PSD-FL-0032

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30308

NOV 21 1979


REF: 4AH-AF

Mr. Steve Smallwood, Chief
Bureau of Air Quality Management
Division of Environmental Programs
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

Dear Mr. Smallwood:

Enclosed for your review and comment are the public notice and Preliminary PSD Determination for Florida Power Corporation's proposed modification of the dry fly ash handling system at Crystal River Units 1 and 2. The public notice is to appear in the Suncoast Sentinel in Crystal River.

Please let us know if you have any comments on this determination.

Sincerely yours,

Tommie A. Gibbs

Tommie A. Gibbs
Chief
Air Facilities Branch

Enclosure

# PUBLIC NOTICE

A new air pollution source is proposed for construction by the Florida Power Corporation at their plant in Crystal River, Florida. Emissions of particulate matter will be increased by the modification of a wet flyash handling system to a dry flyash handling system. This modification is the second of two similar modifications and completes the transition to a totally dry flyash handling system.

The proposed modification has been reviewed by the U. S. Environmental Protection Agency (EPA) under Federal Prevention of Significant Deterioration (PSD) Regulations (40 CFR 52.21). EPA has made a Preliminary Determination that the construction can be approved provided certain conditions are met. A summary of the basis for this determination and the application for a permit submitted by the Florida Power Corporation are available for public review in the Office of the City Manager, 123 N. W. Highway 19, in Crystal River.

The allowable emissions from the proposed modification are less than 50 tons per year for each pollutant emitted. Therefore, consistent with the PSD regulation, the amount of available increment consumed was not determined. In addition, the plant is only 20 kilometers from the Chassahowitzka National Wilderness area; however, an air quality modelling analysis has been performed which shows that no significant adverse impact will occur to the air quality in this Class I area.

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

Mr. Tommie A. Gibbs, Chief
Air Facilities Branch
US Environmental Protection Agency
345 Courtland Street, NE
Atlanta, Georgia 30308

APPLICATION PSD FL 032

PRELIMINARY DETERMINATION SUMMARY

I. Applicant

Florida Power Corporation
3201 Thirty-Fourth Street South
St. Petersburg, Florida 33733

II. Location

The proposed modification is to an existing source located west of US 19 near the city of Crystal River, Florida. The UTM coordinates are 334215.260 East and 3204249.053 North.

III. Project Description

The applicant proposes to modify the fly ash handling system at the existing Crystal River Power Plant for generating units one and two. This system was modified previously under a Prevention of Significant Deterioration (PSD) permit issued by EPA on February 12, 1979. At that time, the wet fly ash handling system was converted to a combination wet and dry system. The dry system allows more recovery of fly ash for sale as a concrete aggregate. The modification currently proposed will provide dry handling capability for the fly ash now transported by the wet handling part of the system. The wet handling capacity will remain as standby equipment.

The proposed modification adds two new vacuum blowers and two new bag filters (vent numbers 4 and 5) to draw ash from the electrostatic precipitators controlling particulate (TSP) emissions from the steam generators. The design fly ash rate for each stream is 27.5 tons per hour (240,000 tons per year).

IV. Source Impact Analysis

Converting the existing wet system to dry handling will increase emissions of TSP. As shown in Table 1, potential emissions of TSP exceed 100 tons per year. Therefore, according to Title 40 Code of Federal Regulations Part 52.21, Prevention of Significant Deterioration (PSD) review of the planned modification is required and should involve the following:

- air quality impact analysis (National Ambient Air Quality Standards (NAAQS) and PSD increments)
- monitoring data

- Best Available Control Technology (BACT) analysis
- growth impact analysis
- visibility, soils, and vegetation analyses
- Class I area impact analysis

However, the applicant proposes installing bag filters, which will reduce the actual emissions to a total of 19.2 tons per year from both vents. Under 40 CFR 52.21 (k), major modifications with allowable emissions less than 50 tons per year, 1000 pounds per day or 50 pounds per hour, as appropriate, are exempted from the requirement for NAAQS and increment analyses, monitoring data, growth impact analysis, and visibility, soils, and vegetation analyses, unless the allowable emissions from the source would impact a Federal Class I area or an area in which the PSD increments are known to be violated. Furthermore, under 40 CFR 52.21 (j), no such source would need a BACT analysis to acquire a PSD permit. Finally, no emission limitations or standards of performance under CFR Part 60 or 61 applies to the facilities in this modification. Therefore, since the increments are not known to be violated in the area impacted by the proposed modification, only a Class I area impact analysis is required in the PSD application.

