Technical Evaluation

and

Preliminary Determination

Orlando Utilities Commission

Stanton Energy Center Units 1 & 2

Orange County, Florida

Permit Number

Federal - PSD-FL-084

Florida Department of Environmental Regulation

Bureau of Air Quality Management

Central Air Permitting

April 6, 1982

PUBLIC NOTICE

PSD-FL-084

The Orlando Utilities Commission (OUC) proposes to construct a new power generating facility consisting of two 460 (gross) megawatt (MW) coal-fired steam generating units in Orange County, Florida. The construction also includes one 83 MMBtu per hour heat input oil-fired auxiliary boiler, and coal, lime, limestone, and fly ash handling systems. The potential emissions for the two proposed units, in tons per year, are as follows:

PM	SO_2	NO_x	CO	VOC
1,042	39,606	20,845	1,737	17

The proposed construction has been reviewed by the Florida Department of Environmental Regulation (FDER) under 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 a federal permit submitted by the Orlando Utilities Commission are available for public review at the following offices:

Bureau of Air Quality Management
Department of Env. Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301

St. Johns River District
Dept. of Env. Regulation
3319 Maguire Blvd.
Suite 232
Orlando, Florida

Orange County Pollution Control Dept.
2008 East Michigan Avenue
Orlando, Florida

The maximum percentages of allowable PSD increments consumed in the area of the proposed construction will be as follows:

	Annual	24-Hour	3-Hour
PM	9	73	N/A
SO_2	27	100	98

Any person may submit written comments to FDER regarding the proposed construction. All comments, postmarked not later than 30 days from the date of notice, will be considered by FDER 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 14 days of the date of this notice.

Letters should be address to:

Mr. C. H. Fancy
Bureau of Air Quality Management
Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Florida 32301

Technical Evaluation
and
Preliminary Determination
(PSD-FL-084)

CONTENTS

I. APPLICANT AND SITE LOCATION

Orlando Utilities Commission

PO Box 3193

Orlando, Florida 32802

The proposed new construction site, known as Curtis H. Stanton Energy Center, is located approximately 10 miles southeast of Orlando, Florida. The UTM coordinates of the site are 484.0 kilometers East and 3150.5 kilometers North.

II. PROJECT AND PROCESS DESCRIPTIONS

The Orlando Utilities Commission (OUC) proposes to construct a new power generating facility consisting of two 460 (gross) megawatt (MW) coal-fired steam generating units in Orange County, Florida. The construction also includes one 83 MMBtu per hour heat input oil-fired auxiliary boiler, and coal, lime, limestone, and fly ash handling systems.

The site is to be designed to accommodate four generating units. Unit No. 1 is scheduled for commercial operation in November 1986. Unit No. 2 is tentatively scheduled for commercial operation in January 1994.

Unit No. 1 will burn approximately one million tons of bituminous coal annually. The boiler will burn No. 6 oil during start-ups, which will require an estimated annual fuel usage of 80,000 gallons. The auxiliary boiler will operate an estimated 150 hours annually and consume 57,000 gallons per year of No. 2 fuel oil having a sulfur content less than 0.5 percent.

The coal handling system will consist of unloading, stocking, reclaiming and long-term reserve storage facilities. Initial facilities will be capable of handling two units.

The fuel oil will be unloaded and pumped to storage tanks. No. 6 fuel oil will be stored in a 250,000 gallon tank and No. 2 fuel oil will be stored in a 41,000 gallon tank.

III. EMISSIONS AND CONTROLS

The types and sources of air emissions from the proposed facility are as follows:

(1) Combustion flue gases from Unit No. 1 and 2.

(2) Combustion flue gases from the auxiliary boiler.

(3) Fugitive dust from coal handling, lime and limestone handling, and fly ash handling systems.

