

Statement of Basis
FMC Corporation – Mobile Manufacturing Center
Mobile County
Facility No. 503-5001

INTRODUCTION

FMC Corporation – Mobile Manufacturing Center (FMC) has applied for renewal of Major Source Operating Permit (MSOP) No. 503-5001. The above-named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans, and other documents attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of the permit.

This facility conducts the manufacture of agricultural pesticides and other intermediates for agricultural chemicals (SIC #2879). Based on the current Title V permit application, this facility is a major source for Title V standards for hazardous air pollutants (HAPs) and is a synthetic minor source with respect to the Prevention of Significant Deterioration (PSD).

The facility is located in Mobile County. Mobile County is currently listed in attainment with all National Ambient Air Quality Standards (NAAQS).

There are no current or ongoing enforcement actions against FMC Corporation necessitating additional requirements to achieve compliance with the proposed permit conditions. The enforcement and compliance history of the facility can be found at <https://echo.epa.gov/> (search using facility ID AL0000000109705001).

BACKGROUND

Air Permits for Unit Nos. 001, 002, 003, 004, 005, 006, and 007 were originally issued by the Department and incorporated into the initial Title V MSOP, which was issued on January 1, 2004. This is the third renewal of the Title V. The renewal application was received on April 13, 2026.

ADEM Admin Code r. 335-3-11-.06(83), which references the Miscellaneous Organic Chemical Manufacturing (MON) Maximum Achievable Control Technology (MACT) 40 CFR 63, Subpart FFFF, was incorporated into the second Title V renewal issued on October 12, 2021, as a result of a 502(b)10 change to the initial Title V permit. The 502(b)10 change was recommended on September 19, 2005, for the authorization to install facilities to manufacture DT291 in A Business Unit L Building. It was part of emission unit X068. The DT291 process was subject to Subpart FFFF. The compliance date for the MON was November 10, 2006.

Air Permit 503-5001-Z204 was issued on May 16, 2019, to install a new 74.5 MMBtu/hr. natural gas fired boiler to replace the existing 92 MMBtu/hr. natural gas fired boiler with the same designation of F-U203. Permit Z204 was reissued on October 4, 2021, with the correct boiler firing rate of 72.8 MMBtu/hr. The boiler became subject to ADEM Admin Code r. 335-3-11-.06(107), 40 CFR Part 63, Subpart DDDDD and ADEM Admin Code r. 335-3-10-.02(2)(c), 40 CFR 60, Subpart Dc. The permit was incorporated into the second Title V renewal issued on October 12, 2021.

ADEM Admin Code 3-10-.02(87), 40 CFR 60, Subpart IIII and ADEM Admin Code 3-11-.06(103), 40 CFR 63, Subpart ZZZZ became applicable following the issuance of Air Permit X205 on October 4, 2019. The permit authorized the installation of a 422 HP emergency compression ignition firewater pump to replace the existing 412 HP emergency compression ignition firewater pump (P-U504). The new firewater pump was given the designation of P-U504. The permit was incorporated into the second Title V renewal issued on October 12, 2021.

ADEM Admin. Code r. 335-3-11-.06(6), 40 CFR 63, Subpart G and ADEM Admin. Code r. 335-3-11-.06(7), 40 CFR 63, Subpart H were applicable to wastewater stream and fugitives in the ABU and BBU and were issued in the 2021 Title V permit.

ADEM Admin. Code r. 335-3-10-.02(9)(c), 40 CFR 60, Subpart K_c does not apply because no storage tanks were constructed or modified after October 4, 2023.

ADEM Admin Code r. 335-3-10-.02(9)(b), 40 CFR 60, Subpart K_b does not apply because storage tanks that were constructed, reconstructed, or modified after July 23, 1984, and before October 4, 2023 have either a maximum true vapor pressure less than 3.5 kPa or a tank capacity less than 75 cubic meters.

SUMMARY OF CHANGES

The following is a list of all this facility's individual emission units that will be part of this facility's Title V MSOP:

Permit Unit No.	Description of Unit
001	A Business Unit
002	B Business Unit
003	PAI Group 1 Storage Vessels
004	PAI Group 2 Storage Vessels
005	MON Group 2 Storage Vessels
006	Boilers
007	Emergency Engines

Since FMC Corporation's last Title V application, Air Permits X102, X505, X103 and X205 have been issued and will be incorporated into this renewal. Otherwise, no other Air Permits have been issued, and no units have been removed from the facility. Below is a description of the permits to be incorporated:

Permit Number	Permit Description	Issued
X102	MSC Storage Tanks (T-G102 and T-G203)	September 14, 2022
X103	MSC Storage Tank (V-CD101)	December 6, 2022
X205	52.8 MMBtu/hr. Boiler (F-U205)	September 16, 2024
X505	324 HP Emergency Firewater Pump (P-U505)	November 9, 2022

During the renewal process, the Title V format was updated to more accurately represent the units utilized by the facility. Specific unit changes are discussed below.

PROCESS UNITS

Unit 001: A Business Unit (ABU)

Unit Specific Changes

- Incorporated minimum temperature of 1,400°F instead of 1,850°F for the CD-GL Thermal Oxidizer (F-U401) due to stack test conducted on July 19, 2023.

