

Jeb Bush
Governor

Department of Environmental Protection

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

David B. Struhs
Secretary

January 28, 1999

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. Robert C. Ready, P.E.
Assistant Director of Treatment Facilities
Miami-Dade Water and Sewer Department (WASD)
4200 Salzedo Street
Coral Gables, Florida 33146-0316

Re: DRAFT Permit No. 0250476-002-AC (PSD-FL-240)
Central District Wastewater Treatment Plant

Dear Mr. Ready:

Enclosed is one copy of the revised Draft Air Construction Permit Modification for the Central District Wastewater Treatment Plant's Diesel Generators located at Virginia Key, Miami Dade County. The Technical Evaluation and Preliminary Determination, Best Available Control Technology, the Department's Intent to Issue Air Construction Permit Modifications and the "PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATIONS" are also included.

The "PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATIONS" must be published as soon as possible in a newspaper of general circulation in the area affected. Proof of publication, i.e., newspaper affidavit, must be provided to the Department's Bureau of Air Regulation office within 7 (seven) days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

Please replace the previously issued Draft Air Construction Permit Modification dated December 31, 1998 with this copy. Because the previously distributed notice was not published and the package was revised based on new information from WASD, we are maintaining the December 31 date as the date on which the Department issued its Intent. Since that time, the permitting clock has been tolled and will remain stopped until 14 days after we receive the proof of publication described above. Please submit any written comments you wish to have considered concerning the Department's proposed action to Mr. Syed Arif, P.E., of the New Source Review Section at the above letterhead address. If you have any other questions, please contact Mr. Arif at 850/921-9528.

Sincerely,

C. H. Fancy, P.E., Chief,
Bureau of Air Regulation

CHF/sa

Enclosures

"Protect, Conserve and Manage Florida's Environment and Natural Resources"

Printed on recycled paper.

In the Matter of an
Application for Permit Modifications by:

Miami-Dade Water and Sewer Department
4200 Salzedo Street
Coral Gables, Florida 33146-0316

DEP File No. 0250476-002-AC
Draft Permit No. PSD-FL-240
Central District Wastewater Treatment Plant
Dade County

INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATIONS

The Department of Environmental Protection (Department) gives notice of its intent to issue air construction permit modifications (copy of draft air construction permit modifications attached) for the proposed action, as detailed in the application specified above, for the reasons stated below.

The applicant, Miami-Dade Water and Sewer Department, applied on July 24, 1997, to the Department for air construction permit modifications to increase the hours of operation of its three existing diesel generators and four existing digester gas generators located in Miami, Dade County.

The Department has permitting jurisdiction under the provisions of Chapter 403, Florida Statutes (F.S.), and Florida Administrative Code (F.A.C.) Chapters 62-4, 62-210, and 62-212. The above action is not exempt from permitting procedures. The Department has determined that a review for the Prevention of Significant Deterioration (PSD), a determination of Best Available Control Technology (BACT) and an air construction permit modifications are required to increase the hours of operation for the diesel generators.

The Department intends to issue these air construction permit modifications based on the belief that reasonable assurances have been provided to indicate that operation of these emission units will not adversely impact air quality, and the emission units will comply with all appropriate provisions of Chapters 62-4, 62-204, 62-210, 62-212, 62-296, and 62-297, F.A.C.

Pursuant to Section 403.815, F.S., and Rule 62-110.106(7)(a)1., F.A.C., you (the applicant) are required to publish at your own expense the enclosed "Public Notice of Intent to Issue Air Construction Permit Modifications." The notice shall be published one time only in the legal advertisement section of a newspaper of general circulation in the area affected. Rule 62-110.106(7)(b), F.A.C., requires that the applicant cause the notice to be published as soon as possible after notification by the Department of its intended action. For the purpose of these rules, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. If you are uncertain that a newspaper meets these requirements, please contact the Department at the address or telephone number listed below. The applicant shall provide proof of publication to the Department's Bureau of Air Regulation, at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, Florida 32399-2400 (Telephone: 850/488-0114; Fax 850/ 922-6979). You must provide proof of publication within seven days of publication, pursuant to Rule 62-110.106(5), F.A.C. No permitting action for which published notice is required shall be granted until proof of publication of notice is made by furnishing a uniform affidavit in substantially the form prescribed in section 50.051, F.S. to the office of the Department issuing the permit. Failure to publish the notice and provide proof of publication may result in the denial of the permit pursuant to Rules 62-110.106(9) & (11), F.A.C.

The Department will issue the final permit with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments concerning the proposed permit issuance action for a period of thirty days from the date of publication of "Public Notice of Intent to Issue Air Construction Permit Modifications." Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit and require, if applicable, another Public Notice.

The Department will issue the permit with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and (f) A demand for relief.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

In addition to the above, a person subject to regulation has a right to apply for a variance from or waiver of the requirements of particular rules, on certain conditions, under Section 120.542 F.S. The relief provided by this state statute applies only to state rules, not statutes, and not to any federal regulatory requirements. Applying for a variance or waiver does not substitute or extend the time for filing a petition for an administrative hearing or exercising any other right that a person may have in relation to the action proposed in this notice of intent.

The application for a variance or waiver is made by filing a petition with the Office of General Counsel of the Department, 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida 32399-3000. The petition must specify the following information: (a) The name, address, and telephone number of the petitioner; (b) The name, address, and telephone number of the attorney or qualified representative of the petitioner, if any; (c) Each rule or portion of a rule from which a variance or waiver is requested; (d) The citation to the statute underlying (implemented by) the rule identified in (c) above; (e) The type of action requested; (f) The specific facts that would justify a variance or waiver for the petitioner; (g) The reason why the variance or waiver would serve the purposes of

the underlying statute (implemented by the rule); and (h) A statement whether the variance or waiver is permanent or temporary and, if temporary, a statement of the dates showing the duration of the variance or waiver requested.

The Department will grant a variance or waiver when the petition demonstrates both that the application of the rule would create a substantial hardship or violate principles of fairness, as each of those terms is defined in Section 120.542(2) F.S., and that the purpose of the underlying statute will be or has been achieved by other means by the petitioner.

Persons subject to regulation pursuant to any federally delegated or approved air program should be aware that Florida is specifically not authorized to issue variances or waivers from any requirements of any such federally delegated or approved program. The requirements of the program remain fully enforceable by the Administrator of the EPA and by any person under the Clean Air Act unless and until the Administrator separately approves any variance or waiver in accordance with the procedures of the federal program.

Executed in Tallahassee, Florida.



C. H. Fancy, P.E., Chief
Bureau of Air Regulation


CERTIFICATE OF SERVICE

The undersigned duly designated deputy agency clerk hereby certifies that this Intent to Issue Air Construction and Title V Permit Modifications (including the Public Notice, and Draft permit modifications) was sent by certified mail (*) and copies were mailed by U.S. Mail before the close of business on 1-28-99 to the person(s) listed:

Robert C. Ready, P.E., Miami-Dade Water and Sewer Department *
Gregg Worley, EPA
John Bunyak, NPS
Isidore Goldman, SED
Patrick Wong, DERM

Clerk Stamp

FILING AND ACKNOWLEDGMENT FILED, on this date, pursuant to §120.52, Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.


(Clerk) 1-28-99
(Date)

PUBLIC NOTICE OF INTENT TO ISSUE AIR CONSTRUCTION PERMIT MODIFICATIONS

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL PROTECTION

DEP File No. 0250476-002-AC (PSD-FL-240)
Central District Wastewater Treatment Plant
Dade County

The Department of Environmental Protection (Department) gives notice of its intent to issue air construction permit modifications to Miami-Dade Water and Sewer Department for its facility located in Virginia Key, Miami, Dade County. A Best Available Control Technology (BACT) determination was required for this modification pursuant to Rule 62-212.400, F.A.C. and 40 CFR 52.21, Prevention of Significant Deterioration (PSD). The applicant's name and address are: Miami-Dade Water and Sewer Department (WASD), 4200 Salzedo Street, Coral Gables, Florida 33146-0316.

This existing facility consists of two wastewater treatment trains. WASD plans to increase the hours of operation of the three existing diesel-fired 2.5 megawatt (MW) generators and four existing digester gas-fired 1.2 MW generators. The 2.5 MW diesel generators will burn No. 2 fuel oil with a sulfur content of 0.05 percent or less, by weight and the 1.2 MW generators will burn digester gases only. All diesel generators are allowed to operate continuously at reduced loads and the No. 2 fuel oil usage is limited to 1.8 million gallons per year. Additionally, the hourly and annual emissions of NO_x for the four 1.2 MW each digester gas generator will be reduced to a level more appropriate for clean burn engines.