A. Particulate Emissions Control for Main Units

The particulate matter control equipment will be an electrostatic precipitator (ESP). The cold side ESP will be located directly downstream of the steam generator air heater. The ESP will be capable of operating continuously and within particulate emission guarantees, 0.03 pound particulate matter per million Btu heat input, down to 20 percent of unit load.

B. Sulfur Dioxide (SO_2) Emissions Control for Main Units

SO_2 emissions will be controlled by a flue gas desulfurization (FGD) system which will consist of a multi-module wet limestone spray tower scrubber located downstream of the draft fans. The system will have three 50 percent capacity modules with a bypass arrangement. OUC is considering bypassing a fraction of the flue gas, when SO_2 emission rates are less than or equal to 0.6 lb/MMBTU. Bypass (FGD) reheat has the advantages of low capital investment and simple operation. However, the maximum degree of reheat which can be obtained is limited by the constraints of SO_2 emission standards. The applicability of bypass reheat generally based on the limitation for SO_2 emission depends on the sulfur content of the fuel, the removal efficiency of the scrubbing system, the temperature of the bypassed flue gas, and the degree of reheat required.

C. <u>Nitrogen Oxides (NO_x) Emissions Control for Main Units</u>

NO_x emissions will be controlled to meet the federal emission standards by utilizing features which will include one or more of the following.

(a) Compartmented wind box (improved combustion control)

(b) Large furnace and widely spaced burners (reduced temperatures).

(c) Staged Combustion.

D. <u>Carbon Monoxide (CO) Emissions Control for Main Units.</u>

CO emissions will be controlled by excess air and good operation practice.

E. Auxiliary Boiler Flue Gas Emissions Control

The 83 MMBTU/hr auxiliary boiler will be a packaged unit and will burn No. 2 fuel oil. The annual operation time will be less than 150 hours per year. The estimated emissions from the boiler will be 0.06 ton/yr for particulate matter, 1.1 ton/yr for SO_2 and 0.6 ton/yr for NO_x.

F. Fugitive Dust Control From Coal Handling System

The coal handling system will consist of unloading, stocking, reclaiming, and long-term reserve storage facilities. Fugitive dust associated with the handling of the coal will be controlled with bag filters, covered conveyors, water and chemical spray, and a telescopic chute. Table I lists the release points with control methods and efficiencies.

G. Fugitive Dust Control From Limestone Handling System

The limestone handling system will be capable of unloading, stocking, reclaiming and long-term reserve storage. Fugitive dust associated with handling of the limestone will be controlled by utilizing bag filters, covered conveyors, telescopic chute and pile compaction. Table II lists the release points, control methods and dust removal efficiencies.

H. Fugitive Dust From Fly Ash Transport System

Fly ash from the boiler hoppers and electrostatic precipitator hoppers will be transported to a fly ash storage silo by a vacuum type pneumatic system. The system will consist of vacuum pumps which will transport the fly ash to the fly ash storage silo and then vent through fabric filters.

I. Fugitive Dust Control From Lime Handling System

Pebble lime will be used as an additive to condition the scrubber sludge fly ash mixture. The lime will be received from the truck or railcar by dumping into an enclosed hopper and transported from the hopper to a storage silo by a pneumatic system. The silo will vent through a bag filter system.

TABLE 1

FUGITIVE COAL DUST EMISSIONS CONTROL

Source of Emissions	Dust Control Method	Control Efficiency Percent
Bottom Car Dumper	Water Spray and Building Enclosure	97
Conveyor 2	Enclosed	99+*
Transfer Building	Enclosed with Baghouse	99+
Conveyor 3	Wind Screen	50
Active Storage		
Load In	Stacker Spray Water	75
Load Out	Reclaimer Spray Water	80
Wind Erosion	Water Spray and Compaction	80
Conveyor 4	Enclosed	99+*
Emergency Stockout		
Load In	Telescopic Chute and Water	85
Load Out	Dozer	50
Wind Erosion	Limit Residence Time	80
Emergency Reclaim	Bag Filter	99+
Reserve Storage		
Load In	Dozer Sprayer Water	50
Wind Erosion	Crusting and Chemical Sprays	90
Conveyor 5	Enclosed	99+*
Conveyor 6A and 6B	Enclosed	99+*

TABLE 1 Continued

Source of Emissions	Dust Control Method	Control Efficiency Percent
Crusher Building	Enclosed and Baghouse	99+
Conveyor 7A and 7B	Enclosed	99+*
Surge Tower	Baghouse	99+
Plant Silo	Baghouse	99+

*The conveyors exhaust to the bag filters in the buildings which they interconnect.