Overview

The A Business Unit (ABU) consists of three production buildings: L-Building, G-Building, and G2-Building. The ABU produces multiple pesticide active ingredient products. The products are dried, pelletized, and packaged in drums or supersacks. This unit is subject to the requirements of 40 CFR Part 63, Subpart MMM, 40 CFR Part 63, Subpart FFFF, and synthetic minor PSD emission limitations. However, as stated in §63.2535(d), the overlapping requirements of 40 CFR Part 63, Subpart MMM shall constitute compliance with 40 CFR Part 63, Subpart FFFF.

An Air Permit for Unit 001 was originally issued by the Department on May 24, 2001. All limits and requirements from the air permit were subsequently incorporated into the initial Title V MSOP, which was issued on January 1, 2004.

Emission Standards

Opacity

The ABU is subject to the state opacity standard.

Particulate Matter (PM)

The state process weight curve is applicable to all of the emission points associated with the ABU.

Sulfur Dioxide (SO₂)

The CD-GL Thermal Oxidizer (F-U401) is subject to the state allowable SO₂ limit for Category I Counties and shall not emit SO₂ emissions in excess of 1.8 lb./MMBtu.

Hazardous Air Pollutants (HAPs)

According to §63.1362(b)(2)(ii) and Table 2 of 40 CFR Part 63, Subpart MMM, the CD-GL Thermal Oxidizer (F-U401) with scrubber series (V-U402 and V-U403) is required to reduce organic HAP emissions by greater than or equal to 98 percent by weight. It is noted that the CD-GL Thermal Oxidizer (F-U401) meets the required HAP removal efficiency of 40 CFR Part 63, Subpart MMM. However, the facility provides further treatment by routing the emissions through a scrubber series (V-U402 and V-U403).

As an alternative, the ABU process emissions can be routed to a flare meeting the requirements of §63.11(b). According to §63.11(b)(6)(ii), a steam-assisted or air assisted flare shall be used only with the net heating value of the gas being combusted at 11.2 MJ/scm (300 Btu/scf). In order to meet the required net heating value for the A-Unit Flare (F-U402), the facility must supplement natural gas. The natural gas to vent gas ratio for the A-Unit Flare (F-U402) shall be maintained at 0.42 or greater.

According to §63.1363(b), a leak detection and repair program (LDAR) equivalent to 40 CFR Part 63, Subpart H, as referenced and modified by §63.1363, shall be implemented for applicable equipment.

The wastewater water streams associated with the ABU are subject to the requirements of 40 CFR Part 63, Subpart MMM. The facility complies with these requirements by maintaining the wastewater streams in this unit as Group 2 wastewater streams with respect to §63.132(c) as referenced by the definitions in §63.1361.

Volatile Organic Compounds (VOCs)

The facility may only route emissions to A-Unit Flare (F-U402) for a maximum of 720 hours per calendar year. The origin of this limit is the initial 2004 Title V permit and it is an anti-PSD limit. The VOC limit has been included in all subsequent Title V permits. This limit is considered federally enforceable as EPA has stated that Title V permits are an appropriate means by which a source can assume a voluntary limit on emissions for the purposes of avoiding being subject to more stringent requirements. 40 CFR Part 70.6(b)(1) has been revised to clarify that such terms and conditions assumed at the request of the permittee for purposes of limiting a source's potential to emit are federally enforceable.

Hydrogen chloride (HCl) and Chlorine (Cl₂)

In order for the ABU process vent emissions to be maintained as a Group 2 with respect to HCl and Cl₂, as referenced by the definitions in §63.1361, the uncontrolled HCl and Cl₂ emissions shall be maintained at less than 6.8 Mg/yr, as indicated in §63.1362(b)(3)(i).

Periodic Monitoring

Opacity / Particulate Matter (PM)

Since the ABU is permitted to fire natural gas only and the potential PM emissions are minimal, the unit should meet the limits inherently. Therefore, no periodic monitoring is required.

Sulfur Dioxide (SO₂)

In order to indicate compliance with the state allowable SO₂ limit for Category I Counties, the CD-GL Thermal Oxidizer (F-U401) shall be limited to firing natural gas only.

Hazardous Air Pollutants (HAPs)

In order to indicate compliance with the HAP emission limitation for the CD-GL Thermal Oxidizer (F-U401) with the scrubber series (V-U402 and V-U403), the facility shall monitor the firebox temperature. The CD-GL Thermal Oxidizer (F-U401) firebox temperature, calculated as a daily average, shall be maintained at 1,400°F or greater. The facility shall continuously monitor the firebox temperature and record a measurement at least once every 15 minutes. Since the CD-GL Thermal Oxidizer (F-U401) meets the required HAP removal efficiency of 40 CFR Part 63, Subpart MMM the scrubber series (V-U402 and V-U403) is not required. However, to indicate proper operation of the scrubber series, the facility shall monitor the daily average scrubber flowrate. The daily average scrubber flowrate shall be maintained at 20 gpm or greater. The facility shall continuously monitor the scrubber flowrate and record a measurement at least once every 15 minutes.

