ECT
Environmental Consulting & Technology, Inc.

December 20, 2004
ECT No. 040796-0100

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DEC 23 2004
BUREAU OF AIR REGULATION

Mr. Hamilton S. Oven, Jr.
Siting Coordination Office
Florida Department of Environmental Protection
2600 Blair Stone Road, MS 48
Tallahassee, FL 32399

Re: Blue Heron Energy Center
Site Certification Application (SCA) No. PA00-42
DOAH Case No. 00-4564EPP
Responses to Agency Sufficiency Comments and Revisions to the SCA

Dear Mr. Oven:

On behalf of Blue Heron Energy Center, L.L.C. (Calpine), enclosed are three copies of Calpine's responses to the "sufficiency comments" that were sent to Calpine by the Florida Department of Environmental Protection (FDEP) on March 15, 2002. The FDEP's sufficiency comments included questions and comments from the St. Johns River Water Management District (SJRWMD) and the other agencies involved in the review of Calpine's Blue Heron Energy Center (BHEC) in Indian River County. The agency comments are included in Attachment A of Calpine's response document.

Also included are three copies of Calpine's revisions to its SCA for the BHEC. Copies of Calpine's sufficiency responses and revisions to the SCA are also being provided directly to the recipients of the SCA and the parties to this proceeding as indicated in the attached Distribution List.

Calpine has concluded that several aspects of the BHEC should be changed and, therefore, Calpine has revised the project description in the SCA. The following paragraphs highlight the key changes to the BHEC and the SCA.

First, as a result of corporate organizational changes, the name of the applicant for the BHEC SCA has changed from Calpine Construction Finance Company, L.P., to Blue Heron Energy Center, L.L.C. (referred to herein and in the SCA as Calpine). Calpine is a Delaware limited liability company that will construct, own, and operate the BHEC. Calpine is a subsidiary of Calpine Corporation, which owns and operates over 90 power plants in the United States.

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Second, Calpine has determined that the BHEC Project will be constructed in two phases, with an ultimate site capacity of a nominal 1,080 megawatts (MW). Phase I will consist of one "2 on 1" combined cycle power plant and will have a generating capacity of 540 MW. Phase I will consist of two Siemens Westinghouse 501F combustion turbine generators integrated with two heat recovery steam generators and one steam turbine generator, as described in the SCA. Phase II of the Project will consist of a second 540-MW "2 on 1" combined cycle power plant. Calpine currently anticipates that construction of Phase I will commence in mid-2005 with a commercial operation date in mid-2007. In the near future Calpine will submit its petition for a determination of need for Phase I of the BHEC to the Public Service Commission.

Based on its current phased development plan, Calpine is hereby amending the SCA for the BHEC. In this proceeding, Calpine is now requesting certification for the construction and operation of Phase I (i.e., a nominal 540-MW electric generating plant and associated facilities) and certification for an ultimate site capacity of 1,080 MW. Calpine recognizes that a supplemental application will need to be submitted and approved in the future, before Calpine commences construction and operation of Phase II (i.e., the second 540-MW facility).

Third, Calpine has concluded that the BHEC will *not* interconnect with the Gulfstream natural gas pipeline system and, therefore, Calpine will not build the natural gas pipeline through St. Lucie County that previously had been proposed. Instead, the BHEC will only interconnect with the Florida Gas Transmission (FGT) Company's natural gas transmission system, which is located on the west side of I-95 west of the Site. The FGT pipeline is located between two Florida Power & Light Company (FPL) 230-kV electric transmission line rights-of-way. Calpine's interconnection with FGT will serve as the only source of natural gas for the Project. The natural gas pipeline interconnection between the BHEC and FGT system will be constructed, owned, and operated by Calpine. Calpine is revising the SCA for the BHEC and seeking certification of the corridor for this natural gas pipeline interconnection in this proceeding.

Fourth, a Conceptual Site Plan and Special Exception Use for the BHEC was approved by the Board of County Commissioners of Indian River County on September 18, 2001. To satisfy the County's requirements, Calpine agreed to dedicate to the County a 30-foot-wide drainage and utility easement adjacent to the 74th Avenue right-of-way, which is located along the eastern boundary of the BHEC site. To provide this easement, the location of the BHEC on the site had to be shifted 30 feet to the west. This minor shift did not change the overall arrangement of the BHEC, but did necessitate a change in the site plan. However, the two onsite wetlands and buffer areas were not affected by this change.

Fifth, on August 12, 2004, Calpine entered into an "Agreement Concerning Delivery and Use of Stormwater" (Agreement) with Indian River County and the Indian River Farms Water Control District (IRFWCD). Under this Agreement, Indian River County will withdraw stormwater from the IRFWCD's canal system and then route the stormwater through the County's Egret Marsh Regional Stormwater Park. Water from the stormwater park will be provided to Calpine for use as the primary source of water for the BHEC. The Agreement also allows Indian River County, at its option, to supplement the stormwater with a specified quantity of brine discharged from the County's South Plant reverse osmosis drinking water treatment facility. Other aspects of the Agreement include Calpine's commitment to: (a) purchase additional property for expansion of the stormwater park by Indian River County; (b) design and construct, at its expense, the pipelines and pumping stations that will be used to deliver water to the stormwater park and to BHEC; and (c) transfer ownership of the property, pipelines, and pumping stations to Indian River County or IRFWCD. Therefore, Calpine will "be a contributing partner in the County's stormwater management efforts."

Most of the sufficiency comments from FDEP and the other reviewing agencies concerned the water supply plan for the BHEC. Calpine's plan has now been finalized with the Agreement, which is contained in Attachment B of the sufficiency responses. The Agreement also is contained in the revised Appendix 10.9 of the SCA.

Sixth, Calpine has continued to refine its plans to minimize potential environmental impacts associated with airborne emissions from the BHEC. Based on these refinements, Calpine is revising the entire PSD permit application in Volume 3, Appendix 10.1.1, of the SCA. Key revisions in the PSD permit application primarily involve reductions in air emissions based on the use of the best available control technology. For example, the removal efficiency of the selective catalytic reduction system has been improved and nitrogen oxides emissions will be reduced from the previously requested 3.5 parts per million, volume dry (ppmvd), to 2.0 ppmvd (corrected to 15 percent oxygen, on a 24-hour block average basis). In addition, Calpine is now planning to use an oxidation catalyst system to minimize emissions of carbon monoxide and volatile organic compounds. Calpine's revised PSD permit application, and other related SCA sections that reflect the changes in the PSD application, are provided in the enclosed revisions.

The revisions to the SCA include updated information and an analysis of the electromagnetic (EMF) fields associated with the new transmission lines that Calpine will use to connect the BHEC to the existing FPL transmission lines on the west side of I-95. The EMF analyses demonstrate that the new transmission lines comply with FDEP's EMF rules.

The enclosed revisions to the SCA are designated as Rev. 1—12/04, which indicate that these revisions were submitted in December 2004. The revisions include instructions for

inserting the revised pages and sections in the 4-volume SCA. Calpine requests each recipient to update their copy(ies) of the SCA accordingly.

We are available to discuss any of Calpine's sufficiency responses and SCA revisions with you or other agency personnel to facilitate your review of the SCA. Please call me at 352/332-0444 if you have any questions.

Sincerely,

ENVIRONMENTAL CONSULTING & TECHNOLOGY, INC.

Jack D. Doolittle
Project Manager

JDD/tsw

Enclosure

cc: Steve Palmer, FDEP, w/attachments
Scott Goorland, Esq., FDEP w/attachments
Tim Eves, Calpine, w/attachments
Ben Borsch, Calpine, w/attachments
David Dee, Esq., Landers & Parsons, w/attachments
All Recipients of Site Certification Application, as shown on the attached Distribution List, w/attachments

BLUE HERON ENERGY CENTER
SITE CERTIFICATION APPLICATION

REVISION 1—12/04

Revision 1—12/04 of the Site Certification Application for the Calpine Blue Heron Energy Center consists of the following revisions to the four volumes. Please follow the instructions below to update your copy(ies) of the SCA. If any questions, please contact Terri Warrington, ECT, at 352/332-0444.

VOLUME 1—CHAPTERS 1 AND 2

Behind Tab*	Remove	Replace with Rev. 1—12/04 Insert
	Outside cover for Volume 1, dated October 2000	Outside cover dated October 2000 (Rev. 1—12/04)
	Inside cover for Volume 1, dated October 2000	Inside cover dated October 2000, (Rev. 1—12/04)
		Insert letter to Hamilton S. Oven, dated December 20, 2004, with attached Distribution List ***in front*** of letter to Hamilton S. Oven, dated October 27, 2000
	Applicant Information page	Applicant Information page
	Signature page, dated 10/24/00	Signature page, dated 12/15/04
	Table of Contents and Lists of Tables, Figures, and Acronyms, pages i through xxvi	Table of Contents and Lists of Tables, Figures, and Acronyms, pages i through xxvii
Executive Summary	Pages EX-1 through EX-8	Pages EX-1 through EX-8
1	Page 1-1	Page 1-1
1.1	Pages 1-2 and 1-3	Pages 1-2 and 1-3
1.2	Pages 1-4 through 1-12	Pages 1-4 through 1-12
1.3	Pages 1-13 through 1-15	Pages 1-13 through 1-15
1.4	Page 1-16	Page 1-16
2.1	Pages 2-7 and 2-8	Pages 2-7 and 2-8

*Do not remove any of the tabs

BLUE HERON ENERGY CENTER
SITE CERTIFICATION APPLICATION

REVISION 1—12/04

Behind Tab*	Remove	Replace with Rev. 1—12/04 Insert
2.2	Page 2-13	Pages 2-13 and 2-13a
2.2	Page 2-19	Page 2-19
2.3	Page 2-131	Page 2-131
2.3	Pages 2-133 through 2-135	Pages 2-133 through 2-135
2.3	Page 2-138	Page 2-138
2.3	Page 2-144	Page 2-144
2.3	Page 2-147	Page 2-147 and 2-147a
2.3	Pages 2-162 through 2-167	Pages 2-162 through 2-167

VOLUME 2—CHAPTERS 3-9

	Outside cover for Volume 2, dated October 2000	Outside cover dated October 2000 (Rev. 1—12/04)
	Inside cover for Volume 2, dated October 2000	Inside cover dated October 2000 (Rev. 1—12/04)
	Table of Contents and Lists of Tables, Figures, and Acronyms, pages i through xxvi	Table of Contents and Lists of Tables, Figures, and Acronyms, pages i through xxvii
3	Page 3-1	Page 3-1
3.1	Pages 3-2 through 3-9	Pages 3-2 through 3-9
3.2	Pages 3-10 through 3-14	Pages 3-10 through 3-14
3.3	Pages 3-15 through 3-16	Pages 3-15 through 3-16
3.4	Pages 3-17 through 3-33	Pages 3-17 through 3-33
3.5	Pages 3-34 though 3-47	Pages 3-34 through 3-49
3.6	Page 3-48	Page 3-50