TABLE II

FUGITIVE LIMESTONE DUST EMISSIONS CONTROL

Source of Emissions	Dust Control Method	Control Efficiency Percent
Bottom Car Dumper	Water Spray and Building Enclosure	97
Stockout Conveyor	Enclosed	99+*
Active Storage		
Load In	Telescopic Chute	85
Load Out	Dozer	50
Wind Erosion	Crusting	80
Reserve Storage		
Load In	Dozer	50
Load Out	Dozer	50
Wind Erosion	Crusting	80
Reclaim Conveyor	Enclosed	99+*
Storage Day Bin	Bag Filter	99+

*The conveyors exhaust to the buildings which they interconnect.

IV. RULE APPLICABILITY

The proposed site is located in an area designated attainment under 40 CFR 81.310 for all criteria pollutants except ozone. Orange County is designated nonattainment for ozone.

The potential emissions for the two proposed generating units and significant emission rates (40 CFR 52.21(b)(23)), in tons per year, are as follows:

Pollutant	Potential Emissions[a]	Significant Emission Rate
PM	1,042	25
SO_2	39,606	40
NO_x	20,845	40
CO	1,737	100
VOC[b]	17	40

a. Based on $4,136 \times 10^6$ Btu/hr heat input rate for each unit and 50 weeks per year operation.

b. Estimated 0.0005 lb VOC/MMBtu average emission rate.

The proposed source is a major stationary source (40 CFR 52.21 (b)(1)) and, as such, is subject to review for prevention of significant deterioration (PSD) under

40 CFR 52.21(i). PSD review consists of a determination of best available control technology (BACT) and an air quality impact analysis for each criteria pollutant that would be emitted in a significant amount. For the proposed source, PSD review is required for four pollutants: PM, SO_2, NO_x, and CO.

The proposed source is also subject to federal new source performance standards (NSPS) for electric utility steam generating units, 40 CFR 60 Subpart Da. The BACT determination for the proposed units must be at least as stringent as the applicable NSPS.

Since the proposed source constitutes a phased construction project, the BACT determination for Unit 2 shall be reviewed and modified as appropriate at the latest reasonable time which occurs no later than 18 months prior to commencement of construction upon the unit (40 CFR 52.21 (j)(4)).

V. CONTROL TECHNOLOGY REVIEW

A Best Available Control Technology (BACT) determination is required for all new major sources of any air pollutant pursuant to PSD regulations.

A. Particulate Matter (PM)

The applicant has proposed to use a high efficiency cold-side electrostatic precipitator (ESP) to meet the emission standards (NSPS) of 0.03 pound per million Btu heat input. The ESP has been the most popular PM control equipment for the utility boiler. A hot-side ESP was not considered because it has greater thermal losses and has exhibited significant operating problems which have resulted in poor performance at several installations. Fabric filters for PM control have been used extensively in industrial boilers. They are becoming more prevalant in the utility market, especially for small and medium-size units. A comparative cost evaluation of ESP and fabric filters for Unit No. 1 indicates that a cold-side ESP is more economical for PM control than a fabric filter system.

