

Statement of Basis
FMC Agricultural Solutions
Facility No. 503-5001
Significant Modification

On June 21, 2022, the Department received an application from FMC Agricultural Solutions (FMC) located in Axis, Alabama. The application addressed the facility's applicability to 40 CFR Part 63, Subpart DD - National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations (OSWRO) and requested that the current monitoring and recordkeeping and reporting provisos for Acidic Vent Scrubber (C-B301) in the B Business Unit of the Title V be corrected to indicate that the pH reading is calculated as a daily average. The current Title V permit was issued on October 12, 2021, and expires on October 11, 2026. The facility is located in Mobile County, which is currently listed as unclassifiable/attainment with all National Ambient Air Quality Standards (NAAQS) except sulfur dioxide (SO₂), which is currently listed as unclassifiable.

History of 40 CFR Part 63, Subpart DD Applicability

In 2001, DuPont Mobile Manufacturing Center (previous owner of FMC) sold a portion of the Axis plant to American Vanguard Corporation (AMVAC). Under the conditions of the sale AMVAC's wastewater is transferred to FMC's site and treated in their wastewater treatment system.

On March 31, 2004, the Department issued a letter to DuPont Mobile Manufacturing Center stating that it appears the facility is subject to the monitoring requirements of 40 CFR Part 63, Subpart DD and the facility should notify the Department if the transferred wastewater exceeds 500 ppmw for hazardous air pollutants (HAPs). The monitoring requirements were subsequently incorporated into the Title V Major Source Operating Permit, issued January 1, 2012.

During the most recent Title V Major Source Operating Permit renewal, FMC performed an updated applicability determination and determined the wastewater transfer operations were not subject to the requirements of 40 CFR Part 63, Subpart DD (see facility comments received on August 2, 2021). Therefore, the Department removed the 40 CFR Part 63, Subpart DD applicability requirements.

Changes in 40 CFR Part 63, Subpart DD Applicability

In March 2022, FMC was notified by AMVAC that the transferred wastewater can periodically contain concentrations of chloroform at levels greater than the hazardous waste toxicity threshold of 6 mg/L and thus be classified as D022 hazardous waste. This new information prompted FMC to perform an updated applicability determination for 40 CFR Part 63, Subpart DD.

For 40 CFR Part 63, Subpart DD to be applicable, the plant site has to be a major source of hazardous air pollutant (HAP) emissions, receive off-site material as defined in §63.680(b), and perform at least one of the waste management or recovery operations described in §63.680(a)(2)(i-vi). Based on the new information, FMC determined that the plant site would be subject to the

requirements of 40 CFR Part 63, Subpart DD, because the facility is a major source for HAP emissions, receives off-site material, and performs the waste management operation described in §63.680(a)(2)(ii). FMC's waste management operation is exempted from regulation as a hazardous waste treatment, storage, and disposal facility under 40 CFR 264.1(g)(6) or 40 CFR 265.1(c)(10), since the wastewater treatment unit utilized by the facility meets the definition listed under §260.10. Based on the information provided by AMVAC for EPA Hazardous Waste No. D022, FMC's wastewater treatment unit can periodically receive an influent wastewater that is above the regulatory level of 6.0 mg/L as defined by §261.24(b) and Table 1 – Maximum Concentration of Contaminants for the Toxicity Characteristic 40 CFR Part 261, Subpart C, as referenced by §261.3(a)(2)(i). Therefore, the influent wastewater is considered hazardous waste and the requirements of 40 CFR Part 63, Subpart DD are applicable.

Control Device / Emissions

AMVAC's wastewater is transferred to FMC for treatment in FMC's wastewater treatment system. FMC currently utilizes Steam Stripper (C-U405) to pretreat wastewater prior to transferring it to the wastewater treatment system. The steam stripper emissions are routed to the NO_x Thermal Oxidizer (F-U406) for control. The thermal oxidizer utilizes the B-Unit Flare (F-U408) as a backup control device. The steam stripper bottoms are routed to FMC's wastewater treatment system.