*Do not remove any of the tabs

BLUE HERON ENERGY CENTER
SITE CERTIFICATION APPLICATION

REVISION 1—12/04

Behind Tab*	Remove	Replace with Rev. 1—12/04 Insert
3.7	Pages 3-49 and 3-50	Page 3-51
3.8	Pages 3-51 through 3-56	Pages 3-52 through 3-57
3.9	Pages 3-57 through 3-60	Pages 3-58 through 3-61
4.1	Pages 4-2 through 4-8	Pages 4-2 through 4-8
4.4	Pages 4-14 through 4-18	Pages 4-14 through 4-18
4.6	Pages 4-21 through 4-23	Pages 4-21 through 4-23
4.7	Pages 4-24 through 4-26	Pages 4-24 through 4-26
5.1	Pages 5-2 through 5-8	Pages 5-2 through 5-8
5.3	Pages 5-10 through 5-19	Pages 5-10 through 5-19
5.6	Pages 5-23 through 5-35	Pages 5-23 through 5-33
5.9	Page 5-43	Page 5-43
5.11	Pages 5-45	Page 5-45
6	Page 6-1	Page 6-1
6.1	Pages 6-2 through 6-3H	Pages 6-2 through 6-57
6.2	Pages 6-4 through 6-60	Pages 6-58 through 6-76
6.3	Pages 6-61 through 6-72	Pages 6-77 through 6-91
7	Page 7-1	Page 7-1
7.1	Pages 7-2 through 7-6	Pages 7-2 through 7-6
7.2	Pages 7-7 and 7-8	Pages 7-7 and 7-8
8	Pages 8-1 and 8-2	Pages 8-1 and 8-2

*Do not remove any of the tabs

Behind Tab*	Remove	Replace with Rev. 1—12/04 Insert
	VOLUME 3—CHAPTER 10, APPENDIX 10.1.1	
	Outside cover for Volume 3, dated October 2000	Outside cover dated October 2000 (Rev. 1—12/04)
	Inside cover for Volume 3, dated October 2000	Inside cover dated October 2000 (Rev. 1—12/04)
10	List of Appendices	List of Appendices
	10.1.1—Prevention of Significant Deterioration (PSD)	
10.1.1 green divider page	Entire PSD (remainder of volume)	New PSD, dated October 2000 (Rev. 1—12/04)
	VOLUME 4—CHAPTER 10, APPENDICES 10.1.2-10.10	
	Outside cover for Volume 4, dated October 2000	Outside cover dated October 2000 (Rev. 1—12/04)
	Inside cover for Volume 4, dated October 2000	Inside cover dated October 2000 (Rev. 1—12/04)
	—	Insert List of Appendices
	10.1.2—Joint Environmental Resource Permit/Section 404 Application	
10.1.2 green divider page	Entire permit	Entire permit
	10.1.3—Stormwater Management Plan	
10.1.3 green divider page	Cover page dated October 2000	Cover page dated October 2000 (Rev. 1—12/04)
	Table of Contents	Table of Contents
	Figures 1, 2, and 3	Figures 1, 2, and 3
	Figure 5	Figure 5
	Attachment—Stormwater Management Calculations page	Attachment—Stormwater Management Calculations page

BLUE HERON ENERGY CENTER
SITE CERTIFICATION APPLICATION

REVISION 1—12/04

Behind Tab*	Remove	Replace with Rev. 1—12/04 Insert
	Stormwater Management Calculations cover page	Stormwater Management Calculations cover page
	10.1.4—Consumptive Water Use Permit Application (Surface Water)	
10.1.4 green divider page	SJRWMD Permit Application for Consumptive Uses of Water	SJRWMD Permit Application for Consumptive Uses of Water
	10.1.4-A—Surface Water Use Impact Assessment	
10.1.4-A green divider page	Entire section dated October 2000	Entire section dated October 2000 (Rev. 1—12/04)
	10.1.4-B—Water Supply Alternatives Analysis	
10.1.4-B green divider page	Entire section dated October 2000	Entire section dated October 2000 (Rev. 1—12/04)
	10.1.6—Land Use Special Exception Application	
	10.1.6 green divider page	10.1.6 green divider page
	—	Indian River County Special Exception approval letter
	10.4—Existing State Permits	
10.4	Single page of Section 10.4	Section 10.4 page with attached March 5 2002, Land Use Recommended Order
	10.7—Seasonal and Annual Cooling Tower Drift Analysis	
10.7	Entire section after cover page	Entire section after cover page
	10.9—Water Supply Agreement	
10.9	Entire section after cover page (two letters)	Entire section after cover page (Agreement Concerning Delivery and Use of Stormwater)

CALPINE
BLUE HERON
ENERGY CENTER

Site Certification Application

Sufficiency Responses

Submitted by

BLUE HERON
ENERGY CENTER, L.L.C.

Prepared by

ECT
Environmental Consulting & Technology, Inc.

December 2004

CALPINE
EASTERN

TABLE OF CONTENTS

CALPINE CONSTRUCTION FINANCE COMPANY, L.P.
BLUE HERON ENERGY CENTER

SITE CERTIFICATION APPLICATION
SUFFICIENCY RESPONSES

A. FLORIDA DEPARTMENT OF ENVIRONMENTAL PROTECTION

A.1 Memorandum from Allen Hubbard (FDEP) to Steven Palmer (FDEP) dated February 22, 2002

FDEP NPDES-1
The Industrial Wastewater Section (IW) has reviewed the portion of the referenced document that respond to IW's comments on our January 18, 2001 memorandum on potential discharges to surface water from the proposed Calpine Blue Heron facility. Calpine's response indicates that they intend to comply with the industrial wastewater and stormwater discharge regulations addressed in our comments, and make appropriate permitting submittals. Based on this, IW considers the Applicant's response adequate.

RESPONSE

Comment is acknowledged. No further response is needed.

A.2 Memorandum from Chris Ferraro (FDEP) to Steven Palmer (FDEP) dated March 8, 2002

FDEP Water Facilities-1
It is noted that this facility will have no wastewater discharges to either ground or surface water. Therefore we continue to have no comments with regard to wastewater discharges.

RESPONSE

No response is needed.

FDEP Water Facilities-2
The water supply for the project has not yet been finalized, but we would encourage Calpine to work with Indian River County on utilization of reclaimed water and demineralization concentrate for their water needs. We would like to review the information regarding the finalized plans for water supply when they become available.

RESPONSE

The water supply plan for the Blue Heron Energy Center (BHEC) Project has been finalized. On August 12, 2004, Calpine entered into an "Agreement Concerning Delivery and Use of Stormwater" (Agreement) with Indian River County (County) and the Indian River Farms Water Control District (IRFWCD). The Agreement authorizes Calpine to use stormwater from the County's Egret Marsh Regional Stormwater Park (Stormwater Park) as the primary source of water for the Project. The Agreement allows the County to supplement the stormwater with brine discharged from the reverse osmosis system at the County's South Plant water treatment facility. However, the Agreement does not address Calpine's use of the County's reclaimed water at the BHEC. The County has indicated that its reclaimed water is essentially committed to the irrigation of golf courses and other developments; and therefore, is unavailable for use by the BHEC.

Calpine's water supply plan will help the County implement the provisions of the East Indian River County Master Stormwater Management Plan (Master Plan). The Master Plan is designed to improve the water quality in the Indian River Lagoon by (a) reducing the amount of surface water and stormwater that flows into the Lagoon and (b) improving

the quality of the water that enters the Lagoon. The Master Plan was prepared by the County, working in cooperation with the IRFWCD, the City of Vero Beach, and the St. Johns River Water Management District (SJRWMD or the District).

Consistent with the Master Plan, the County will use the Stormwater Park to capture and treat water from the IRFWCD canal system before the water enters the Indian River Lagoon. The County will pump water from the Stormwater Park to the BHEC, where the water will be beneficially used for cooling, irrigation, and other purposes. Thus, Calpine's Project will help the County reduce the flow of stormwater into the Lagoon, and the County's Stormwater Park will provide a source of lower quality water for Calpine's Project.

Subject to various conditions, Calpine will potentially buy additional property that will be used to expand the County's Stormwater Park. Calpine also will design, construct, and donate the pipelines and pumping stations that will be used to pump water from the District's canals to the Stormwater Park and the BHEC. In this fashion, Calpine will "be a contributing partner in the County's stormwater management efforts" (Agreement at page 3).

The details concerning Calpine's water supply plan are provided in the Agreement, which is provided in Attachment B hereto.

FDEP Water Facilities-3
We have reviewed the response to the comments provided by Eric Pluchino of my staff regarding the endangered hand fern and the response is satisfactory.

RESPONSE

No response is needed.

B. FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

Letter from Bradley J. Hartman (FFWCC) to Steven L. Palmer (FDEP) dated March 8, 2002

FFWCC-1

The Office of Environmental Services of the Florida Fish and Wildlife Conservation Commission has reviewed the response to insufficiency questions submitted by Calpine Construction Finance Company, L.P. for the referenced site certification application, and offers no comments.

RESPONSE

No response is needed.

C. FLORIDA DEPARTMENT OF TRANSPORTATION

Letter from Sheauching Yu (FDOT) to Hamilton S. Oven (FDEP), dated February 22, 2002

FDOT-1
The Florida Department of Transportation has found the transportation related information relative to the subject sufficiency response to be sufficient for site certification evaluation.

RESPONSE

No response is needed.

D. TREASURE COAST REGIONAL PLANNING COUNCIL

Letter from Peter G. Merritt (TCRPC) to Steven Palmer (FDEP), dated March 8, 2002

TCRPC-1

Council staff has reviewed the Sufficiency Responses for the Calpine Blue Heron Energy Center Site Certification Application submitted February 2002. We do not have additional sufficiency questions at this time. However, we note that Calpine is engaged in ongoing discussions with Indian River county, IRFWCD, and SJRWMD concerning a water supply plan for the project. Calpine has stated that it would consider using water from storm water storage and treatment facilities, and some quantity of reverse osmosis discharge from the County's water treatment plants as supplemental water supply. Council would like to receive details of the water supply plan when it becomes available.

