



**northPOND**  
ENERGY PARK  
A Consolidated Power Source Company

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February 26, 2001

RECEIVED

FEB 28 2001

BUREAU OF AIR REGULATION

Scott Sheplak, P.E.  
Administrator, Title V Section  
Florida Department of Environmental Protection  
Division of Air Resources Management  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Re: DEP File No. 0490046-001-AC (PSD-FL-306) – <sup>South</sup>North Pond Energy Park

and 0490045-001-AC PSD-307 North

Dear Mr. Sheplak:

This correspondence provides additional information requested in response to your letter of December 8, 2000, and the meeting on the proposed North Pond Energy Park that will be located in Hardee County, Florida. In your letter, you indicate that the North Pond Energy Park and the South Pond Energy Park appear to meet the Environmental Protection Agency (EPA) requirements for consideration as a single facility and you request that we provide a rationale for classifying these as two separate facilities. You also ask that we address the question of whether the plants are subject to the Electrical Power Plant Siting Act.

While you have not specified for us the EPA requirements that the facilities "appear to meet" for consideration as a single facility, we are not aware of any listing of specific criteria that would be used for this purpose. It is our understanding that EPA does not have specific guidance on this issue and that such questions are handled case-by-case. See, 45 Federal Register, at 52695 (August 7, 1980). The applicable regulations, preamble and various EPA decisions on this issue clearly suggest that these two facilities do not merit consideration as a single facility. EPA's rules define "stationary source" as "any building, structure, facility, or installation which emits or may emit any air pollutants subject to regulation . . . ." 40 CFR § 52.21(b)(5). For regulatory purposes, a "building, structure, facility or installation" is defined in the rules as "all of the pollutant-emitting activities which belong to the same industrial grouping, are located on one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control) . . . . Pollutant-emitting activities shall be considered as part of the same industrial grouping if they belong to the same "major group" (i.e., which have the same first two-digit code) as described in the Standard Industrial Classification Manual, 1972 . . . ." 40 CFR § 52.21(b)(6).

Florida's rules are based on EPA rules and are almost identical in defining a stationary source. A "facility" is defined as "all of the emission units which are located on one or more contiguous or adjacent properties, and which are under the control of the same person (or persons under common control)." Rule 62-210.200(125), Florida Administrative Code (FAC).

The two facilities are separate and distinct legal entities and are not operationally or functionally related. For purposes of evaluating whether the two facilities should be aggregated, the following facts are relevant:

1. Both of the facilities are separate legal entities by virtue of being established as stand-alone, independent companies.

2. Each of the plants has separate, stand-alone operating facilities. The two plants will not be connected in any way and will operate independently. There will be separate operating staffs and facilities for independent operation. Neither plant will be dependent upon the other for operational support.

3. The plants are configured differently. The configurations are unique to the location of each plant and will be defined by the constraints of each site's infrastructure.

4. The North Pond facility will electrically connect to Tampa Electric Company's system at the Hardee substation. This substation is adjacent to the site. The South Pond will electrically connect to the Florida Power & Light Company 230 KV transmission system by way of a new seven to eight mile transmission. The existing electrical transmission system will not allow a single 1,000/1,250 MW plant to connect into the system and, therefore, the plants are separate and located in such a way as to minimize electrical interconnection costs. Each of the companies and facilities will have separate interconnection studies and contracts for the interconnection.

5. The two sites are located six miles (about 10 kilometers) apart as a result of operational and functional differences. This separation is the result of two important features. The first is based on the ability to interconnect to the transmission systems as noted above. The second is based on the unique surface water bodies that the plants can use for cooling and water supply. The North Pond facility will use an existing pond that is no longer being used in the phosphate industry. The South Pond location coincides with an actively mined area. The pond is much larger in size which allows a larger power plant. Neither location is capable of handling the combined water needs of the two facilities.

We have reviewed a number of decisions on this issue made by EPA over a period of years, and we have been unable to uncover a single instance in which two facilities meeting the descriptions set forth above have been combined. Assuming, without conceding, that the two facilities would meet the test of being under common control, the sites are neither adjacent nor contiguous. The only instances in which physically separated sites have been combined by EPA are those where there is some feature, such as a railroad line or a transmission line, that also connects the sites or

where the sites are functionally or operationally related. This is not the case with the two plants in question here.

It is also important to note that both projects are required to undergo PSD review for regulated air pollutants including particulate matter, sulfur dioxide, and nitrogen oxides. As such, the projects will implement Best Available Control Technology (BACT) as individually required for each separate project. Clearly, the separate projects will not result in avoidance of any technical reviews required by DEP.