B. Sulfur Dioxide (SO_2)

The applicant has proposed to use limestone scrubbers designed for 90 percent removal to meet new source performance standards (NSPS). Currently, there are eight flue gas desulfurization (FGD) processes commercially available. The majority of the FGD systems which have been purchased and planned utilize lime/limestone technology. OUC first considered lime and limestone scrubbers as feasible alternatives for the proposed facility because both lime and limestone are available in the counties surrounding the site. A further cost evaluation of these two types of scrubbers shows that limestone scrubbers are more economical than lime scrubbers for all three coals considered for use in Unit No. 1. An evaluation of available systems and costs indicates that the limestone scrubber is the most reliable and economical desulfurization system for this installation. The use of washed coal is also being considered by the company.

C. Nitrogen Oxide (NO_x)

The applicant has proposed to reduce NO_x emissions by combustion control, not by post-combustion NO_x control. The boiler manufacturer will guarantee that NO_x emissions from the proposed boilers will meet NSPS.

D. Carbon Monoxide (CO)

Good operation practice and excess air control will reduce CO emissions to minimum levels. There will be no post-combustion CO control for the proposed boilers.

E. Maximum Allowable Emissions

Based on the BACT determination for the proposed units, the emissions from each unit shall not exceed the allowable emission limits listed in Table III.

Table III

Maximum Allowable Emissions

Pollutant	lb/MMBTU	lb/hr (Each Unit)
PM	0.03	124
SO_2	1.14	4715 (three hour average)
NO_x	0.60	2482 (30-day average)
Visible Emissions	Maximum 20% opacity (6-minute average) except for one 6-minute period per hour of not more than 27% opacity.	

VI. AIR QUALITY IMPACT ANALYSIS

The air quality impact analysis required for PM, SO_2, NO_x, and CO includes:

* An analysis of existing air quality;
* A PSD increment analysis (for PM and SO_2 only);
* A National Ambient Air Quality Standards (NAAQS) analysis;
* An analysis of impacts on soils, vegetation and visibility and growth-related air quality impacts; and
* A "good engineering practice (GEP)" stack height analysis.

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

Based on these required analyses, FDER has reasonable assurance that the proposed OUC two unit power generating facility, as described in this permit and subject to the conditions of approval proposed herein, will not cause or contribute to a violation of any PSD increment or ambient air quality standard. A discussion of the modeling methodology and required analyses follows:

A. Modeling Methodology

Two EPA-approved dispersion models were used in the air quality impact analysis. These were the Single-Source (CRSTER) and Industrial Source Complex (ISC) models. The CRSTER model was used to predict annual, 24-hour and 3-hour average concentrations resulting from OUC Unit 1 and 2 stack emissions alone. The ISC model was used to predict particulate concentrations resulting from the stack emissions, emissions from the coal handling facility and fugitive emissions from the coal and limestone storage piles.

Receptor rings in the CRSTER model were positioned at 1 km and 0.1 km intervals, respectively, for determination of annual and short-term concentrations. Receptors in the ISC model were placed at 0.1 km intervals along the plant boundary.

The surface meteorological data used in the models were National Weather Service data collected at the Orlando Jet Port during the period 1974-78. Upper air meteorological data used in the models were collected during the same time period at Tampa, Florida.

Stack parameters and emission rates used in evaluating the proposed OUC facilities are contained in Table IV.

B. Analysis of Existing Air Quality

One year (from May 1, 1980, through April 30, 1981) of preconstruction ambient air quality data were collected by OUC at the proposed site. The instruments (all EPA-reference or the equivalent) were sited in accordance with the recommendations given in Ambient Monitoring Guidelines for Prevention of Significant Deterioration (EPA 450/2-78-019) and operated in accordance with the quality assurance procedures of 40 CFR 58, Appendix B. Data recovery rates for all pollutants subject to PSD review exceeded 80 percent. The results of the monitoring program are summarized in the following table.

