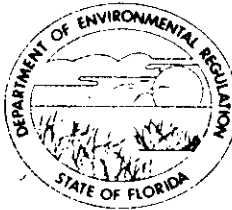


STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM
GOVERNOR

VICTORIA J. TSCHINKEL
SECRETARY

August 24, 1982

Mr. P. A. Korelich, Chief Engineer
Utilities Commission, City of New
Smyrna Beach
Post Office Box 519
New Smyrna Beach, Florida 32069

Dear Mr. Korelich:

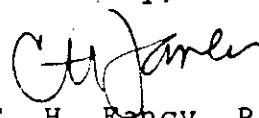
RE: Preliminary Determination - New Smyrna Beach Utilities
Commission, Swoope Units 3 and 4, State AC 64-57578 and
AC 64-57580, Federal PSD-FL-089

The Florida Department of Environmental Regulation, under the authority delegated by the U.S. Environmental Protection Agency, Region IV, has reviewed your application to modify the referenced sources under the provisions of the Prevention of Significant Deterioration Regulations (40 CFR 52.21) and has made a preliminary determination of approval with conditions. Please find enclosed two copies of the Preliminary Determination.

A copy of the Preliminary Determination and your application will be open to public review and comment for a period of 30 days. The public can also request a public hearing to review and discuss specific issues. At the end of this period, the Department will evaluate the comments received and make a final determination regarding the proposed construction.

Should you have questions regarding this information, please contact Mr. Bill Thomas at (904) 488-1344.

Sincerely,


C. H. Fancy, P.E.
Deputy Chief
Bureau of Air Quality
Management

CHF/pa

Enclosure

DEPARTMENT OF ENVIRONMENTAL REGULATION

ROUTING AND TRANSMITTAL SLIP

ACTION NO.

ACTION DUE DATE

1. TO: (NAME, OFFICE, LOCATION)

~~Bill Thomas~~ BT

INITIAL

DATE

2.

Clair Faney

INITIAL

DATE

3.

INITIAL

DATE

4.

INITIAL

DATE

REMARKS:

1. Attached is the Preliminary Determination for City of New Smyrna Beach.

2. It needs to be out today. (55 days will be 8/22)

INFORMATION

REVIEW & RETURN

REVIEW & FILE

INITIAL & FORWARD

DISPOSITION

REVIEW & RESPOND

PREPARE RESPONSE

FOR MY SIGNATURE

FOR YOUR SIGNATURE

LET'S DISCUSS

SET UP MEETING

INVESTIGATE & REPLY

INITIAL & FORWARD

DISTRIBUTE

CONCURRENCE

FOR PROCESSING

INITIAL & RETURN

FROM:

Bob King

DATE

8/20/82

PHONE

Technical Evaluation
and
Preliminary Determination

Utilities Commission
City of New Smyrna Beach
Volusia County, Florida
Swoope Units 3 and 4, Gas Diesel

Permit Numbers

State: AC 64-57578
AC 64-57580
Federal: PSD-FL-089

Florida Department of Environmental Regulation
Bureau of Air Quality Management
Central Air Permitting

August 10, 1982

Public Notice

A modification to an existing air pollution source is being proposed by the City of New Smyrna Beach, Volusia County, Florida. The proposed modification is the construction of two gas diesel units, Swoope #3 and #4, with generating capacities of 2050 KW and 2275 KW, respectively. The modification will increase emissions of air pollutants, in tons per year, by the following amounts.

<u>PM</u>	<u>SO₂</u>	<u>NO_x</u>	<u>CO</u>	<u>VOC</u>
2	4	535	87	42

The proposed modification has been reviewed by the Florida Department of Environmental Regulation under Chapter 403, Florida Statutes, and, Federal regulation 40 CFR 52.21, Prevention of Significant Deterioration (PSD). The Department has made a preliminary determination that the construction can be approved provided certain conditions are met. A summary of the basis for the determination and the application for State and Federal permits submitted by the City of New Smyrna Beach are available for public review at the following offices:

Brannon Memorial Library
105 Riverside Drive
New Smyrna Beach, Florida 32069

Bureau of Air Quality Management
Dept. of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301

St. Johns River District
3319 Maguire Drive
Suite 232
Orlando, Florida 32803

No allowable PSD increments for PM or SO₂ are consumed by the proposed modification.