In order to indicate compliance with the flare requirements of §63.11(b), the facility shall monitor for the presence of the pilot light and the natural gas to vent gas ratio for A-Unit Flare (F-U402). When the facility is utilizing the A-Unit Flare (F-U402), the facility shall continuously monitor for the presence of the pilot light and record a measurement at least once every 15 minutes. The facility shall also continuously monitor the natural gas to vent gas ratio for the flare. The natural gas to vent gas ratio for the A-Unit Flare (F-U402) shall be maintained at 0.42 or greater. The natural gas to vent gas ratio shall be included in the semiannual periodic report required by 40 CFR Part 63, Subpart MMM.

In order to indicate compliance with Group 2 wastewater stream classification, the facility shall follow the recordkeeping and reporting requirements specified in §63.146(b)(1) and §63.147(b)(8).

Volatile Organic Compounds (VOCs)

In order to indicate compliance with 720 hour per calendar year operational limit for A-Unit Flare (F-U402), the facility shall maintain records for the amount of time that the vent stream is diverted from CD-GL Thermal Oxidizer (F-U401) with scrubber series (V-U402 and V-U403) to A-Unit Flare (F-U402).

Hydrogen chloride (HCl) and Chlorine (Cl₂)

In order to indicate compliance with the HCl and Cl₂ emission limitation, the facility shall maintain records of the initial calculations utilized to make the process vent group determination.

Testing of Emissions

Periodic testing of the destruction efficiency of the thermal oxidizer using EPA Method 18, 25, or 25A and shall be conducted at intervals not to exceed five years following the date of the previous approved test.

Unit 002: B Business Unit

Overview

The B Business Unit (BBU) consists of one production building. The BBU produces multiple pesticide active ingredient products. The products are dried, pelletized, and packaged in drums or supersacks. This unit is subject to the requirements of 40 CFR Part 63, Subpart DD, 40 CFR Part 63, Subpart MMM, and synthetic minor PSD emission limitations.

The Air Permit for Unit 002 was originally issued by the Department on October 27, 1999. All limits and requirements from the air permit were subsequently incorporated into the initial Title V MSOP, which was issued on January 1, 2004.

Emission Standards

Opacity

The B Business Unit (BBU) is subject to the state opacity standard.

Particulate Matter (PM)

The state process weight curve is applicable to all of the emission points associated with the BBU.

Sulfur Dioxide (SO₂)

The NO_x Thermal Oxidizer (F-U406) is subject to the state allowable SO₂ limit for Category I Counties and shall not emit SO₂ emissions in excess of 1.8 lb./MMBtu.

Hazardous Air Pollutant (HAP)

According to §63.1362(b)(2)(ii) and Table 2 of 40 CFR Part 63, Subpart MMM, the NO_x Thermal Oxidizer (F-U406) shall reduce organic HAP emissions by greater than or equal to 98 percent by weight.

As an alternative, the process emissions can be routed to a flare meeting the requirements of §63.11(b). According to §63.11(b)(6)(ii), a steam-assisted or air assisted flare shall be used only with the net heating value of the gas being combusted at 11.2 MJ/scm (300 Btu/scf). In order to meet the required net heating value for the B-Unit Flare (F-U408), the facility must supplement natural gas. The natural gas to vent gas ratio for the B-Unit Flare (F-U408) shall be maintained at 0.17 or greater.

According to §63.691(b)(2) and §63.1363(b), a leak detection and repair program (LDAR) equivalent to 40 CFR Part 63, Subpart H, as referenced and modified by §63.691 and §63.1363, shall be implemented for applicable equipment.

The wastewater water streams associated with the BBU are subject to the requirements of 40 CFR Part 63, Subpart MMM. The facility complies with these requirements by maintaining the wastewater streams in this unit as Group 2 wastewater streams with respect to §63.132(c) as referenced by the definitions in §63.1361.

Volatile Organic Compound (VOC)

The facility may only route emissions to A-Unit Flare (F-U402) for a maximum of 720 hours per calendar year. The origin of this limit is the initial 2004 Title V permit and it is an anti-PSD limit. The VOC limit has been included in all subsequent Title V permits. This limit is considered federally enforceable as EPA has stated that Title V permits are an appropriate means by which a source can assume a voluntary limit on emissions for the purposes of avoiding being subject to more stringent requirements. 40 CFR Part 70.6(b)(1) has been revised to clarify that such terms and conditions assumed at the request of the permittee for purposes of limiting a source's potential to emit are federally enforceable.

Hydrochloric Acid (HCl) and Chlorine (Cl₂)

According to §63.1362(b)(3)(ii) and Table 2 of 40 CFR Part 63, Subpart MMM, the Acidic Vent Scrubber (C-B301) and HCl Scrubber (C-B702) shall reduce HCl and Cl₂ emissions by greater than or equal to 94 percent.

Periodic Monitoring

Opacity / Particulate Matter (PM)

Since the BBU is permitted to fire natural gas only and the potential PM emissions are minimal, the unit should meet the limits inherently. Therefore, no periodic monitoring is required.

Sulfur Dioxide (SO₂)

In order to indicate compliance with the state allowable SO₂ limit for Category I Counties, the NO_x Thermal Oxidizer (F-U406) shall be limited to firing natural gas only.