RESPONSE

The water supply plan for the BHEC Project has been finalized. On August 12, 2004, Calpine entered into an "Agreement Concerning Delivery and Use of Stormwater" (Agreement) with Indian River County (County) and the IRFWCD. The Agreement authorizes Calpine to use stormwater from the County's Egret Marsh Regional Stormwater Park (Stormwater Park) as the primary source of water for the Project. The Agreement allows the County to supplement the stormwater with brine discharged from the reverse osmosis system at the County's South Plant water treatment facility.

Calpine's water supply plan will help the County implement the provisions of the East Indian River County Master Plan. The Master Plan is designed to improve the water quality in the Indian River Lagoon by (a) reducing the amount of surface water and stormwater that flows into the Lagoon and (b) improving the quality of the water that enters the Lagoon. The Master Plan was prepared by the County, working in cooperation with the IRFWCD, the City of Vero Beach, and the SJRWMD.

Consistent with the Master Plan, the County will use the Stormwater Park to capture and treat water from the IRFWCD canal system before the water enters the Indian River Lagoon. The County will pump water from the Stormwater Park to the BHEC, where the water will be beneficially used for cooling, irrigation, and other purposes. Thus, Cal-

pine's Project will help the County reduce the flow of stormwater into the Lagoon, and the County's Stormwater Park will provide a source of lower quality water for Calpine's Project.

Subject to various conditions, Calpine will potentially buy additional property that will be used to expand the County's Stormwater Park. Calpine also will design, construct, and donate the pipelines and pumping stations that will be used to pump water from the District's canals to the Stormwater Park and the BHEC. In this fashion, Calpine will "be a contributing partner in the County's stormwater management efforts" (Agreement at page 3).

The details concerning Calpine's water supply plan are provided in the Agreement, which is provided in Attachment B hereto.

E. ST. JOHNS RIVER WATER MANAGEMENT DISTRICT

Letter from Mary Ellen Jones (SJRWMD) to Hamilton S. Oven (FDEP), dated March 1, 2002

SJRWMD-1

As part of the siting process, an applicant seeks a determination of need from the Public Service Commission for the proposed power plant. The granting of a determination of need then creates a presumption of public need. In Tampa Electric Co. v. Garcia, et al., 767 So.2d 428, 435 (Fla. 2000), the Florida Supreme Court held that "the statutory scheme embodied in the Siting Act and FEECA was not intended to authorize the determination of need for a proposed power plant output that is not fully committed to use by Florida customers who purchase electrical power at retail rates." The Blue Heron Energy Center (the "Project") has likewise been proposed as a "merchant" power plant. In evaluating a proposed consumptive use of water, the District must evaluate whether the proposed use: 1) is a reasonable beneficial use, 2) interferes with presently existing legal uses of water and 3) is consistent with the public interest. See Section 373.223, Fla. Stat. (2001). Under current Florida law and without a determination of need from the PSC, the applicant may not be able to show that the proposed consumptive use of water is both reasonable and consistent with the public interest. Has the output of the proposed power plant been committed to use by Florida customers? See Section 10.3, Applicant's Handbook: Consumptive Uses of Water (A.H.).

RESPONSE

The construction and operation of Calpine's BHEC Project are consistent with the public interest. Calpine has entered into a contract with the Florida Municipal Power Association (FMPA) for the sale of electricity from the Project. Calpine currently is negotiating with a second Florida utility for the sale of additional power from the Project. Thus, it is anticipated that Calpine's Project will generate electricity for two Florida utilities that serve the needs of Florida retail customers.

In several respects, the BHEC will be similar to Calpine's Osprey Energy Center, which was built and is in operation in Auburndale, Florida. Calpine entered into a contract with Seminole Electric Cooperative, Inc. (Seminole) for the sale of most, but not all, of the electricity generated at the Osprey Energy Center, and this contractual arrangement was approved by the Florida Public Service Commission (PSC). In Panda Energy International v. Jacobs, 813 So. 2d 46, 53 (fn. 8) (Fla. 2002), the Florida Supreme Court cited the PSC's approval of the Osprey facility and implicitly recognized that Calpine's con-

tractual arrangement is consistent with the applicable statutory criteria, the PSC's rules, and the PSC's precedents.

Calpine's BHEC will not be a "merchant" power plant, like the one at issue in Tampa Electric Company v. Garcia, 767 So. 2d 428 (Fla. 2000). To the contrary, the BHEC will be a "contract" power plant, like the Osprey Energy Center.

Calpine soon will file a petition asking the PSC to conduct a determination of need proceeding for the BHEC. FMPA and the other Florida utility with whom Calpine is negotiating a power purchase agreement will join Calpine in requesting the PSC's approval for the Project, just as Seminole joined Calpine in requesting the PSC's approval for the Osprey Energy Center. A favorable ruling by the PSC "shall create a presumption of public need and necessity" for Calpine's Project. Section 403.519, F.S.; see Panda, 813 So. 2d at 52.

Given these facts, Calpine respectfully requests the District to move forward with its evaluation of Calpine's application for the Project. Under the Florida Electrical Power Plant Siting Act, it is not uncommon for the state's environmental agencies to conduct their evaluations of a proposed power plant at the same time that the PSC is conducting its evaluation of the need for the proposed facility. In this case, the District and the PSC can simultaneously conduct their respective determinations. This approach will enable the District to conduct a timely evaluation of Calpine's application, without waiving any of the District's rights.

Pursuant to Section 403.508(3), F.S., "an affirmative determination of need by the Public Service Commission pursuant to Section 403.519 shall be a condition precedent to the conduct of the certification hearing" before the Administrative Law Judge. Thus, there cannot be a certification hearing, and the Project cannot be approved by the Siting Board, unless the PSC determines there is a need for the Project. As a practical matter, if the PSC does not approve the Project, the District's determination about the Project will be immaterial.

SJRWMD-2

It is the District's understanding that Calpine is currently negotiating with the County and the Indian River Farms Water Control District (IRFWCD) regarding water supply options for the Project. It was previously noted that the Project will consider using water from a regional reservoir to be created in the next several years and will also consider using "...some quantity of RO discharge..." from the County's water treatment plants. Please evaluate the environmental, technical, and economical feasibility of maximizing the use of these lower quality water sources. Please contact Ralph Brown, with SJRWMD, for any additional information that may be needed regarding the proposed storm water treatment reservoir. [Paragraphs 10.2 (a) & (l) and 10.3 (d) & (g), A.H.]

RESPONSE

The water supply plan for the BHEC Project has been finalized. On August 12, 2004, Calpine entered into an "Agreement Concerning Delivery and Use of Stormwater" (Agreement) with Indian River County (County) and the IRFWCD. The Agreement authorizes Calpine to use stormwater from the County's Egret Marsh Regional Stormwater Park (Stormwater Park) as the primary source of water for the Project. The Agreement allows the County to supplement the stormwater with brine discharged from the reverse osmosis system at the County's South Plant water treatment facility. However, the Agreement does not address Calpine's use of the County's reclaimed water at the BHEC. The County has indicated that the reclaimed water is essentially committed to the irrigation of golf courses and other developments; and therefore, is unavailable for use by the BHEC.

Calpine's water supply plan will help the County implement the provisions of the East Indian River County Master Plan. The Master Plan is designed to improve the water quality in the Indian River Lagoon by (a) reducing the amount of surface water and stormwater that flows into the Lagoon and (b) improving the quality of the water that enters the Lagoon. The Master Plan was prepared by the County, working in cooperation with the IRFWCD, the City of Vero Beach, and the SJRWMD.

Consistent with the Master Plan, the County will use the Stormwater Park to capture and treat water from the IRFWCD canal system before the water enters the Indian River Lagoon. The County will pump water from the Stormwater Park to the BHEC, where the

water will be beneficially used for cooling, irrigation, and other purposes. Thus, Calpine's Project will help the County reduce the flow of stormwater into the Lagoon, and the County's Stormwater Park will provide a source of lower quality water for Calpine's Project.

Subject to various conditions, Calpine will potentially buy additional property that will be used to expand the County's Stormwater Park. Calpine also will design, construct, and donate the pipelines and pumping stations that will be used to pump water from the District's canals to the Stormwater Park and the BHEC. In this fashion, Calpine will "be a contributing partner in the County's stormwater management efforts" (Agreement at page 3).

In general, Calpine's water supply plan maximizes the use of lower quality water. The details concerning Calpine's water supply plan are provided in the Agreement, which is provided in Attachment B hereto.

SJRWMD-3
It is the District's understanding that grassed and landscaped areas of the plant site will be irrigated. Please complete and submit the previously provided forms addressing urban landscape irrigation. [Paragraphs 10.2(b), (i) & (k) and 10.3 (a), (b) & (e), A.H.]

RESPONSE

Calpine has not yet determined the exact extent of the landscaping and type of landscape materials that will be used at the BHEC. However, some initial estimates of the amount of landscaped and sodded areas can be made. It is anticipated that there will be landscaped and sodded areas around the perimeter of the site and around the plant facilities. The landscaped areas around the site perimeter are required by Indian River County, in the conditions of the County's approval of the conceptual site plan and special exception use for the Project. For certain perimeter areas, the existing natural vegetation will not be impacted by the Project construction and serve as the required buffer.

Xeriscape and native planting, requiring limited water, will be used in these areas, to the extent possible. However, for the purposes of this submittal, the most conservative assumptions for landscape areas and watering rates were used. The source of water for the irrigation system will be Indian River County's Egret Marsh Regional Stormwater Park. This water has been determined to be the lowest quality water available for irrigation. The conceptual landscape plan, estimates of the irrigated areas, volume requirements, and water use are provided in the Urban Landscape Irrigation forms provided in Attachment C.

SJRWMD-4
It is the District's understanding that Calpine is currently negotiating with the County and IRFWCD regarding water supply sources, pipeline and pump station locations and easement rights. What is the current status of acquisition of easement rights from IRFWCD and the County for the water supply line and pump station? Please provide appropriate authorizations from IRFWCD and Indian River County authorizing Calpine Blue Heron Energy Center to obtain "...some combination of reuse, canal, managed storm water, reverse osmosis discharge..." to operate the plant. [Paragraphs 10.2 (a) (k) (l) and 10.3 (c)]

RESPONSE

The Agreement Concerning Delivery and Use of Stormwater between Calpine and Indian River County and the IRFWCD was finalized and executed on August 12, 2004. Section 3 of the Agreement authorizes Calpine to utilize all rights-of-way and easements necessary or required for the construction of the pipelines and pumping stations from the Lateral C Canal to the Stormwater Park and from the Stormwater Park to the BHEC. Section 4 of the Agreement contains the County's commitment to deliver stormwater from the Stormwater Park. The County also may deliver brine from the reverse osmosis system at the County's water treatment plant. A copy of the executed Agreement is provided in Attachment B.