Any person may submit written comments regarding the proposed modification. All comments, postmarked not later than 30 days from the date of this notice, will be considered in making a final determination regarding approval for construction of this source. Those comments will be made available for public review on request. Furthermore, a public hearing can be requested by any person. Such request should be submitted within 15 days of the date of this notice. Letters should be addressed to:

Mr. C. H. Fancy, P.E.
Dept. of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301

Technical Evaluation
and
Preliminary Determination
Contents

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I. Applicant and Site Location

Utilities Commission
City of New Smyrna Beach
P.O. Box 519
New Smyrna Beach, Florida 32069

The proposed modification will occur at the Swoope Generating Station located in the City of New Smyrna Beach, Volusia County, Florida. The UTM coordinates are 505.8 km East and 3214.8 km North.

II. Project Description

The Utilities Commission plans to construct two additional gas diesel units, Swoope #3 and #4, with generating capacities of 2050 KW and 2275 KW, respectively. Both units will be natural gas fired with 4 to 6 percent heat input from No. 2 fuel oil (diesel) as pilot fuel.

Currently there are two power generating units at the existing site. Swoope Unit #1 is a 116 MMBtu/hr steam generator and Swoope Unit #2 is a 910 KW gas diesel generator which is limited by permit condition to a 70 percent capacity factor.

The proposed modification is the addition of the two gas diesel units and an increase to 100 percent capacity factor for Swoope Unit #2.

III. Emissions and Controls

The major air pollutant emitted from the diesel generating units while firing 95% natural gas and 5% No. 2 fuel oil (based on Btu heat input) will be NO_x emissions. The projected air pollutant emissions from Swoope Unit 3 and 4 are listed as follows:

Pollutant	Unit 3		Unit 4	
	Maximum lbs/hr	tons per year	Maximum lbs/hr	tons per year
Nitrogen Oxides, NO _x	57.1	250	55.9	245
Particulate, PM	0.25	1	0.28	1
Sulfur Dioxide, SO ₂	0.42	2	0.47	2
Carbon Monoxide, CO	8.9	39	9.8	43
Hydrocarbon, HC	2.5	11	3.5	15

The current maximum air pollutant emissions and the projected maximum emissions after modification are listed in the following table:

Annual Emissions from Swoope Station

	NO _x	PM	SO ₂	CO	HC*
<u>Current</u>	<u>Tons per Year</u>				
Unit 1 (steam)	140	27	1	5	8
Unit 2 (diesel)	<u>94</u>	<u>0.1</u>	<u>0.3</u>	<u>12</u>	<u>37</u>
TOTAL	234	27	1	17	45
 <u>Projected</u>					
Unit 1	140	27	1	5	8
Unit 2	134	0.2	0.4	17	53
Unit 3	250	1	2	33	11
Unit 4	<u>245</u>	<u>1</u>	<u>2</u>	<u>43</u>	<u>15</u>
TOTAL	769	29	5	104	87
 <u>NET INCREASE</u>	 <u>535</u>	 <u>2</u>	 <u>4</u>	 <u>87</u>	 <u>42</u>

*Swoope Unit 2 hydrocarbons reported as total HC, Units 3 and 4 reported as non-methane HC.

There will not be any pollution control equipment installed at the site.

IV. Rule Applicability

State Rule

The proposed project is subject to preconstruction review under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2, Florida Administrative Code (FAC).