Hazardous Air Pollutant (HAP)

In order to indicate compliance with the organic HAP removal efficiency, for the NO_x Thermal Oxidizer (F-U406), the facility shall monitor the firebox temperature. The firebox temperature, calculated as a daily average, shall be maintained at 1,750°F or greater. The facility shall continuously monitor the firebox temperature and record a measurement at least once every 15 minutes.

In order to indicate compliance with the flare requirements of §63.11(b), the facility shall monitor the presence of the pilot light and the natural gas to vent gas ratio for B-Unit Flare (F-U408). When the facility is utilizing the B-Unit Flare (F-U408), the facility shall continuously monitor for the presence of the pilot light and record a measurement at least once every 15 minutes. The facility shall also continuously monitor the natural gas to vent gas ratio for the flare. The natural gas to vent gas ratio for the B-Unit Flare (F-U408) shall be maintained at 0.17 or greater. The natural gas to vent gas ratio shall be included in the semiannual periodic report required by 40 CFR Part 63, Subpart MMM.

In order to indicate compliance with Group 2 wastewater stream classification, the facility shall follow the recordkeeping and reporting requirements specified in §63.146(b)(1) and §63.147(b)(8). The Steam Stripper (C-U405) was previously determined to be subject to the requirements of 40 CFR Part 63, Subpart DD. However, FMC performed an applicability determination for the wastewater operations and determined the operations are not subject to the requirements of 40 CFR Part 63, Subpart DD. The facility was previously required to monitor the requirements listed in §63.143(b) and Table 12 of 40 CFR Part 63, Subpart G to indicate compliance with the “design steam stripper” standards. FMC has elected to maintain these monitoring requirements in subsequent permits since the facility utilizes these parameters to indicate the wastewater streams at the facility are maintained as Group 2 wastewater streams with respect to §63.132(c), as referenced by the definitions in §63.1361. The facility shall continue to monitor the steam to water feed ratio, the wastewater feed mass flow rate, and the column operating temperature for the Steam Stripper (C-U405). The steam to water feed ratio, the wastewater feed flowrate, and column operating temperature shall be maintained at 0.33 or greater, less than 15,800 gallons per hour, and 203°F or greater, respectively.

Volatile Organic Compound (VOC)

In order to indicate compliance with 720 hour per calendar year operational limit for B-Unit Flare (F-U408), the facility shall maintain records for the amount of time that the vent stream is diverted from NO_x Thermal Oxidizer (F-U406) to B-Unit Flare (F-U408).

Hydrogen chloride (HCl) and Chlorine (Cl₂)

In order to indicate compliance with the HCl and Cl₂ emission limitation for Acidic Vent Scrubber (C-B301), the facility shall monitor the scrubber liquor flowrate and scrubbing liquor pH. The liquor flowrate shall be maintained at 35 gpm or greater and the liquor pH shall be maintained at

9.5 or greater. The facility shall continuously monitor the flowrate and pH of the scrubbing liquor and record a measurement at least once every 15 minutes.

The HCl Scrubber (C-B702) is only utilized when the facility is unloading an acid truck. This operation occurs every few weeks. In order to indicate compliance with the HCl and Cl₂ emission limitation for HCl Scrubber (C-B702), the facility shall monitor the scrubber water flowrate and shall fill the scrubber reservoir with fresh process water prior to initiating operation for acid truck unloading. The water flowrate shall be maintained at 8 gpm or greater prior to initiating acid truck unloading.

Testing of Emissions

Periodic testing of the destruction efficiency of the thermal oxidizer using EPA Method 18, 25, or 25A and shall be conducted at intervals not to exceed five years following the date of the previous approved test.

Unit 003: PAI Group 1 Storage Vessels

Unit Specific Changes

- Reviewed and updated the current storage vessels utilized at the facility.

Overview

The storage vessels in the following table are defined or have been designated as Group 1 storage vessels with respect to 40 CFR Part 63, Subpart MMM. The capacity, vapor pressure of the material stored, and control requirement of the tanks are included in the table.

Tank No.	Tank Capacity	Material In Tank	Maximum Vapor Pressure	Control Requirement	Standard
T-G204	≤ 75 m ³	Methanesulfonyl Chloride	≤ 3.45 kPa	Route to F-U401 or F-U402	335-3-14-.04
T-G302	≤ 75 m ³	HAP	≥ 3.45 kPa	Route to F-U401 or F-U402	335-3-14-.04
T-G303	≤ 75 m ³	HAP	≥ 3.45 kPa	Route to F-U401 or F-U402	335-3-14-.04
V-G220	≤ 75 m ³	3-Picoline	≤ 3.45 kPa	Route to F-U401 or F-U402	335-3-14-.04
V-L601	≤ 75 m ³	3-Picoline	≤ 3.45 kPa	Route to F-U401 or F-U402	335-3-14-.04
V-G112	≥ 75 m ³	HAP	≥ 3.45 kPa	Route to F-U401 or F-U402	335-3-11-.06(64)
V-L307	≤ 75 m ³	Methanesulfonyl Chloride	≤ 3.45 kPa	Route to F-U401 or F-U402	335-3-14-.04
V-T205	≥ 75 m ³	HAP	≥ 3.45 kPa	Route to F-U401 or F-U402	335-3-11-.06(64)

