

Facility Name: **U.S. Army Maneuver Center of Excellence – Fort Benning**

City: Fort Benning

County: Chattahoochee

AIRS #: 04-13-215-00021

Application #: 685172

Date SIP Application Received: 7/28/22, additional information 9/21/22

Date Title V Application Received: 7/28/22, additional information 9/21/22

Permit No: 9711-215-0021-V-04-1

| Program | Review Engineers | Review Managers |
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Introduction

This narrative is being provided to assist the reader in understanding the content of the referenced SIP permit to construct and draft operating permit amendment. Complex issues and unusual items are explained in simpler terms and/or greater detail than is sometimes possible in the actual permit. This permit is being issued pursuant to: (1) Sections 391-3-1-.03(1) and 391-3-1-.03(10) of the Georgia Rules for Air Quality Control, (2) Part 70 of Chapter I of Title 40 of the Code of Federal Regulations, and (3) Title V of the Clean Air Act Amendments of 1990. The following narrative is designed to accompany the draft permit and is presented in the same general order as the permit. This narrative is intended only as an adjunct for the reviewer and has no legal standing. Any revisions made to the permit in response to comments received during the public comment period and EPA review process will be described in an addendum to this narrative.

I. Facility Description

A. Existing Permits

Table 1 below lists the current Title V permit, and all administrative amendments, minor and significant modifications to that permit, and 502(b)(10) attachments.

Table 1: Current Title V Permit and Amendments

| Permit/Amendment Number | Date of Issuance | Description |
|-------------------------|------------------|-----------------|
| 9711-215-0021-V-04-0 | 10/17/2019 | Title V renewal |

B. Regulatory Status

1. PSD/NSR/RACT

Fort Benning has the potential to emit nitrogen oxides (NO_x) and carbon monoxide (CO) at a rate in excess of 250 tons per year. The facility is considered a major source under the PSD regulations and is subject to PSD review for modifications in which any pollutant increase is more than the significance level. Fort Benning has avoided PSD review for past facility modifications by accepting limits as stated in permit Conditions 3.2.1, 3.2.3, 3.2.5, 3.2.6, 3.2.7, and 3.2.8. This permit conditions includes new permit Condition 3.2.9 which limits operating hours of the generators for PSD avoidance.

2. Title V Major Source Status by Pollutant

Table 2: Title V Major Source Status

| Pollutant | Is the Pollutant Emitted? | If emitted, what is the facility's Title V status for the Pollutant? | | |
|-------------------|---------------------------|--|-----------------------------------|-------------------------|
| | | Major Source Status | Major Source Requesting SM Status | Non-Major Source Status |
| PM | | | | ✓ |
| PM ₁₀ | | | | ✓ |
| PM _{2.5} | | | | ✓ |
| SO ₂ | | | | ✓ |
| VOC | | | | ✓ |
| NO _x | | ✓ | | |
| CO | | ✓ | | |
| TRS | n/a | | | |
| H ₂ S | n/a | | | |
| Individual HAP | | | | ✓ |
| Total HAPs | | | | ✓ |

II. Proposed Modification

A. Description of Modification

To change the status of fifteen existing 525 kW stationary spark ignition (SI) internal combustion engines/emergency generators to non-emergency generators. The fifteen generators GEN1 through GEN15 will comply with the requirements of 40 CFR 60 Subpart JJJJ for non-emergency generators.

B. Emissions Change

Emission increases were calculated using the emission factors from AP-42 Table 3.2-2 and the 3,800 operating hour limit. The table below summarizes the emissions change due to the modification.

Table 3: Emissions Change Due to Modification

| Pollutant | Is the Pollutant Emitted? | Net Actual Emissions* Increase (Decrease) (tpy) | Net Potential Emissions Increase (Decrease) (tpy) |
|-------------------|----------------------------------|--|--|
| PM | Yes | 0.46 | 0.46 |
| PM ₁₀ | Yes | 0.0036 | 0.0036 |
| PM _{2.5} | Yes | 0.0036 | 0.0036 |
| SO ₂ | Yes | 0.0274 | 0.0274 |
| VOC | Yes | 5.50 | 5.50 |
| NO _x | Yes | 39.49 | 39.49 |
| CO | Yes | 25.97 | 25.97 |
| TRS | n/a | | |
| H ₂ S | n/a | | |
| Individual HAP | Yes | 2.46 | 2.46 |
| Total HAPs | Yes | 3.35 | 3.35 |

*Actual emissions will vary depending on the number of hours the generators operate.

C. PSD/NSR Applicability

This modification is not a major modification as defined by PSD/NSR. The emissions increases are below the significant thresholds requiring PSD review.

III. Facility Wide Requirements

There are no changes associated with this modification.

IV. Regulated Equipment Requirements

A. Brief Process Description

To change the status of fifteen existing 525 kW stationary spark ignition (SI) internal combustion engines/emergency generators to non-emergency generators. The fifteen generators GEN1 through GEN15 will comply with the requirements of 40 CFR 60 Subpart JJJJ for non-emergency generators.