The proposed project location is in an attainment area for all the pollutants. It will make the existing minor facility become a major facility for NO_x as defined in Section 17-2.100, because NO_x emissions will increase by more than 250 tons per year due to this modification. The project is subject to the provisions of Section 17-2.500, Prevention of Significant Deterioration (PSD) which requires an air quality impact analysis and the use of Best Available Control Technology (BACT)

Federal Rule

The proposed source is subject to federal PSD review because it is a major modification (40 CFR 52.21(b)(2)). The actual NO_x emissions increase, 535 tons per year, is above the major emission rate 250 tons per year. Therefore, emissions of NO_x are subject to an air quality impact analysis and a BACT determination under 40 CFR 52.21(i).

V. Control Technology Review

Fuel injection retardation is an effective NO_x control technique but results in approximately a 3% increase in fuel usage. The increased monthly cost to a consumer using 1000 kwh of electricity would be approximately one dollar. Based on a proposed NSPS for stationary internal combustion engines, FDER has determined that this technique represents the best available control technology for the proposed gas diesel units. NO_x emissions will be limited for this modification as follows:

Unit No. 2 - 690 ppmv corrected to 15% oxygen on a dry basis

Unit No. 3 - 620 ppmv corrected to 15% oxygen on a dry basis

Unit No. 4 - 625 ppmv corrected to 15% oxygen on a dry basis

VI. Air Quality Impact Analysis

A. Summary

Since the proposed project is subject to both State and federal PSD review for the pollutant NO_x, an air quality impact analysis is required. This analysis includes:

- o An analysis of existing air quality;
- o An ambient air quality standards analysis;
- o An analysis of impact on soils, vegetation and visibility and growth-related air quality impacts.

The analysis of existing air quality may require preconstruction monitoring. The air quality standards

analysis depends on air quality modeling carried out in accordance with FDER- and EPA-approved methods. Federal PSD review also requires a good engineering practice stack height evaluation.

Based on this air quality impact analysis, FDER has reasonable assurance that the proposed project, as described in this permit and subject to the conditions of approval proposed herein, will not cause or contribute to a violation of any State or federal ambient air quality standard. A discussion of the required analysis follows.

B. Discussion

1. Modeling Methodology

Both State and federal regulations contain only annual average standards for NO₂. The State and federal annual average standards are the same, 100 ug/m³. The FDER- and EPA-approved Industrial Source Complex Long-Term (ISCLT) model was used in the air quality impacts analysis. The conservative assumption that all NO_x is emitted as NO₂ was made in the modeling. One year of National Weather Service data collected at Daytona Beach, Florida in 1964 was used in the model. These data were summarized in the STAR format. A rectangular grid with a 0.1 kilometer spacing was used and all sources were assumed to emit at maximum allowable rates, 24 hours a day, every day of the year. Final stack parameters and emission rates used in modeling the proposed project are contained in Tables VI-1 and VI-2.

Table VI-1

Stack Parameters for the Existing Swoope Generating Facility

<u>Emissions Unit</u>	<u>Stack Height (m)</u>	<u>Stack Diameter (m)</u>	<u>Exit Velocity (m/s)</u>	<u>Exit Temperature (K)</u>	<u>Emission Rate (g/s) NO_x</u>
Swoope #1	38.1	1.38	9.5	644	4.04
Swoope #2	6.1	0.36	43.9	589	2.69

Table VI-2

Stack Parameters for Proposed Swoope Generating Station

<u>Emission Unit</u>	<u>Stack Height (m)</u>	<u>Stack Diameter (m)</u>	<u>Exit Velocity (m/s)</u>	<u>Exit Temperature (K)</u>	<u>Emission Rate (g/s) NO_x</u>
Swoope #1	38.1	1.38	9.5	644	4.04
Swoope #2	6.1	0.36	43.9	589	3.84
Swoope #3	6.1	0.56	41.2	644	7.20
Swoope #4	6.1	0.56	44.2	644	7.00

2. Analysis of Existing Air Quality

In order to evaluate existing air quality in the area of a proposed project, FDER may require a period of continuous preconstruction monitoring for any pollutant subject to PSD review. An exemption from this requirement may be obtained if the net emissions increase of the pollutant from the modification would cause an air quality impact less than a certain de minimis level as defined in 40 CFR 52.21(i)(8) and Table 500-3 in Chapter 17-2, FAC. The federal level is 14 ug/m³, annual average, however, in the State rules the level is currently defined as 14 ug/m³, 24-hour average. Modeling predicts the impact of the proposed project to be greater than the State level, but less than the federal level.