Table 1. Emissions Summary for Proposed Modification

| Facility | Potential TSP Emissions[a] (Tons/Yr.) | Estimated Actual TSP Emissions (Tons/Yr.) | Proposed Allowable Emissions[b] (Tons/Yr.) |
|---|---|---|---|
| Vent No. 4 | 9610 | 9.6 | 14.4 |
| Vent No. 5 | 9610 | 9.6 | 14.4 |
| Total Modification | 19220 | 19.2 | 28.8 |

[a]Calculated by assuming the separators specified in the application remove 96% of the ash handled, and the system operates continuously at maximum capacity.

[b]The applicant proposes allowable emission rates which include a 50% increase over estimated actual emissions to insure that allowable rates are not exceeded.

V. Class I Area Impact

The source is located approximately 20 kilometers from the Chassahowitzka Class I area. A modeling analysis using standard EPA models (CRSTER and PTMTP-W) and five year meteorological data from Tampa Airport was carried out to evaluate air quality impacts of the ash handling operations. Further, emissions from the proposed modification were modeled in conjunction with emissions from 14 other points at the FPC Crystal River Source and 13 other sources in the area. These sources are listed and described in Table 2. It should be noted that the applicant is not required to perform an increment or NAAQS analysis so that modeling of these additional sources is not strictly required; however, the result is a very conservative estimate of the impact of the proposed modification on the Chassahowitzka Class I area. The modeling results are summarized in Table 3.

Table 3. Air Quality Modeling Results: Class I Area Impacts

| | Annual Average ($\mu G/M^3$) | 24 Hour Average ($\mu G/M^3$) |
|---|---|---|
| Maximum predicted concentrations within Class I area | <<1 | 2 |
| Significance levels | 1 | 5 |

Inspection of Table 3 shows that the maximum impact on the Chassahowitzka Class I area from the proposed modification in conjunction with other TSP sources in the vicinity is less than the significance levels defined in the PSD regulations. Therefore, it is concluded that the proposed modification will not significantly adversely affect the ambient air quality within the Chassahowitzka Class I area. As stated in the introduction to the source impact analysis, the applicant is not required to perform an increment analysis.

TABLE 2. SOURCES IN AIR QUALITY MODEL

| Source Name | Location (KM) Horizontal | Vertical | County | ID Number | Particulate Emissions Tons/Day |
|---|---|---|---|---|---|
| FPC Sources | | | | | |
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| Fly Ash Transfer Silo | 334.200 | 3204.200 | Citrus | 2. | 0.001 |
| Fly Ash Storage Silo | 334.200 | 3204.200 | Citrus | 3. | 0.010 |
| Vacuum Blower Vents[a] | 334.200 | 3204.200 | Citrus | 4. | 0.052 |
| CR1, 1980's[b] | 334.200 | 3204.200 | Citrus | 5 | 4.664 |
| CR2, 1980's[c] | 334.200 | 3204.200 | Citrus | 6. | 5.653 |
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| Other Sources in Areas | | | | | |
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[a]Proposed modification.
[b]Crystal River Unit 1.
[c]Crystal River Unit 2.
[d]Crystal River Units 4 and 5 (to be built in 1980's).

## VI. Conclusions

EPA proposes a preliminary determination of approval for modification of Florida Power Corporation's Crystal River Units 1 and 2 Fly Ash Handling System (PSD FL 032), based on the application dated June 8, 1979, and supplemental modeling information dated April 18, 1979. The following conditions will be specified by the EPA for final approval of the modified source:

A. The proposed modification will be constructed and operated in accordance with the application cited above. Allowable emissions will be 3.3 pounds per hour and 14.4 tons per year from each of the following emissions points:

- Outlet of the bag filter for the vacuum blower on the fly ash transfer silo for precipitator 2C (vent number 4 in application).

- Outlet of the bag filter for the vacuum blower on the fly ash transfer silo for precipitators 2A and 2B (vent number 5 in application).

B. Compliance with the allowable emission rates specified in Condition A will be determined by performance tests in accordance with the provisions of 40 CFR 60.8 and using Standard EPA Methods. These tests will be carried out during a period when operation is continuous and when process rates and gas flow rates are within 10% of the maximum design rates specified in the application: 55,000 lb/hr of ash and 1887 ACFM, respectively. Testing of particulate matter emissions will be carried out isokinetically using EPA Standard Method 5 and with a minimum sampling time of 60 minutes for each run. Also, written results of these performance tests will be reported to EPA Region IV within 120 days of the date testing is completed.