T-G549	$\leq 75 \text{ m}^3$	HAP	$\geq 3.45 \text{ kPa}$	Route to C-U901 Building Air Wash System	335-3-14-.04
V-U412	$\geq 75 \text{ m}^3$	Waste Solvent	$\geq 3.45 \text{ kPa}$	Route to F-U401 or F-U402	335-3-14-.04
V-CD101	$\leq 75 \text{ m}^3$	Methanesulfonyl Chloride	$\leq 3.45 \text{ kPa}$	Route to F-U401 or F-U402	335-3-11-.06(64)
T-G203	$\geq 75 \text{ m}^3$	Methanesulfonyl Chloride	$\leq 3.45 \text{ kPa}$	Route to F-U401 or F-U402	335-3-11-.06(64)
T-B112	$\geq 75 \text{ m}^3$	VOC	$\geq 3.45 \text{ kPa}$	Route to F-U406 or F-U408	335-3-11-.06(64)
T-B114	$\geq 75 \text{ m}^3$	VOC	$\geq 3.45 \text{ kPa}$	Route to F-U406 or F-U408	335-3-11-.06(64)
V-B310	$\geq 75 \text{ m}^3$	HAP	$\geq 3.45 \text{ kPa}$	Route to F-U406 or F-U408	335-3-11-.06(64)
T-B603	$\leq 75 \text{ m}^3$	VOC	$\leq 3.45 \text{ kPa}$	Route to F-U406 or F-U408	335-3-14-.04
V-B311	$\geq 75 \text{ m}^3$	HAP	$\geq 3.45 \text{ kPa}$	Route to F-U406 or F-U408	335-3-14-.04
V-B102	$\geq 75 \text{ m}^3$	HAP	$\geq 3.45 \text{ kPa}$	Route to F-U406 or F-U408	335-3-11-.06(64)
V-B103	$\geq 75 \text{ m}^3$	HAP	$\geq 3.45 \text{ kPa}$	Route to F-U406 or F-U408	335-3-11-.06(64)
V-B107	$\geq 75 \text{ m}^3$	HAP	$\geq 3.45 \text{ kPa}$	Route to F-U406 or F-U408	335-3-11-.06(64)
V-B453	$\leq 75 \text{ m}^3$	HAP	$\leq 3.45 \text{ kPa}$	Route to F-U406 or F-U408	335-3-14-.04
T-B702	$\leq 75 \text{ m}^3$	HAP	$\geq 3.45 \text{ kPa}$	Route to HCl Tank Scrubber C-B702	335-3-14-.04
T-B116	$\leq 75 \text{ m}^3$	VOC	$\leq 3.45 \text{ kPa}$	Route to F-U406 or F-U408	335-3-14-.04
V-B612	$\leq 75 \text{ m}^3$	Methanesulfonyl Chloride	$\leq 3.45 \text{ kPa}$	Route to F-U406 or F-U408	335-3-14-.04
T-B105	$\geq 75 \text{ m}^3$	ABU Aqueous Waste	$\leq 3.45 \text{ kPa}$	Route to F-U406 or F-U408	335-3-14-.04
T-B118	$\leq 75 \text{ m}^3$	ABU Aqueous Waste	$\leq 3.45 \text{ kPa}$	Route to F-U406 or F-U408	335-3-14-.04
T-B119	$\leq 75 \text{ m}^3$	ABU Aqueous Waste	$\leq 3.45 \text{ kPa}$	Route to F-U406 or F-U408	335-3-14-.04
T-B108	$\geq 75 \text{ m}^3$	ABU Aqueous Waste	$\leq 3.45 \text{ kPa}$	Route to F-U406 or F-U408	335-3-14-.04
T-B106	$\geq 75 \text{ m}^3$	Waste Solvent	$\geq 3.45 \text{ kPa}$	Route to F-U406 or F-U408	335-3-14-.04
T-B107	$\geq 75 \text{ m}^3$	Waste Solvent	$\geq 3.45 \text{ kPa}$	Route to F-U406 or F-U408	335-3-14-.04
V-U520	$\leq 75 \text{ m}^3$	Waste Solvent	$\geq 3.45 \text{ kPa}$	Route to F-U406 or F-U408	335-3-14-.04

Emission Standards

Hazardous Air Pollutant (HAP)

As indicated in §63.1362(c)(2)(iv)(A) and Table 2 of 40 CFR Part 63, Subpart MMM, the CD-GL Thermal Oxidizer (F-U401) with scrubber series (V-U402 and V-U403) and the NO_x Thermal Oxidizer (F-U406) shall reduce organic HAP emissions by greater than or equal to 95 percent by weight.

As indicated in §63.1362(c)(2)(iv)(C), the A-Unit Flare (F-U402) and B-Unit Flare (F-U408) shall meet the requirements of §63.11(b).

A leak detection and repair (LDAR) program as specified in §63.1363 shall be implemented for applicable equipment.

The following storage vessels shall be routed to CD-GL Thermal Oxidizer (F-U401) with scrubber series (V-U402 and V-U403) or to A-Unit Flare (F-U402).

