

## STATEMENT OF BASIS

Title V Air Operation Permit Renewal  
Permit No. 0250520-029-AV

### APPLICANT

The applicant for this project is Miami-Dade Water and Sewer Department. The applicant's responsible official and mailing address is: Ms. Billie McCarley, Deputy Director of Operations, Miami-Dade Water and Sewer Department, 3071 SW 38 Avenue, Miami, Florida 33146.

### FACILITY DESCRIPTION

The applicant operates the existing South District Wastewater Treatment Plant, which is in Miami-Dade County at 8950 SW 232<sup>nd</sup> St., Miami, Florida.

The existing facility consists of a publicly owned wastewater treatment plant. The South District Wastewater Treatment Plant has a designed capacity of 112.5 million gallons per day based on annual average daily flow, and a peak hourly flow of 285 million gallons per day. Liquid processes at the facility include bar screens, aerated grit chambers, oxygenation tanks, secondary clarifiers and chlorine contact basins. Solids handling includes biosolids concentration tanks, primary and secondary anaerobic digesters, biosolids anaerobic storage tanks, centrifuges, drying bed dewatering, and static pile aerobic composting facilities.

Power for in-plant use is produced from four Cummins Model C2000 N6C low BTU fuel and natural gas cogeneration engines driving generators. These engines can burn digester gas from the facility, as well as conditioned (removed moisture and hydrogen sulfide gas) landfill gas from the nearby landfill. These co-generators produce electricity, and the waste heat is used to heat anaerobic digesters. The units are equipped with lean-burn low-combustion technology to reduce NO<sub>x</sub> emissions. These generators utilize a 37 hp Yanmar Model 3TNV88-DSA diesel engine driven air compressor to start when electricity is not available.

Power for in-plant use is also produced from four Electro Motive Division (EMD), Model 20-645E4B generators, consisting of a 3,600 horse power diesel-fueled internal combustion prime mover, each coupled to a 2,500 kW (2.5 MW) electrical generator; one EMD, Model 16-710G4A, that consists of a 3,800 hp diesel fueled internal combustion prime mover, coupled to a 2,700 kW (2.7) electrical generator with fuel rate calculated at 0.328 lb/bhp-hr and 7.034 lb/gal; one EMD, Model 20-645F4B, that consists of a 4,000 hp diesel fueled internal combustion prime mover, coupled to a 2,865 kW (2.865 MW) electrical generator. These generators utilize a 37 hp HATZ Model 2M41Z diesel engine driven air compressor to start when electricity is not available.

Additional stand-by power is produced from seven 4,000 hp diesel engine driven generators, each coupled to a 2,865-kw electrical generator. The generators are manufactured by Electro Motive Division (EMD) Model No. 16-710G4C-T2. These generators utilize a 25 hp Kohler Model KD625-2 diesel engine (EPA Tier 4 Certified) driven air compressor to start when electricity is not available.

The facility operates six flares (anaerobic digesters).

This facility also includes miscellaneous unregulated and insignificant emissions units and/or activities.

### EMISSIONS UNIT IDENTIFICATION NUMBERS AND DESCRIPTIONS

EU No.	Brief Description
<i>Regulated Emissions Units</i>	
006	Diesel Engine Generator EMD Model 20-645E4B (No.1)
007	Diesel Engine Generator EMD Model 20-645E4B (No.2)
008	Diesel Engine Generator EMD Model 20-645E4B (No.3)
009	Diesel Engine Generator EMD Model 20-645E4B (No.4)
010	Diesel Engine Generator EMD Model 16-710G4A (No.5)
013	Diesel Engine Generator EMD Model 20-645F4B (No.6)

## STATEMENT OF BASIS

014	Emergency Generators Units Nos. 1 to 7
015	Low BTU Fuel & Natural Gas Co-generator. Cummins Model C2000 N6C, No. 4
016	Low BTU Fuel & Natural Gas Co-generator. Cummins Model C2000 N6C, No. 5
017	Low BTU Fuel & Natural Gas Co-generator. Cummins Model C2000 N6C, No. 6
018	Low BTU Fuel & Natural Gas Co-generator. Cummins Model C2000 N6C, No. 7
019	Kohler 25 HP Diesel Engine Driven Starting Air Compressor
020	Hatz 37 HP Diesel Engine Driven Starting Air Compressor
021	Yanmar 37 HP Diesel Engine Driven Starting Air Compressor
023	Miami-Dade County Internal Services Department's (ISDs) gasoline dispensing facility unleaded gasoline fuel storage tanks
<i>Unregulated Emissions Unit</i>	
005	Wastewater Treatment Plant Liquid Processes
012	Six Digester Gas Flares

### APPLICABLE REGULATIONS

Based on the Title V air operation permit renewal application received on July 1, 2024, this facility is not a major source of hazardous air pollutants (HAP). The existing facility is not a prevention of significant deterioration (PSD) major source of air pollutants in accordance with Rule 62-212.400, F.A.C. A summary of applicable regulations is shown in the following table:

Regulation	EU No(s).
<i>Federal Rule Citations</i>	
40 CFR 60, Subpart A, NSPS General Provisions	014, 015, 016, 017, 018, 019
40 CFR 60, Subpart IIII	014, 019
40 CFR 60, Subpart JJJJ	015, 016, 017, 018
40 CFR 63, Subpart A, NESHAP General Provisions	006, 007, 008, 009, 010, 013, 014, 020, 021, 023
40 CFR 63, Subpart ZZZZ, NESHAP	006, 007, 008, 009, 010, 013; 014, 020, 021
40 CFR 63, Subpart CCCCCC, NESHAP	023
<i>State Rule Citations</i>	
Rules 62-296.320, F.A.C.; 62-297.310, F.A.C.	006, 007, 008, 009, 010, 013, 014-021
Rule 62-296.570, F.A.C.- Reasonably Available Control Technology (RACT)	006, 007, 008, 009, 010, 013, 018-021
Rule 62-297.340, F.A.C.	006, 007, 008, 009, 010, 013

### PROJECT DESCRIPTION

The purpose of this permitting project is to renew the existing Title V permit for the above referenced facility.

### PROCESSING SCHEDULE AND RELATED DOCUMENTS

- Application for a Title V air operation permit renewal received July 1, 2024.
- Draft Title V air operation permit renewal issued August 30, 2024.
- Public Notice of Intent to Issue Air Permit published on October 23, 2024.
- Proof of publication (affidavit) of Public Notice of Intent to Issue Air Permit received on October 25, 2024.

## STATEMENT OF BASIS

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- Proposed Title V air operation permit renewal issued November 26, 2024.
- Final Title V air operation permit renewal issued January 14, 2025.

### PRIMARY REGULATORY REQUIREMENTS

Standard Industrial Classification (SIC) Code: 4952 - Sewage Systems.

North American Industry Classification System (NAICS): 221320 - Sewage Treatment Facilities.

HAP: The facility is not identified as a major source of hazardous air pollutants (HAP).

Title V: The facility is a Title V major source of air pollution in accordance with Chapter 62-213, Florida Administrative Code (F.A.C.).

PSD: The facility is not a Prevention of Significant Deterioration (PSD)-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

Title I, Section 111, NSPS: The facility operates units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal Regulations (CFR) 60 [40 CFR 60 Subpart IIII and 40 CFR 60, Subpart JJJJ].

Title I, Section 112, NESHAP: The facility operates units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63 [40 CFR 63 Subpart ZZZZ and 40 CFR 63, Subpart CCCCCC].

The facility is a Group 2 Publicly Owned Treatment Works (POTW) but is not subject to National Emission Standards for Hazardous Air Pollutants (NESHAP) 40 CFR 63, Subpart VVV, because the facility is not a major source of HAPs.

CAM: Compliance Assurance Monitoring (CAM) does not apply to any of the units at the facility. None of the units have control devices to achieve compliance with any pollutants.

### PROJECT REVIEW

Changes were made in this Title V air operation permit renewal. The major changes made in this project are overviewed here. Some changes were made in the format of this renewed Title V air operation permit.

#### Permit

- Subsection II. Facility-wide Conditions. A new reporting summary condition was added. The condition summarizes all reports required under the Title V air operation permit. See Specific Condition FW9.
- Subsection III.A. EUs 006, 007, 008, 009, 010, and 013 - Standby Diesel Generators.
  - The state's excess emissions rule (Rule 62-210.700, F.A.C.) recently sunsetted. An applicability statement was added to reflect the sunset context. See Specific Condition A.8.
- Subsection III.B. EUs 014 - Seven Identical Diesel Engine Generators.
  - The state's excess emissions rule (Rule 62-210.700, F.A.C.) recently sunsetted. An applicability statement was added to reflect the sunset context. See Specific Condition B.6.
- Subsection III.C. EUs 015, 016, 017 and 018 - Low-BTU Fuel Cogeneration Cummins Engine Generators.
  - The state's excess emissions rule (Rule 62-210.700, F.A.C.) recently sunsetted. An applicability statement was added to reflect the sunset context. See Specific Condition C.3.
- Subsection III.D. EU 019 - Kohler 25 Hp Diesel Engine.
  - The state's excess emissions rule (Rule 62-210.700, F.A.C.) recently sunsetted. An applicability statement was added to reflect the sunset context. See Specific Condition D.5.
- Subsection III.E. EU 020 & 021 - Diesel Engine Driven Starting Air Compressors greater than 500 HP.
  - The state's excess emissions rule (Rule 62-210.700, F.A.C.) recently sunsetted. An applicability statement was added to reflect the sunset context. See Specific Condition E.4.

#### Appendices & Attachments

## **STATEMENT OF BASIS**

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- Appendix I, List of Insignificant Emissions Units and/or Activities. Added an insignificant emissions unit and/or activity {see the activity numbered as 11.}.
- Federal Regulation Appendices. Version dates were added in the header section of the document.
  - For example, Appendix NSPS 40 CFR 60, Subpart A - General Provisions (Version Dated 10/07/2020).
  - The appendices for the federal regulations were updated, replacing previous outdated ones.
- The Department uses standardized appendices in Title V air operation permits. The following standardized appendices were updated in this renewed permit (the new version date is indicated here):
  - Appendix RR, Facility-wide Reporting Requirements (Version Dated 08/08/2019).

### **CONCLUSION**

This project renews Title V Air Operation Permit No. 0250520-26-AV, which was effective on February 11, 2020. This Title V air operation permit renewal is issued under the provisions of Chapter 403, Florida Statutes (F.S.), and Chapters 62-4, 62-210, and 62-213, F.A.C.