C. Opacity of the emissions from each of the emissions points listed under Condition A shall not exceed 20 percent at any time as measured by EPA Method 9, Appendix A, 40 CFR 60.

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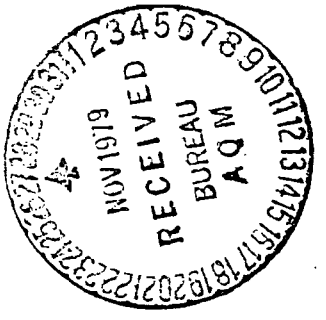


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B. Compliance with the allowable emission rates specified in Condition A will be determined by performance tests in accordance with the provisions of 40 CFR 60.8 and using Standard EPA Methods. These tests will be carried out during a period when operation is continuous and when process rates and gas flow rates are within 10% of the maximum design rates specified in the application: 55,000 lb/hr of ash and 1887 ACFM, respectively. Testing of particulate matter emissions will be carried out isokinetically using EPA Standard Method 5 and with a minimum sampling time of 60 minutes for each run. Also, written results of these performance tests will be reported to EPA Region IV within 120 days of the date testing is completed.

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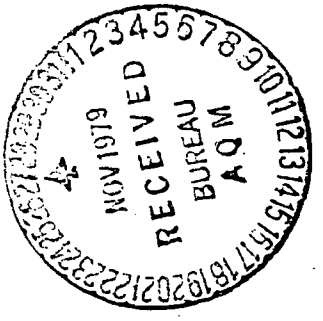


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Table 3. Air Quality Modeling Results: Class I Area Impacts

| | Annual Average ($\mu G/M^3$) | 24 Hour Average ($\mu G/M^3$) |
|---|---|---|
| Maximum predicted concentrations within Class I area | <<1 | 2 |
| Significance levels | 1 | 5 |

Inspection of Table 3 shows that the maximum impact on the Chassahowitzka Class I area from the proposed modification in conjunction with other TSP sources in the vicinity is less than the significance levels defined in the PSD regulations. Therefore, it is concluded that the proposed modification will not significantly adversely affect the ambient air quality within the Chassahowitzka Class I area. As stated in the introduction to the source impact analysis, the applicant is not required to perform an increment analysis.

TABLE 2. SOURCES IN AIR QUALITY MODEL

| Source Name | Location (KM) Horizontal | Location (KM) Vertical | County | ID Number | Particulate Emissions Tons/Day |
|---|---|---|---|---|---|
| FPC Sources | | | | | |
| Fly Ash Transfer Silo | 334.200 | 3204.200 | Citrus | 1. | 0.064 |
| Fly Ash Transfer Silo | 334.200 | 3204.200 | Citrus | 2. | 0.001 |
| Fly Ash Storage Silo | 334.200 | 3204.200 | Citrus | 3. | 0.010 |
| Vacuum Blower Vents[a] | 334.200 | 3204.200 | Citrus | 4. | 0.052 |
| CR1, 1980's[b] | 334.200 | 3204.200 | Citrus | 5 | 4.664 |
| CR2, 1980's[c] | 334.200 | 3204.200 | Citrus | 6. | 5.653 |
| CR4&5, 1980's[d] | 334.700 | 3205.300 | Citrus | 7. | 15.998 |
| Emerging Reclaim Hopper | 334.700 | 3205.300 | Citrus | 8. | 0.010 |
| Crusher House | 334.800 | 3205.300 | Citrus | 9. | 0.020 |
| Silo Dust Collectors | 334.700 | 3205.300 | Citrus | 10. | 0.033 |
| Fly Ash Silos | 334.700 | 3205.300 | Citrus | 11. | 0.052 |
| Fly Ash Vacuum Pump | 334.700 | 3205.300 | Citrus | 12. | 0.008 |
| Transfer Point 25 | 334.600 | 3203.900 | Citrus | 13. | 0.006 |
| Transfer Point 26 | 334.680 | 3203.900 | Citrus | 14. | 0.006 |
| Transfer Point 27 | 335.000 | 3204.100 | Citrus | 15. | 0.006 |
| Other Sources in Areas | | | | | |
| Florida Lime Works | 341.000 | 3204.200 | Citrus | 03-01 | 0.066 |
| Carroll Contracting Company | 364.100 | 3192.600 | Citrus | 01-01 | 0.025 |
| Crystal River Quarries | 340.500 | 3205.300 | Citrus | 07-01 | 0.090 |
| Dairy Service Corporation | 364.500 | 3158.300 | Hernando | 04-01 | 0.214 |
| Dairy Service Corporation | 364.500 | 3158.300 | Hernando | 04-02 | 0.016 |
| Chemical Lime, Inc. | 359.400 | 3162.300 | Hernando | 05-05 | 0.233 |
| Chemical Lime, Inc. | 359.400 | 3162.300 | Hernando | 05-06 | 0.008 |
| (Unnamed) | 359.400 | 3162.300 | Hernando | 05-07 | 0.041 |
| Florida Mining & Materials Corp. | 356.200 | 3103.700 | Hernando | 10-04 | 0.033 |
| Deltona Corporation | 359.700 | 3164.000 | Hernando | 13-01 | 0.008 |
| Southern Materials Corp. | 384.600 | 3244.100 | Marion | 16-01 | 0.033 |
| Southern Materials Corp. | 384.600 | 3244.100 | Marion | 16-02 | 0.266 |
| Mid Florida Mining Co. | 384.500 | 3203.300 | Marion | 17-01 | 0.310 |