T-G204	V-L601	V-U412
T-G302	V-G112	V-CD101
T-G303	V-L307	T-G203
V-G220	V-T205	

The permittee shall only route emissions to the A-Unit Flare (F-U402) for a maximum of 720 hours per calendar year.

Volatile Organic Compound (VOC)

The following storage vessels shall be routed to NO_x Thermal Oxidizer (F-U406) or to B-Unit Flare (F-U408).

T-B112	V-B107	T-B108
T-B114	V-B453	T-B106
V-B310	T-B116	T-B107
T-B603	V-B612	V-U520
V-B311	T-B105	
V-B102	T-B118	
V-B103	T-B119	

The permittee shall only route emissions to the B-Unit Flare (F-U408) for a maximum of 720 hours per calendar year.

Periodic Monitoring

Hazardous Air Pollutant (HAP)

In order to indicate compliance with the organic HAP process emission limitation of the CD-GL Thermal Oxidizer (F-U401), the firebox temperature, calculated as a daily average, shall be maintained at 1400°F or greater during any production or material transfer operations. The facility

shall continuously monitor the firebox temperature and record a measurement at least once every 15 minutes

In order to indicate compliance with the organic HAP emission limitation of the NO_x Thermal Oxidizer (F-U406), the firebox temperature, calculated as a daily average, shall be maintained at 1750°F or greater during any production or material transfer operations. The facility shall continuously monitor the firebox temperature and record a measurement at least once every 15 minutes.

Volatile Organic Compound (VOC)

As an indicator of compliance with the net heating value requirement of §63.11(b), the A-Unit Flare (F-U402) natural gas to vent gas ratio shall be maintained at 0.42 or greater.

As an indicator of compliance with the net heating value requirement of §63.11(b), the B-Unit Flare (F-U408) natural gas to vent gas ratio shall be maintained at 0.17 or greater.

Records of the natural gas to vent gas ratio for A-Unit Flare (F-U402) and B-Unit Flare (F-U408) shall be maintained and readily available for inspection for a period of five (5) years. The natural gas to vent gas ratio shall be included in the semiannual periodic report required by 40 CFR Part 63, Subpart MMM.

Unit 004: PAI Group 2 Storage Vessels

Overview

The storage vessels in the following table are defined as Group 2 storage vessels with respect to 40 CFR Part 63, Subpart MMM. The capacity, vapor pressure of the material stored, and control requirement of the tanks are included in the table.

Tank No.	Tank Capacity	Material In Tank	Maximum Vapor Pressure	Control Requirement	Standard
T-G311	≥ 75 m ³	ABU Aqueous Waste	≤ 3.45 kPa	N/A	335-3-11-.06(64)
T-L101	≥ 75 m ³	ABU Aqueous Waste	≤ 3.45 kPa	N/A	335-3-11-.06(64)
T-L102	≥ 75 m ³	ABU Aqueous Waste	≤ 3.45 kPa	N/A	335-3-11-.06(64)
T-U432	≥ 75 m ³	ABU Aqueous Waste	≤ 3.45 kPa	N/A	335-3-11-.06(64)
T-U433	≥ 75 m ³	ABU Aqueous Waste	≤ 3.45 kPa	N/A	335-3-11-.06(64)
T-U905	≥ 75 m ³	ABU Aqueous Waste	≤ 3.45 kPa	N/A	335-3-11-.06(64)
T-U430	≥ 75 m ³	ABU Aqueous Waste	≤ 3.45 kPa	N/A	335-3-11-.06(64)

T-U431	≥ 75 m ³	ABU Aqueous Waste	≤ 3.45 kPa	N/A	335-3-11-.06(64)
T-U801	≥ 75 m ³	ABU Aqueous Waste	≤ 3.45 kPa	N/A	335-3-11-.06(64)
T-U802	≥ 75 m ³	ABU Aqueous Waste	≤ 3.45 kPa	N/A	335-3-11-.06(64)
T-U409	≥ 75 m ³	ABU Aqueous Waste	≤ 3.45 kPa	Route to C-U901	335-3-14-.04

Emission Standards

The following tanks are defined as Group 2 storage vessels with respect to 40 CFR Part 63, Subpart MMM. In order to remain a Group 2 storage vessel with respect to 40 CFR Part 63, Subpart MMM, each material stored in these storage vessels shall have a maximum true vapor pressure below 3.45 kPa.

T-G311
T-L101
T-L102
T-U432

T-U433
T-U905
T-U430
T-U431

T-U801
T-U802
T-U409
T-G549

Tank No. T-U409 shall be routed to G/G2 Process Building Air Wash Scrubber (C-U901).

A leak detection and repair (LDAR) program as specified in §63.1363 shall be implemented for applicable equipment.

Periodic Monitoring

The monitoring requirements for the leak detection and repair (LDAR) program listed in §63.1363 of 40 CFR Part 63, Subpart MMM shall be followed, as applicable.

Unit 005: MON Group 2 Storage Vessels

Overview

The storage vessels in the following table are defined as Group 2 storage vessels with respect to 40 CFR Part 63, Subpart FFFF. The capacity, vapor pressure of the material stored, and control requirement of the tanks are included in the table.

