Title V Air Operation Permit Renewal
Permit No. 0250281-016-AV

APPLICANT

The applicant for this project is Miami-Dade Water and Sewer Department. The applicant's responsible official and mailing address are: Francisco Martinez, Assistant Director of water Operations, Miami-Dade Water and Sewer Department, Hialeah/Preston Water Treatment Plant, 3071 Southwest 38th Avenue, Miami, Florida 33146.

FACILITY DESCRIPTION

The applicant operates the existing Hialeah/Preston Water Treatment Plant, which is located in Miami-Dade County at 1100 West 2nd Avenue, Hialeah, Florida.

This existing facility consists of a water treatment plant that treats up to 225 million gallons per day (MGD) of raw well water for public water supply, using a lime softening process, which includes softening, recarbonation, disinfection, filtration, and air stripping to provide potable water to the public. This permitted facility consists of two distinct co-located water treatment plants, the Hialeah water treatment plant and the John E. Preston water treatment plant. A 120 tons per day rotary lime kiln with cooler, twin cyclone and scrubbing tower, that is fired by natural gas recovers the water softening process solids for conversion back to quick lime for process and reuse on site.

A bank of seven electric generator units provides power to the facility during emergencies. The generator sets are manufacturer by the Electro-Motive Division of General Motors (EMD); three of the units consist of a 3,600 hp diesel fueled internal combustion prime mover, Model EMD 20- 645E4, coupled to a 2,500 KW electrical generator; and, the other four are EMD Model 20- 645F4B and consist of a 4,000 hp diesel fueled internal combustion prime movers, coupled to a 2,865 KW electrical generator. All the engines are twenty cylinders two-cycle turbocharged units subject to the major source Reasonably Available Control Technology (RACT) requirements for Nitrogen Oxides (NOx), and Best Available Control Technology (BACT). The air stripping towers consist of 64 units (40 at Preston plant and 24 at Hialeah plant); this emissions unit is capable of treating up to 245.12 million gallons of water per day. Each tower is equipped with a 33,000 acfm blower. The towers are used to remove and/or reduce concentrations of volatile organic compounds, including hazardous air pollutants, and trihalomethanes from the water. The towers are subject to a federally enforceable cap on total and individual hazardous air pollutant (HAP) emissions. Based on the Title V Air Operation Permit Renewal application received December 12, 2019, this facility is a major source of hazardous air pollutants (HAP). Also included in this permit are miscellaneous insignificant emissions units and activities.

REGULATED EMISSIONS UNIT IDENTIFICATION NUMBERS AND DESCRIPTIONS

EU No.	Brief Description
Regulated Emissions Units	
001	Lime Recalcining Kiln w/ Cooler, Twin Cyclone & Scrubbing Tower
004	64 Air Stripping Towers (40 at Preston; 24 at Hialeah)
006	Standby Diesel Engine Generator #1(EMD model 20-645E4)
007	Standby Diesel Engine Generator #2 (EMD model 20-645E4)
008	Standby Diesel Engine Generator #3 (EMD model 20-645E4)
009	Sandby Diesel Engine Generator #4 (EMD model 20645-F4B)
010	Standby Diesel Engine Generator #5 (EMD model 20645-F4B)
011	Standby Diesel Engine Generator #6 (EMD model 20645-F4B)
012	Standby Diesel Engine Generator #7 (EMD model 20-645F4B)
014	Kohler 25 kW Disel Generator Located at Lime Plant
015	Magnetek 150 kW Diesel Generator at Generator Maintenance Building

EU No.	Brief Description
016	Perkins 62 kW Diesel Generator – Emergency Lime Sludge Effluent Pump Engine
017	Perkins 62 kW Diesel Generator – Emergency Kiln Rotation Engine
018	Hatz 20 HP Diesel Engine Driven Starting Air Compressor
019	Kubota 20 HP Diesel Engine Driven Starting Air Compressor

APPLICABLE REGULATIONS

Based on the Title V air operation permit renewal application received on October 28,2024, this facility is a major source of hazardous air pollutants (HAP). The existing facility is 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).
Federal Rule Citations	
40 CFR 60, Subpart A, NSPS General Provisions	016 and 017
40 CFR 60, Subpart IIII, Standards of Performance for Stationary Compression Ignition Internal Combustion Engines	016 and 017
40 CFR 63, Subpart A, NESHAP General Provisions	006, 007, 008, 009, 010, 011, 012,014, 015, 016, 017, 018, 019
40 CFR 63, Subpart ZZZZ, National Emissions Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines	006, 007, 008, 009, 010, 011, 012, 014, 015, 016, 017, 018, 019
State Rule Citations	
Rule 62-4, F.A.C. – Permits	All
Rule 62-210.300, F.A.C. – Permits Required	All
Rule 62-213, F.A.C. – Operation Permits for Major Source of Air Pollution	All
Rule 62-296.320, F.A.C. – General Pollutant Emission Limiting Standards	All
Rule 62-296.570, F.A.C. – Reasonably Available Control Technology (RACT) – Requirements for Major VOC and NOx Emitting Facilities	001
Rule 62-297, F.A.C. – Stationary Sources – Emissions Monitoring	All

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

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

Initial Title V Air Operation Permit issued **March 7, 1995**
Application for a Title V Air Operation Permit Renewal received **October 28, 2024**
Draft permit package issued **December 10, 2024**
Proposed permit package issued **January 29, 2025**
Final permit package issued **Month day, year**

PRIMARY REGULATORY REQUIREMENTS

Standard Industrial Classification (SIC) Code: 4941 – Water Supply.

North American Industry Classification System (NAICS): 221310 – Water Supply and Irrigation Systems.

HAP: The facility is 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 a Prevention of Significant Deterioration (PSD)-major source of air pollution in accordance with Rule 62-212.400, F.A.C.

NSPS: The facility operates units subject to the New Source Performance Standards (NSPS) of 40 Code of Federal Regulations (CFR) 60.

NESHAP: The facility operates units subject to the National Emissions Standards for Hazardous Air Pollutants (NESHAP) of 40 CFR 63.

CAM: Compliance Assurance Monitoring (CAM) does not apply to any of the units at the facility CAM applies to emissions units that have pre-control emissions of greater than 100 tons, are subject to an emissions limit and must use control device to meet emission limit. The emissions units at the facility do not use a control device to comply with emissions limits or are subject to post November 15, 1990, emissions limitations or standards.

GHG: The facility is identified as a major source of greenhouse gas (GHG) pollutants.

PROJECT REVIEW

The following revisions were made to the Title V air operating permit follows:

1. Changes throughout the Title V air operation permit that do not alter the intent or underlying language of any permit conditions include:
   - The renewal permit is based on the Department's updated formats for a Title V air operation permit.
   - Updated the permit rule citations and identified acronyms.
   - Updated facility and emissions unit descriptions.

CONCLUSION

This project renews Title V air operation permit No. 0250281-015-AV, which was effective on June 11, 2020. This Title V air operation permit renewal is issued under the provisions of Chapter 403, Florida Statues (F.S.), and Chapters 62-4, 62-210, and 62-213, F.A.C.