SJRWMD-5

In Attachment 10.1.4-B it is noted that the Project will use the lowest quality water sources, the most water efficient fuel source, and will be extremely efficient in its water use because of extensive water reuse measures including water recycling and reusing cooling water blowdown. Please provide a detailed description of these water conservation measures. For example, how much water is recycled in the various processes and what is the total water savings? [Paragraphs 10.2 (h) & (i) and 10.3 (e), A.H.]

RESPONSE

The BHEC has been designed to be extremely efficient in its use of water. One of the key water conservation measures of the Project is the use of a zero liquid discharge (ZLD) system, which will enable the Project to eliminate all offsite wastewater discharges. If an electrical power plant does not use a ZLD system, the various wastewater streams, including cooling tower blowdown, from the power plant typically must be maintained at a relatively high quality so that the wastewater can be discharged to a surface water body or a wastewater treatment plant. To maintain the quality of the wastewater, the power plant must restrict the extent to which it recycles and reuses the wastewater, which, in turn, significantly increases the amount of water required for plant operation and the amount of the facility's discharge.

With the use of the ZLD system, the BHEC has been designed to maximize the recycling and reuse of all wastewaters, thus minimizing the plant's overall water use. All of the cooling tower blowdown water and other wastewaters (e.g., boiler blowdown, wash wastewater, plant service water, and filter backwash) will be treated and reused as cooling tower makeup water. This reuse of these wastewaters results in a water saving of 20 to 25 percent, compared to a typical natural gas-fired combined cycle power plant with offsite wastewater discharge, or a reduction of approximately 1.2 to 1.5 million gallons per day (MGD), based on the BHEC's average annual water use of 5.8 MGD when both phases of the Project are completed.

The Project does not include the installation of any ground water wells. The Project will not use any ground water, except for potable water, which will be provided by the County.

As discussed in the response to SJRWMD-2, the Project will use stormwater from the Stormwater Park that will be constructed and operated by Indian River County. The proposed use of this stormwater is consistent with and supportive of the SJRWMD's programs to reduce freshwater flows and pollutant loadings to the Indian River Lagoon. Moreover, under the Agreement, Indian River County may provide brine discharged from its South Plant water treatment facility to supply up to 8 percent of the total water requirements of the Project. Based on the Project's average annual water use of 5.8 MGD, this water conservation measure may reduce the Project's use of stormwater by approximately 0.5 MGD.

Thus, the combination of the water conservation measures planned for the BHEC Project will result in significant water savings compared to a typical natural gas-fired combined cycle power plant, as well as provide significant environmental benefits to the Indian River Lagoon system.

F. BOARD OF COUNTY COMMISSIONERS, INDIAN RIVER COUNTY

Letter from James W. Davis (BCCIRC) to Steven Palmer (FDEP), dated March 11, 2002

BCCIRC-1

Page 2—Cover letter from Jack Doolittle, ECT to Hamilton S. Oven, Jr., DEP dated 02-01-02—Paragraph 5 (last paragraph)—Calpine is continuing discussions with Indian River County and Indian River Farms Water Control District (IRFWCD) regarding water supply options, as noted. We are in discussions with three landowners to purchase a 100+ acre site for stormwater storage from which Calpine can obtain water supply. Option agreements to purchase land have been drafted. The County is also currently reviewing water quality requirements submitted by Calpine. Water from the IRFWCD canal system and other sources (R.O. Brine Concentrate) will be blended within the pond or downstream from the pond and transmitted to the Blue Heron Energy Center.

RESPONSE

The Agreement Concerning Delivery and Use of Stormwater between Calpine and Indian River County and IRFWCD was executed on August 12, 2004. A copy of the Agreement is provided in Attachment B. No further response is needed.

BCCIRC-2

Page 3—Sufficiency Responses—FDEP Ambient Monitoring-1 Indian River County concurs that the plant shall be a zero discharge facility as production water is managed. The County has no objection to surface water discharge from the site in excess of the 25-year, 24-hour storm.

RESPONSE

No response is needed.

BCCIRC-3

Page 24—SJRWMD-2 Indian River County, Calpine, and IRFWCD is negotiating a production water agreement at this time. The Indian River County Utility Department (Water and Sewer) requests that at least .5 mgd of R.O. Brine discharge be used by Calpine and blended with stormwater for the 1080 MW plant and .25 mgd of R.O. Brine for a Phase I 540 MW plant.

RESPONSE

The Agreement acknowledges that the County may, at its option, inject reverse osmosis brine discharge water into the pipeline from the Stormwater Park to BHEC.

BCCIRC-4

Page 28—Calpine reports that the computer model predicts minimal canal water level drawdowns during historic low flow conditions, Was the latest version of the computer model as calibrated by SJRWMD used for this analysis? SJRWMD's analysis of the original computer model prepared by Calpine indicates that it needs further calibration, and in fact, SJRWMD'S computer modeling section has recalibrated the model somewhat. However, the County's consulting team reports that the recalibrated model still predicts results during certain storm events that based on local knowledge, do not actually occur. The consulting team and County agree that the computer model needs further calibration and should be used cautiously until this occurs. Perhaps Calpine should run the canal drawdown during historic flows again with the more calibrated SJRWMD version of the model and compare the results to Calpine's original version.

RESPONSE

The different versions of the IRFWCD SWMM model, based on different calibration parameters, might produce different peak flows and peak water levels under extreme storm conditions. However, the predicted maximum drawdown during an extreme dry season is not as sensitive to calibration parameter changes due to the low energy conditions in the canal system. In addition, there were no pronounced differences in the predicted results between previous and current SJRWMD versions, even under extreme storm conditions. Therefore, Calpine believes that the projected water level drawdowns are within acceptable accuracy and consistent with sound engineering practice.

BCCIRC-5

The Utility Dept. has reviewed the Calpine Site Certification Application and offers the following comments. For the most part, the document primarily deals with non-utility issues. However, on pages 24 and 25, under a discussion by SJRWMD, there is a discussion regarding utilizing Wastewater reuse and Reverse Osmosis water plant reject water (Brine) for cooling water. Calpine only indicates a willingness to consider utilizing Brine and Reuse water. I believe that this "willingness to consider utilizing Brine and Reuse" is not sufficiently consistent with the second comment on page 24 of SJRWMD requesting an evaluation of the "environmental, technical, and economic feasibility of maximizing the use of these lower quality water sources." It would be of benefit to the County to have Calpine respond, as requested by SJRWMD, indicating the benefits of utilizing Brine and Reuse. By responding in this way, Calpine cannot come back, at a later date, and refuse usage of Brine or Reuse for economic, technical or economic reasons.

RESPONSE

In the Agreement, Calpine acknowledges that the County may, at its option, inject reverse osmosis brine discharge water into the pipeline from the Stormwater Park to BHEC. No further evaluations are needed.

BCCIRC-6

On page 25, SJRWMD-3 comments, although SJRWMD has requested information on: reclaimed water, surface water, and byproduct water. The response only references reclaimed and surface water, not Brine.

RESPONSE

The executed Agreement Concerning Delivery and Use of Stormwater between Calpine and Indian River County and IRFWCD addresses the use of brine as a portion of the Project's water supply.

BCCIRC-7

It is my understanding that Calpine is planning to use Indian River Co. drinking water for the plant as well as sewer service. Unless I missed it, I didn't see any reference to that.

RESPONSE

Section 3.5.2, Domestic/Sanitary Wastewater, and Section 3.5.3, Potable Water Systems, in the site certification application indicate that these services will be provided by the Indian River County systems.

BCCIRC-8

Environmental Planning Section commented on FDEP Ambient Monitoring-2 Page 3—Section 929.02(4), of the Code of Indian River County, provides for protection of listed species (flora and fauna) and their habitat, It appears from the documentation presented by Calpine that all the Ophiglossum palmatum L. (hand adder's tongue fern) is within the wetlands that are to be preserved. If and when Indian River County issues a Land Clearing Permit the permit will contain special conditions that will:

a) require the permittee to either dispose of the resulting debris in a manner other than open burning, or if burned (either open air or air curtain incinerator) will require that the material be sufficiently dried so as to release as little smoke as possible;

b) will require that the debris be burned as far away from the wetland areas as possible;

c) will require appropriate wind conditions that will reduce or eliminate the potential for harm to this listed plant.

RESPONSE

Comment is acknowledged. No response is needed.

ATTACHMENT A

AGENCY COMMENTS

Department of Environmental Protection

Jeb Bush
Governor

Marjory Stoneman Douglas Building
3900 Commonwealth Boulevard
Tallahassee, Florida 32399-3000

David B. Struhs
Secretary

March 15, 2002

David S. Dee
Landers & Parsons, P.A.
P.O. Box 271
Tallahassee, Florida 32302

Dear Mr. Dee:

The Siting Coordination Office (SCO) has received comments from agencies reviewing the sufficiency responses submitted by Calpine Finance construction Company, L.P. regarding the site certification application (SCA) for the proposed Blue Heron Energy Center. The SCO has determined that this SCA continues to be insufficient.

The comments submitted by reviewing agencies are attached. Since this is the second finding of insufficiency, all time clocks are tolled until these issues can be addressed to the satisfaction of the reviewing agencies.

If you have any questions, please call me at 850-487-0472.

Sincerely,

Steven L. Palmer, P.E.
Siting Coordination Office

attachments--

cc: Buck Oven
Scott Goorland

Palmer, Steven

From: Hubbard, Allen
Sent: Friday, February 22, 2002 11:29 AM
To: Palmer, Steven
Cc: Potts, Elsa; Seibold, Vince
Subject: Action Item OWM 151: Calpine Blue Heron Energy Center -- Sufficiency Responses, February 2002, Site Certification Application

Steve,
FDEP NPDES-1
The Industrial Wastewater Section (IW) has reviewed the portion of the referenced document that respond to IW's comments in our January 18, 2001 memorandum on potential discharges to surface water from the proposed Calpine Blue Heron facility. Calpine's response indicates that they intend to comply with the industrial wastewater and stormwater discharge regulations addressed in our comments, and make appropriate permitting submittals. Based on this, IW considers the Applicant's response adequate.

Please let me know if we can be of further assistance.

Allen Hubbard, P.E.
Supervisor, Power Plant NPDES Permitting
Industrial Wastewater Section
(850) 921-9385
SC 291-9385
allen.hubbard@dep.state.fl.us

Palmer, Steven

From: Ferraro, Chris
Sent: Friday, March 08, 2002 4:19 PM
To: Palmer, Steven
Cc: Oven, Hamilton; Garfein, Vivian; Pluchino, Eric; Kazi, Ali
Subject: Calpine Blue Heron Energy Center in Indian River County

Hi Steve,

The Water Facilities Group in the Central District has reviewed the sufficiency responses that were provided for the Site Certification Application (SCA) for Calpine's Blue Heron Energy Center and our comments are listed below:

FDEP Water Facilities-1

1. It is noted that this facility will have no wastewater discharges to either ground or surface water. Therefore we continue to have no comments with regard to wastewater discharges.