Tank No.	Tank Capacity	Material In Tank	Maximum Vapor Pressure	Control Requirement	Standard
V-T206	≥ 10,000 gallons	HAP	≤ 6.9 kPa	N/A	335-3-11-.06(83)
V-L510	≥ 10,000 gallons	HAP	≤ 6.9 kPa	N/A	335-3-11-.06(83)
T-L702	≥ 10,000 gallons	HAP	≤ 6.9 kPa	N/A	335-3-11-.06(83)

Emission Standards

The following tanks are defined as Group 2 storage vessels with respect to 40 CFR Part 63, Subpart FFFF. In order to remain a Group 2 storage vessel with respect to 40 CFR Part 63, Subpart FFFF, each material stored in these storage vessels shall have a maximum true vapor pressure below 6.9 kPa.

V-T206

V-L510

T-L702

Periodic Monitoring

The monitoring requirements listed in §63.2470 of 40 CFR Part 63, Subpart FFFF shall be followed, as applicable.

Unit 006: Boilers

Unit Specific Changes

- Incorporated Air Permit 503-5001-X205: The permit was issued on September 16, 2024, to allow the 52.8 MMBtu/hr boiler, which served as a temporary replacement for the 92 MMBtu/hr boiler (F-U204), to become a permanent boiler. Boiler (F-U204) was decommissioned on November 1, 2022, and the 52.8 MMBtu/hr boiler was given the designation F-U205.
- Incorporated 40 CFR Part 63, Subpart DDDDD requirements for the 72.8 MMBtu/hr boiler (F-U203) and 52.8 MMBtu/hr boiler (F-U205).

Overview

The description, operating capacity, fuel type, and installation date of the boilers utilized by the facility are listed in the table below. The 72.8 MMBtu/hr boiler (F-U203) and the 52.8 MMBtu/hr boiler (F-U205) are subject to the requirements of 40 CFR Part 60, Subpart Dc. Both of the boilers utilized at the facility (F-U203 and F-U205) are subject to the requirements of 40 CFR Part 63, Subpart DDDDD.

Boiler ID	Engine Description/Capacity	Fuel Type	Installation Date
F-U203	72.8 MMBtu/hr Boiler	Natural Gas	2019
F-U205	52.8 MMBtu/hr Boiler	Natural Gas	2022

Emission Standards

Opacity

Both of the boilers utilized by the facility (F-U203 and F-U205) are subject to the state opacity requirement.

Particulate Matter (PM)

Both of the boilers utilized by the facility (F-U203 and F-U205) are subject to the state allowable particulate limit equation for fuel burning equipment in Class I counties.

Both boilers utilized by the facility (F-U203 and F-U205) are subject to 40 CFR Part 63, Subpart DDDDD. Since both of the boilers would fire natural gas only, they would be classified as a unit designed to burn gas 1 fuels and would not be subject to the emission limits listed in Table 1 and Table 2, the alternative emission limits listed in Table 11 through Table 13, or the operating limits listed in Table 4.

Sulfur Dioxide (SO₂)

Both of the boilers utilized by the facility are subject to the state allowable SO₂ limit for Category I Counties and shall not emit SO₂ emissions in excess of 1.8 lb/MMBtu.

Both boilers are subject to the requirements of 40 CFR Part 60, Subpart Dc. Since the boilers would only be permitted to fire natural gas, the facility is only subject to the recordkeeping and reporting requirements listed in §60.48c, as applicable.

Periodic Monitoring

Opacity / Particulate Matter (PM)

Since both of the boilers utilized by the facility (F-U203 and F-U205) are permitted to fire natural gas only, the units would meet the state allowable PM limit calculated from the particulate limit equation for fuel burning equipment inherently. Therefore, no periodic monitoring is required for the state allowable PM limit.

Since both of the boilers utilized by the facility (F-U203 and F-U205) are subject to the requirements of 40 CFR Part 63, Subpart DDDDD, the facility must perform tune-ups on the boilers based on the schedule listed in §63.7540 and Table 3 of Subpart DDDDD.

Sulfur Dioxide (SO₂)

Since both of the boilers utilized by the facility (F-U203 and F-U205) are permitted to fire natural gas only, the units would meet the state allowable SO₂ limit inherently. Therefore, no periodic monitoring is required for the state allowable SO₂ limit.

Since the 72.8 MMBtu/hr. Boiler (F-U203) and the 52.8 MMBtu/hr. Boiler (F-U205) is subject to the requirements of 40 CFR Part 60, Subpart Dc, the facility shall maintain records of the total amount of natural gas combusted in each of the units on a monthly basis, as required by §60.48c(g)(2).

Unit 007: Emergency Engines

Unit Specific Changes

- Incorporated Air Permit 503-5001-X505: This permit was issued on October 18, 2022. The permit was for the installation of a new 324 HP emergency compression ignition firewater

pump to replace the existing 412 HP emergency firewater pump (P-U505). It was given the same designation of P-U505.

Overview

The description, date installed, operating capacity, and ignition type of the emergency generators and firewater pumps utilized by the facility are listed in the table below. All engines are utilized as emergency use only. All of the emergency engines are subject to the requirements of 40 CFR Part 63, Subpart ZZZZ. The Firewater Pump (P-U504) and Firewater Pump (P-U505) are subject to the requirements of 40 CFR Part 60, Subpart IIII and compliance with this subpart will constitute compliance with Subpart ZZZZ.