[a] Proposed modification.
[b] Crystal River Unit 1.
[c] Crystal River Unit 2.
[d] Crystal River Units 4 and 5 (to be built in 1980's).

VI. Conclusions

EPA proposes a preliminary determination of approval for modification of Florida Power Corporation's Crystal River Units 1 and 2 Fly Ash Handling System (PSD FL 032), based on the application dated June 8, 1979, and supplemental modeling information dated April 18, 1979. The following conditions will be specified by the EPA for final approval of the modified source:

A. The proposed modification will be constructed and operated in accordance with the application cited above. Allowable emissions will be 3.3 pounds per hour and 14.4 tons per year from each of the following emissions points:

- Outlet of the bag filter for the vacuum blower on the fly ash transfer silo for precipitator 2C (vent number 4 in application).
- Outlet of the bag filter for the vacuum blower on the fly ash transfer silo for precipitators 2A and 2B (vent number 5 in application).

B. Compliance with the allowable emission rates specified in Condition A will be determined by performance tests in accordance with the provisions of 40 CFR 60.8 and using Standard EPA Methods. These tests will be carried out during a period when operation is continuous and when process rates and gas flow rates are within 10% of the maximum design rates specified in the application: 55,000 lb/hr of ash and 1887 ACFM, respectively. Testing of particulate matter emissions will be carried out isokinetically using EPA Standard Method 5 and with a minimum sampling time of 60 minutes for each run. Also, written results of these performance tests will be reported to EPA Region IV within 120 days of the date testing is completed.

C. Opacity of the emissions from each of the emissions points listed under Condition A shall not exceed 20 percent at any time as measured by EPA Method 9, Appendix A, 40 CFR 60.

File Copy

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IV
345 COURTLAND STREET
ATLANTA, GEORGIA 30365

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APR 25 1988
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4APT/APB-aes

Mr. Jeff Pardue
Licensing and Environmental Affairs
Florida Power Corporation
P.O. Box 14042
3201 Thirty-fourth Street South
St. Petersburg, Florida 33733

Re: Florida Power Corporation, Crystal River Cooling Towers Units 4 and 5

Dear Mr. Pardue:

In your March 30, 1988, telephone conversation with Mr. Wayne J. Aronson of my staff, you requested an opportunity to review the draft permit conditions that EPA might propose in modifying the EPA PSD Permit (PSD-FL-032) for the cooling towers at the above facility. You indicated that you would like to review these conditions prior to submitting an application for a permit modification. Enclosed please find draft permit conditions for the Units 4 and 5 cooling towers. We remind you that these conditions are subject to further agency and public review.

If you have any questions, please call Mr. Wayne J. Aronson of my staff at (404) 347-2864.