When DuPont Mobile Manufacturing Center (previous owner of FMC) was in the process of selling a portion of the Axis site to AMVAC, the facility requested a performance testing waiver for the steam stripper. On February 8, 2001, the Department issued a letter to DuPont granting the performance testing waiver, provided that the facility monitors the requirements listed in §63.148(b) and Table 12 of 40 CFR Part 63, Subpart G to indicate compliance with the "design steam stripper" standards. The monitoring requirements include monitoring the steam to water feed ratio, the wastewater feed mass flowrate, and the column operating temperature. During the issuance of the most recent Title V, FMC elected to maintain these monitoring requirements since the facility also utilizes these parameters to indicate the wastewater streams at the facility are maintained as Group 2 with respect to §63.132(c), as referenced by the definition in §63.1361. The current monitoring requirements for the steam stripper will remain the same and the facility will continue to maintain the steam to water feed ratio at 0.33 or greater, the wastewater feed mass flowrate at less than 15,800 gallons per hour, and the column temperature at 203°F or greater.

The thermal oxidizer is currently subject to the requirements of 40 CFR Part 63, Subpart MMM and is required to reduce HAP emissions by greater than or equal to 98 percent by weight. To indicate compliance with HAP removal efficiency the facility shall monitor the firebox temperature and maintain the temperature at 1,750°F or greater, calculated as a daily average. The current monitoring requirements for the NO_x Thermal Oxidizer will remain the same.

There is no expected increase in emissions from the periodic transfer of wastewater containing chloroform concentrations at levels greater than the hazardous waste toxicity threshold of 6 mg/L. The facility will continue to utilize the steam stripper to pretreat the wastewater and route the emissions from the stripper to the NO_x Thermal Oxidizer for control.

National Emission Standards for Hazardous Air Pollutants (NESHAP)

40 CFR Part 63, Subpart DD

The Department reviewed 40 CFR Part 63, Subpart DD – National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations. Since AMVAC can periodically transfer wastewater to FMC’s wastewater treatment system that contains chloroform (EPA Hazardous Waste No. D022) above the regulatory level of 6.0 mg/L, the wastewater can be classified as hazardous waste. Therefore, the facility is subject to the requirements of 40 CFR Part 63, Subpart DD.

As stated in §63.683(b)(1), for each off-site material management unit that is part of an affected source, the facility shall meet one of the control options listed in §63.683(b)(1)(i-iii). The shared services agreement established when DuPont Mobile Manufacturing Center (previous owner of FMC) sold a portion of the Axis plant to AMVAC, prevents AMVAC from transferring wastewater to FMC’s wastewater treatment system if volatile organic hazardous air pollutants (VOHAP) concentration is greater than 500 ppmw, as determined by §63.694(b) methodology. Therefore, FMC will comply with the requirements of §63.683(b)(1)(iii) for each off-site material management unit and the requirements of §63.683(c)(1)(ii) for process vents.

As stated in §63.683(d), the facility shall control equipment leaks from each equipment component that is part of the affected source specified in §63.680(c)(3). However, based on the new data provided by AMVAC, the maximum total HAP concentration in the wastewater is 460 mg/L or 0.05% weight and does not meet all of the conditions of an affected source for equipment leaks, as defined in §63.680(c)(3)(i-iii).

As stated in §63.683(e), the facility shall operate and maintain any affected source, in a manner consistent with good air pollution control practices for minimizing emissions.

Since the VOHAP concentration of the off-site material will be less than 500 ppmw and the total HAP concentration will be less than 0.05% weight, no additional emission standards listed in 40 CFR Part 63, Subpart DD will apply to the facility.

Title V Major Source Operating Permit

B Business Unit (BBU) - 40 CFR Part 63, Subpart DD

The Steam Stripper (C-U405) would not be required to indicate compliance with 40 CFR Part 63, Subpart DD. Therefore, the performance testing waiver would no longer be applicable and the facility would not be required to monitor the steam to water feed ratio, the wastewater feed mass flowrate, and the column operating temperature to indicate compliance with 40 CFR Part 63, Subpart DD. However, FMC will continue to utilize the steam stripper to indicate that the wastewater streams at the facility are maintained as Group 2 with respect to §63.132(c), as referenced by the definition in §63.1361. FMC shall maintain the average VOHAP concentration of the off-site material at less than 500 ppm by weight at the point-of-delivery and notify the Department within 24-hours if the concentration exceeds the 500 ppm by weight limit.

The following provisos should be incorporated into the current B Business Unit (Emission Unit 002) section of the Title V permit for the new applicability to 40 CFR Part 63, Subpart DD.

