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September 3, 2003

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Florida Department of Environmental Protection
Bureau of Air Regulation
New Source Review Section
2600 Blair Stone Road MS 5505
Tallahassee, FL 32399-2400

SEP 04 2003

BUREAU OF AIR REGULATION

Attention: Mr. A. A. Linero, Administrator, New Source Review

RE: NEW HOPE POWER PARTNERSHIP, OKEELANTA COGENERATION PLANT
INCREASED HEAT INPUT RATES
PROJECT NO. 0990332-016-AC; PSD-FL-196(O)

Dear Mr. Linero:

Thank you and Jeff Koerner for meeting with representatives of New Hope Power Partnership (NHPP) on August 19 regarding the draft air construction permit ("Draft Permit") and Public Notice of Intent To Issue Air Permit for the above referenced project, dated July 31, 2003. Based on our discussions, and your requests, the following information is being provided concerning NHPP's plan to add electrical generating capacity at NHPP's Okeelanta cogeneration facility ("Facility").

In simple terms, the expansion in generating capacity will be accomplished by operating the existing boilers at a higher capacity factor and by adding a second steam turbine generator (STG) to the Facility. The net electrical generating capacity will increase from 74.9 MW to approximately 140 MW. In terms of equipment sourcing, the most likely scenario is that NHPP will transfer the STG located at Osceola to the Facility. However, pending the results of a detailed condition assessment and other considerations, NHPP may decide to procure a new STG of comparable design and rating. Along with the STG, NHPP will add a cooling tower, a step up transformer, and auxiliary equipment necessary to operate and protect the STG.

NHPP recognizes it must obtain Power Plant Siting Act (PPSA) approval before NHPP generates more than 74.9 MW net, and thus NHPP intends to file a Site Certification Application (SCA) under the PPSA within the next few months.

Based on our analysis of NHPP's proposed expansion plans, we believe that NHPP's application to increase the Facility's annual heat input would not need to be revised, except as described below. We also believe that the Draft Permit [PSD-FL-196(O)] DEP has recently issued for the annual heat input increase would not need to be revised, except to delete the limitation on the Facility's electrical generating capacity.

- The Facility's three boilers are expected to operate at a higher actual annual capacity factor with the addition of the second STG. The new expected annual capacity factor for the three boilers is approximately 70% to 75% (based on the new maximum heat input rate of 760 MMBtu/hr), whereas in the past the boilers have operated at an average annual capacity factor of approximately 60% (based on the former maximum heat input of 715 MMBtu/hr). The air permit

application and projected emissions were based on a 100% capacity factor, except as described below in regards to the best available control technology (BACT) analysis.

- The additional fuel used to support the additional production will come from the same suppliers currently used by NHPP. Also recall that at one time both the Okeelanta and Osceola cogeneration plants were operating, and both had an adequate fuel supply.
- It is expected that the higher production will increase the fuel burning rate by approximately 15-20% from historical levels. It is further expected that all of the incremental fuel will be biomass, most likely wood, although the supply of bagasse may also increase. As in the past, fossil fuel will be burned only during startup, shutdown, to supplement biomass combustion, and as needed to promote good combustion.
- None of the short-term or annual emissions rates presented in the pending application for the Draft Permit would change. The maximum heat input capacity for each boiler would remain at 760 MMBtu/hr. Annual emissions were based on operation at this heat input rate for 8,760 hr/yr. Fugitive emissions from biomass and ash handling would not change, as these are dependent upon the heat input rates. In the pending application, the total tonnage of biomass processed through the biomass handling system was assumed to be 50% greater than the biomass consumed if the Facility operated at a 100% capacity factor. This conservative assumption was used to account for potential year-to-year variability in the amounts of biomass delivered and stockpiled at the Facility.
- Since the addition of a second STG will not cause any changes in the maximum emissions from the Facility, as presented in the pending permit application, the modeling analysis in the application also will be unaffected by the addition of the STG. It is noted that the new cooling tower will likely cause some additional particulate matter emissions in the form of cooling tower drift. Historically, such emissions have not been considered in non-utility PSD permitting. However, it is understood that these emissions will be addressed in the PPSA process.
- In the BACT analysis presented in the application, the cost effectiveness calculations were based on a projected future capacity factor for the boilers of 90%. As explained above, the projected capacity factor with the second STG is approximately 70% to 75%.
- The NHPP boilers are currently subject to the NSPS in 40 CFR 60, Subpart Da. The proposed change in the Facility's electrical generating capacity does not physically affect the boilers, and thus no "modification" or "reconstruction" will occur. Therefore, no new Subpart Da requirements will be triggered by the project. Although the facility will remain a cogeneration unit under FERC, Subpart Da does not define or otherwise address cogeneration units.
- NHPP's proposed project does not conflict with any of the conditions contained in the Draft Permit, except Condition 1 in Section III, which we have already commented on. To resolve this conflict, we suggest rewording this condition as follows:
 1. **Generating Capacity:** Construction of the proposed cogeneration plant shall reasonably conform to the plans described in the application. The owner or operator shall comply with all of the applicable requirements in the Florida Electrical Power Plant Siting Act, Sections 403.501-.518, F.S., and the rules contained in Chapter 62-17, F. A. C. The hourly average net electrical generation rate shall be recorded and retained for at least 5 years.