FDEP Water Facilities-2

2. The water supply for the project has not yet been finalized, but we would encourage Calpine to work with Indian River County on utilization of reclaimed water and demineralization concentrate for their water needs. We would like to review the information regarding the finalized plans for water supply when they become available.

FDEP Water Facilities-3

3. We have reviewed the response to the comments provided by Eric Pluchino of my staff regarding the endangered hand fern and the response is satisfactory.

Thanks for the opportunity to provide input into the SCA process for this project and call me if you have any questions.

Chris Ferraro
Water Facilities Administrator
Central District DEP
3319 Maguire Blvd., Suite 232
Orlando Fl 32803
407-893-3308
chris.ferraro@dep.state.fl.us

FLORIDA FISH AND WILDLIFE CONSERVATION COMMISSION

BRADLEY J. HARTMAN, DIRECTOR
OFFICE OF ENVIRONMENTAL SERVICES
(850)488-6661 TDD (850)488-9542
FAX (850)922-5679

March 8, 2002

Mr. Steven L. Palmer, P.E.
Siting Coordination Office
Department of Environmental Protection
2600 Blair Stone Road, MS 48
Tallahassee, FL 32399-2400

RE: PA00-42, Calpine Blue Heron
Energy Center, Indian River County

Dear Mr. Palmer:

FFWCC-1

The Office of Environmental Services of the Florida Fish and Wildlife Conservation Commission has reviewed the response to insufficiency questions submitted by Calpine Construction Finance Company, L.P. for the referenced site certification application, and offers no comments.

If we may provide any additional assistance, please contact us.

Sincerely,

Bradley J. Hartman

Bradley J. Hartman, Director
Office of Environmental Services

BJH/DBB
ENV 2-11-2/3
calpbhec.suf
cc: Mr. Jim Antista
Mr. Steve Lau

DEPARTMENT OF
ENVIRONMENTAL PROTECTION
MAR 1 : 2002
SITING COORDINATION

Florida Department of Transportation

JEB BUSH
GOVERNOR

605 Suwannee Street
Tallahassee, Florida 32399-0450

THOMAS F. BARRY, JR.
SECRETARY

February 22, 2002

Mr. Hamilton S. Oven, P.E., Administrator
Siting Coordination Office
Division of Air Resources Management
Department of Environmental Protection
2600 Blair Stone Road, MS 48
Tallahassee, Florida 32399-2400

Re: Calpine Construction Finance Company, L.P. (Blue Heron Energy Center) Power Plant Siting Application
Application No. PA 00-42
DOAH Case No. 00-4564 EPP
DEP File No. 00-2072

Dear Mr. Oven:

FDOT-1

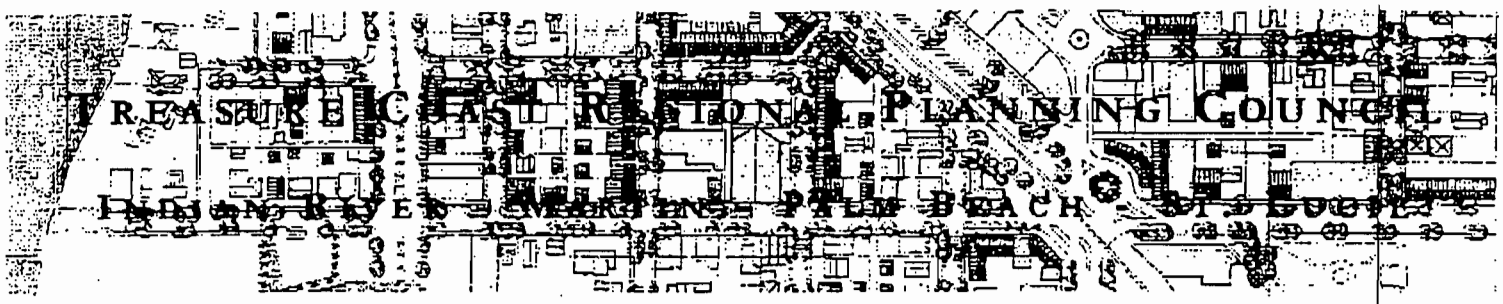
The Florida Department of Transportation has found the transportation related information relative to the subject sufficiency response to be sufficient for site certification evaluation.

If you have any questions, please call me at 414-5387 or Sandra Whitmire, Siting Coordinator, at 414-4812. Thank you.

Sincerely,

Sheauching Yu
Assistant General Counsel

cc: David S. Dee, Esquire
Larry Hymowitz, District 4
Sandra Whitmire



March 8, 2002

Mr. Steven Palmer, P.E.
Siting Coordination Office
Florida Department of Environmental Protection
2600 Blair Stone Rd., MS 48
Tallahassee, FL 32399

Subject: Calpine Construction Finance Company, L.P.
Blue Heron Energy Center
Site Certification Application: PA00-42

Dear Mr. Palmer:

TCRPC-1

Council staff has reviewed the Sufficiency Responses for the Calpine Blue Heron Energy Center Site Certification Application submitted February 2002. We do not have additional sufficiency questions at this time. However, we note that Calpine is engaged in ongoing discussions with Indian River County, IRFWCD, and SJRWMD concerning a water supply plan for the project. Calpine has stated that it would consider using water from storm water storage and treatment facilities, and some quantity of reverse osmosis discharge from the County's water treatment plants as supplemental water supply. Council would like to receive details of the water supply plan when it becomes available.

Please contact me if you have any questions.

Sincerely,

Peter G. Merritt, Ph.D.
Regional Ecologist

cc: Roger Saberson

St. Johns River
Water Management District
Kirby B. Green III, Executive Director • John R. Wehle, Assistant Executive Director
Post Office Box 1429 • Palatka, FL 32178-1429 • (386) 329-4500

March 1, 2002

Hamilton S. Oven, Administrator
DEP Siting Coordination Office
Twin Towers Office Building
2600 Blair Stone Road, MS 48
Tallahassee, FL 32399-2400

Via Facsimile and Overnight Mail
(850) 921-7250

RE: Calpine Construction Finance Company, L.P. (Blue Heron Energy Center) Power Plant Siting Application No. PA00-42; DOAH Case No. 00-4564EPP; DEP File No. 00-2072; FOR No. 2000-0058

Dear Mr. Oven:

Pursuant to Section 403.5067, Florida Statutes, the St. Johns River Water Management District hereby transmits to you its requests for additional information which must be provided in order to enable the District to carry out its statutory review responsibilities. The requests below reflect the information the District's technical staff believes is needed to complete the District's review and to thereafter render a report to the Department:

SJRWMD-1

1. As part of the siting process, an applicant seeks a determination of need from the Public Service Commission for the proposed power plant. The granting of a determination of need then creates a presumption of public need. In Tampa Electric Co. v. Garcia, et al., 767 So.2d 428, 435 (Fla. 2000), the Florida Supreme Court held that "the statutory scheme embodied in the Siting Act and FEECA was not intended to authorize the determination of need for a proposed power plant output that is not fully committed to use by Florida customers who purchase electrical power at retail rates." The Blue Heron Energy Center (the "Project") has likewise been proposed as a "merchant" power plant. In evaluating a proposed consumptive use of water, the District must evaluate whether the proposed use: 1) is a reasonable beneficial use, 2) interferes with presently existing legal uses of water and 3) is consistent with the public interest. See Section 373.223, Fla. Stat. (2001). Under current Florida law and without a determination of need from the PSC, the applicant may not be able to show that the proposed consumptive use of water is both reasonable and consistent with the public interest. Has the output of the

proposed power plant been committed to use by Florida customers? See Section 10.3, Applicant's Handbook: Consumptive Uses of Water (A.H.).

SJRWMD-2 2. It is the District's understanding that Calpine is currently negotiating with the County and the Indian River Farms Water Control District (IRFWCD) regarding water supply options for the Project. It was previously noted that the Project will consider using water from a regional reservoir to be created in the next several years and will also consider using "...some quantity of RO discharge..." from the County's water treatment plants. Please evaluate the environmental, technical, and economical feasibility of maximizing the use of these lower quality water sources. Please contact Ralph Brown, with SJRWMD, for any additional information that may be needed regarding the proposed storm water treatment reservoir. [Paragraphs 10.2 (a) & (l) and 10.3 (d) & (g), A.H.]

SJRWMD-3 3. It is the District's understanding that grassed and landscaped areas of the plant site will be irrigated. Please complete and submit the previously provided forms addressing urban landscape irrigation. [Paragraphs 10.2(b), (i) & (k) and 10.3 (a), (b) & (e), A.H.]

SJRWMD-4 4. It is the District's understanding that Calpine is currently negotiating with the County and IRFWCD regarding water supply sources, pipeline and pump station locations and easement rights. What is the current status of acquisition of easement rights from IRFWCD and the County for the water supply line and pump station? Please provide appropriate authorizations from IRFWCD and Indian River County authorizing Calpine Blue Heron Energy Center to obtain "...some combination of reuse, canal, managed storm water, reverse osmosis discharge..." to operate the plant. [Paragraphs 10.2 (a) (k) (l) and 10.3 (c)]

SJRWMD-5 5. In Attachment 10.1.4-B it is noted that the Project will use the lowest quality water sources, the most water efficient fuel source, and will be extremely efficient in its water use because of extensive water reuse measures including water recycling and reusing cooling water blowdown. Please provide a detailed description of these water conservation measures. For example, how much water is recycled in the various processes and what is the total water savings? [Paragraphs 10.2 (h) & (i) and 10.3 (e), A.H.]

The District requests the Department's assistance in obtaining the above-requested information. If further clarification is needed with regard to the items noted above, please contact me at (386) 312-2340 or Ms. Jennifer Springfield at (386) 329-4199.

Thank you in advance for your cooperation.