An air quality impact analysis was conducted. Emissions from the facility will not cause or contribute to a violation of any state or federal ambient air quality standards. The maximum predicted PSD NO₂ increment consumed by all sources, including this project, in the nearest Class I (Everglades National Park) and Class II areas will be as follows:

Averaging Time and Class	Allowable Increment ($\mu\text{g}/\text{m}^3$)	Increment Consumed ($\mu\text{g}/\text{m}^3$)	Percent Consumed
Annual - Class I	2.5	0.74	30
Annual - Class II	25	24.9	99

The Department will issue the final permit modifications with the attached conditions unless a response received in accordance with the following procedures results in a different decision or significant change of terms or conditions.

The Department will accept written comments and requests for public meetings concerning the proposed permit issuance action for a period of 30 (thirty) days from the date of publication of "Public Notice of Intent to Issue Air Construction Permit Modifications." Written comments should be provided to the Department's Bureau of Air Regulation at 2600 Blair Stone Road, Mail Station #5505, Tallahassee, FL 32399-2400. Any written comments filed shall be made available for public inspection. If written comments received result in a significant change in the proposed agency action, the Department shall revise the proposed permit modifications and require, if applicable, another Public Notice.

The Department will issue these permit modifications with the attached conditions unless a timely petition for an administrative hearing is filed pursuant to Sections 120.569 and 120.57 F.S., before the deadline for filing a petition. The procedures for petitioning for a hearing are set forth below. Mediation is not available in this proceeding.

A person whose substantial interests are affected by the proposed permitting decision may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57 of the Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station #35, Tallahassee, Florida, 32399-3000. Petitions filed by the permit applicant or any of the parties listed below must be filed within fourteen days of receipt of this notice of intent. Petitions filed by any persons other than those entitled to written notice under section 120.60(3) of the Florida Statutes must be filed within fourteen days of publication of the public notice or within fourteen days of receipt of this notice of intent, whichever occurs first. Under section 120.60(3), however, any person who asked the Department for notice of agency action may file a petition within fourteen days of receipt of that notice, regardless of the date of publication. A petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. The failure of any person to file a petition within the appropriate time period shall constitute a waiver of that person's right to request an administrative determination (hearing) under sections 120.569 and 120.57 F.S., or to intervene in this proceeding and participate as a party to it. Any subsequent intervention will be only at the approval of the presiding officer upon the filing of a motion in compliance with Rule 28-106.205 of the Florida Administrative Code.

A petition that disputes the material facts on which the Department's action is based must contain the following information: (a) The name and address of each agency affected and each agency's file or identification number, if known; (b) The name, address, and telephone number of the petitioner, the name, address, and telephone number of the petitioner's representative, if any, which shall be the address for service purposes during the course of the proceeding; and an explanation of how the petitioner's substantial interests will be affected by the agency determination; (c) A statement of how and when petitioner received notice of the agency action or proposed action; (d) A statement of all disputed issues of material fact. If there are none, the petition must so indicate; (e) A concise statement of the ultimate facts alleged, as well as the rules and statutes which entitle the petitioner to relief; and (f) A demand for relief.

A petition that does not dispute the material facts upon which the Department's action is based shall state that no such facts are in dispute and otherwise shall contain the same information as set forth above, as required by Rule 28-106.301.

Because the administrative hearing process is designed to formulate final agency action, the filing of a petition means that the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any such final decision of the Department on the application have the right to petition to become a party to the proceeding, in accordance with the requirements set forth above.

A complete project file is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Dept. of Environmental Protection Bureau of Air Regulation 111 S. Magnolia Drive, Suite 4 Tallahassee, Florida 32301 Telephone: 850/488-0114 Fax: 850/922-6979	Dept. of Environmental Protection Southeast District Office 400 North Congress Avenue West Palm Beach, Florida 33401 Telephone: 561/681-6600 Fax: 561/681-6755	Miami-Dade Department of Environmental Resources Mgmt. 33 SE 2nd. Avenue, Suite 900 Miami, Florida 33130-1540 Telephone: 305/372-6925 Fax: 305/372-6954
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The complete project file includes the Draft Permit modifications, the application, and the information submitted by the responsible official, exclusive of confidential records under Section 403.111, F.S. Interested persons may contact the New Resource Review Section at 111 South Magnolia Drive, Suite 4, Tallahassee, Florida 32301, or call 850/488-0114, for additional information.

**Revised Technical Evaluation
and
Preliminary Determination**

**Miami-Dade Water & Sewer Department
Central District Wastewater Treatment Plant
Dade County, Florida**

**THREE DIESEL GENERATORS
(2.5 megawatts each)**

Construction Permit No. 0250476-002-AC
PSD-FL-240

Department of Environmental Protection
Division of Air Resources Management
Bureau of Air Regulation

January 28, 1999

1. GENERAL INFORMATION

1.1 Name and address of applicant

Miami-Dade Water & Sewer Department - WASD
4200 Salzedo Street
Coral Gables, Florida 33146-0316

Authorized Representative: Mr. Robert C. Ready, P.E., Assistant Director of Treatment Facility

1.2 Reviewing and Process Schedule

07-24-97: Date of Receipt of Application
08-21-97: DEP Completeness Request
03-09-98: DEP Additional Completeness Request
03-16-98: WASD's response to DEP's Completeness Requests of 08-21-97 and 03-09-98
04-15-98: DEP Completeness Request
10-21-98: WASD's response to DEP's Completeness Request of 04-15-98.
Application complete
12-31-98: Issue Intent
01-xx-99: Issue Revised Intent

2 FACILITY INFORMATION

2.1 Facility Location

This facility is located at Central District Wastewater Treatment Plant, Virginia Key, Miami, Dade County, Florida. The UTM coordinates are Zone 17, 585.2 km east and 2848.1 km north.

2.2 Standard Industrial Classification Code (SIC)

Major Group No. 49 - Electric, Gas and Sanitary Services.

Industry Group No. 4952 - Sewerage Systems.

2.3 Project Description

The Miami-Dade Water and Sewer Department proposes to increase operation of three existing standby electric generators at its Central District Wastewater Treatment Plant (WWTP) on Virginia Key in Miami, Florida. WASD desires to increase operation of its three generator sets to provide power generation capacity during periods of load-sharing with the local utility, Florida Power and Light; during power failure events; or as needed under other circumstances. WASD also requests to eliminate the hours of operation restriction for the existing four (4) digester gas engine generator sets. Actual emissions are expected to decrease due to improved maintenance procedures.

The three generator set will be noted as Emissions Unit 13, 14 and 15. Each generator is rated to produce 2,500 kilowatts (kW) of electric power at continuous, full load operating conditions. The generators are capable of operating at partial load conditions, and are driven by 3,600-horsepower (hp) diesel engine prime movers. The 3,600-hp engines burn transportation-grade diesel fuel, which has a low sulfur content (0.05 weight percent sulfur). Fuel oil combustion shall be limited to 1.8 million gallons per year for the three generators (which corresponds to 3056 hours of full-load operation per year limit).

The WWTP currently consists of seven (7) engines generators used for peaking power. The three existing emergency diesel generators noted above as Emissions Unit 13, 14 and 15 are 2.5 megawatts (MW) each. Low sulfur (0.05% or less, by weight) No. 2 oil is used as fuel for these units. Additionally four existing digester gas engine generator sets noted as Units 7, 9, 10 and 11 are 1.2 MW each. Digester gas combustion per unit is approximately 312 scfm. Digester gas heating value ranges from 650 to 730 btu/mmcf. Total capacity of the facility with seven (7) units will be 12.3 MW.

2.4 Project Emissions

The proposed project will produce maximum emissions of 267 tons per year (TPY) of nitrogen oxides (NO_x); 9.6 TPY of sulfur dioxide (SO₂); 37.7 TPY of carbon monoxide (CO); 9.8 TPY of particulate matter (PM/PM₁₀) and 14.7 TPY of volatile organic compounds (VOC) based on an annual consumption of 1.8 million gallons of No. 2 fuel oil and 100% capacity factor for the three diesel generator sets. The No. 2 fuel oil will be limited to maximum of 0.05% sulfur content, by weight. The actual emissions for the proposed project will be much less than the numbers represented above based on projected actual operating hours.

3 RULE APPLICABILITY

The proposed project, increased operation of three 2.5 MW diesel generator sets, in Dade County, is subject to preconstruction review under the provisions of Chapter 403, Florida Statutes, Chapters 62-212 and 62-4, Florida Administrative Code (F.A.C.), and 40 CFR 60 (July 1, 1996 version).

This facility is located in an area designated attainment for all criteria pollutants in accordance with F.A.C. Rule 62-275.400.

The proposed project was reviewed under Rule 62-212.400(5), F.A.C., New Source Review (NSR) for Prevention of Significant Deterioration (PSD), because it will be a major stationary source. This review consisted of a determination of Best Available Control Technology (BACT) and an analysis of the air quality impact of the increased emissions. The review also includes an analysis of the project's impacts on soils, vegetation and visibility, along with air quality impacts resulting from associated commercial, residential and industrial growth.