Both EPA and at least one court have indicated an intention to use a common sense approach in applying the definition of "stationary source." Alabama Power v. Costle, 606 F.2d 1068, 1077 (DC Cir. 1979), superceded in other aspects, Alabama Power v. Costle, 636 F.2d 323 (DC Cir. 1979); 45 Fed. Reg. at p. 52694. Applying common sense, it would seem appropriate to look at the commonly understood meaning of the words "contiguous" and "adjacent." "Adjacent" is defined in Webster's dictionary as nearby or having a common border. "Contiguous" is defined as being in actual contact or touching along a boundary or at a point. These definitions imply sites that are in very close proximity to one another, and certainly not separated by a distance of six miles.

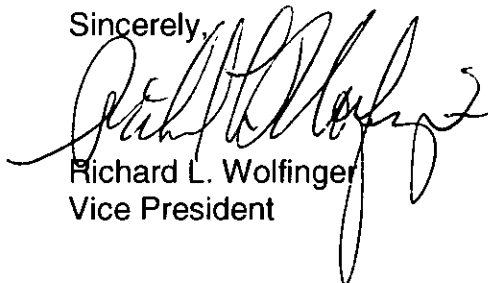
Your December 8, 2000, letter also raises the question of whether sufficient information has been provided to make the determination that the proposed power plant is not subject to the provisions of the Siting Act. As we understand it, the Siting Act applies to any electrical power plant, as defined in the statute, that has a steam generating capacity of 75 megawatts or greater. We further understand that DEP has consistently determined that plants that are not currently capable of generating 75 megawatts or greater of steam are not subject to the provisions of the Siting Act and are subject instead to the traditional permitting for stationary sources. This plant will be limited to an output of 74.9 megawatts of steam generation. This limitation will be placed on the equipment in a way that the 74.9 megawatts will not be exceeded at any time. The bid specifications for the plant will limit the steam capacity to 74.9 megawatts or less. Consistent with the past determinations of DEP, we believe that this configuration is not subject to the provisions of the Siting Act. As noted above, we see no basis on which to combine the sites for PSD or for other purposes, including the Siting Act.

Attached is a letter report dated February 6, 2001 from Golder Associates which combines the air impact of the North Pond Energy Park and South Pond Energy Park as requested by FDEP. The modeling that is summarized in the report has been submitted to the Department.

Scott Sheplak, P.E.  
February 27, 2001  
Page 4 of 4

We would be pleased to discuss this further with you should you have questions or require additional information.

Sincerely,

A handwritten signature in black ink, appearing to read 'Richard L. Wolfinger', with a large, stylized flourish extending from the end of the signature.

Richard L. Wolfinger  
Vice President

cc: Larry Curtin, Holland & Knight  
Ken Kosky, Golder Associates

**Golder Associates Inc.**

6241 NW 23rd Street, Suite 500  
Gainesville, FL 32653-1500  
Telephone (352) 336-5600  
Fax (352) 336-6603



February 6, 2001

9939503

North Pond Energy Park, LLC and South Pond Energy Park, LLC  
111 Market Place, Suite 200  
Baltimore, Maryland 21202

Attention: Mr. Richard L. Wolfinger, Vice President

RE: North Pond Energy Park and South Pond Energy Park  
DEP File Nos. 0490045-001-AC (PSD-FL-307) and 0490046-001-AC (PSD-FL-306)  
FDEP Request for Additional Information

Dear Rick:

Golder Associates Inc. (Golder) has performed the ambient air quality impact analysis for both the North Pond Energy Park and South Pond Energy Park as requested by the Florida Department of Environmental Protection (FDEP) in their December 8, 2000 correspondence. As requested by the FDEP, the ambient air impact analysis was conducted to determine the combined impacts of both facilities on the Prevention of Significant Deterioration (PSD) Class II areas in the vicinity of each plant and the Chassahowitzka PSD Class I Area. The impact analysis is attached. Under separate cover, Golder will submit the modeling documentation to Mr. Cleve Holladay, the FDEP meteorologist that reviews the impact analyses for projects.