Pollutant and Time Average	Highest Recorded Concentration	Second-Highest Concentration
SO_2 (ug/m_3)		
3-hour	124	115
24-hour	44	41
12-month	14.4	---
PM (ug/m^3)		
24-hour	105*	90*
12-month*	34**	---
NO_2 (ug/m^3)		
12-month	10.7	---
CO (mg/m^3)		
1-hour	10.6	10.5
8-hour	5.2	4.6

*Two 24-hour samples not reported because of unrepresentative local influences (range fires near monitor).
**Geometric mean value.

C. PSD Increment Analysis

The proposed OUC facilites will be located in an area where the Class II PSD increments apply. The nearest Class I area is more than 100 km from the proposed site; therefore, no analysis of Class I area impacts was performed.

No sources other than the proposed OUC facilities have been identified which would be expected to significantly affect increment consumption in the area of the proposed site. As shown in the following table, modeling results predict that the two generating units and associated facilities proposed by OUC will not cause a violation of any PSD increment, although 100% of the 24-hour SO_2 increment will be consumed on plant property.

Pollutant and Time Average	PSD ClassII Increment	Predicted Concentration	Percent Increment Consumed
SO_2 (ug/m^3)			
3-hour	512	503	98
24-hour	91	91*	100*
Annual	20	5.4*	27*
		(*On plant property)	
PM (ug/m^3)			
24-hour	37	27	73
Annual	19	1.8	9

For SO_2, the highest second-highest short-term predicted concentrations are given in the table since five years of meteorological data were used in the CRSTER modeling. For PM, the highest 24-hour average predicted concentration is given since only one year of meteorological data was used in the ISC modeling.

D. NAAQS Analysis

Given existing air quality in the area, the proposed OUC facilities are not expected to cause or contribute to a violation of any NAAQS. The results of the NAAQS analysis are summarized in the following table.

Pollutant and Time Average	Existing (Background) Concentration	Predicted Concentration Increase	Total Expected Concentration	NAAQS
SO_2 (ug/m^3)				
3-hour	124	503	627	1,300
24-hour	44	91*	135*	365
Annual	14	5*	19*	80
		(*On plant property)		
PM (ug/m^3)				
24-hour	105	27	132	150
Annual	34	2	36	60
NO_2 (ug/m^3)				
Annual	11	3	14	100
CO (mg/m^3)				
1-hour	11	<<1	11	40
8-hour	5	<<1	5	10

For SO_2, the highest second-highest short-term predicted concentrations are given in the table since five years of meteorological data were used in the modeling. For PM, the highest 24-hour average predicted concentration is given since only one year of meteorological data was used. For both SO_2 and PM, the short-term background concentrations (concentrations due to natural background and distant man-made sources) are conservatively given as the highest monitored values.

The increases in PM and NO_2 concentrations in downtown Orlando as a result of the OUC emissions are predicted to be less than 1 ug/m^3, annual average. Therefore, the proposed facilities are not expected to cause a violation of PM ambient air quality standards in the city or contribute significantly to the production of ozone due to the photodisassociation of NO_2 in the presence of hydrocarbon emissions from city traffic.

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

The maximum ground-level concentrations predicted to occur as a result of emissions from the proposed OUC facilities will be below all applicable NAAQS including the secondary standards designed to protect public welfare related values. No highly sensitive species of vegetation to the emissions are known to occur onsite or in the site vicinity. Therefore, no adverse impacts on soils or vegetation are expected. Since there are no Class I areas within 100 km of the proposed site, no adverse impacts on visibility in any such area are expected.

The proposed facilities are intended to supply power to meet demands projected to result from normal economic growth in the service area and are not expected to stimulate additional growth or shift the nature of the projected growth. Therefore, no significant secondary air pollution impacts are expected.

F. GEP Stack Height Analysis

Guidelines published by EPA in the Federal Register of January 12, 1979, define GEP stack height as the maximum nearby building height plus 1.5 times the building height or width, whichever is less. Projected onto a plane perpendicular to the wind direction, the maximum building heights and widths of the proposed OUC two unit generating facility are approximately 74.1 m and 62.2 m, respectively. The GEP stack height, then is:

$$74.1 + (1.5)(62.2) = 167.4 \text{ m}$$

The stack heights used in the air quality modeling for the PSD increment and NAAQS analyses do not exceed this approximate GEP value.