Under the existing State regulation which requires preconstruction monitoring for NO_x, FDER has determined that existing representative NO_x ambient air monitoring data may be used. Since the Swoope facility is located in a remote area with respect to non-specified NO_x sources, FDER has determined that NO_x data gathered at a regional site may be used as representative data. FDER has chosen the Stanton Plant monitoring site in east Orange County, which is operated by the Orlando Utilities Commission, as a regional NO_x monitoring site for this project. Based on data from

this site, FDER has assumed a background NO_x value of 12 ug/m³, annual average.

3. Ambient Air Quality Standards Analysis

Both State and federal PSD regulations require the permit applicant to demonstrate that, given existing air quality in an area, a proposed emissions increase subject to PSD will not cause or contribute to any violation of ambient air quality standards. For this project, an ambient air quality standards analysis is required for NO_x. Modeling results predict that the highest expected annual average impact due to the Swoope Generating Station is 28 ug/m³ (this value includes a background value of 12 ug/m³). This value is well below both the State and federal ambient air quality standard of 100 ug/m³, annual average.

The impacts of interaction of emissions from other sources with those from the Swoope facility were evaluated. Maximum NO_x concentrations from surrounding sources are very small compared to maximum concentrations from Swoope. Therefore, no violations of ambient standards are predicted to occur due to interacting sources.

4. Good Engineering Practice Stack Height Evaluation

The stack heights proposed for the Swoope project do not exceed the Good Engineering Practice (GEP) stack height of 65 meters for stacks uninfluenced by structures or terrain.

No downwash analysis was performed since only long-term average air quality standards exist for NO_x emissions.

5. Analysis of Impact on Soils, Vegetation and
Visibility and Growth-Related Air Quality Impacts

The maximum impact of the proposed NO_x emissions increase will be insignificant. No adverse effects on soils, vegetation and visibility are expected.

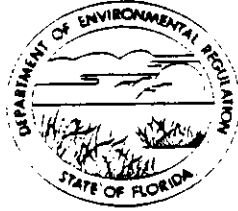
There will be no secondary residential, commercial or industrial growth which will adversely affect air quality in the area.

VII. Conclusions

Based on evaluation of the application, FDER believes that compliance with all State and federal air regulations will be achieved provided certain specific conditions are met. The general and specific conditions are listed in the attached draft State permits (AC 64-57578 and AC 64-57580) and federal permit (PSD-FL-089).

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY

APPLICANT: Utilities Commission
City of New Smyrna Beach
P. O. Box 519
New Smyrna Beach, Florida 32069

PERMIT/CERTIFICATION
NO. AC 64-57578

COUNTY: Volusia

PROJECT: Swoope Unit #3
Gas Diesel

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 and 17-4, Florida Administrative Code. The above named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

For the installation of a 2050 kw diesel generating unit to be located at the existing Swoope plant site in the City of New Smyrna Beach, Volusia County, Florida. The UTM coordinates are 505.8 km East and 3214.8 km North.

The construction shall be in accordance with the attached permit application, plans and documents except as otherwise noted on page 3, Specific Conditions.

Attachments:

1. Application to Construct Air Pollution Source, DER Form 17-2.122(16), received on June 28, 1982.
2. Best Available Control Technology (BACT) Determination dated August 18, 1982.