- *Applicability*
 8. This source is subject to the requirements of 40 CFR Part 63, Subpart DD – National Emission Standards for Hazardous Air Pollutants from Off-Site Waste and Recovery Operations.
 9. This source is subject to the requirements of the General Provisions as indicated in 40 CFR Part 63, Subpart A, unless otherwise stated in 40 CFR Part 63, Subpart DD.
- *Emission Standard*
 12. As indicated in §63.683(b)(1)(iii) and §63.683(c)(1)(ii), the facility shall maintain the average VOHAP concentration of the off-site material at less than 500 ppm by weight at the point-of-delivery.
 13. As indicated in §63.683(e), the facility shall operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions.
- *Compliance and Performance Test Methods and Procedures*
 8. The initial determination procedures specified in §63.694(b) shall be followed to determine the average VOHAP concentration of the off-site material at the point-of-delivery.
- *Emission Monitoring*
 13. As indicated in §63.683(b)(1)(iii) and §63.683(c)(1)(ii), the facility shall review and update, as necessary, the average VOHAP concentration of the off-site material at least once every calendar year following the date of the initial determination.
- *Recordkeeping and Reporting Requirements*
 14. If the VOHAP concentration of the off-site material is greater than or equal to 500 ppm by weight at the point-of-delivery, the facility shall notify the Department within 24 hours.

B Business Unit (BBU) - Acidic Vent Scrubber (C-B301)

The application requested that the pH emission monitoring and recordkeeping and reporting provisos for the Acidic Vent Scrubber (C-B301) be corrected to indicate the pH reading is calculated as a daily average. The scrubber is subject to the requirements of 40 CFR Part 63, Subpart MMM. As stated in §63.1362(b)(3)(ii) and Table 2 of 40 CFR Part 63, Subpart MMM, the scrubber is required to reduce hydrochloric acid (HCl) emissions by greater than or equal to 94%. Since the scrubber is a halogenated scrubber, the facility may comply with the monitoring requirements specified in §63.994(c). These requirements include a pH monitoring device capable

of providing a continuous record and a flow meter capable of providing a continuous record. The continuous records are utilized to calculate a daily average as stated in §63.998(b)(3), as referenced by §63.994(c)(1). The current and corrected provisos for the Acidic Vent Scrubber (C-B301) are listed below.

Current Provisos – B Business Unit (BBU)

- *Emission Monitoring*
 6. As an indicator of compliance with the HCl and Cl₂ emission limitation of the Acidic Vent Scrubber (C-B301), the facility shall maintain a circulating scrubbing liquor pH of 9.5 or greater. The facility shall continuously monitor the liquor pH and record a measurement at least once every 15 minutes.

- *Recordkeeping and Reporting Requirements*
 6. Records of the 15-minute scrubber liquor pH for Acidic Vent Scrubber (C-B301) shall be maintained and readily available for inspection for a period of five (5) years.

Corrected Provisos – B Business Unit (BBU)

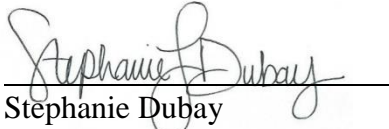
- *Emission Monitoring*
 6. As an indicator of compliance with the HCl and Cl₂ emission limitation of the Acidic Vent Scrubber (C-B301), the facility shall maintain a circulating scrubbing liquor pH, calculated as a daily average, of 9.5 or greater. The facility shall continuously monitor the liquor pH and record a measurement at least once every 15 minutes.

- *Recordkeeping and Reporting Requirements*
 6. Records of the daily average scrubber liquor pH for Acidic Vent Scrubber (C-B301) shall be maintained and readily available for inspection for a period of five (5) years.

The proposed changes to the B Business Unit (BBU) should be classified as a significant modification to the Title V permit. A 30-day public comment period and a 45-day EPA review period would be required. The modifications would be incorporated into the Title V permit upon completion of the EPA review.

Recommendation

I recommend that Title V Major Source Operating Permit (503-5001) be modified as attached pending resolution of any comments received during the 30-day public comment period and the 45-day EPA review.

A handwritten signature in cursive script, reading "Stephanie Dubay", is written over a horizontal line.

Stephanie Dubay
Industrial Chemicals Section
Chemical Branch
Air Division

August 30, 2022

Date

SJD:sjd

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