Table IV

OUC Stanton Energy Center

Proposed OUC Stack and Area Source Parameters and Emission Rates

Emissions Unit	Stack Height (m)	Stack Diameter (m)	Exit Velocity (m/s)	Exit Temperature (K)	Emission Rate (g/s) PM	SO_2	NO_x	CO
Unit 1	167.6	5.79	21.5	326.0	15.6	594.1	312.7	24.2
Unit 2	167.6	5.79	21.5	326,0	15.6	594.1	312.7	24.2
Transfer Building	33.5	1.07	20.3	---	0.69	---	---	---
Crusher Building	38.1	0.73	20.3	---	0.33	---	---	---
Plant Coal Silo	45.7	1.15	20.3	---	0.81	---	---	---
Plant Transfer Area	45.7	0.77	20.3	---	0.36	---	---	---

Area Source	Release Height (m)	Area Width (m)	PM Emission Rate ($g/s/m^2$) With Wind Erosion	Without Wind Erosion
Coal Storage Pile	12.2	70.0	0.00011	0.00005
Limestone Storage Pile	5.0	100.0	0.00006	0.00003
Unloading Facility	3.0	25.0	---	0.00025

VII. CONCLUSIONS

FDER proposes a preliminary determination of approval with conditions for the construction of the proposed new facility by Orlando Utilities Commission. The determination is made on the basis of information contained in the application dated May 18, 1981, and deemed substantially complete as of that date, with five Amendments, 1, 2, 3, 4, and 5 dated June 5, August 24, October 30, 1981, January 13, and March 5, 1982, respectively, and the response to incompleteness letter, dated November 6, 1981, supplied by the applicant. The determination of approval is contingent upon the following specific and general conditions.

Specific Conditions

1. The proposed steam generating station shall be constructed and operated in accordance with the capabilities and specifications of the application including the 4136 MMBtu/hr. heat input rate for each steam generator.

2. Emissions for each unit shall not exceed the allowable emission limits listed in the following Table for SO_2, PM, NO_x and visible emissions. The control technology and allowable emission limits for Unit 2 shall be reviewed and modified as appropriate at the latest reasonable time which occurs no later than 18 months prior to commencement of construction of the unit. At such time, the applicant shall demonstrate the adequacy of this BACT determination or propose a modification to it, taking into account energy, environmental and economic impacts.

Allowable Emission Limits

Pollutant	lb/MMBtu
PM	0.03
SO_2	1.14 (3 hr. average) and 90 percent reduction (30 day rolling average)
NO_x	0.60 (30-day rolling average)
Visible Emissions	20% (6-minute average), expect for one 6-minute period per hour of not more than 27% opacity.

3. The fuel oil to be fired in each unit and the auxiliary boiler shall be "new oil", which means an oil which has been refined from crude oil and has not been used. Emissions from the auxiliary boiler for burning No. 2 fuel oil shall not exceed the allowable emission limits listed in the following table.

Allowable Emission Limits

Pollutant	lb/MMBtu
PM	0.015
SO_2	0.51
NO_x	0.16
Visible Emissions	20% Opacity

4. The flue gas scrubber shall be put into service during normal operational startup, and shutdown, when No. 6 fuel oil is being burned. The emission limits when burning No. 6 fuel oil shall be 0.80 lb MMBtu for SO_2 and 0.03 lb MMBtu for particulate matter, except during normal startup and shutdown and malfunctions as provided in 40 CFR 60.46a.

5. Samples of all fuel oil and coal fired in the boilers shall be taken and analyzed for sulfur content, ash content, and heating value. Accordingly, samples shall be taken of each fuel oil shipment received. Coal sulfur content shall be determined and recorded on a daily basis

in accordance with EPA Reference Method 19. Records of all the analyses shall be kept for public inspection for a minimum of two years.

