.D.11
Preventative maintenance for fuel burning equipment	II.C.1		Maintenance recordkeeping	II.E.4
Fuel sulfur content limits	II.C.2 and II.C.3	Fuel sulfur content recordkeeping		II.E.2
Limitations on generator operation	II.C.4 and II.C.5		Hours of operation recordkeeping	II.E.4 and II.E.7
Air pollution controls for generators	II.C.6	None		N/A
Reasonable precautions against airborne fugitive dust	II.C.7	None		N/A
Fugitive dust discharge limitations	II.C.8	None		N/A

IX. Streamlining Applicable Requirements:

Consistent with USEPA policy, overlapping or redundant requirements may be streamlined when these are incorporated in a Title V permit. In this process, the most stringent of the overlapping requirements is determined and included in the Title V permit (while the source of authority for this condition lists all related requirements, including those that have been streamlined). Streamlining allows the permit conditions

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to be listed in a clear and concise manner while ensuring compliance with all applicable requirements. The following section contains a description of streamlining that has been performed in this permit.

Condition II.C.3 – Fuel Oil Sulfur Content Limitation for Generators

USEPA Permit NSR 4-11, GU 93-03 states that the fuel oil used in the diesel-fired generators (Units 278, 279, and 280) shall not exceed 0.6% sulfur content by weight. GAPCSR Section 1103.10 states that no person shall burn fossil fuel containing in excess of 2.0% sulfur by weight. Since the requirement in the USEPA permits is more stringent, the 0.6% sulfur limit was included in the permit.

Condition II.C.5 – Hours of Operation Limitation for Generators

The combined operation of the diesel-fired generators (Units 278, 279, and 280) was limited to a maximum of 1,350 hours of operation per year in accordance with the Title V application submitted to GEPA.

Conditions II.E.6 and II.E.7 – Recordkeeping Retention Requirements

USEPA Permit NSR 4-11, GU 93-03, Conditions X.D.2 and X.H.3 include a records retention requirement of two years. GAPCSR Section 1104.12(7)(H) requires five years of record retention. Since GAPSCR requirement is more stringent, the five year requirement was included in the permit.