PERMIT NO.: AC 64-57578
APPLICANT: Utilities Commission

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions," and as such are binding upon the permittee and enforceable pursuant to the authority of Section 403.161(1), Florida Statutes. Permittee is hereby placed on notice that the department will review this permit periodically and may initiate court action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.
2. This permit is valid only for the specific processes and operations indicated in the attached drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit shall constitute grounds for revocation and enforcement action by the department.
3. 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 notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance, including exact 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. 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 revocation of this permit.
4. As provided in subsection 403.087(6), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor 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.
5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.
6. 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 arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.111, F.S.
7. In the case of an operation permit, 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.
8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.
9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.
10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.
11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.
12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation 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.
13. This permit also constitutes:
 - ☐ Determination of Best Available Control Technology (BACT)
 - ☐ Determination of Prevention of Significant Deterioration (PSD)
 - ☐ Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

PERMIT NO.: AC 64-57578
APPLICANT: Utilities Commission

SPECIFIC CONDITIONS:

1. The proposed unit shall be constructed in accordance with the capacities and specifications stated in the application and additional information supplied by the applicant.
2. Sulfur content of the fuel oil fired in the proposed gas diesel unit shall be limited to 0.3%.
3. Nitrogen oxides emissions from the Unit No. 3 shall be limited to 620 ppmv corrected to 15% oxygen on a dry basis. Compliance with the emission limits required by the attached BACT determination shall be determined by performance tests while the unit is at or close to full operating capacity.
4. The 70% capacity factor restriction of Swoope Unit No. 2 shall be eliminated. The new NO_x emission limit, which is regulated by the attached BACT determination, shall be 690 ppmv corrected to 15% oxygen on a dry basis.

PERMIT NO.: AC 64-57578
APPLICANT: Utilities Commission

Expiration Date: June 30, 1983

_____ Pages Attached.

Issued this _____ day of _____, 19____.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

Signature

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2500 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301



BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY

APPLICANT: Utilities Commission
City of New Smyrna Beach
P. O. Box 519
New Smyrna Beach, Florida 32069

PERMIT/CERTIFICATION
NO. AC 64-57580

COUNTY: Volusia

PROJECT: Swoope Unit #4
Gas Diesel

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2 and 17-4, Florida Administrative Code. The above-named applicant, hereinafter called Permittee, is hereby authorized to perform the work or operate the facility shown on the approved drawing(s), plans, documents, and specifications attached hereto and made a part hereof and specifically described as follows:

For the installation of a 2275 kw diesel generating unit to be located at the existing Swoope plant site in the City of New Smyrna Beach, Volusia County, Florida. The UTM coordinates are 505.8 km East and 3214.8 km North.

The construction shall be in accordance with the attached permit application, plans and documents except as otherwise noted on page 3, Specific Conditions.

Attachments:

1. Application to Construct Air Pollution Source, DER Form 17-1.122(16), received on June 28, 1982.
2. Best Available Control Technology (BACT) Determination dated August 18, 1982.

PERMIT NO.: AC 64-57580
APPLICANT: Utilities Commission

GENERAL CONDITIONS:

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions," and as such are binding upon the permittee and enforceable pursuant to the authority of Section 403.161(1), Florida Statutes. Permittee is hereby placed on notice that the department will review this permit periodically and may initiate court action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.
2. This permit is valid only for the specific processes and operations indicated in the attached drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit shall constitute grounds for revocation and enforcement action by the department.
3. 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 notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance, including exact 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. 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 revocation of this permit.
4. As provided in subsection 403.087(6), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor 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.
5. This permit is required to be posted in a conspicuous location at the work site or source during the entire period of construction or operation.
6. 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 arising under the Florida Statutes or department rules, except where such use is proscribed by Section 403.111, F.S.
7. In the case of an operation permit, 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.
8. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant, or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and department rules, except where specifically authorized by an order from the department granting a variance or exception from department rules or state statutes.
9. This permit is not transferable. Upon sale or legal transfer of the property or facility covered by this permit, the permittee shall notify the department within thirty (30) days. The new owner must apply for a permit transfer within thirty (30) days. The permittee shall be liable for any non-compliance of the permitted source until the transferee applies for and receives a transfer of permit.
10. The permittee, by acceptance of this permit, specifically agrees to allow access to permitted source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this permit and department rules.
11. This permit does not indicate a waiver of or approval of any other department permit that may be required for other aspects of the total project.
12. This permit conveys no title to land or water, nor constitutes state recognition or acknowledgement of title, and does not constitute authority for the reclamation 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.
13. This permit also constitutes:
 - ☐ Determination of Best Available Control Technology (BACT)
 - ☐ Determination of Prevention of Significant Deterioration (PSD)
 - ☐ Certification of Compliance with State Water Quality Standards (Section 401, PL 92-500)