Sincerely yours,

Bruce P. Miller

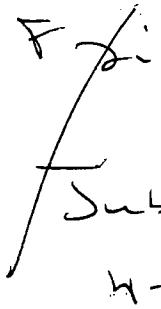
Bruce P. Miller, Chief
Air Programs Branch
Air, Pesticides, and Toxics
Management Division

Enclosure

cc: J.P. Subramami, Florida DER, Water Quality Management
Steve Smallwood, Florida DER, Bureau of Air Quality Management

cc: Tom Rogus, CHF } 4/26/88

Clair -



4-25-88

Tom Rogers

Draft Permit Conditions - Amendment to PSD Permit FL-032

1. Emission Limitation

The cooling towers serving Units 4 and 5 shall be maintained and operated to assure a maximum particulate emission rate of 1.5 lb/hr per tower. Test methods and procedures for demonstrating compliance with this limitation are described in item 3 below.

2. Ambient Monitoring

The Permittee shall continue the salt drift monitoring program approved by EPA and the Florida Department of Environmental Regulation (FDER) on January 6, 1981, and January 28, 1981, respectively. Reports shall be submitted quarterly to EPA and FDER. At the Permittee's discretion, the Permittee may review this monitoring program and evaluate the need for revisions. If, in the opinion of the Permittee, EPA, or FDER, revisions to the monitoring program appear appropriate, the Permittee shall submit to EPA and FDER a plan for a revised monitoring program. This plan shall present a description of the proposed monitoring program, a comparison with the present monitoring program, and justification for the changes. EPA and FDER will review the proposed monitoring program plan and either approve it as is or with modifications.

If, as determined by EPA, FDER, or the Permittee, the monitoring data indicate that significant impacts are occurring to the surrounding area, the Permittee shall consult with EPA and FDER to mitigate these impacts. Should the data indicate that no significant impacts are occurring to the surrounding area, the Permittee--after consultation with and approval by the Director of the EPA Region IV Air, Pesticides, and Toxics Management Division, and FDER--may reduce or eliminate the monitoring program.

3. Compliance Testing

Particulate emissions shall be measured by the sensitive paper (SP) method for each cooling tower. Testing shall be done at either the drift eliminator level within the tower or at the tower exit plane. For demonstrating compliance with the applicable emission limit, three tests shall be conducted. The Unit 4 tower shall be the first tower tested after the scheduled fall 1988 service outage. This test shall be conducted no later than December 1, 1988. The first compliance test for the Unit 5 tower shall be conducted after the scheduled spring 1992 service outage but no later than May 1, 1992. Additionally, the Units 4 and 5

towers shall be tested no less than once every five years thereafter with the Unit 4 tower always tested after the fall outage, but in no event later than December of that year and Unit 5 tower always tested after the spring outage, but in no event later than May of that year.

All valid data from each of these tests shall be averaged in demonstrating compliance. No individual test result shall determine compliance or noncompliance. The emission rate reported as a percent of the circulating water rate as well as lb/hr and total dissolved solids in the cooling tower basin(s) and intake water shall be reported for each test. Within three months after permit issuance, all areas adjacent to concrete structures within the Unit 5 tower shall be properly sealed to assure that the drift eliminators are not bypassed. Not less than once every three months, the drift eliminators ot both towers shall be inspected from the concrete walkways by FPC staff or representatives to assure that the drift eliminators are clean and in good working order. Not less than annually, a complete inspection of the towers shall be conducted by a manutacturer of drift elminators or by a consultant with recognized expertise in the field. An inspection protocol shall be submitted prior to the first inspection. Certification that the drift eliminators are properly installed and in good working order shall be made at the time of submission of the reports noted below.

4. Reporting

Reports on tower testing and inspection shall be submitted according to the following timeframe:

- within 30 days after all visual inspections of the drift eliminators, and

- within 30 days after the compliance testing of either the Unit 4 or Unit 5 tower.

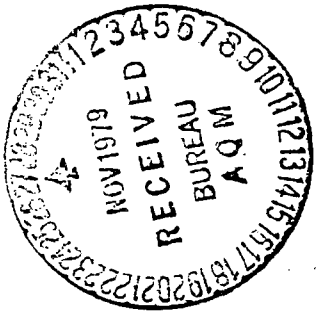
Should either tower emission rate exceed 175 lb/hr, permittee shall (1) notify EPA and FDER of the occurrence within 10 days of becoming aware of the situation, (2) provide an assessment of necessary corrective actions and a proposed schedule of implementation within an additional 20 days, (3) expeditiously complete corrective actions, (4) retest the tower within three months after the correction is completed, and (5) submit a testing report within 30 days after completion of said tests.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IV

345 COURTLAND STREET
ATLANTA, GEORGIA 30308

NOV 21 1979




REF: 4AH-AF

Mr. Steve Smallwood, Chief
Bureau of Air Quality Management
Division of Environmental Programs
Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32301

Dear Mr. Smallwood:

Enclosed for your review and comment are the public notice and Preliminary PSD Determination for Florida Power Corporation's proposed modification of the dry fly ash handling system at Crystal River Units 1 and 2. The public notice is to appear in the Suncoast Sentinel in Crystal River.