Thank you for consideration of this information. Please feel free to call James Meriwether, New Hope Power Partnership, at (561) 993-1003 or Dave Buff, Golder Associates Inc., at (352) 336-5600 if you have any questions or comments concerning these comments.

Sincerely,

GOLDER ASSOCIATES INC.

David A. Buff

David A. Buff, P. E., Q. E. P.
Principal Engineer
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August 19, 2003

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Bureau of Air Regulation
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RE: NEW HOPE POWER PARTNERSHIP, OKEELANTA COGENERATION PLANT
INCREASED HEAT INPUT RATES
PROJECT NO. 0990332-016-AC (PSD-FL-196O)

Dear Mr. Linero:

New Hope Power Partnership (NHPP) has received the draft air construction permit and Public Notice of Intent To Issue Air Permit for the above referenced project, dated July 31, 2003. NHPP and its representatives have reviewed the draft permit, and have the following comments.

Draft Permit

Pg. 1 of 13, Project and Location: It is requested that the reference to megawatt electrical generation be deleted from the PSD permit. The megawatt generation has no relationship to air emissions. This permit will allow the boilers to operate continuously year-around at full load. Therefore, there is no reason to limit the amount of electrical generation by the facility. In fact, increased generation with the same permitted air emissions would only further benefit the environment. If NHPP decides to increase its power generation beyond 74.9 MW net, it will address this change through the power plant certification process.

Pg. 2 of 13, Facility Description: Reword the beginning sentence to read "For PSD purposes, the facility consists of two adjacent plants."

Pg. 2 of 13, Regulatory Classification: Under Title III, retain the wording from the previous PSD permit (PSD-FL-196M), and the current Title V permit (0990005-003-AV), i.e., "Based on the Title V operation permit, the facility may have emissions of hazardous air pollutants (HAPs) at levels greater than the major source thresholds."

Under NSPS, delete the reference to Subpart Db being applicable. Subpart Db is applicable to Okeelanta's Boiler No. 16, which is not a part of the NHPP facility.

Pg. 4 of 13, Administrative Requirements, Item #8.: It is requested that up to 180 days be allowed to submit a Title V application.

Pg. 5 of 13, Item #1, Generating Capacity: As requested above, please delete the last three sentences in this paragraph, which deal with megawatt power generation.

Pg. 5 of 13, Item #2, Boiler Design: Reword second sentence as “Natural gas and distillate oil are fired at startup and shutdown, when necessary to ensure good combustion, to supplement biomass fuel, and for periods when the biomass fuel supply is interrupted.”

Pg. 5 of 13, Item #5, Control Equipment: In the first bullet item, second sentence, reword as “Four burners are installed with one in each corner of the boiler.”

Pg. 7 of 13, Item #10, Permitted Capacity: The permit does not address the allowable operating hours of the boilers. Therefore, add a sentence to this condition as follows: “The operating hours of the cogeneration boilers are not restricted.”