Sincerely,

Mary Ellen Jones
Assistant General Counsel
Office of General Counsel

cc: Jennifer Springfield, Esq.
Dwight Jenkins, Esq.
Rich Burklew
Michelle Reiber
Marc von Canal
Ralph Brown
Troy Rice
David S. Dee, Esq. Landers & Parsons
10 West College Ave.
Tallahassee, FL 32301
Jack D. Doolittle Environmental Consulting & Technology, Inc.
3701 NW 98th St.
Gainesville, FL 32606

BOARD OF COUNTY COMMISSIONERS

1840 25TH STREET, VERO BEACH, FL. 32960

PUBLIC WORKS DEPARTMENT
772-567-8000 EXT. 245
FAX: 772-778-9391
SUNCOM 224-1245

March 11, 2002

Mr. Steven L. Palmer, P.E.
Siting Coordination Office
Florida Department of Environmental Protection
Marjory Stoneman Douglas Bldg.
3900 Commonwealth Blvd.
Tallahassee, Fl. 32399-3000

Subject: Calpine Construction Finance Company L.P.'s Blue Heron Energy Center Site Certification Application: PA00-42
Response to Insufficiency Questions

Dear Mr. Palmer:

Indian River County hereby presents a review of the Sufficiency Responses for the subject project:

IRC-1

1) Page 2 – Cover letter from Jack D. Doolittle, ECT to Hamilton S. Oven, Jr., DEP dated 02-01-02 – Paragraph 5 (last paragraph) – Calpine is continuing discussions with Indian River County and Indian River Farms Water Control District (IRFWCD) regarding water supply options, as noted. We are in discussions with three landowners to purchase a 100+ acre site for stormwater storage from which Calpine can obtain water supply. Option agreements to purchase land have been drafted. The County is also currently reviewing water quality requirements submitted by Calpine. Water from the IRFWCD canal system and other sources (R.O. Brine Concentrate) will be blended within the pond or downstream from the pond and transmitted to the Blue Heron Energy Center.

IRC-2

2) Page 3 - Sufficiency Responses – FDEP Ambient Monitoring –1 Indian River County concurs that the plant shall be a zero discharge facility as production water is managed. The County has no objection to surface water discharge from the site in excess of the 25-year, 24-hour storm.

IRC-3

3) Page 24 – SJRWMD – 2 Indian River County, Calpine, and IRFWCD is negotiating a production water agreement at this time. The Indian River County Utility Department (Water and Sewer) requests that at least .5 mgd of R.O. Brine discharge be used by Calpine and blended with stormwater for the 1080 MW plant and .25 mgd of R.O. Brine for a Phase I 540 MW plant.

IRC-4

4) Page 28 – Calpine reports that the computer model predicts minimal canal water level drawdowns during historic low flow conditions. Was the latest version of the computer model as calibrated by SJRWMD used for this analysis? SJRWMD's analysis of the original computer model prepared by Calpine indicates that it needs further calibration, and in fact, SJRWMD's computer modeling section has recalibrated the model somewhat. However, the County's consulting team reports that the recalibrated model still predicts results during certain storm events that based on local knowledge, do not actually occur. The consulting team and County agree that the computer model needs further calibration and should be used cautiously until this occurs. Perhaps Calpine should run the canal drawdown during historic flows again with the more calibrated SJRWMD version of the model and compare the results to Calpine's original version.

IRC-5

5) The Utility Dept. has reviewed the Calpine Site Certification Application and offers the following comments. For the most part, the document primarily deals with non-utility issues. However, on pages 24 and 25, under a discussion by SJRWMD, there is a discussion regarding utilizing Wastewater reuse and Reverse Osmosis water plant reject water (Brine) for cooling water. Calpine only indicates a willingness to consider utilizing Brine and Reuse water. I believe that this "willingness to consider utilizing Brine and Reuse" is not sufficiently consistent with the second comment on page 24 of SJRWMD requesting an evaluation of the "environmental, technical, and economic feasibility of maximizing the use of these lower quality water sources." It would be of benefit to the County to have Calpine respond, as requested by SJRWMD, indicating the benefits of utilizing Brine and Reuse. By responding in this way, Calpine cannot come back, at a later date, and refuse usage of Brine or Reuse for economic, technical or economic reasons.

IRC-6

6) On page 25, SJRWMD-3 comments, although SJRWMD has requested information on: reclaimed water, surface water, and byproduct water. The response only references reclaimed and surface water, not Brine.

IRC-7

7) It is my understanding that Calpine is planning to use Indian River Co. drinking water for the plant as well as sewer service. Unless I missed it, I didn't see any reference to that.

IRC-8

8) Environmental Planning Section commented on FDEP Ambient Monitoring – 2 Page 3 – Section 929.02(4), of the Code of Indian River County, provides for protection of listed species (flora and fauna) and their habitat. It appears from the documentation presented by Calpine that all the *Ophiglossum palmatum* L. (hand adder's tongue fern) is within the wetlands that are to be preserved. If and when Indian River County issues a Land Clearing Permit the permit will contain special conditions that will:

   a) require the permittee to either dispose of the resulting debris in a manner other than open burning, or if burned (either open air or air curtain incinerator) will

require that the material be sufficiently dried so as to release as little smoke as possible;

b) will require that the debris be burned as far away from the wetland areas as possible;

c) will require appropriate wind conditions that will reduce or eliminate the potential for harm to this listed plant.

Please contact me if you have any questions regarding these comments.

Sincerely,

James W. Davis, P.E.
Public Works Director

JWD:rt

Cc: James E. Chandler, County Administrator
Eric Olsen, Utilities Services Department
Roland DeBlois, Chief, Environmental Planning
Michael O'Haire, Attorney for IRFWCD
Dean Luethje, Carter Associates, Inc.

ATTACHMENT B

AGREEMENT CONCERNING DELIVERY AND USE OF STORMWATER

BOARD OF COUNTY COMMISSIONERS
OFFICE OF COUNTY ATTORNEY

William G. Collins II, County Attorney
Marian E. Fell, Assistant County Attorney
William K. DeBraal, Assistant County Attorney

August 12, 2004

Mr. Timothy R. Eves
Vice President – Sales & Marketing
CALPINE
Island Center
2701 N. Rocky Point Drive, Suite 1200
Tampa, FL 33607

Re: Agreement Concerning Delivery and Use of Stormwater

Dear Mr. Eves:

Enclosed for your records is an original Agreement Concerning Delivery and Use of Stormwater executed by all parties.

Yours truly,

William G. Collins II
County Attorney

nhm
enclosure

1840 25th Street, Vero Beach, Florida 32960 · (772) 567-8000, Ext. 1424 · Fax (772) 569-4317
ircattorney@ircgov.com

AGREEMENT CONCERNING DELIVERY

AND USE OF STORMWATER

THIS AGREEMENT is made and entered into this 12th day of August, 2004, by and between **INDIAN RIVER COUNTY**, a political subdivision of the State of Florida ("County"), **INDIAN RIVER FARMS WATER CONTROL DISTRICT**, a Special District located in Indian River County, Florida ("District") and **BLUE HERON ENERGY CENTER, L.L.C.**, a wholly owned Calpine Corporation subsidiary, a Delaware limited partnership, with offices at The Island Center, 2701 N. Rocky Point Drive, Suite 1200, Tampa, Florida 33607 ("Calpine").

Recitals:

Recital 1. Calpine has obtained special exception approval and conceptual site plan approval from the County to construct a nominal 1,080 mw natural gas-fired combined cycle electricity generating power plant ("Plant") on approximately 50 acres east of and adjoining Interstate 95 ("I-95") and immediately north of the south County boundary line, adjacent and west of 74th Avenue ("Blue Heron Energy Center" or "BHEC"), located within Indian River County.

Recital 2. Calpine estimates that the average annual water requirements for BHEC to be 7.5 million gallons per day of water ("MGD") with a maximum peak daily demand of 9.1 MGD.

Recital 3. As part of the planning for BHEC, Calpine has investigated a wide range of potential sources for the cooling water. Calpine, in cooperation with the County and the District, has determined that the District's canal network has sufficient capacity to provide water, in the form of surface water and stormwater ("stormwater" as used herein shall mean water above the minimum level established by the District from time to time for water level guidelines in the District's canal system), in the quantity and of the quality required by BHEC.

Recital 4. Calpine plans to build BHEC in two 540 MW phases. Calpine plans to have BHEC Phase I in operation in 2007. In order to have Phase I of the Plant operational in 2007, Calpine must have a water supply system in place for start-up and testing by June 2006. The target operational date for Phase II has not yet been set; however, it will be subsequent to Phase I. All of the provisions of this Agreement shall be applicable to both phases of the Blue Heron Energy Center, except where the terms or context of this Agreement clearly indicate to the contrary.

Recital 5. The County, in cooperation with the District, St. Johns River Water Management District ("SJRWMD"), and the City of Vero Beach ("Vero Beach"), has completed a Stormwater Management Plan ("Master Plan") for stormwater impoundment and treatment which will meet the goals of improving the quality and reducing the quantity of surface and stormwater released into Indian River Lagoon, which Master Plan involves the incorporation and use of the District's system, works and structures.

Recital 6. Calpine, the County and the District recognize that the stormwater park proposed in the Master Plan can be the source of cooling water for BHEC and that Calpine can be a contributing partner in the County's stormwater management efforts.

NOW, THEREFORE, in consideration of the mutual promises and agreements set forth herein and other valuable consideration given one party to the other, the County, the District and Calpine hereby agree as follows:

1. **Incorporation of Recitals**: The foregoing recitals are incorporated as if fully restated in this Agreement.

2. **Regional Stormwater Park**:

a. The County, the District and Calpine will identify a parcel(s) of land up to 160 acres available and desirable for a regional stormwater park within the area shown on Exhibit "A", Stormwater Park Location, to function as a water management facility pursuant to the Master Plan.

b. Within 60 days of execution of this Agreement, Calpine, through a wholly owned subsidiary, or the County under express written authority from Calpine, will enter into an Option Contract(s) with the owner or owners of the property identified as desirable for the regional stormwater park under Paragraph 2.a, with Calpine's subsidiary being the purchaser at a price not to exceed fair market value. Fair market value shall be determined by an appraisal to be

performed by an appraiser selected by Calpine and approved by the County, which approval shall not be unreasonably withheld or delayed. If Calpine, or the County under authority from Calpine, is unable to negotiate an Option Contract at fair market value or less, then Calpine shall not be obligated to enter into the Option Contract to purchase the property. The Option Contract shall be in a form as mutually agreeable to the County, the District and Calpine, with a closing date agreeable to the County, the District, Calpine, and the seller or sellers. The County or other governmental agency may contribute funds above the fair market value price to complement Calpine funding.

c. Upon Calpine's purchase of the property identified in Paragraph 2.b, Calpine shall, at no cost to the County or District, transfer or otherwise convey fee simple title to such property to the County for the purpose of constructing, owning and operating the stormwater park. Calpine's purchase of the property will be conditioned upon and will follow receipt of certification of BHEC by the Power Plant Siting Board. The County may, with the prior consent of Calpine, which consent shall not be unreasonably withheld or delayed, include passive recreation on the property to complement the stormwater park, provided that such passive recreation does not impact the County's ability to operate the stormwater park in compliance with the requirements of this Agreement, or those of the District.

d. The County, working with SJRWMD, shall be responsible for the design, permitting, construction, operation and maintenance of the stormwater park and all related costs. The District shall be responsible for establishing and modifying, from time to time as necessary, minimum and maximum water level requirements in the canal system ("District's Water

Level Guidelines" for withdrawal of water from the District's canal system for use by others, including Calpine). The County will operate the stormwater park so as to maximize the water inventory available to BHEC. Notwithstanding anything herein provided to the contrary, BHEC will not be permitted to withdraw, at any time, water from the upper pool of the District's system. The County shall also be responsible to make the necessary improvements and/or modifications to its stormwater collection, storage and delivery systems, as needed, (except the works or structures of the District) in order to comply with the terms and provisions of this Agreement. The design, permitting, construction, operation and maintenance of the stormwater park and improvements and/or modifications to the stormwater collection, storage, and delivery systems, shall be done in accordance with the requirements of Exhibit "B", Stormwater Park and Water Supply System Operational requirements, and the District's Water Level Guidelines.