Engine ID	Engine Description	Operating Capacity (HP)	Ignition Type	Installation Date
P-U504	Firewater Pump	327	Compression Ignition	2019
P-U505	Firewater Pump	324	Compression Ignition	2022
A-U984	Emergency Generator	742	Spark Ignition	1999

Emission Standards

Opacity

All emergency engines associated with this facility are subject to the state opacity requirement.

40 CFR Part 60, Subpart IIII

Firewater Pump (P-U504) and Firewater Pump (P-U505) are subject to the requirements of 40 CFR Part 60, Subpart IIII. In order for Firewater Pump (P-U504) and Firewater Pump (P-U505) to remain classified as emergency, the engine would be required to operate according to the requirements of 40 CFR 60.4211(f)(1)-(3). This subpart requires the facility to comply with the emission standards listed in Table 4 of Subpart IIII.

Non-methane Hydrocarbon + Nitrogen Oxides (NMHC + NO_x)

As listed in Table 4 of 40 CFR Part 60, Subpart IIII, for a 2009 and newer model year engine with a maximum horsepower of $225 \leq \text{KW} < 450$, the sum of the non-methane hydrocarbon (NMHC) and nitrogen oxide (NO_x) emission rate shall not exceed 4.0 g/KW-hr.

Particulate Matter (PM)

As listed in Table 4 of 40 CFR Part 60 Subpart IIII, for a 2009, and newer model year engine with a maximum horsepower of $225 \leq \text{KW} < 450$, the particulate matter (PM) emission rate shall not exceed 0.20 g/KW-hr.

Hazardous Air Pollutants (HAPs)

According to §63.6603(a), Firewater Pump (P-U505) shall meet the requirements listed in Table 2d of Subpart ZZZZ for emergency stationary CI RICE. The facility should also operate Firewater Pump (P-U505) according to the manufacturer's emission specification or develop a site specific maintenance plan as required by §63.6625(e). In order for Firewater Pump (P-U505) to remain classified as emergency, the engine would be required to operate according to the requirements of 40 CFR 63.6640(f)(1)-(4).

As stated in §63.6585, any facility that owns or operates a stationary RICE at a major or area source of HAP emissions is subject to 40 CFR Part 63, Subpart ZZZZ. However, as stated in §63.6590(b)(3)(ii), any existing spark ignition 4 stroke lean burn (4SLB) stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions does not have to meet the requirements of 40 CFR Part 63, Subpart ZZZZ or 40 CFR Part 63, Subpart A. The Emergency Generator (A-U984) also meets §63.6590(b)(3)(iii) and does not have to meet the requirements since the engine is an existing emergency stationary RICE with a site rating of more than 500 brake HP located at a major source of HAP emissions and does not operate or is not contractually obligated to be available for more than 15 hours per calendar year for the purposes specified in §63.6640(f)(2)(ii) and (iii). Therefore, Emergency Generator (A-U984) has no emission limitations or operating limitations for 40 CFR Part 63, Subpart ZZZZ. However, for the Emergency Generator (A-U984) to remain classified as an emergency engine, the engine shall only operate as specified in §63.6640(f)(1)-(4).

Periodic Monitoring

Opacity / Particulate Matter (PM)

Since all of the engines are classified as emergency, no additional monitoring requirements for the opacity standard are required.

40 CFR Part 60, Subpart IIII

To indicate compliance with the emission limitations for Firewater Pump (P-U504), the facility shall operate and maintain the stationary CI internal combustion engine according to the manufacturer's emission-related written instructions, change only those emission-related settings that are permitted by the manufacturer, and meet the requirements of 40 CFR Parts 89, 94 and/or 1068, as applicable.

The facility shall install a non-resettable hour meter on the Firewater Pump (P-U504) to record emergency and non-emergency operation hours. The facility shall also maintain records of any maintenance performed on Firewater Pump (P-U504).

Hazardous Air Pollutants (HAPs)

As an indicator of compliance with the requirements listed in Table 2d of Subpart ZZZZ for Firewater Pump (P-U505) and the emergency operating limitations for Emergency Generator (A-U984), records of operations of the engine in emergency and non-emergency service, which is recorded through a non-resettable hour meter, are required to be maintained.

CAM

Compliance assurance monitoring is not applicable.

PERMITTING FEES

Title V major sources are subject to operating permit fees which charge the facility a yearly amount based on the actual emission rate of pollutants for the previous year.

AFFECTED STATES NOTIFICATION

No notification of the issuance of this major source operating permit to any affected state bordering Alabama is necessary since all states are notified automatically when the public notice is issued.

FUGITIVE DUST

The fugitive dust potential was evaluated and is not expected to be of concern at this facility. The plant property and travel areas are covered by asphalt, concrete, or graveled surfaces. No stockpiles of dust producing materials are planned. Therefore, it has been determined by the Department that a dust plan is not required at this time.

RECOMMENDATION

The proposed Title V Major Source Operating Permit (503-5001) third renewal shall be issued with the requirements pending resolution of any comments received during a 30-day public comment period and a 45-day EPA review.

Chandalyce Robinson

Chemical Branch

September 2026