The emission units affected by this PSD permit shall comply with all applicable provisions of the Florida Administrative Code and, specifically, the following Chapters and Rules:

Chapter 62-4	Permits.
Rule 62-204.220	Ambient Air Quality Protection
Rule 62-204.240	Ambient Air Quality Standards
Rule 62-204.260	Prevention of Significant Deterioration Increments
Rule 62-204.360	Designation of Prevention of Significant Deterioration Areas
Rule 62-204.800	Federal Regulations Adopted By Reference
Rule 62-210.200	Definitions
Rule 62-210.300	Permits Required
Rule 62-210.350	Public Notice and Comments
Rule 62-210.370	Reports
Rule 62-210.550	Stack Height Policy
Rule 62-210.650	Circumvention
Rule 62-210.700	Excess Emissions

Rule 62-210.900	Forms and Instructions
Rule 62-212.300	General Preconstruction Review Requirements
Rule 62-212.400	Prevention of Significant Deterioration
Rule 62-212.410	Best Available Control Technology (BACT)
Rule 62-213	Operation Permits for Major Sources of Air Pollution
Rule 62-296.320	General Pollutant Emission Limiting Standards
Rule 62-297.310	General Test Requirements
Rule 62-297.401	Compliance Test Methods

4 TECHNICAL EVALUATION

The applicant proposes to increase operation of the three existing standby electric generators with a rated capacity of 2.5 MW each at their existing facility which consists of four additional digester gas generators. This facility is a wastewater treatment plant which generates power only during periods of load-sharing with the local utility, Florida Power and Light; during power failure events; or as needed under other circumstances.

The Central District Wastewater Treatment Plant is located on Virginia Key in Miami, Florida. The facility consists of two parallel wastewater treatment trains, including the following processes and associated structures:

- Liquid processes consisting of identical grit chamber buildings at both plants, aeration tanks at plant 1, oxygenation tanks at plant 2, final settling tanks at both plants, and chlorination buildings at both plants.
- Solids processes consisting of 8 gravity sludge concentration tanks, 24 anaerobic digesters, 2 sludge thickener tanks, a sludge dewatering building, and a dried sludge storage building.
- Other processes and structures, including a maintenance building, a blower and cogeneration building, four scrubber buildings, an electrical switchgear building, an oxygen plant, and the three standby generator enclosures.

PSD is triggered due to the existing Plant being a major facility, and the emissions of NO_x exceed their respective significance levels.

The diesel generators are EMD Model 20-645E4 with a nominal base load rating of 2.5 MW. All engines are diesel-fueled 20-cylinder, 2-cycle, and turbocharged. The primary fuel to the diesel generator will be No. 2 fuel oil, with a maximum sulfur content of 0.05%, by weight. There will be a fuel oil consumption limit of 1.8 million gallons per year. The emissions of NO_x represents a significant proportion of the total emissions generated by this project. The facility is subject to PSD and BACT for NO_x emissions because the proposed increase in annual NO_x emissions exceeds the significant emission rate. The BACT for NO_x, as determined by the Department, will be met by using fuel injection timing retardation and cooling of combustion air. Compliance with the NO_x emission standards will be determined by stack tests.

CO emissions from the diesel engine will be below the PSD significance levels, and, therefore will not be subjected to a BACT analysis.

Particulate matter (PM/PM₁₀) emissions from the diesel engine will be below the PSD significance levels, and, therefore will not be subjected to a BACT analysis.

SO₂ emissions will be controlled by the use of low sulfur fuel. The No. 2 fuel oil will be limited to a maximum of 1.8 million gal/yr, and to a maximum sulfur content of 0.05%, by weight. The proposed facility is not subject to PSD and BACT for SO₂ emissions, because the proposed increase in annual SO₂ emissions does not exceed the significant emission rate.

The following table summarizes the potential maximum emissions of air pollutants in tpy :

Pollutant	PSD Significance Levels ¹	Maximum Emissions	Subject to PSD Review?
NO _x	40	267 ²	Yes
CO	100	37.7 ³	No
PM/PM ₁₀	25/15	9.8 ⁴	No
SO ₂	40	9.6 ⁵	No
VOC	40	14.7 ⁶	No

¹ Florida Administrative Code 212.400-2

² Maximum emissions based on operation at 3,056 hours per year at full load while firing No. 2 fuel oil (0.05% sulfur by weight).

³ Maximum emissions based on continuous operation at 25 percent load while firing No. 2 fuel oil (0.05% sulfur by weight).

⁴ Maximum emissions based on operation at 8,590 hours per year at 50 percent load while firing No. 2 fuel oil (0.05% sulfur by weight).

⁵ Maximum emissions based on operation at 8,590 hours per year at 50 percent load while firing No. 2 fuel oil (0.05% by weight).

⁶ Maximum emissions based on operation at 8,590 hours per year at 50 percent load while firing No. 2 fuel oil (0.05% by weight).

5 AIR QUALITY IMPACT ANALYSIS

5.1 Introduction

The proposed project will increase NO_x emissions at a level in excess of PSD significant amounts. The air quality impact analyses required by the PSD regulations for this pollutant include:

- * An analysis of existing air quality;
- * A significant impact analysis;
- * A PSD increment analysis;
- * An Ambient Air Quality Standards (AAQS) analysis, and
- * An analysis of impacts on soils, vegetation, and visibility and of growth-related air quality modeling impacts.

The analysis of existing air quality generally relies on preconstruction monitoring data collected with EPA-approved methods. The significant impact, PSD increment, and AAQS analyses depend on air quality dispersion modeling carried out in accordance with EPA guidelines.

Based on the required analyses, the Department has reasonable assurance that the proposed project, as described in this report and subject to the conditions of approval proposed herein, will not cause or significantly contribute to a violation of any AAQS or PSD increment. However, the following EPA-directed stack height language is included: "In approving this permit, the Department has determined that the application complies with the applicable provisions of the stack height regulations as revised by EPA on July 8, 1985 (50 FR 27892). Portions of the regulations have been remanded by a panel of the U.S. Court of Appeals for the D.C. Circuit in

NRDC v. Thomas, 838 F. 2d 1224 (D.C. Cir. 1988). Consequently, this permit may be subject to modification if and when EPA revises the regulation in response to the court decision. This may result in revised emission limitations or may affect other actions taken by the source owners or operators." A discussion of the required analyses follows.

5.2 Analysis of Existing Air Quality

Preconstruction ambient air quality monitoring is required for all pollutants subject to PSD review unless otherwise exempted or satisfied. This monitoring requirement may be satisfied by using previously existing representative monitoring data, if available. An exemption to the monitoring requirement may be obtained if either of the following conditions is met: the maximum predicted air quality impact resulting from the projected emissions increase, as determined by air quality modeling, is less than a pollutant-specific de minimus concentration, or the existing ambient concentrations are less than a pollutant-specific de minimus concentration. If preconstruction ambient monitoring is exempted, determination of background concentrations for PSD significant pollutants with established AAQS may still be necessary for use in any required AAQS analysis. These concentrations may be established from the required preconstruction ambient air quality monitoring analysis or from the existing representative monitoring data. These background ambient air quality concentrations are added to pollutant impacts predicted by modeling and represent the air quality impacts of sources not included in the modeling.

Annual NO_2 impacts from the project are predicted to be 13.6 ug/m^3 , which is less than the de minimus level of 14 ug/m^3 ; therefore, no preconstruction monitoring is required. However, a background concentration was established for use in the required AAQS analysis. There is an NO_2 monitor located on Virginia Key near the proposed project. This monitor had a measured annual average NO_2 concentration of 13 ug/m^3 in 1997.

5.3 Models and Meteorological Data Used in Significant Impact, PSD Increment and AAQS Analyses

The EPA-approved Industrial Source Complex Short-Term (ISCST3) dispersion model was used to evaluate the pollutant emissions from the proposed project and other existing major facilities. The model determines ground-level concentrations of inert gases or small particles emitted into the atmosphere by point, area, and volume sources. The model incorporates elements for plume rise, transport by the mean wind, Gaussian dispersion, and pollutant removal mechanisms such as deposition. The ISCST3 model allows for the separation of sources, building wake downwash, and various other input and output features. A series of specific model features, recommended by the EPA, are referred to as the regulatory options. The applicant used the EPA recommended regulatory options in each modeling scenario. Direction-specific downwash parameters were used for all sources for which downwash was considered. The stacks associated with this project all satisfy the good engineering practice (GEP) stack height criteria.