3. **Connection Corridor and Construction Costs**:

a. After purchase of the property for the stormwater park, Calpine shall be responsible for all costs of designing, permitting, constructing and connecting the stormwater pipelines and pumping stations from: (i) the District's Lateral "C" canal to the design discharge point into the stormwater park; (ii) for the stormwater park bypass; and (iii) from the design withdrawal point at the stormwater park to BHEC (collectively the "Pipelines"). Calpine, the County and the District, will jointly determine the actual withdrawal point location from the lower pool, immediately downstream of the Lateral "C" canal radial gate, dependent upon the quantity of stormwater available at the withdrawal location. The Pipelines shall be constructed according to routing agreed

upon by Calpine, the County, and the District, as shown on Exhibit "C", Pipeline Routing. The pipelines and pumping stations will be designed to satisfy the needs of the BHEC, as described in this Agreement, and such design, including the installation of flow meters, will be completed by Calpine and will comply with the County's and the District's technical standards and specifications, and will be subject to review and approval by the County and District. The County and the District shall allow Calpine, at no cost to Calpine, to utilize all rights-of-way and easements, necessary or required for the construction of the Pipelines, the routing of which is shown on Exhibit "C". Under no event shall the County or the District be obligated to exercise its eminent domain authority for the benefit of Calpine. Since the County is not contributing funds toward the construction of the Pipelines, Calpine shall not be required to comply with the Competitive Consultants Negotiation Act or any particular bidding process.

b. Following construction of the Pipelines:

A. Upon completion of construction of the pipelines and pumping stations, Calpine shall transfer the ownership of the pipelines and pumping stations located in the District's rights-of-way, as shown on Exhibit "C" to the District. Calpine will maintain ownership of all pipelines and pumping stations not located in the District's rights-of-way.

(i) The County and the District shall enter into a Lease, with terms to be mutually agreed upon, for the following equipment located in the District's rights-of-way ("County Leased Property"): (a) the pipeline from the Lateral "C" canal

withdrawal point to the stormwater park; and (b) the pumping stations at the Lateral "C" withdrawal point.

(ii) Calpine and the District shall enter into a Lease, with terms to be mutually agreed upon, for the following equipment located in the District's rights-of-way: (i) the pipeline from the stormwater park design withdrawal point to BHEC; and (ii) the stormwater park bypass.

B. The County agrees that it will be responsible for the maintenance, after the applicable warranty period, and operation, consistent with the District's Water Level Guidelines, of: (i) the pipeline from the Lateral "C" canal withdrawal point to the stormwater park; and (ii) the pumping stations at the Lateral "C" withdrawal point. In the event of the County's loss of use or destruction of such pipeline, pumping station and/or stormwater park, the County agrees to give prompt telephone notice to Calpine followed by written notice of its inability to supply stormwater of the quantity defined herein, and the County agrees to initiate good faith efforts to repair the pipeline and/or pumping station, regardless of the cause of the interruption, within 24 hours after discovery by the County or reported by Calpine; and

C. Calpine shall be responsible for the maintenance and operation, consistent with and according to the District's Water Level Guidelines, of: i) the pumping station at the stormwater park design withdrawal point; ii) the pipeline from the stormwater park design withdrawal point to BHEC; and iii) the stormwater park bypass.

D. The District shall allow unrestricted access to the County and Calpine to the land and equipment owned by the District for the purpose of maintaining the pumping stations, pipelines and other related equipment defined in Paragraph 3.b.A above.

c. Calpine agrees to obtain all approvals required to connect BHEC to the pipeline from the stormwater park to BHEC.

d. The County and the District agree that Calpine has the right to access and cross their property and right-of-way when necessary for Calpine to perform the work required under this Agreement.

e. As an inducement to the District and to the County to enter into this Agreement, Calpine waives and covenants not to exercise any power of eminent domain Calpine may have, whether state or federal, at any time against County or District to acquire property of either or any right thereto or interest therein.

4. **Term, Volume and Delivery Schedule**:

a. After completion of the stormwater park and associated pumping stations and piping, the County shall deliver stormwater, which may include limited Brine injection as defined in Paragraph 7, to Calpine from the regional stormwater park, through the Pipelines

described above in Paragraph 3, in quantities set forth herein, and in accordance with the terms and provisions of this Agreement.

b. This Agreement shall be effective upon execution and shall be for a term of 20 years from June 1, 2006. Calpine shall have the option to extend this Agreement for two (2) additional terms of five years each, upon written notification to the County and to the District by Calpine at least 180 days prior to the expiration of the initial 20 year term and any subsequent term thereafter ("Term" to include the initial 20 year term and all extensions thereto). The parties may agree to extend the Term of this Agreement beyond the two additional five year extensions, by mutual agreement of the parties. Notwithstanding this provision, in the event any change in state or federal law, rule, regulation or policy subsequently prohibits the use of the County's or the District's stormwater by Calpine in the manner contemplated by this Agreement, with such prohibition being agreed upon by the parties or determined by a court of competent jurisdiction, this Agreement may be terminated by any party with 180 days notice to the other parties, and no party will have any further obligations to the others upon such termination other than costs associated with the disposal of accrued solids to be paid by the County as defined in Paragraph 7.b.

c. Calpine agrees to notify the County and the District 180 days prior to the date it will begin accepting stormwater. The County, the District and Calpine acknowledge that the scheduled date for commencement of stormwater delivery under this Agreement is June 2006. The County, the District and Calpine will perform their respective obligations under this Agreement

required to meet this schedule. In the event the stormwater park is not completed in a manner to support this schedule, then the provisions of Paragraph 4.g shall apply.

d. The total amount of stormwater to be delivered from the County to Calpine shall be up to 9.1 MGD at a rate not to exceed 7000 gallons per minute ("GPM") as discussed in Paragraph 6.b. BHEC Phase I will require a maximum peak daily demand of 4.55 MGD at a rate not to exceed 3500 GPM.

e. The County reserves the right to use stormwater from the stormwater park for other purposes, should such use become feasible in the future; however, subject only to agricultural demands, it is understood and agreed that Calpine shall have the right of first use and shall be entitled to utilize and receive all of the County's stormwater from the stormwater park up to the amounts specified in Paragraph 4.d above, subject to the District's Water Level Guidelines, during the Term of this Agreement. Neither the County nor the District shall allow any new non-agricultural withdrawals or uses of the water from the stormwater park that would prevent the County from satisfying its obligations to Calpine under this Agreement.

f. The District reserves the right to use stormwater in its system for other purposes in the event of an emergency and Calpine acknowledges that, in times of drought or dry periods, water may not be available; District, however, will not prefer any other large industrial uses over the needs of Calpine for water subject to the District's Water Level Guidelines, during the Term of this Agreement.

g. Throughout the Term of this Agreement, the parties acknowledge that the delivery of stormwater from the stormwater park will be as available. The County acknowledges that if the County cannot deliver the daily stormwater of the quantity defined herein to Calpine during the Term of this Agreement, Calpine may suffer damages; however, Calpine, its successors and assigns, will not assert a claim for damages against the County or District but may pursue other remedies that may exist at law or in equity. The County, therefore, must give prompt telephone notice followed by written notice of its inability to supply stormwater of the quantity defined herein to Calpine. Calpine acknowledges that from time to time there may be an interruption of flow due to failure of mechanical equipment at the Lateral "C" withdrawal location or at the stormwater park, failure of the pipeline between Lateral "C" and the stormwater park, and/or failure due to other causes. The County agrees to use its best efforts to repair or restore the flow and/or rectify the non-compliance, regardless of the cause of the interruption, within 24 hours after discovery by the County or reported by Calpine. If the County is not able to deliver stormwater of the quantity defined herein, Calpine may: a) with prior notice to the County, and subject to and in compliance with the District's Water Level Guidelines, use the stormwater park bypass to deliver stormwater directly from the Lateral "C" withdrawal point to BHEC, and, under this operational mode, the County shall be responsible for the operation and maintenance costs associated with the pumping station located at the Lateral "C" withdrawal point; or b) at Calpine's own cost, obtain the required quantity of water from an alternative source, which source(s) may include, but shall not be limited to, Calpine's own holding ponds or other sources, subject to and in compliance with the District's Water Level Guidelines, until such time as the County is able to deliver stormwater in compliance with the terms

and provisions of this Agreement. Calpine shall be responsible for operation, subject to the District's Water Level Guidelines, and maintenance of the pumping station at the stormwater park design withdrawal point and pipeline from the stormwater park design withdrawal point to the BHEC, as defined in Paragraph 3.b.C, and the County shall have no responsibility for such pumping station at the stormwater park design withdrawal point and pipeline from the stormwater park design withdrawal point to the BHEC.