PERMIT NO.: AC 64-57580
APPLICANT: Utilities Commission

SPECIFIC CONDITIONS:

1. The proposed unit shall be constructed in accordance with the capacities and specifications stated in the application and additional information supplied by the applicant.
2. Sulfur content of the fuel oil fired in the proposed gas diesel unit shall be limited to 0.3%.
3. Nitrogen oxides emissions from the unit shall be limited to 625 ppmv corrected to 15% oxygen on a dry basis. Compliance with the emission limits required by the attached BACT determination shall be determined by performance tests while the unit is at or close to full operating capacity.

PERMIT NO.: AC 64-57580
APPLICANT: Utilities Commission

Expiration Date: June 30, 1983

Issued this _____ day of _____, 19_____.

_____ Pages Attached.

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

Signature

Preliminary Determination

(PSD-FL-089)

Utilities Commission
City of New Smyrna Beach

The preceeding Technical Evaluation and Preliminary Determination are adopted by reference for the proposed federal permit, PSD-FL-089.

Special Conditions listed in the draft State permits, AC 64-57578 and AC 64-57580 are adopted as special conditions for the draft federal permit, PSD-FL-089, for this source.

The attached General Conditions are also made a part of the proposed federal permit PSD-FL-089 for this source.

Attachment: General Conditions (federal)

GENERAL CONDITIONS

1. The permittee shall notify the permitting authority in writing of the beginning of construction of the permitted source within 30 days of such action and the estimated date of start-up of operation.
2. The permittee shall notify the permitting authority in writing of the actual start-up of the permitted source within 30 days of such action and the estimated date of demonstration of compliance as required in the specific conditions.
3. Each emission point for which an emission test method is established in this permit shall be tested in order to determine compliance with the emission limitations contained herein within sixty (60) days of achieving the maximum production rate, but in no event later than 180 days after initial start-up of the permitted source. The permittee shall notify the permitting authority of the scheduled date of compliance testing at least thirty (30) days in advance of such test. Compliance test results shall be submitted to the permitting authority within forty-five (45) days after the complete testing. The permittee shall provide (1) sampling ports adequate for test methods applicable to such facility, (2) safe sampling platforms, (3) safe access to sampling platforms, and (4) utilities for sampling and testing equipment.
4. The permittee shall retain records of all information resulting from monitoring activities and information indicating operating parameters as specified in the specific conditions of this permit for a minimum of two (2) years from the date of recording.
5. If, for any reason, the permittee does not comply with or will not be able to comply with the emission limitations specified in this permit, the permittee shall immediately notify the State District Manager by telephone and provide the District Office and the permitting authority with the following information in writing within four (4) days of such conditions:
 - (a) description for noncomplying emission(s),
 - (b) cause of noncompliance,
 - (c) anticipated time the noncompliance is expected to continue or, if corrected, the duration of the period of noncompliance,

(d) steps taken by the permittee to reduce and eliminate the noncomplying emission,

and

(e) steps taken by the permittee to prevent recurrence of the noncomplying emission.

Failure to provide the above information when appropriate shall constitute a violation of the terms and conditions of this permit. Submittal of this report does not constitute a waiver of the emission limitations contained within this permit.