The results of the analyses determined that the impacts of both projects are less than the PSD Class II Significant Impact Levels. In addition, the impacts of both projects are less than the EPA proposed PSD Class I Significant Impact Levels, except for the 24-hour SO<sub>2</sub> impacts when the combined cycle units and simple cycle units are operating. In this case, the combined impacts of both projects are slightly above the PSD Class I Significant Impact Levels (i.e., 0.22 µg/m<sup>3</sup> compared to 0.2 µg/m<sup>3</sup>). The combined impacts of both projects are also slightly greater than the visibility impairment criteria of 5 percent in the PSD Class I Area. It should be noted that both the PSD Significant Impact Levels and visibility impairment criteria are appropriate modeling thresholds for individual projects and not the combination of two separate projects. The impact analyses included in the air permit and PSD applications for each project demonstrated conformance with these FDEP modeling thresholds. In addition, the impact analysis was based on the use of distillate fuel oil, which is the backup fuel for the each project. Thus, the impact analyses of both projects are inherently conservative (i.e., predicted impacts would be much greater than would actually occur during operation).

Please call if you have any questions.

Sincerely,

GOLDER ASSOCIATES INC.

Kennard F. Kosky, P.E.  
Principal

KFK/jkw/jkw

Enclosures

cc: Steve Marks, Golder - Gainesville Office  
Manitia Moultrie, Golder - Tampa Office

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## COMBINED AIR QUALITY IMPACT ANALYSIS FOR CONSTELLATION NORTH POND ENERGY PARK AND SOUTH POND ENERGY PARK

### AIR MODELING ANALYSIS APPROACH

The Florida Department of Environmental Protection (FDEP) has requested that an ambient air quality impact analyses be performed for the North Pond Energy Park and South Pond Energy Park as if they were a single facility. The North Pond Energy Park site is located approximately 6 miles due north of the South Pond Energy Park site. Both sites are located in Hardee County. For modeling purposes, model runs were performed using the ISCST3 to determine impacts in the vicinity of each site and the CALPUFF model was used to determine impacts in the Chassahowitzka Class I Area. In the modeling analyses originally performed for each facility and submitted with the air permit application, impacts were determined for both the primary fuel (i.e., natural gas) and the backup fuel (i.e., distillate fuel oil). The worst-case impacts from these analyses were determined to be when distillate oil is used since emissions of this backup fuel are higher than natural gas. For the modeling analysis of both facilities, it was assumed that each facility would be operating on the backup fuel (i.e., distillate fuel oil). A description of the models, source parameters, meteorological data, and procedures are described in the two separate air permit applications for each project. These applications are the *Air Permit Application and Prevention of Significant Deterioration Analysis for the South Pond Energy Park, Hardee County, Florida* and the *Air Permit Application and Prevention of Significant Deterioration Analysis for the North Pond Energy Park, Hardee County, Florida*.

### RECEPTOR LOCATIONS

For determining impacts in the vicinity of each facility, fenceline receptors for both the North Pond Energy Park and South Pond Energy Park were included in the modeling analysis. Two polar receptor grids, with 10 degree spacing, were generated beyond the fenceline of each site. Each receptor grid included 36 receptors located on radials extending out from each proposed HRSG stack location. Along each radial, receptors were located at each project's fenceline and distances of 0.1, 0.2, 0.3, 0.5, 0.7, 1.0, 1.5, 2.0, 2.5, 3.0, 4.0, 5.0, 7.0, 10.0, 12.0, 15.0, 20.0, 25.0, and 30 kilometers (km) from each proposed HRSG stack location.

Modeling refinements were performed, as needed, by employing a polar receptor grid with a maximum spacing of 100 meters (m) along each radial and an angular spacing between radials of 2 degrees or less. For determining impacts from both facilities to the Chassahowitzka Class I Area, the same receptors identified in the air permit applications were used.

#### **AIR MODELING RESULTS**

For the area in the vicinity of each separate facility, the maximum impacts were previously determined to be a result of the combined cycle unit and peaking unit(s) operating on distillate oil. Table 6-2a presents the maximum impacts in the vicinity of either project when all five units are operating on distillate fuel oil. As shown in Table 6-2a, the maximum predicted pollutant impacts due to the proposed facilities are less than the significant impact levels for carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), sulfur dioxide (SO<sub>2</sub>), and particulate matter of 10 microns diameter or less (PM<sub>10</sub>). Maximum predicted NO<sub>2</sub> concentrations were assumed as 75 percent of the total predicted NO<sub>2</sub> concentration as allowed by U. S. Environmental Protection Agency (EPA) guidance (EPA, 1995). The proposed facilities, when combined, will not have a significant impact on the air quality in the vicinity of either plant. A comparison of the maximum impacts to the PSD Class II Increments, Ambient Air Quality Standards, and Significant Impact Levels is shown in Table 6-3a.