Meteorological data used in the ISCST3 model consisted of a concurrent 5-year period of hourly surface weather observations and twice-daily upper air soundings from the National Weather Service (NWS) stations at Miami, Florida (surface data) and West Palm Beach, Florida (upper air data). The 5-year period of meteorological data was from 1987 through 1991. These NWS stations were selected for use in the study because they are the closest primary weather stations to the study area and are most representative of the project site. The surface observations included wind direction, wind speed, temperature, cloud cover, and cloud ceiling. For this project, since only the impacts of NO_x emissions are being evaluated and since the NO_2 standards and increments are based on annual averages, the highest predicted annual averages were compared with the significant impact level, the AAQS and the PSD increments.

5.4 Significant Impact Analysis

Initially, the applicant conducted modeling to determine whether the proposed project's NO_x emissions were predicted to have a significant impact in the vicinity of the facility or in the Class I area. The applicant placed a total of 800 receptors along the site boundary and within eight km of the facility, which is located in a PSD Class II area. A total of 28 receptors were placed along the northern and eastern boundaries of the Everglades National Park (ENP). ENP is a PSD Class I area which is located approximately 30 km from the project at its closest point. The tables below show the results of this modeling. The radius of significant impact is also shown in the first table below.

**Maximum Project Air Quality Impact for Comparison
to the PSD Class II Significant Impact Level in the Vicinity of the Facility**

Pollutant	Averaging Time	Maximum Predicted Impact (ug/m ³)	Significant Impact Level (ug/m ³)	Significant Impact?	Radius of Significant Impact (km)
NO ₂	Annual	13.6	1	YES	8

**Maximum Project Air Quality Impact in the ENP for
Comparison to the PSD Class I Significant Impact Level**

Pollutant	Averaging Time	Maximum Predicted Impact (ug/m ³)	Significant Impact?	Significant Impact Level (ug/m ³)
NO ₂	Annual	0.118	YES	0.1

As shown in the tables the maximum predicted air quality impacts due to NO_x emissions from the proposed project are greater than the PSD significant impact levels both in the vicinity of the facility and in the ENP. Therefore, the applicant was required to do full impact NO₂ modeling in the vicinity of the facility, within the applicable significant impact area, to determine the impacts of the project along with all other sources in the vicinity of the facility. The significant impact area is based upon the predicted radius of significant impact. Full impact modeling is modeling that considers not only the impact of the project but the impacts of the existing facility and other major sources, including background concentrations, located within the vicinity of the project to determine whether all increments or AAQS or predicted to be met.

5.5 Procedure For Performing PSD Increments And AAQS Analyses

For the PSD and AAQS analyses, receptor grids normally are based on the size of the significant impact area for each pollutant. The size of the significant impact areas for the required NO₂ analyses were based on a 8 km radius of significant impact.

5.6 PSD Increment Analysis

The PSD increment represents the amount that new sources in an area may increase ambient ground level concentrations of a pollutant. The results of the required PSD Class I and II increment analyses presented in the tables below show that all of the maximum predicted impacts are less than the allowable Class II increments.

PSD Class II Increment Analysis in the Vicinity of the Facility

Pollutant	Averaging Time	Maximum Predicted Impact (ug/m ³)	Impact Greater Than Allowable Increment?	Allowable Increment (ug/m ³)
NO _x	Annual	24.9	NO	25

PSD Class I Increment Analysis in the ENP

Pollutant	Averaging Time	Maximum Predicted Impact (ug/m ³)	Impact Greater Than Allowable Increment?	Allowable Increment (ug/m ³)
NO _x	Annual	0.74	NO	2.5

5.7 AAQS Analysis

The results of the AAQS analysis are summarized in the table below. As shown in this table, emissions from the proposed facility are not expected to cause or significantly contribute to a violation of any AAQS.

Ambient Air Quality Impacts

Pollutant	Averaging Time	Maximum Predicted Impact (ug/m ³)	Predicted Impact Greater Than AAQS?	AAQS (ug/m ³)
NO _x	Annual	39	NO	100

5.8 Additional Impacts Analysis

5.8.1 Impacts On Soils, Vegetation, Wildlife, and Visibility

The maximum ground-level concentrations predicted to occur due to NO_x emissions as a result of the proposed project, including all other nearby sources, will be below the associated AAQS. The AAQS are designed to protect both the public health and welfare. As such, this project is not expected to have a harmful impact on soils and vegetation in the PSD Class II area. An air quality related values (AQRV) analysis was done by the applicant for the Class I area. No significant impacts on this area are expected. A visibility analysis was done by the Department for the Class I area. This analysis showed no significant impact on visibility in this area.

5.8.2 Growth-Related Air Quality Impacts

There will be no growth associated with this project.

6 CONCLUSION

Based on the foregoing technical evaluation of the application and additional information submitted by WASD, the Department has made a preliminary determination that the proposed project will comply with all applicable state air pollution regulations provided the Department's Best Available Control Technology Determination is implemented.

Permit Engineer: Syed Arif, P.E.
Meteorologist: Cleve Holladay

PERMITTEE:

Miami-Dade Water and Sewer Department
4200 Salzedo Street
Coral Gables, Florida 33146-0316

Authorized Representative:

Robert C. Ready, P.E.
Assistant Director of Treatment Facility

FID No.	0250476
PSD No.	PSD-FL-240
SIC No.	4952
Project:	Diesel Generators
Permit No.	0250476-002-AC
Expires:	December 31, 1999

PROJECT AND LOCATION:

Permit for increasing the hours of operation for the three 2.5 megawatt diesel electric generators and four 1.2 megawatt digester gas electric generators at the Central District Wastewater Treatment Plant, Virginia Key, Miami, Dade County. UTM coordinates are Zone 17; 585.2 km E; 2848.1 km N.

STATEMENT OF BASIS:

This construction permit is issued under the provisions of Chapter 403 of the Florida Statutes (F.S.), and the Florida Administrative Code (F.A.C.) Chapters 62-4, 62-204, 62-210, 62-212, 62-290, and 62-297. The above named permittee is authorized to modify the facility in accordance with the conditions of this permit and as described in the application, approved drawings, plans, and other documents on file with the Department of Environmental Protection (Department).

Attached appendices are made a part of this permit:

Appendix BD BACT Determination
Appendix GC Construction Permit General Conditions
Appendix CSC Emission Unit(s) Common Specific Conditions

Howard L. Rhodes, Director
Division of Air Resources
Management

AIR CONSTRUCTION PERMIT 0250476-002-AC AND PSD-FL-240

SECTION I. FACILITY INFORMATION

SUBSECTION A. FACILITY DESCRIPTION

The Miami-Dade Water and Sewer Department (WASD) Central District Wastewater Treatment Plant presently consists of three nominal 2.5 Megawatt (MW) diesel engine-driven generators, designated as Units 13 and 14 and 15; four nominal 1.2 MW digester gas engine-driven generators, designated as Units 7, 9, 10 and 11; and one wastewater treatment plant, designated as Unit 8. This permit is to increase the hours of operation for the seven generators (Units 7, 9, 10, 11, 13, 14 and 15) and to limit the potential-to-emit of units 7, 9, 10 and 11.

SUBSECTION B. REGULATORY CLASSIFICATION

The Central District Wastewater Treatment is classified as a Major Source of Air Pollution or Title V Source because it emits or has the potential to emit at least 100 tons per year of nitrogen oxides (NO_x) and carbon monoxide (CO). It is also a Major Facility with respect to preconstruction review because it emits or has the potential to emit at least 250 tons per year of NO_x.

SUBSECTION C. PERMIT SCHEDULE:

- 07-24-97: Date of Receipt of Application
- 10-21-98: Application deemed complete
- 12-31-98: Intent issued
- 01-xx-99: Revised Intent issued

SUBSECTION D. RELEVANT DOCUMENTS:

The documents listed form the basis of the permit. They are specifically related to this permitting action. These documents are on file with the Department.