6. No fraction of the flue gas shall be allowed to bypass the FGD system to reheat the gases exiting from the FGD system, if the bypass will cause overall SO_2 removal efficiency less than 90 percent (or 70% for mass SO_2 emission rates less than or equal to 0.6 lb/MMBtu). The percentage and amount of flue gas bypassing the FGD system shall be documented and records kept for a minimum of two years available for public inspection.

7. A flue gas oxygen meter shall be installed for each unit, to continuously monitor a representative sample of the flue gas. The oxygen monitor shall be used with automatic feedback or manual controls to continuously maintain optimum air/fuel ratio parameters.

   The applicant shall install and operate continuously monitoring devices for each main unit exhaust for sulfur dioxide, nitrogen oxide and opacity. The monitoring devices shall meet the applicable requirements of 40 CFR 60.47a.

8. Visible emissions from the following facilities with air pollution control equipment shall be limited to 5%

opacity or 0.02 gr/acf: coal, lime, limestone and flyash handling systems.

9. Coal shall not be burned in the unit unless both the electrostatic precipitator and limestone scrubber are operating properly except as provided under 40 CFR 60.46a.

10. The following requirements shall be met to minimize fugitive dust emissions from the coal storage and handling facilities, the limestone storage and handling facilities, haul roads and general plant operations:

    a. All conveyors and conveyor transfer points will be enclosed to preclude PM emissions (except those directly associated with the coal stacker/reclaimer and the emergency stockout facilities for which enclosure is operationally infeasible).

    b. Inactive coal storage piles will be shaped, compacted and oriented to minimize wind erosion.

    c. Water sprays or chemical wetting agents and stabilizers will be applied to storage piles, handling equipment, etc. during dry periods and as necessary to all facilities to maintain an opacity of less than or equal to 5 percent except when adding, transferring and/or removing coal from the coal pile during which the opacity allowed shall be 20%.

d. The limestone handling receiving hopper, transfer conveyors and day silos will be maintained at negative pressures while operating with the exhaust vented to a control system.

e. The fly ash handling system (including transfer and silo storage) will be totally enclosed and vented (including pneumatic system exhaust) through fabric filters.

11. Within 90 days of commencement of operations, the applicant will determine and submit to EPA and FDER the pH level in the scrubber effluent that correlates with 90% removal of the SO_2 in the flue gas (or 70% for mass SO_2 emission rates less than or equal to 0.6 lb/MMBtu). Moreover, the applicant is required to operate a continuous pH meter equipped with an upset alarm to ensure that the operator becomes aware when pH level of the scrubber effluent falls below this level. The value of the scrubber pH may be revised at a later date provided notification to EPA and FDER is made demonstrating that the minimum percent removal will be achieved on a continuous basis. Further, if compliance data show that higher FGD performance is necessary to maintain the

minimum removal efficiency limit, a different pH value will be determined and maintained.

12. The applicant will comply with all requirements and provisions of the New Source Performance Standard for electric utility steam generating units (40 CFR 60 Part Da). In addition, the applicant must comply with the provisions and the requirements of the attached General Conditions.

13. As a requirement of this specific condition, the applicant will comply with all emissions limits and enforceable restrictions required by the State of Florida Department of Environmental Regulation which are more restrictive, that is lower emissions limits or stricter operating requirements and equipment specifications, than the requirements of specific conditions 1-12 of this permit.

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 limitation 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 specifed 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 provide the permitting authority with the following information in writing within five (5) days of such conditions:

   (a) description of 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 violationof 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 increases 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 methods 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 by this permit to the permitting agency shall be mailed to:

   Chief, Air Facilities Branch
   Air and Hazardous Materials Division
   U. S. Environmental Protection Agency
   Region IV
   345 Courtland Street
   Atlanta, Georgia 30308

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.