Table 6-4a presents the maximum pollutant specific concentrations due to both the North Pond Energy Park and the South Pond Energy Park operating on distillate oil. Table 6-5a presents the maximum impacts compared to the EPA Class I Significant Impact Levels. The maximum predicted impacts are less than the EPA PSD Class I Significant Impact Levels for both facilities, with the exception of maximum 24-hour SO<sub>2</sub> concentrations predicted for three simple cycle units and two combined cycle units operating on distillate oil.

Table 7-5a presents highest predicted 24-hour visibility impairment at the Chassahowitzka PSD Class I Area for the South Pond Energy Park, the North Pond Energy Park, and both facilities. These predictions were based on distillate oil firing. As shown, the visibility

impairment of each individual facility is well within the Florida Wildlife Service/National Park Service (FWS/NPS) criteria of 5 percent. The combined impact of each separate facility is slightly higher than the FWS/NPS criteria.

It should be noted that the EPA PSD Class I and II Significant Impact levels and the visibility impairment criteria were established for individual projects. In that context, the previous modeling analyses presented in the air permit application demonstrated conformance with the applicable criteria. Moreover, the predicted impacts were based on both facilities firing distillate oil, which is the backup fuel for each project. The maximum distillate oil usage being requested for each project is only 720 hours per year or about 8.2 percent of the available hours in a year. In addition, the operation of peaking units is typically only during peak electric demand periods, which normally occur less than 12 to 14 hours per day (i.e., 7 a.m. to 9 p.m.). For the purpose of modeling it was assumed that all units operate for 24-hours a day at 100-percent load. When these facts are taken together, the predicted impacts for both facilities are extremely conservative.

Table 6-2a. Maximum Predicted Pollutant Concentrations for the North Pond Energy Park and South Pond Energy Park Projects Compared to the EPA PSD Class II Significant Impact Levels

Pollutant	Averaging Time	Maximum Predicted Concentrations (ug/m <sup>3</sup> ) by Operating Load and Air Inlet Temperature <sup>a</sup>									EPA Class II Significant Impact Levels (μg/m <sup>3</sup> )
		Base Load			75% Load			50% Load			
		32°F	59°F	95°F	32°F	59°F	95°F	32°F	59°F	95°F	
<u>Simple/Combined Cycle Operation <sup>b</sup></u>											
SO <sub>2</sub>	Annual	0.217	0.216	0.204	0.213	0.215	0.197	0.185	0.178	0.163	1
	24-Hour	2.18	2.29	2.22	2.52	2.82	3.30	3.46	3.37	3.24	5
	3-Hour	7.1	16.5	16.3	18.5	19.0	17.9	16.2	15.5	14.5	25
PM <sub>10</sub>	Annual	0.147	0.150	0.151	0.159	0.164	0.155	0.152	0.150	0.141	1
	24-Hour	1.53	1.62	1.73	1.92	2.64	3.07	3.31	3.28	3.24	5
NO <sub>2</sub> <sup>c</sup>	Annual	0.881	0.881	0.879	0.879	0.879	0.877	0.877	0.876	0.875	1
CO	8-Hour	76	76	76	76	76	76	76	76	76	500
	1-Hour	208	208	208	208	208	208	208	208	208	2,000

<sup>a</sup> Concentrations are based on highest predicted concentrations using five years of meteorological for 1987 to 1991 of surface data from the National Weather Service stations at the Tampa International Airport and upper air data from Ruskin.

<sup>b</sup> Modeled worst case scenario consisting of two combined cycle and three simple cycle combustion turbines using fuel oil and two natural gas fired auxiliary boilers.

<sup>c</sup> NO<sub>2</sub> concentrations derived from the ozone limiting method as described in Section 6-4.

Table 6-3a. Maximum Predicted Pollutant Concentrations for the North Pond Energy Park and the South Pond Energy Park Projects Compared to the EPA Class II Significant Impact Levels, PSD Class II Increments, and AAQS