- Application received 7-24-97
- Department's letters dated 8-21-97, 3-9-98, and 4-15-98
- Company letters dated 3-16-98, and 10-21-98
- Technical Evaluation and Preliminary Determination dated 12-31-98
- Revised Technical Evaluation and Preliminary Determination dated 01-xx-99
- Best Available Control Technology determination (issued concurrently with permit)

AIR CONSTRUCTION PERMIT 0250476-002-AC AND PSD-FL-240

SECTION II. EMISSION UNIT(S) GENERAL REQUIREMENTS

SUBSECTION A. ADMINISTRATIVE

- A.1 Regulating Agencies: All documents related to applications for permits to operate, reports, tests, minor modifications and notifications shall be submitted to the Department of Environmental Protection, Southeast District Office located at 400 North Congress Avenue, West Palm Beach, Florida 33401, and phone number (561) 681-6600. All applications for permits to construct or modify an emission unit(s) *subject to the Prevention of Significant Deterioration (PSD)* should be submitted to the Bureau of Air Regulation (BAR), Florida Department of Environmental Protection (FDEP) located at 2600 Blairstone Road, Tallahassee, Florida 32399-2400 and phone number (850)488-0114.
- A.2 General Conditions: The owner and operator is subject to and shall operate under the attached General Permit Conditions G.1 through G.15 listed in *Appendix GC* of this permit. General Permit Conditions are binding and enforceable pursuant to Chapter 403 of the Florida Statutes. [Rule 62-4.160, F.A.C.]
- A.3 Emission Unit(s) Common Specific Conditions: The owner and operator is subject to and shall operate under the attached Emission Unit(s) Common Specific Conditions listed in *Appendix CSC* of this permit. The Emission Unit(s) Common Specific Conditions are binding and enforceable pursuant to Chapters 62-204 through 62-297 of the Florida Administrative Code.
- A.4 Terminology: The terms used in this permit have specific meanings as defined in the corresponding chapters of the Florida Administrative Code.
- A.5 Forms and Application Procedures: The permittee shall use the applicable forms listed in Rule 62-210.900, F.A.C. and follow the application procedures in Chapter 62-4, F.A.C. [Rule 62-210.900, F.A.C.]
- A.6 Expiration: This air construction permit shall expire on **December 31, 1999**. [Rule 62-210.300(1), F.A.C.]. The permittee may, for good cause, request that this construction permit be extended. Such a request shall be submitted to the Bureau of Air Regulation prior to 60 days before the expiration of the permit. However, the permittee shall promptly notify the permitting authority office of any delays in completion of the project which would affect the startup day by more than 90 days. [Rule 62-4.090, F.A.C.]
- A.7 Applicable Regulations: The facility is subject to the following regulations: Florida Administrative Code Chapters 62-4; 62-103; 62-204; 62-210; 62-212; 62-296, and 62-297. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements or regulations. [Rule 62-210.300, F.A.C.]

AIR CONSTRUCTION PERMIT 0250476-002-AC AND PSD-FL-240

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

SUBSECTION A. LISTING OF EMISSIONS UNITS

This permit addresses the following emission units.

EMISSIONS UNIT NO.	SYSTEM	EMISSIONS UNITS DESCRIPTION
007	Power	1.2 MW Digester Gas Electric Generator
009	Power	1.2 MW Digester Gas Electric Generator
010	Power	1.2 MW Digester Gas Electric Generator
011	Power	1.2 MW Digester Gas Electric Generator
013	Power	2.5 MW Diesel Electric Generator
014	Power	2.5 MW Diesel Electric Generator
015	Power	2.5 MW Diesel Electric Generator

SUBSECTION B. SPECIFIC CONDITIONS (UNITS 013, 014 AND 015):

The following Specific Conditions apply to the following emission unit:

EMISSION UNIT NO.	SYSTEM	EMISSION UNIT DESCRIPTION
013	Power	2.5 MW Diesel Electric Generator
014	Power	2.5 MW Diesel Electric Generator
015	Power	2.5 MW Diesel Electric Generator

EMISSION LIMITATIONS

- B.1 The maximum allowable emission rates for NO_x for Units No. 013, 014 and 015 shall not exceed 58 pounds per hour (lb/hr) each and 267 tons per year (TPY) combined pursuant to the Best Available Control Technology (BACT) Determination. [Rule 62-212.400(6), F.A.C.]
- B.2 Visible emissions shall be less than 20% opacity. [Rule 62-296.320, F.A.C.]
- B.3 In order to minimize excess emissions during startup/shutdown/malfunction this emission unit shall adhere to best operational practices. [Rule 62-210.700, F.A.C.]

OPERATIONAL LIMITATIONS

- B.4 The emission unit is allowed to operate continuously (8760 hours/year) at reduced load. [Rule 62-210.200, F.A.C., Definitions: Potential-to-Emit].
- B.5 Only No. 2 fuel oil can be fired in the diesel generator. The maximum sulfur content of the No. 2 fuel oil shall not exceed 0.05 percent, by weight. [Rule 62-210.200, F.A.C., Definitions: Potential-to-Emit].
- B.6 The combined maximum heat input rate to Units No. 013, 014 and 015 shall not exceed 81 million Btu per hour (MMBtu/hr) at 100 percent load. [Rule 62-210.200, F.A.C., Definitions: Potential-to-Emit].

AIR CONSTRUCTION PERMIT 0250476-002-AC AND PSD-FL-240

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

- B.7 The maximum No. 2 fuel oil consumption allowed to be burned in Units No. 013, 014 and 015 is 1,800,000 gallons per year, which is equivalent to 3056 hours per year of operation at full load for each unit. [Rule 62-210.200, F.A.C., Definitions: Potential-to-Emit]

TEST METHODS AND PROCEDURES

- B.8 Compliance with the allowable emission limiting standards for NO_x in B.1 shall be determined by using EPA Reference Method 7 (or equivalent) as described in 40 CFR 60, Appendix A (1996, version) adopted by reference in Rule 62-204.800, F.A.C. [Rule 62-297.401, F.A.C.]
- B.9 The fuel shall be monitored for the sulfur content using ASTM D4294 Method (or equivalent), or by maintaining records of fuel sulfur content certifications, as provided by the fuel supplier. [Rule 62-297.440, F.A.C.]
- B.10 The permittee shall maintain daily records of fuel oil consumption for the emission unit. [Rule 62-210.200, F.A.C.]
- B.11 Compliance with the visible emission standard shall be demonstrated with EPA Reference Method 9 as described in 40 CFR 60, Appendix A (1996, version) adopted by reference in Rule 62-204.800, F.A.C. [Rule 62-297.401, F.A.C.]

RECORDKEEPING AND REPORTING REQUIREMENTS

- B.12 All measurements, records, and other data required to be maintained by this facility shall be retained for at least five (5) years following the data on which such measurements, records, or data are recorded. These data shall be made available to the Department upon request. [Rule 62-4.070(3), F.A.C.]
- B.13 Two copies of the results of the emission tests for the pollutant listed in Condition B.1 for Units No. 13, 14 and 15 shall be submitted within forty-five days of the last sampling run to the Southeast District office in West Palm Beach. All reports shall be in a format consistent with and shall include the information in accordance with Rule 62-297.310 (8), F.A.C. [Rule 62-297.310(8), F.A.C.]

AIR CONSTRUCTION PERMIT 0250476-002-AC AND PSD-FL-240

SECTION III. EMISSION UNIT(S) SPECIFIC CONDITIONS

SUBSECTION C. SPECIFIC CONDITIONS (UNITS 007, 009, 010 AND 011)

The following Specific Conditions apply to the following emission units:

EMISSIONS UNIT No.	SYSTEM	EMISSIONS UNITS DESCRIPTION
007	Power	1.2 MW Digester Gas Electric Generator
009	Power	1.2 MW Digester Gas Electric Generator
010	Power	1.2 MW Digester Gas Electric Generator
011	Power	1.2 MW Digester Gas Electric Generator

EMISSION LIMITATIONS

- C.1 The maximum allowable emission rates for NO_x for Units No. 007, 009, 010 and 011 shall not exceed 7.6 pounds per hour (lb/hr) each and 133 tons per year (TPY) combined. [Rule 62-210.200, F.A.C., Definitions: Potential-to-Emit.]
- C.2 Visible emissions shall be less than 20% opacity. [Rule 62-296.320, F.A.C.]
- C.3 In order to minimize excess emissions during startup/shutdown/malfunction this emission unit shall adhere to best operational practices. [Rule 62-210.700, F.A.C.]

OPERATIONAL LIMITATIONS

- C.4 The existing Units No. 007, 009, 010 and 011 are allowed to operate continuously (8760 hours per year). [Rule 62-210.200, F.A.C., Definitions: Potential-to-Emit]
- C.5 Only digester gas can be fired in the diesel generators 007, 009, 010 and 011. The maximum annual usage rate of the digester gas shall be 656,000,000 cubic feet. [Rule 62-210.200, F.A.C., Definitions: Potential-to-Emit]

TEST METHODS AND COMPLIANCE PROCEDURES

- C.6 Compliance with the allowable emission limiting standards for NO_x in C.1 shall be determined by using EPA Reference Method 7 (or equivalent) as described in 40 CFR 60, Appendix A (1996, version) adopted by reference in Rule 62-204.800, F.A.C. [Rule 62-297.401, F.A.C.]
- C.7 Compliance with the visible emission standard shall be demonstrated with EPA Reference Method 9 as described in 40 CFR 60, Appendix A (1996, version) adopted by reference in 62-204.800, F.A.C. [Rule 62-297.310, F.A.C.]