6. Any change in the information submitted in the application regarding facility emissions or changes in the quantity or quality of materials processed that will result in new or increased emissions must be reported to the permitting authority. If appropriate, modifications to the permit may then be made by the permitting authority to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause violation of the emission limitations specified herein.
7. In the event of any change in control or ownership of the source described in the permit, the permittee shall notify the succeeding owner of the existence of this permit by letter and forward a copy of such letter to the permitting authority.
8. The permittee shall allow representatives of the State environmental control agency or representatives of the Environmental Protection Agency, upon the presentation of credentials:
 - (a) to enter upon the permittee's premises, or other premises under the control of the permittee, where an air pollutant source is located or in which any records are required to be kept under the terms and conditions of the permit;
 - (b) to have access to any copy at reasonable times any records required to be kept under the terms and conditions of this permit, or the Act;
 - (c) to inspect at reasonable times any monitoring equipment or monitoring method required in this permit;

(d) to sample at reasonable times any emission of pollutants;

and

(e) to perform at reasonable times an operation and maintenance inspection of the permitted source.

9. All correspondence required to be submitted to this permit to the permitting agency shall be mailed to:

Mr. James T. Wilburn
Chief, Air Management Branch
Air & Waste Management Division
U.S. EPA, Region IV
345 Courtland Street, NE
Atlanta, GA 30365

10. The conditions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

The emission of any pollutant more frequently or at a level in excess of that authorized by this permit shall constitute a violation of the terms and conditions of this permit.

BEST AVAILABLE CONTROL TECHNOLOGY (BACT) DETERMINATION
CITY OF NEW SMYRNA BEACH
VOLUSIA COUNTY

The City of New Smyrna Beach plans to increase electric power generation capacity an additional 4.33 megawatts. Two generators, each driven by a dual fuel twelve cylinder diesel engine, are to be installed at the Swoope generating station. The engines will use natural gas and No. 2 distillate oil as fuel.

The new installations identified as Swoope No. 3 and Swoope No. 4 will have a maximum engine heat input of 19.2 and 21.2 million Btu per hour, respectively. Both units are scheduled to operate 8760 hours per year.

Swoope No. 2, a similar existing 910 kilowatt unit is limited by permit conditions to operate at 70 percent of full load (AC 64-43484). The applicant has requested this permit condition be changed to allow unrestricted operation.

Air Contaminants Summary: (tons per year)

<u>Source</u>	<u>PM</u>	<u>SO₂</u>	<u>CO</u>	<u>NO_x</u>	<u>HC</u>
No. 3 Unit	<1	2	39	250	11
No. 4 Unit	<1	2	43	245	15
Total	2	4	82	495	26
No. 2 Unit ⁽¹⁾	<1	<1	5	40	16
Rate ⁽²⁾	25	40	100	40	-

(1) Emissions due to increase from 70 to 100 percent operation.

(2) Significant Emission Rate, 17-2.500, FAC, Table 500-2.

The amount of NO_x emitted from the proposed sources exceed the significant emission rate and requires a BACT determination per 17-2.500(5)(c), FAC. A BACT determination is also required for Swoope No. 2 due to the relaxation of a permit limitation.

BACT Determination Requested by the Applicant:

Pollutant	Emission Limit
NO _x	Natural gas firing with the ignition timing set as recommended by the manufacturer

Date of Receipt of a BACT Application:

June 28, 1982

Date of Publication in the Florida Administrative Weekly:

July 9, 1982

Review Group Members:

Comments were obtained from the New Source Review Section, the Air Modeling Section in the Bureau of Air Quality Management, and DER St. Johns River District.

BACT Determined by DER:

*NO_x Pollutant Emission Limits

Unit 2 - 690 ppmv corrected to 15% oxygen on a dry basis

Unit 3 - 620 ppmv corrected to 15% oxygen on a dry basis

Unit 4 - 625 ppmv corrected to 15% oxygen on a dry basis

*Based on manufacturer's rated brake-specific fuel consumption at peak load. Applicant has option of using brake-specific fuel consumption as determined in the field. Test methods and operations monitoring as per the proposed NSPS 40 CFR 60.320, Subpart FF, Subsections 60.324 and 60.323.