Pg. 8 of 13, Item #16, Emissions Standards:

Particulate Matter- The Department has set a lower PM limit of 0.026 lb/MMBtu based on the proposed MACT standards for industrial boilers. However, based on actual operation of the NHPP boilers, this limit is too stringent. Presented in Table 1 is a summary of PM/PM10 compliance test data for the boilers since the mechanical dust collectors were installed (note: these data were also presented in the permit application). These data show individual boilers have tested as high as 0.025 lb/MMBtu, with a total of six compliance tests with PM emissions of 0.021 lb/MMBtu or higher. Setting a new PM limit of 0.026 lb/MMBtu would provide little if any margin for compliance in the future. Given the variability in wood and bagasse fuel quality, variability in boiler operation, and variability in ESP operation and performance over time, NHPP strongly urges that Department retain the 0.030 lb/MMBtu limit for PM/PM10.

Volatile Organic Compounds- The Department has set a lower VOC limit of 0.05 lb/MMBtu based on the actual tested emission rates for the NHPP boilers. Based on actual operation of the NHPP boilers, this limit is too stringent. The Department was possibly not made aware of the most recent VOC compliance tests. Presented in Table 1 is a summary of VOC compliance test data for the boilers firing the normal combination of wood and bagasse, including the tests conducted in 2003. The 2003 data show that an individual boiler tested as high as 0.058 lb/MMBtu for VOC. Although this may not be typical of VOC emissions, it is reflective of the variability that can occur in wood and bagasse fuel quality and variability in boiler operation. Further investigation of operation during this test showed that CO emissions averaged approximately 0.45 lb/MMBtu. CO emissions for the entire day averaged 0.33 lb/MMBtu. These CO levels were in compliance with the 30-day rolling average limit of 0.5 lb/MMBtu. It is therefore requested that the 0.06 lb/MMBtu limit for VOC be retained. Setting a new VOC limit of 0.05 lb/MMBtu would provide no margin for compliance in the future.

Pg. 9 of 13, Item #16, Emissions Standards, Footnote “a”: The Department has added a requirement to record and report the CO emissions from each boiler in terms of ppmvd corrected to 3% O₂. As the CEMS software is not setup to do this currently, a significant cost would result to upgrade the software. In addition, it is premature at this time to report additional CO data since the final form of the MACT standards may change significantly from the proposed form. It is therefore requested that this new requirement be deleted.

Pg. 9 of 13, Item #16, Emissions Standards, Footnote “f”: Clarify that the VOC emissions should be “reported as carbon”.

Pg. 13 of 13, Item #19, Stack Test Requirements, Item “e”: For Method 25A, clarify that VOC should be reported as carbon.

Pg. 13 of 13, Item #21, Quarterly Reports: Delete the sentence “The fuel usage summary shall include the monthly heat input and the 12-month rolling total heat input for the cogeneration boilers.” The annual heat input limitation on the facility has been deleted.

Technical Evaluation and Preliminary Determination

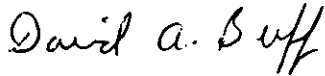
Pg. 2 of 24, Regulatory Categories: Retain the wording from the previous PSD permit (PSD-FL-196M), and the current Title V permit (0990005-003-AV), i.e., “Based on the Title V operation permit, the facility may have emissions of hazardous air pollutants (HAPs) at levels greater than the major source thresholds.”

Pg. 10 of 24: First bullet item related to Osceola cogen: this facility is no longer being re-permitted.

Please feel free to call James Meriwether, New Hope Power Partnership, at (561) 993-1003 or Dave Buff, Golder Associates Inc., at (352) 336-5600 if you have any questions or comments concerning these comments.

Sincerely,

GOLDER ASSOCIATES INC.



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Table 1. Summary of PM and VOC Test Data, NHPP Cogeneration Facility

Test Date	Boiler	Fuel	Particulate (TSP) (lb/MMBtu)	Particulate (PM10) (lb/MMBtu)	VOC (lb/MMBtu)
Jan 3-23, 2001	A	100% wood	0.022	0.025	--
	B	100% wood	0.013	0.014	--
	C	100% wood	0.022	0.023	--
	A	100% bagasse	0.016	0.015	--
	B	100% bagasse	0.021	0.023	--
	C	100% bagasse	0.010	0.013	--
Feb 12-14, 2002	A	50% wood/50% bagasse	0.008	0.008	0.007
	B	50% wood/50% bagasse	0.010	0.01	0.036
	C	50% wood/50% bagasse	0.011	0.011	0.020
Jan. 21-23, 2003	A	50% wood/50% bagasse	0.0089	--	0.0027
	B	50% wood/50% bagasse	0.0079	--	0.0057
	C	50% wood/50% bagasse	0.0081	--	0.058