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

Central District Wastewater Treatment Plant
Miami-Dade Water and Sewer Department
PSD-FL-240 and 0250476-002-AC
Miami, Dade County

The Miami-Dade Water and Sewer Department (WASD) plans to increase the hours of operation of its three existing standby Diesel Engine Generators at Central District Wastewater Treatment Plant (WWTP) in Miami, Dade County. The units are Electro-Motive Diesel generator model 20-645E4 with a nominal base load rating of 2.5 megawatts (MW) each. The units will be fired with No. 2 fuel oil with a sulfur content of 0.05 percent or less, by weight, and a fuel oil consumption limit of 1.800 million gallons per year. The facility additionally consists of four (4) digester gas engine generators used for peaking power. These units are each rated at 1.2 MW burning digester gas. The facility also has two parallel wastewater treatment trains.

WASD has indicated that the maximum annual air pollutant emission rates in tons per year for the three diesel generators, based on consumption of 1.800 million gallons of No. 2 fuel oil, with a maximum sulfur content of 0.05 percent, by weight, will be:

Pollutant	PSD Significance Levels ¹	Maximum Emissions	Subject to PSD Review?
NO _x	40	267 ²	Yes
CO	100	37.7 ³	No
PM/PM ₁₀	25/15	9.8 ⁴	No
SO ₂	40	9.6 ⁵	No
VOC	40	14.7 ⁶	No

¹ Florida Administrative Code 212.400-2

² Maximum emissions based on operation at 3,056 hours per year at full load while firing No. 2 fuel oil (0.05% sulfur by weight).

³ Maximum emissions based on continuous operation at 25 percent load while firing No. 2 fuel oil (0.05% sulfur by weight).

⁴ Maximum emissions based on operation at 8,590 hours per year at 50 percent load while firing No. 2 fuel oil (0.05% sulfur by weight).

⁵ Maximum emissions based on operation at 8,590 hours per year at 50 percent load while firing No. 2 fuel oil (0.05% by weight).

⁶ Maximum emissions based on operation at 8,590 hours per year at 50 percent load while firing No. 2 fuel oil (0.05% by weight).

Following is the BACT determination proposed by the applicant:

BACT DETERMINATION REQUESTED BY THE APPLICANT:

POLLUTANT	EMISSION LIMIT
Nitrogen Oxides	58 lbs/hr each by timing retardation and aftercoolers

The Central District Wastewater Treatment Plant is a major source of air pollution or Title V source. Because emissions of nitrogen oxides are greater than 250 tons per year, it is a major facility with respect to the Prevention of Significant Deterioration (Rule 62-212.400). Because the project will result in a significant increase in nitrogen

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

oxides emissions per Table 62-212.400-2, F.A.C., "Regulated Air Pollutants - Significant Emissions Rates," a BACT determination is required pursuant to Rule 62-212.410, F.A.C.

DATE OF RECEIPT OF A BACT APPLICATION:

July 24, 1997

REVIEW GROUP MEMBER:

Syed Arif, P.E., prepared BACT

BACT DETERMINATION PROCEDURE:

In accordance with Chapter 62-212, F.A.C., this BACT determination is based on the maximum degree of reduction of each pollutant emitted which the Department of Environmental Protection (Department), on a case by case basis, taking into account energy, environmental and economic impacts, and other costs, determines is achievable through application of production processes and available methods, systems, and techniques. In addition, the regulations state that, in making the BACT determination, the Department shall give consideration to:

- Any Environmental Protection Agency determination of BACT pursuant to Section 169, and any emission limitation contained in 40 CFR Part 60 - Standards of Performance for New Stationary Sources or 40 CFR Part 61 - National Emission Standards for Hazardous Air Pollutants.
- All scientific, engineering, and technical material and other information available to the Department.
- The emission limiting standards or BACT determination of any other state.
- The social and economic impact of the application of such technology.

The EPA currently stresses that BACT should be determined using the "top-down" approach. The first step in this approach is to determine, for the emission unit in question, the most stringent control available for a similar or identical emission unit or emission unit category. If it is shown that this level of control is technically or economically unfeasible for the emission unit in question, then the next most stringent level of control is determined and similarly evaluated. This process continues until the BACT level under consideration cannot be eliminated by any substantial or unique technical, environmental, or economic objections.

The air pollutant emissions from this facility can be grouped into categories based upon the control equipment and techniques that are available to control emissions from these emission units. Using this approach, the emissions can be classified as follows:

- **Combustion Products** (e.g., SO₂, NO_x, PM). Controlled generally by good combustion of clean fuels, removal in add-on control equipment.
- **Products of Incomplete Combustion** (e.g., CO, VOC). Control is largely achieved by proper combustion techniques.

Grouping the pollutants in this manner facilitates the BACT analysis because it enables the equipment available to control the type or group of pollutants emitted and the corresponding energy, economic, and environmental impacts to be examined on a common basis. Although all of the pollutants addressed in the BACT analysis may be subject to a specific emission limiting standard as a result of PSD review, the control of "non-regulated" air pollutants is

APPENDIX BD

BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

considered in imposing a more stringent BACT limit on a "regulated" pollutant (i.e., PM, SO₂, H₂SO₄, fluorides, etc.), if a reduction in "non-regulated" air pollutants can be directly attributed to the control device selected as BACT for the abatement of the "regulated" pollutants.

BACT POLLUTANT ANALYSIS

NITROGEN OXIDES (NO_x)

Oxides of nitrogen (NO_x) are generated during fuel combustion by oxidation of chemically bound nitrogen in the fuel (fuel NO_x) and by thermal fixation of nitrogen in the combustion air (thermal NO_x). As flame temperature increases, the amount of thermally generated NO_x increases. Fuel type affects the quantity and type of NO_x generated. Generally, natural gas is low in nitrogen. However it causes higher flame temperatures and generates more thermal NO_x than oil or coal, which have higher fuel nitrogen content, but exhibit lower flame temperatures.

NO_x emissions represent a significant portion of the total emissions generated by this project, and must be minimized using BACT. A review of EPA BACT/LAER Clearinghouse (BACT Clearinghouse) information indicates that NO_x emissions at most small facilities are minimized by process control and good combustion practices.

In a diesel engine, injection of fuel into the cylinder starts the combustion process. Retarding the timing of fuel injection until the piston is in its downward motion increases the volume of the combustion chamber, which reduces combustion temperature and pressure, subsequently reducing the formation of NO_x. However, fuel injection timing retardation (IR) generally increases black smoke and cold smoke (white smoke during start up) emissions, as well as increasing exhaust temperatures. The increase in exhaust temperatures affect turbocharger performance and may be detrimental to exhaust valve life. A small increase in fuel consumption (2 percent) and a significant increase in particulate emissions (25 percent) usually result from the application of IR alone to diesel engines. To counteract this problem, it has been demonstrated that the installation of a device to cool the combustion air upstream of the cylinder alleviates most of the negative side effects of IR.

In large bore diesel engines equipped with a turbocharger, the combustion air pre-cooler consists of a heat exchanger, located downstream of the turbocharger, and is typically referred to as an after-cooler. Cooler air box temperatures reduce bulk combustion temperature, which reduces NO_x formation. Because cooler air is denser, the cylinders are charged with a greater mass of air that generally helps reduce emissions of unburned hydrocarbons, carbon monoxide, and particulate matter. Manufacturer's test results have shown that installation of four-pass aftercoolers piped to the engine's cooling system reduce uncontrolled emissions of NO_x and PM₁₀ by up to 10 percent while slightly lowering fuel consumption (0.5 to 1 percent). Tests have also shown that combining a 4-degree IR with the installation of a four pass aftercooler will reduce NO_x emissions by 28 percent and PM₁₀ emissions by 7 percent with a slight decrease in fuel consumption.

The applicant has proposed modification of the combustion process through a combination of fuel injection timing retardation and cooling of combustion air resulting in exhaust temperature reduction. The design specific to WASD's 20-645E4 includes a 4° injection timing retardation and a 4-pass aftercooler circuit. The combination of retarded injection timing and lowered combustion air temperature results in less NO_x formation. **This combination of NO_x controls, proper engine design, good combustion practices, and the use of low sulfur fuel should provide effective emissions control.**

BACT DETERMINATION BY DEP:

Based on the information provided by the applicant and the information searches conducted by the Department, lower emissions limits can be obtained employing the top-down BACT approach for NO_x.

APPENDIX BD

BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

NO_x DETERMINATION

The top-down BACT approach for diesel fired internal combustion engines listed in order from most stringent control to least:

1. Selective Catalytic Reduction (SCR)
2. Combined technologies of injection timing retardation, turbocharger with aftercoolers
3. Good combustion design/practices

The following table summarizes the feasibility of using these control technologies with the EMD 20-645E4 as designed for installation in WASD's Central District Wastewater Treatment Plant.