B. Equipment List for the Process

| Emission Units | | Applicable Requirements/Standards | Air Pollution Control Devices | |
|-----------------------|---|--|-------------------------------|-------------|
| ID No. | Description | | ID No. | Description |
| GEN1 thru GEN15 | Fifteen SI engine generators for non-emergency use. [Dixie Road Resiliency Generators] Model Year: 2019 Total Input: 28.26 MMBtu/hr Total Output: 9 MW Type: SI ICE 4SLB | 391-3-1-.02(2)(b) 391-3-1-.02(2)(g) 40 CFR 60 Subpart A 40 CFR 60 Subpart JJJJ 40 CFR 63 Subpart A 40 CFR 63 Subpart ZZZZ | | |

C. Equipment & Rule Applicability

Emission and Operating Caps –

The Permittee shall limit the hours of operation of the generators GEN1 through GEN15 to 3,800 hours combined, during any twelve consecutive month period. Limiting the operating hours of the generators keeps NOx emissions below the 40 tpy significant threshold for PSD avoidance.

Applicable Rules and Regulations -

40 CFR 60 Subpart JJJJ – “Standards of Performance for Stationary Spark Ignition Internal Combustion Engines

The fifteen stationary spark ignition reciprocating internal combustion engine (SI RICEs) generators are subject to NSPS Subpart JJJJ. They are 525 kW Power Solutions International (PSI) engine/generators manufactured in 2019. Subpart JJJJ requires the Permittee to comply with the emission standards applicable to each of the engines by purchasing the engine certified to the applicable EPA emission standards for their model years and maximum site ratings. This subpart also defines allowable operating circumstances, compliance demonstration, and specifies maintenance, recording keeping and reporting requirements.

40 CFR 63 Subpart ZZZZ – “National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines”

This regulation establishes emission and operating limitations for RICE located at major and area sources of HAP emissions. Fort Benning as an area source so the generators are subject to 40 CFR 63 Subpart ZZZZ. In accordance with 40 CFR 63.6590(c), an affected source that meets any of the criteria in paragraphs (c)(1) through (7) of 40 CFR 63.6590 must meet the requirements of this part by meeting the requirements of 40 CFR 60 Subpart IIII, for compression ignition engines or 40 CFR 60 Subpart JJJJ, for spark ignition engines. No further requirements apply for such engines under this part. The generators meet the criteria established by 40 CFR 63.6590(c)(1) because the generators are classified as new stationary RICE located at an area source. The generators will demonstrate compliance with 40 CFR 63 Subpart ZZZZ by meeting the requirements of 40 CFR 60 Subpart JJJJ for spark ignition engines.

391-3-1-.02(2)(b) – “Visible Emissions”

Georgia Rule (b) limits the visible emissions from a stationary source's vent or stack to 40 percent opacity or less if the source is not subject to other visible emission limits. The generators are subject to this rule. The generators burn natural gas so compliance with this rule is expected.

391-3-1-.02(2)(g) – “Sulfur Dioxide”

Georgia Rule (g) allows the facility to use fuels containing up to 2.5 percent sulfur in fuel burning units including the stationary SI internal combustion engine generators. The generators burn natural gas so compliance with this rule is expected.

D. Permit Conditions

Permit conditions that have been modified and added in this permit amendment are discussed below.

New Condition 3.2.9 limits the hours of operation of the generators GEN1 through GEN15 to 3,800 hours combined, during any twelve consecutive month period for PSD avoidance.

New Conditions 3.3.3 and 3.3.4 establish the applicability of 40 CFR 63 Subpart ZZZZ and 40 CFR 60 Subpart JJJJ to the generators.

New Conditions 3.3.5 and 3.3.6 require the Permittee to comply with the emission standards and compliance requirements in 40 CFR 60 Subpart JJJJ for the generators.

Condition 3.4.1, containing Georgia Rule (b) requirements, has been modified to include the generators GEN1 through GEN15.

New Condition 3.4.4 establishes the applicability of Georgia Rule (g) to the generators GEN1 through GEN15.

V. Testing Requirements (with Associated Record Keeping and Reporting)

Permit conditions that have been modified and added in this permit amendment are discussed below.

Condition 4.13 has been updated to include all the test methods to be used when conducting performance tests.

Condition 4.2.1, which includes the generic condition addressing general NSPS testing requirements, has been modified to include general NESHAP testing requirements.

New Conditions 4.2.2 and 4.2.3 contain the testing requirements for the generators in accordance with 40 CFR 60 Subpart JJJJ.

VI. Monitoring Requirements (with Associated Record Keeping and Reporting)

Condition 5.2.1 has been modified to require the facility to install and operate non-resettable hour meters to measure and record the number of hours operated for generators GEN1 through GEN15. This data is used for the record keeping requirements specified in Condition 6.2.16.

VII. Other Record Keeping and Reporting Requirements

Permit conditions that have been modified and added in this permit amendment are discussed below.

New Condition 6.1.7.b.ix. was added to this permit amendment defining a reportable exceedance for the generators exceeding the 3,800 hour operating limit.

Condition 6.2.11, which lists records to submit with the semiannual report, has been modified to include the total combined operating hours for the generators.

New Condition 6.2.16 requires recording the monthly and annual operating hours of the generators to demonstrate compliance with the limit on operating hours.

New Condition 6.2.17 contains the recordkeeping requirements for the generators subject to 40 CFR 60 Subpart JJJJ.

Addendum to Narrative

The 30-day public review started on month day, year and ended on month day, year. Comments were/were not received by the Division.

//If comments were received, state the commenter, the date the comments were received in the above paragraph. All explanations of any changes should be addressed below.//