DER Determination Rationale:

There is a proposed NSPS for stationary internal combustion engines, 40 CFR 60.320, Subpart FF. The NSPS is in administrative review and promulgation is expected in the last quarter of 1982. The consensus was that a more stringent NO_x emission limitation than the NSPS was not justified. The department has determined BACT for NO_x emissions to be based on the NSPS formula in Subpart FF, Subsection 60.322(a)(3)(ii).

$$\text{STD} = 600 \frac{10.2}{Y}$$

STD = Allowable NO_x emissions, ppmv corrected to 15% oxygen on a dry basis.

Y = Manufacturer's rated brake-specific fuel consumption at peak load (Kj/w-hr) or applicants brake-specific fuel consumption at peak load as determined in the field.

The NO_x emission limits determined as BACT are based on the manufacturer's brake-specific fuel consumption at peak load. The applicant has the option of using a brake-specific fuel consumption as determined in the field.

The NSPS was proposed July 23, 1979 (44 FR 43152) to apply to sources that commence construction after January 1982. The manufacturers of engines subject to the regulations should have had adequate time to develop a NO_x emission reduction control technique for their engines in anticipation of the NSPS being promulgated.

The applicant, therefore, should have no great difficulty in meeting the NO_x emission limits determined as BACT for Units 3 and 4. However, Unit 2 was permitted in July 1981 and that engine may require major modifications to meet the NO_x emission limit. In this case, the applicant may submit to the department actual field data indicating the inability to meet the NO_x emission limit. The department will then review the BACT determination for Unit 2 on basis of the new data presented.

The dual-fired engines serve the same application as diesel engines. In the event that natural gas should become limited the dual-fuel engines would likely operate as diesel engines. The NO_x emission limit determined as BACT also applies to diesel engines, therefore, simplifying compliance by the applicant in the event the engines are converted totally to diesel.

Fuel injection retard is an effective NO_x control technique but results in approximately a 3% increase in fuel usage. This will increase total fuel usage by 1107 cubic feet per hour of natural gas and 0.519 gallon per hour of No. 2 oil. The increased monthly cost to a consumer using 1000 kw of electricity would be approximately one dollar. The additional fuel cost is not considered excessive.

Details of the Analysis May Be Obtained by Contacting:

Edward Palagyi, BACT Coordinator
Department of Environmental Regulation
Bureau of Air Quality Management
2600 Blair Stone Road
Tallahassee, Florida 32301

Recommended By:

for *Steve Smallwood*
Steve Smallwood, Chief BAQM

Date: *August 19, 1982*

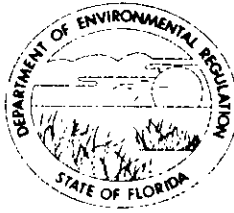
Approved:

Terry Cole
Victoria V. Tschinkel, Secretary

Date: *8/18/82*

STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

TWIN TOWERS OFFICE BUILDING
2600 BLAIR STONE ROAD
TALLAHASSEE, FLORIDA 32301-8241



BOB GRAHAM
GOVERNOR
VICTORIA J. TSCHINKEL
SECRETARY

M E M O R A N D U M

TO: Charles Collins, DER St. Johns River District Office

FROM: C. H. Fancy, Deputy Chief, Bureau of Air
Quality Management *CHF*

DATE: August 24, 1982

SUBJ: Preliminary Determination - City of New Smyrna Beach
Utilities Commission, Swoope Units 3 and 4, AC 64-57578
and AC 64-57580, Federal PSD-FL-089

Attached is one copy of the application, Technical Evaluation and Preliminary Determination, and proposed permits to construct two additional gas diesel units at the Swoope Generating Station, Volusia County.

Please submit any comments which you wish to have considered concerning this action, in writing, to Bill Thomas of the Bureau of Air Quality Management.

CHF/bjm

Attachment