Control Technology	Emission Reduction (%)	Technically Feasible	Cost per ton (\$)	Adverse Environ. Impacts	Adverse Energy Impacts
SCR with ammonia	75-95	No	3,800	Yes	N/A
SCR with urea	80	No	N/A	N/A	N/A
Timing retard; turbo charger, aftercoolers	28	Yes	31	No	0.3%
Dry/Low NO _x	18	No	N/A	N/A	N/A

SCR is more widely used in Japan and Germany than it is in the United States and the technology is being improved such that the hazards and costs have been reduced. It remains, however, a costly technology for small applications and has potential hazards associated with the use and storage of ammonia. SCR is not generally used with diesel engines of this size. The BACT/LAER database lists only a single facility which uses SCR on diesel engines. SCR was selected in that instance because a local ordinance mandated strict limits on emissions without regards to cost. SCR is not technically feasible for this diesel engine because the exhaust temperatures will be below 550°F up to 50 percent of the time. In order for SCR technology to achieve effective reduction of NO_x, the catalyst temperature must be at least 550°F.

For NO_x emissions, the Department accepts the applicants proposed use of injection timing retardation and cooling of combustion air as BACT for this project.

The BACT emission levels established by the Department are as follows:

POLLUTANT	EMISSION LIMIT
Nitrogen Oxides (NO _x)	58 lbs/hr each (267 TPY combined)

COMPLIANCE

Compliance with the NO_x limitations shall be in accordance with the EPA Reference Method 7 or equivalent as contained in 40 CFR 60, Appendix A.

APPENDIX BD
BEST AVAILABLE CONTROL TECHNOLOGY DETERMINATION (BACT)

DETAILS OF THE ANALYSIS MAY BE OBTAINED BY CONTACTING:

Syed Arif, P.E.
Department of Environmental Protection
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Recommended By:

Approved By:

C. H. Fancy, P.E., Chief
Bureau of Air Regulation

Howard L. Rhodes, Director
Division of Air Resources Management

Date:

Date:

APPENDIX GC
GENERAL PERMIT CONDITIONS [F.A.C. 62-4.160]

- G.1 The terms, conditions, requirements, limitations, and restrictions set forth in this permit are "Permit Conditions" and are binding and enforceable pursuant to Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of these conditions.
- G.2 This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings or exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.
- G.3 As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey and vested rights or any exclusive privileges. Neither does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit is not a waiver or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.
- G.4 This permit conveys no title to land or water, does not constitute State recognition or acknowledgment of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the State. Only the Trustees of the Internal Improvement Trust Fund may express State opinion as to title.
- G.5 This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, or plant life, or property caused by the construction or operation of this permitted source, or from penalties therefore; nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.
- G.6 The permittee shall properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.
- G.7 The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law and at a reasonable time, access to the premises, where the permitted activity is located or conducted to:
- (a) Have access to and copy and records that must be kept under the conditions of the permit;
 - (b) Inspect the facility, equipment, practices, or operations regulated or required under this permit, and,
 - (c) Sample or monitor any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

- G.8 If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately provide the Department with the following information:
- (a) A description of and cause of non-compliance; and
 - (b) The period of noncompliance, including dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

APPENDIX GC
GENERAL PERMIT CONDITIONS [F.A.C. 62-4.160]

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or for revocation of this permit.

- G.9 In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source which are submitted to the Department may be used by the Department as evidence in any enforcement case involving the permitted source arising under the Florida Statutes or Department rules, except where such use is prescribed by Sections 403.73 and 403.111, Florida Statutes. Such evidence shall only be used to the extent it is consistent with the Florida Rules of Civil Procedure and appropriate evidentiary rules.
- G.10 The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided, however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.
- G.11 This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 62-4.120 and 62-730.300, F.A.C., as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.
- G.12 This permit or a copy thereof shall be kept at the work site of the permitted activity.
- G.13 This permit also constitutes:
- (a) Determination of Best Available Control Technology (X)
 - (b) Determination of Prevention of Significant Deterioration (X); and
 - (c) Compliance with New Source Performance Standards ().
- G.14 The permittee shall comply with the following:
- (a) Upon request, the permittee shall furnish all records and plans required under Department rules. During enforcement actions, the retention period for all records will be extended automatically unless otherwise stipulated by the Department.
 - (b) The permittee shall hold at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation) required by the permit, copies of all reports required by this permit, and records of all data used to complete the application or this permit. These materials shall be retained at least three years from the date of the sample, measurement, report, or application unless otherwise specified by Department rule.
 - (c) Records of monitoring information shall include:
 - 1. The date, exact place, and time of sampling or measurements;
 - 2. The person responsible for performing the sampling or measurements;
 - 3. The dates analyses were performed;
 - 4. The person responsible for performing the analyses;
 - 5. The analytical techniques or methods used; and
 - 6. The results of such analyses.
- G.15 When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be corrected promptly.

APPENDIX CSC

EMISSION UNIT(S) COMMON SPECIFIC CONDITIONS

SUBSECTION 1.0 CONSTRUCTION REQUIREMENTS

- 1.1 Applicable Regulations: Unless otherwise indicated in this permit, the construction and operation of the subject emission unit(s) shall be in accordance with the capacities and specifications stated in the application. The facility is subject to all applicable provisions of Chapter 403, F.S and Florida Administrative Code Chapters 62-4, 62-103, 62-204, 62-210, 62-212, 62-213, 62-296, 62-297; and the applicable requirements of the Code of Federal Regulations Section 40, Part 60, adopted by reference in the Florida Administrative Code regulation [Rule 62-204.800, F.A.C.]. Issuance of this permit does not relieve the facility owner or operator from compliance with any applicable federal, state, or local permitting requirements or regulations. [Rule 62-210.300, F.A.C.]

SUBSECTION 2.0 EMISSION LIMITING STANDARDS

- 2.1 General Particulate Emission Limiting Standards. General Visible Emissions Standard: Except for emissions units that are subject to a particulate matter or opacity limit set forth or established by rule and reflected by conditions in this permit, no person shall cause, let, permit, suffer, or allow to be discharged into the atmosphere the emissions of air pollutants from any activity, the density of which is equal to or greater than that designated as Number 1 on the Ringelmann Chart (20% opacity). [Rule 62-296-320(4)(b)1, F.A.C.]
- 2.2 Unconfined Emissions of Particulate Matter [Rule 62-296.320(4)(c), F.A.C.]
- (a) The owner or operators shall not cause, let, permit, suffer or allow the emissions of unconfined particulate matter from any source whatsoever, including, but not limited to, vehicular movement, transportation of materials, construction, alteration, demolition or wrecking, or industrially related activities such as loading, unloading, storing or handling, without taking reasonable precautions to prevent such emission.
- (b) Any permit issued to a facility with emissions of unconfined particulate matter shall specify the reasonable precautions to be taken by that facility to control the emissions of unconfined particulate matter.
- (c) Reasonable precautions include the following:
- Paving and maintenance of roads, parking areas and yards.
 - Application of water or chemicals to control emissions from such activities as demolition of buildings, grading roads, construction, and land clearing.
 - Application of asphalt, water, oil, chemicals or other dust suppressants to unpaved roads, yards, open stock piles and similar activities.
 - Removal of particulate matter from roads and other paved areas under the control of the owner or operator of the facility to prevent reentrainment, and from buildings or work areas to prevent particulate from becoming airborne.
 - Landscaping or planting of vegetation.
 - Use of hoods, fans, filters, and similar equipment to contain, capture and/or vent particulate matter.

APPENDIX CSC

EMISSION UNIT(S) COMMON SPECIFIC CONDITIONS

- Confining abrasive blasting where possible.
- Enclosure or covering of conveyor systems.

NOTE: Facilities that cause frequent, valid complaints may be required by the Permitting Authority to take these or other reasonable precautions. In determining what constitutes reasonable precautions for a particular source, the Department shall consider the cost of the control technique or work practice, the environmental impacts of the technique or practice, and the degree of reduction of emissions expected from a particular technique or practice.

2.3 General Pollutant Emission Limiting Standards: [Rule 62-296.320, F.A.C.]

- (a) The owner or operator shall not store, pump, handle, process, load, unload or use in any process or installation, volatile organic compounds or organic solvents without applying known and existing vapor emission control devices or systems.
- (b) No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor.

NOTE: An objectionable odor is defined as any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance. [F.A.C. 62-210.200(198)]

SUBSECTION 3.0 OPERATION AND MAINTENANCE

- 3.1 Changes/Modifications: The owner or operator shall submit to the Permitting Authority(s), for review any changes in, or modifications to: the method of operation; process or pollution control equipment; increase in hours of operation; equipment capacities; or any change which would result in an increase in potential/actual emissions. Depending on the size and scope of the modification, it may be necessary to submit an application for, and obtain, an air construction permit prior to making the desired change. *Routine maintenance of equipment will not constitute a modification of this permit.* [Rule 62-4.030, 62-210.300 and 62-4.070(3), F.A.C.]
- 3.2 Plant Operation - Problems: If temporarily unable to comply with any of the conditions of the permit due to breakdown of equipment or destruction by fire, wind or other cause, the owner or operator shall notify the Permitting Authority as soon as possible, but at least within (1) working day, excluding weekends and holidays. The notification shall include: pertinent information as to the cause of the problem; the steps being taken to correct the problem and prevent future recurrence; and where applicable, the owner's intent toward reconstruction of destroyed facilities. Such notification does not release the permittee from any liability for failure to comply with the conditions of this permit and the regulations. [Rule 62-4.130, F.A.C.]