Please let us know if you have any comments on this determination.

Sincerely yours,

Tommie A. Gibbs

Tommie A. Gibbs
Chief
Air Facilities Branch

Enclosure

# PUBLIC NOTICE

A new air pollution source is proposed for construction by the Florida Power Corporation at their plant in Crystal River, Florida. Emissions of particulate matter will be increased by the modification of a wet flyash handling system to a dry flyash handling system. This modification is the second of two similar modifications and completes the transition to a totally dry flyash handling system.

The proposed modification has been reviewed by the U. S. Environmental Protection Agency (EPA) under Federal Prevention of Significant Deterioration (PSD) Regulations (40 CFR 52.21). EPA has made a Preliminary Determination that the construction can be approved provided certain conditions are met. A summary of the basis for this determination and the application for a permit submitted by the Florida Power Corporation are available for public review in the Office of the City Manager, 123 N. W. Highway 19, in Crystal River.

The allowable emissions from the proposed modification are less than 50 tons per year for each pollutant emitted. Therefore, consistent with the PSD regulation, the amount of available increment consumed was not determined. In addition, the plant is only 20 kilometers from the Chassahowitzka National Wilderness area; however, an air quality modelling analysis has been performed which shows that no significant adverse impact will occur to the air quality in this Class I area.

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

Mr. Tommie A. Gibbs, Chief
Air Facilities Branch
US Environmental Protection Agency
345 Courtland Street, NE
Atlanta, Georgia 30308

APPLICATION PSD FL 032

PRELIMINARY DETERMINATION SUMMARY

I. Applicant

Florida Power Corporation
3201 Thirty-Fourth Street South
St. Petersburg, Florida 33733

II. Location

The proposed modification is to an existing source located west of US 19 near the city of Crystal River, Florida. The UTM coordinates are 334215.260 East and 3204249.053 North.

III. Project Description

The applicant proposes to modify the fly ash handling system at the existing Crystal River Power Plant for generating units one and two. This system was modified previously under a Prevention of Significant Deterioration (PSD) permit issued by EPA on February 12, 1979. At that time, the wet fly ash handling system was converted to a combination wet and dry system. The dry system allows more recovery of fly ash for sale as a concrete aggregate. The modification currently proposed will provide dry handling capability for the fly ash now transported by the wet handling part of the system. The wet handling capacity will remain as standby equipment.

The proposed modification adds two new vacuum blowers and two new bag filters (vent numbers 4 and 5) to draw ash from the electrostatic precipitators controlling particulate (TSP) emissions from the steam generators. The design fly ash rate for each stream is 27.5 tons per hour (240,000 tons per year).

IV. Source Impact Analysis

Converting the existing wet system to dry handling will increase emissions of TSP. As shown in Table 1, potential emissions of TSP exceed 100 tons per year. Therefore, according to Title 40 Code of Federal Regulations Part 52.21, Prevention of Significant Deterioration (PSD) review of the planned modification is required and should involve the following:

- air quality impact analysis (National Ambient Air Quality Standards (NAAQS) and PSD increments)
- monitoring data

- Best Available Control Technology (BACT) analysis
- growth impact analysis
- visibility, soils, and vegetation analyses
- Class I area impact analysis

However, the applicant proposes installing bag filters, which will reduce the actual emissions to a total of 19.2 tons per year from both vents. Under 40 CFR 52.21 (k), major modifications with allowable emissions less than 50 tons per year, 1000 pounds per day or 50 pounds per hour, as appropriate, are exempted from the requirement for NAAQS and increment analyses, monitoring data, growth impact analysis, and visibility, soils, and vegetation analyses, unless the allowable emissions from the source would impact a Federal Class I area or an area in which the PSD increments are known to be violated. Furthermore, under 40 CFR 52.21 (j), no such source would need a BACT analysis to acquire a PSD permit. Finally, no emission limitations or standards of performance under CFR Part 60 or 61 applies to the facilities in this modification. Therefore, since the increments are not known to be violated in the area impacted by the proposed modification, only a Class I area impact analysis is required in the PSD application.