Pollutant	Averaging Time	Maximum Predicted Concentration ( $\mu\text{g}/\text{m}^3$ )	Receptor Location		Time Period (YYMMDDHH)	EPA Class II Significant Impact Levels ( $\mu\text{g}/\text{m}^3$ )	PSD Class II Increments ( $\mu\text{g}/\text{m}^3$ )	AAQS ( $\mu\text{g}/\text{m}^3$ )
			Direction (degree)	Distance (m)				
<u>Simple/Combined Cycle Operation</u>								
SO <sub>2</sub>	Annual	0.217	305	9279	91123124	1	25	60
	24-Hour	3.46	120	200	91021524	5	91	260
	3-Hour	19.0	350	8762	91031009	25	512	1,300
PM <sub>10</sub>	Annual	0.164	10	1900	89123124	1	17	50
	24-Hour	3.31	120	200	91021524	5	30	150
NO <sub>2</sub>	Annual	0.881	120	200	87123124	1	25	100
CO	8-Hour	76	120	200	90040424	500	NA	10,000
	1-Hour	208	120	190	91112321	2,000	NA	40,000

Note: NA = Not Applicable  
YYMMDDHH = Year,Month,Day,Hour Ending

Table 6-4a. Maximum Predicted Concentrations due to North Pond Energy Park and the South Pond Energy Park at the Chassahowitzka National Wilderness Area Class I Area

Pollutant	Concentrations <sup>a</sup> ( $\mu\text{g}/\text{m}^3$ ) for Averaging Times				
	Annual	24-Hour	8-Hour	3-Hour	1-Hour
<u>Distillate Fuel Oil - 3SC Units and 2CC Units at Two Facilities</u>					
Sulfur Dioxide (SO <sub>2</sub> )	0.011	0.22	0.424	0.632	0.728
Nitrogen Dioxide (NO <sub>2</sub> )	0.007	0.294	0.776	1.14	1.42
Particulates (PM <sub>10</sub> )	0.006	0.125	0.238	0.329	0.37
Carbon Monoxide (CO)	0.014	0.199	0.316	0.519	0.637
<u>Distillate Fuel Oil - 5 SC Units at Two Facilities</u>					
Sulfur Dioxide (SO <sub>2</sub> )	0.01	0.191	0.435	0.663	0.79
Nitrogen Dioxide (NO <sub>2</sub> )	0.009	0.316	0.911	1.47	1.73
Particulates (PM <sub>10</sub> )	0.003	0.043	0.094	0.148	0.185
Carbon Monoxide (CO)	0.013	0.205	0.351	0.539	0.724

<sup>a</sup> Impacts predicted with the CALPUFF model using 1990 windfield data and a Central Florida model created with CALMET.

Note: SC = Simple Cycle Operation  
CC = Combined Cycle Operation

Table 6-5a. Summary of Maximum Pollutant Concentrations Predicted Using CALPUFF for North Pond Energy Park and South Pond Energy Park Compared to the EPA Class I Significant Impact Levels and PSD Class I Increments

Pollutant	Averaging Time	Maximum Predicted Concentration ( $\mu\text{g}/\text{m}^3$ )	EPA Class I Significant Impact Levels ( $\mu\text{g}/\text{m}^3$ )	PSD Class I Increments ( $\mu\text{g}/\text{m}^3$ )
<u>Distillate Fuel Oil Firing in 3 SC Units and 2 CC Units</u>				
SO <sub>2</sub>	Annual	0.0110	0.1	2
	24-Hour	0.22	0.2	5
	3-Hour	0.63	1.0	25
PM <sub>10</sub>	Annual	0.0060	0.2	4
	24-Hour	0.13	0.3	8
NO <sub>2</sub>	Annual	0.007	0.1	2.5
<u>Distillate Fuel Oil Firing in 5 SC Units</u>				
SO <sub>2</sub>	Annual	0.0100	0.1	2
	24-Hour	0.191	0.2	5
	3-Hour	0.66	1.0	25
PM <sub>10</sub>	Annual	0.003	0.2	4
	24-Hour	0.04	0.3	8
NO <sub>2</sub>	Annual	0.009	0.1	2.5

Table 7-5a. Predicted Visibility Impairment<sup>a</sup> (%) at the Chassahowitzka PSD Class I Area - South Pond Energy Park, North Pond Energy Park, and Both Facilities

	South Pond Energy Park		North Pond Energy Park		Both Facilities	
	2SC/1CC	3SC	1SC/1CC	2SC	3 SC/2 CC	5 SC
Oil-Firing	3.26	3.71	2.2	2.76	5.38	6.36
Criteria	5.0	5.0	5.0	5.0	5.0	5.0

<sup>a</sup>Predicted with CALPUFF Version 5.4 with a Central Florida CALMET Wind Field, 1990. Impairment predicted using CALPOST with hourly RH data and background extinctions provided by FWS/NPS (8/00).

Note: SC = Simple Cycle CT operation.  
CC = Combined Cycle CT operation.