APPENDIX CSC

EMISSION UNIT(S) COMMON SPECIFIC CONDITIONS

- 3.3 Circumvention: The owner or operator shall not circumvent the air pollution control equipment or allow the emission of air pollutants without this equipment operating properly. [Rules 62-210.650, F.A.C.]
- 3.4 Excess Emissions Requirements [Rule 62-210.700, F.A.C.]
- (a) Excess emissions resulting from start-up, shutdown or malfunction of these emissions units shall be permitted providing (1) best operational practices to minimize emissions are adhered to and (2) the duration of excess emissions shall be minimized, but in no case exceed two hours in any 24 hour period unless specifically authorized by the Permitting Authority office for longer duration. [Rule 62-210.700(1), F.A.C.]
 - (b) Excess emissions that are caused entirely or in part by poor maintenance, poor operation, or any other equipment or process failure that may reasonably be prevented during start-up, shutdown, or malfunction shall be prohibited. [Rule 62-210.700(4), F.A.C.]
 - (c) In case of excess emissions resulting from malfunctions, the owner or operator shall notify Permitting Authority within one (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the problem; and the corrective actions being taken to prevent recurrence. [Rule 62-210.700(6), F.A.C.]
- 3.5 Operating Procedures: Operating procedures shall include good operating practices and proper training of all operators and supervisors. The good operating practices shall meet the guidelines and procedures as established by the equipment manufacturers. All operators (including supervisors) of air pollution control devices shall be properly trained in plant specific equipment. [Rule 62-4.070(3), F.A.C.]

SUBSECTION 4.0 MONITORING OF OPERATIONS

- 4.1 Determination of Process Variables
- (a) The permittee shall operate and maintain equipment and/or instruments necessary to determine process variables, such as process weight input or heat input, when such data is needed in conjunction with emissions data to determine the compliance of the emissions unit with applicable emission limiting standards.
 - (b) Equipment and/or instruments used to directly or indirectly determine such process variables, including devices such as belt scales, weigh hoppers, flow meters, and tank scales, shall be calibrated and adjusted to indicate the true value of the parameter being measured with sufficient accuracy to allow the applicable process variable to be determined within 10% of its true value. [Rule 62-297.310(5), F.A.C.]

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EMISSION UNIT(S) COMMON SPECIFIC CONDITIONS

SUBSECTION 5.0 TEST REQUIREMENTS

- 5.1 Test Performance Within 60 days after achieving the maximum production rate at which these emission units will be operated, but not later than 180 days after initial startup and annually thereafter, the owner or operator of this facility shall conduct performance test(s) pursuant to 40 CFR 60.8, Subpart A, General Provisions and 40 CFR 60, Appendix A. No other test method shall be used unless approval from the Department has been received in writing. Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emission unit(s) operating at permitted capacity pursuant to Rule 62-297.310(2), F.A.C. [Rules 62-204.800, 62-297.310, 62-297.400, 62-297.401, F.A.C.]
- 5.2 Test Procedures shall meet all applicable requirements of the Florida Administrative Code Chapter 62-297. [Rule 62-297.310, F.A.C.]
- 5.3 Test Notification: The owner or operator shall notify the Permitting Authority in writing at least (30) days (initial) and 15 days (annual) prior to each scheduled compliance test to allow witnessing. The notification shall include the compliance test date, place of such test, the expected test time, the facility contact person for the test, and the person or company conducting the test. The (30) or (15) day notification requirement may be waived at the discretion of the Department. Likewise, if circumstances prevent testing during the test window specified for the emission unit, the owner or operator may request an alternate test date before the expiration of this window. [Rule 62-297.310 and 40 CFR 60.8, F.A.C.]
- 5.4 Special Compliance Tests: When the Department, after investigation, has good reason (such as complaints, increased visible emissions or questionable maintenance of control equipment) to believe that any applicable emission standard contained in Rule 62-204, 62-210, 62-212, 62-296 and 62-297, F.A.C. or in a permit issued pursuant to those rules is being violated, it may require the owner or operator of the facility to conduct compliance tests which identify the nature and quantity of pollutant emissions from the emissions units and to provide a report on the results of said tests to the Permitting Authority. [Rule 62-297.310(7)(b), F.A.C.]
- 5.5 Stack Testing Facilities: The owner or operator shall install stack testing facilities in accordance with Rule 62-297.310(6), F.A.C..
- 5.6 Exceptions and Approval of Alternate Procedures and Requirements: An Alternate Sampling Procedure (ASP) may be requested from the Bureau of Air Monitoring and Mobile Sources of the Florida Department of Environmental Protection in accordance with the procedures specified in Rule 62-297.620, F.A.C.
- 5.7 Operating Rate During Testing: Unless otherwise stated in the applicable emission limiting standard rule, testing of emissions shall be conducted with the emissions unit operation at permitted capacity. Permitted capacity is defined as 90 to 100 percent of the maximum operation rate allowed by the permit. If it is impracticable to test at permitted capacity, an

APPENDIX CSC

EMISSION UNIT(S) COMMON SPECIFIC CONDITIONS

emissions unit may be tested at less than the minimum permitted capacity; in this case, subsequent emissions unit operation is limited to 110 percent of the test load until a new test is conducted. Once the unit is so limited, operation at higher capacities is allowed for no more than 15 consecutive days for the purpose of additional compliance testing to regain the authority to operate at the permitted capacity. [Rule 62-297.310(2) and (3), F.A.C.]

SUBSECTION 6.0 REPORTS AND RECORDS

- 6.1 Duration: All reports and records required by this permit shall be kept for at least (5) years from the date the information was recorded. [Rule 62-4.160(14)(b), F.A.C.]
- 6.2 Emission Compliance Stack Test Reports:
- (a) A *test report* indicating the results of the required compliance tests shall be filed with the Permitting Authority as soon as practical, but no later than 45 days after the last sampling run is completed. [Rule 62-297.310(8), F.A.C.]
 - (b) The *test report* shall provide sufficient detail on the tested emission unit and the procedures used to allow the Department to determine if the test was properly conducted and if the test results were properly computed. At a minimum, the test report shall provide the applicable information listed in **Rule 62-297.310(8), F.A.C.**
- 6.3 Excess Emissions Report: If excess emissions occur, the owner or operator shall notify the Permitting Authority within (1) working day of: the nature, extent, and duration of the excess emissions; the cause of the excess emissions; and the actions taken to correct the problem. In addition, the Department may request a written summary report of the incident. Pursuant to the New Source Performance Standards, excess emissions shall also be reported in accordance with 40 CFR 60.7, Subpart A. [Rules 62-4.130 and 62-210.700(6), F.A.C.]
- 6.4 Annual Operating Report for Air Pollutant Emitting Facility: Before March 1st of each year, the owner or operator shall submit to the Permitting Authority this required report [DEP Form No. 62-210.900(5)], which summarizes operations for the previous calendar year. [Rule 62-210.370(3), F.A.C.]

SUBSECTION 7.0 OTHER REQUIREMENTS

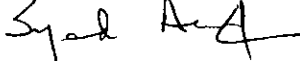
- 7.1 Waste Disposal: The owner or operator shall treat, store, and dispose of all liquid, solid, and hazardous wastes in accordance with all applicable Federal, State, and Local regulations. This air pollution permit does not preclude the permittee from securing any other types of required permits, licenses, or certifications.

Memorandum

Florida Department of Environmental Protection

TO: Clair Fancy

THRU: Al Linero

FROM: Syed Arif 

DATE: January 28, 1999

SUBJECT: Miami-Dade Water and Sewer Department / Central District
Wastewater Treatment Plant / 0250476-002-AC (PSD-FL-240)

Attached is a revised Public Notice package for increasing the hours of operation of three existing 2.5 MW each diesel electric generators and four 1.2 MW each digester gas electric generators at the above referenced facility. The revision incorporates a slight increase in NO_x emissions (5.3 to 7.6 lb/hr) from the four digester gas generators and a decrease in NO_x emissions (375 to 267 TPY) from the three diesel generators.

The only pollutant that underwent PSD review was NO_x. The diesel generator will be fired with No. 2 fuel oil with a sulfur content of 0.05 percent or less, by weight. The NO_x controls will be timing retardation and turbocharger aftercoolers.

Additionally, the hourly and annual emissions of NO_x for the four digester gas generators (1.2 MW ea.) will be reduced to a level more appropriate for clean burn engines.

I recommend your approval and signature.

SA

Attachments