Table 1. Emissions Summary for Proposed Modification

| Facility | Potential TSP Emissions[a] (Tons/Yr.) | Estimated Actual TSP Emissions (Tons/Yr.) | Proposed Allowable Emissions[b] (Tons/Yr.) |
|---|---|---|---|
| Vent No. 4 | 9610 | 9.6 | 14.4 |
| Vent No. 5 | 9610 | 9.6 | 14.4 |
| Total Modification | 19220 | 19.2 | 28.8 |

[a]Calculated by assuming the separators specified in the application remove 96% of the ash handled, and the system operates continuously at maximum capacity.

[b]The applicant proposes allowable emission rates which include a 50% increase over estimated actual emissions to insure that allowable rates are not exceeded.

V. Class I Area Impact

The source is located approximately 20 kilometers from the Chassahowitzka Class I area. A modeling analysis using standard EPA models (CRSTER and PTMTP-W) and five year meteorological data from Tampa Airport was carried out to evaluate air quality impacts of the ash handling operations. Further, emissions from the proposed modification were modeled in conjunction with emissions from 14 other points at the FPC Crystal River Source and 13 other sources in the area. These sources are listed and described in Table 2. It should be noted that the applicant is not required to perform an increment or NAAQS analysis so that modeling of these additional sources is not strictly required; however, the result is a very conservative estimate of the impact of the proposed modification on the Chassahowitzka Class I area. The modeling results are summarized in Table 3.

Table 3. Air Quality Modeling Results: Class I Area Impacts

| | Annual Average ($\mu G/M^3$) | 24 Hour Average ($\mu G/M^3$) |
|---|---|---|
| Maximum predicted concentrations within Class I area | <<1 | 2 |
| Significance levels | 1 | 5 |

Inspection of Table 3 shows that the maximum impact on the Chassahowitzka Class I area from the proposed modification in conjunction with other TSP sources in the vicinity is less than the significance levels defined in the PSD regulations. Therefore, it is concluded that the proposed modification will not significantly adversely affect the ambient air quality within the Chassahowitzka Class I area. As stated in the introduction to the source impact analysis, the applicant is not required to perform an increment analysis.

TABLE 2. SOURCES IN AIR QUALITY MODEL

| Source Name | Location (KM) Horizontal | Vertical | County | ID Number | Particulate Emissions Tons/Day |
|---|---|---|---|---|---|
| FPC Sources | | | | | |
| Fly Ash Transfer Silo | 334.200 | 3204.200 | Citrus | 1. | 0.064 |
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[a] Proposed modification.
[b] Crystal River Unit 1.
[c] Crystal River Unit 2.
[d] Crystal River Units 4 and 5 (to be built in 1980's).

VI. Conclusions

EPA proposes a preliminary determination of approval for modification of Florida Power Corporation's Crystal River Units 1 and 2 Fly Ash Handling System (PSD FL 032), based on the application dated June 8, 1979, and supplemental modeling information dated April 18, 1979. The following conditions will be specified by the EPA for final approval of the modified source:

A. The proposed modification will be constructed and operated in accordance with the application cited above. Allowable emissions will be 3.3 pounds per hour and 14.4 tons per year from each of the following emissions points:

- Outlet of the bag filter for the vacuum blower on the fly ash transfer silo for precipitator 2C (vent number 4 in application).
- Outlet of the bag filter for the vacuum blower on the fly ash transfer silo for precipitators 2A and 2B (vent number 5 in application).

B. Compliance with the allowable emission rates specified in Condition A will be determined by performance tests in accordance with the provisions of 40 CFR 60.8 and using Standard EPA Methods. These tests will be carried out during a period when operation is continuous and when process rates and gas flow rates are within 10% of the maximum design rates specified in the application: 55,000 lb/hr of ash and 1887 ACFM, respectively. Testing of particulate matter emissions will be carried out isokinetically using EPA Standard Method 5 and with a minimum sampling time of 60 minutes for each run. Also, written results of these performance tests will be reported to EPA Region IV within 120 days of the date testing is completed.

C. Opacity of the emissions from each of the emissions points listed under Condition A shall not exceed 20 percent at any time as measured by EPA Method 9, Appendix A, 40 CFR 60.