5. **Stormwater Quality**:

a. The County agrees to design, permit, construct, operate and maintain the stormwater park in accordance with Exhibit "B" hereto, and to make the necessary improvements or modifications to its stormwater collection, storage, or delivery systems, as needed, in order to comply with the terms and provisions of this Agreement during the Term of this Agreement.

b. The County shall test the constituents listed in Exhibit "B" only if they are required as part of the County's FDEP or SJRWMD stormwater management permit or permits. The County shall supply Calpine a copy of its FDEP and SJRWMD permits and all renewals promptly upon their issuance. At the same time the County shall provide Calpine with a listing of all constituents to be tested and the testing frequency. Calpine may test all or selected parameters to determine the water quality delivered by the County.

c. The County will provide to Calpine and the District will make available to Calpine at the District's office copies of all test results and reports which the County and/or the District are required to file with any local, state or federal agencies with regard to the stormwater. Such test results and reports shall be provided to Calpine at the same time these materials are filed with the appropriate agencies.

d. Throughout the Term of this Agreement, Calpine may perform water quality testing of the stormwater to be delivered by the County from the stormwater park. This provision, however, does not obligate Calpine in any way to perform independent testing or metering of the stormwater provided by the County. In the event that Calpine performs such testing, the County and/or the District may request and Calpine shall provide copies of all test results and reports so requested.

e. In the event that Calpine, in good faith, determines that the quality of the stormwater, with or without Brine injection, delivered by the County, exceeds the maximum acceptable limits as shown on Exhibit "D", "Constituent Make-Up of the Water in the District's Canals and the Brine Discharge from the County's South Treatment Plant", thereby rendering the stormwater unusable by BHEC, Calpine may: i) cease injecting Brine into the pipeline from the stormwater park to BHEC, or ii) cease accepting stormwater from the County ("Shutoff Period"), until such time as the stormwater is within the maximum acceptable limits as shown on Exhibit "D". Calpine agrees to notify the County as soon as practicable, but under no circumstances later than 24 hours after discovery by Calpine of any stormwater that is supplied from the stormwater park to

BHEC which Calpine deems unusable, with justification of such decision by Calpine and the reasons for Calpine's decision. Notification to the County will be made by telephone and will be followed by written notification. In the event Calpine ceases accepting storm water from the County due to such water exceeding the maximum acceptable limits as shown on Exhibit "D", Calpine may: a) with prior notice to the County, and subject to and in compliance with the District's Water Level Guidelines, use the stormwater park bypass to deliver stormwater directly from the Lateral "C" withdrawal point to BHEC, and, under this operational mode, the County shall be responsible for the operation and maintenance costs associated with the pumping station located at the Lateral "C" withdrawal point; or b) at Calpine's own cost, obtain the required quantity of water from an alternative source, which source(s) may include, but shall not be limited to, Calpine's own holding ponds or other sources, subject to and in compliance with the District's Water Level Guidelines. Such delivery via the stormwater park bypass or from alternate sources shall continue until such time as Calpine determines that stormwater to be delivered by the County is within the maximum acceptable limits as set forth on Exhibit "D" and usable at BHEC. Calpine shall be responsible for operation and maintenance of the pumping station at the stormwater park design withdrawal point and pipeline from the stormwater park design withdrawal point to the BHEC, as defined in Paragraph 3.b.C, and the County shall have no responsibility for such pumping station at the stormwater park design withdrawal point and pipeline from the stormwater park design withdrawal point to the BHEC. The provision of Paragraph 5.b shall apply during such Shutoff Period.

f. Exhibit "D" represents a sampling of the water in the District canals and the Brine discharge from the IRC South Plant as of the time of execution of this Agreement.

Both the County, the District and Calpine reserve the right to renegotiate applicable portions of this Agreement in the event of any significant change in the constituency make-up of either the District canal water or the Brine from the representative sampling attached as Exhibit "D".

g. Calpine shall make no discharges into District's system and County will at all times, meet District's reasonable requirement for quality of water discharged into District's system from the stormwater park.

6. **Use and Discharge of Stormwater**:

a. Calpine may use the stormwater as a source of cooling water for BHEC, for storage, exclusive of any Brine, in off-site holding ponds, or for any on-site purposes and in any manner determined by Calpine; provided, however, (i) Calpine's use of the stormwater shall at all times be consistent with all local, state and federal guidelines and requirements; and, (ii) Calpine shall not discharge any stormwater obtained from the County or District, directly or indirectly into any surface waters of the State of Florida, canals of the District, or other waters without the express written authorization of the appropriate permitting agency, and shall not sell or permit use of such stormwater by any third party or for any purpose not essential for operations at BHEC..

b. Calpine may withdraw from the stormwater park at the design withdrawal point, up to 9.1 MGD at a rate not to exceed 7000 GPM, unless otherwise agreed to by the County and District.

c. Calpine shall utilize a "zero liquid discharge system" to eliminate all process wastewater discharge from BHEC as set forth in Calpine's Site Certification Application for the Blue Heron Energy Center.

d. Throughout the Term of this Agreement the County agrees to accept the solids resulting from the operation of the BHEC zero liquid discharge system at the County landfill, to the extent allowed by the state and federal agencies, and shall grant Calpine such permits or authority as necessary. Calpine, at its option and expense, may choose to dispose of the solids at a location other than the County landfill, however, such decision by Calpine shall not affect the County's obligation to accept the solids at the County landfill throughout the Term of the Agreement.

7. **Brine Discharge**:

a. Calpine and the County acknowledge that the County may, at its option, choose to pipe discharge water from the County's South Plant reverse osmosis water treatment facility ("Brine") to inject into the pipeline from the stormwater park to BHEC for delivery to BHEC. The County may only inject Brine during periods when BHEC is in operation. The Brine injection rate, for Brine within the constituency limits shown on Exhibit "D" in the column labeled "RO Brine Values", shall be limited to eight percent (8.0%) of the total flow rate of stormwater being supplied to BHEC. In the event the Brine exceeds the constituency limits shown on Exhibit

"D" in the column labeled "RO Brine Values", Calpine and the County shall, in good faith, negotiate a reduced Brine injection rate based on maintaining the water supply constituency within the "Maximum Allowable Limits" as shown on Exhibit "C". Calpine shall provide and operate a control system to control the Brine injection rate at the above level unless Calpine provides notification to the County to reduce the level and provides justification for such reduction in the flow level. The design of the control scheme will be mutually agreeable to Calpine and the County. Calpine and the County, based on actual operational data and experience, may agree to inject Brine in quantities greater than those specified above.

b. When and only when the County is supplying Brine in accordance with Paragraph 7.a, the County shall reimburse Calpine for the disposal of solids associated with the Brine treatment, in an amount to be determined on a monthly basis in accordance with the following:

Amount of Reimbursement = [ADBA/MIR][SF*SDC]*

ADBA = Average Daily Brine Acceptance (calculated on a monthly basis)

MIR = Maximum Injection Rate:

Phase I MIR = 300,000 gallons per day

Phase I and II MIR = 600,000 gallons per day

SF = Solids Factor= Additional solids generated due to acceptance of brine in cooling water supply to BHEC. The Solids Factor will be set at 0.4 (40%) for the first year of operation. After the first full year of operation, the Solids Factor will be modified

based on the actual solids generated due to the acceptance of brine in the cooling water supply to BHEC.

SDC = Solids Disposal Costs for the respective month

c. In the event the injection of Brine into the pipeline from the stormwater park to BHEC causes the resulting solids from the BHEC zero liquid discharge system to be reclassified with a disposal fee differing from that specified in Paragraph 8.c, then the County shall be responsible for the cost in excess of the cost calculated using the estimated quantity of solid waste generated in the BHEC zero liquid discharge system without Brine injection at the disposal fee specified in Paragraph 8.c.

d. If the County elects to build a pipeline to supply Brine for injection into the pipeline from the stormwater park to BHEC as described in Paragraph 7.a, then all costs associated with the design, permitting and construction of the respective pipeline will be shared at the ratio of 85% County and 15% Calpine, with Calpine's 15% limited to a maximum of $200,000. Calpine, at the time of County's issuance of the building permit for BHEC, shall, at its option, (i) escrow $200,000 with the County, or (ii) deliver a Letter of Credit in the amount of $200,000, presentable on a Florida bank, to secure this obligation. In the event Calpine's 15% share is less than $200,000, the County shall refund the excess. The County shall be responsible for the operation and maintenance of such pipeline.

8. **Fees**:

a. Calpine and County acknowledge that the County is intending to establish a stormwater utilization fee. It is anticipated that the fee will be uniform within each drainage basin and will be similar to the County fee for reclaimed water, which at the time of adoption of this Agreement is $0.15/1000 gallons. Upon the County's adoption of such uniform fee, in an amount similar to the reclaimed water fee, for the delivery and use of stormwater, Calpine shall thereafter begin paying such uniform fee, as may be increased from time to time to reflect increases in the operation and maintenance costs of the County and District, for the stormwater actually delivered to Calpine under the terms of this Agreement. In the event any other non-agricultural users utilizing water from the stormwater park are being charged a lower utilization fee by the County than Calpine, then the fee charged to Calpine shall be decreased, or eliminated, accordingly. In the event any new industrial users utilizing water withdrawn from the same basin within the District's canal system are being charged a lower utilization fee by the County than Calpine, or are not being charged any utilization fee by the County, then the fee charged to Calpine shall be decreased, or eliminated, accordingly.

b. There shall be no fee charged by the County or paid by Calpine for any Brine which is injected in the pipeline from the stormwater park to BHEC as defined in Paragraph 7.a.

c. Calpine shall pay the prevailing rate for disposal of solids, classified as industrial, non-hazardous (garbage), at the Indian River County landfill, which, at the time of the adoption of this Agreement, is $34.45/ton.

d. No other operational fees shall be paid by Calpine to the County under this Agreement.

e. The County shall pay a lease payment to the District for the County Leased Property defined in Paragraph 3.b.A(i). The annual lease payment will be $1.00 (one dollar) firm, non-escalating, for the Term of this Agreement.

f. Calpine shall pay a lease payment to the District for the use of the land and structures of the District, as shown on Exhibit "C", and for the pipelines and pumping stations provided to the District pursuant to Paragraph 3.b.A. The annual lease payment will be equal to the District's tax rate, as such may be established for each fiscal year of the District during the Term hereof, times 5200 acres (at the time of this Agreement the District's tax rate is $14/acre/year).

9. **Invoicing of Fees:**

a. During the term of this Agreement, the County shall invoice Calpine at the end of each month for (i) stormwater supplied by the County to BHEC and (ii) zero liquid discharge system solids accepted at the County landfill. Such invoices shall include the credit for the

previous month solids disposal, as defined in Paragraph 7.b, if applicable for that month. Calpine shall pay such invoices within thirty (30) days of receipt thereof.

b. All undisputed payments properly invoiced by the County for stormwater and acceptance of discharge system solids shall be payable to the County by wire transfer, or such other payment method as the County and Calpine may agree upon. If Calpine fails to pay any undisputed payments properly invoiced by the County when due, Calpine shall owe interest on the unpaid amount, accruing daily at the Late Payment Rate as defined in Section 9.e below, from the date the same is due until paid. If prior to the expiration of the applicable period for payment of invoices stated above, Calpine disputes that the provision of any stormwater or acceptance of any discharge system solids is in accordance with this Agreement, Calpine shall, prior to the expiration of such period, provide the County with written notice identifying the basis for such dispute and the amount of the payment invoiced by the County in dispute. Thereafter, the payment of such disputed amount shall be deferred until such dispute has been resolved to the satisfaction of Calpine and the County. If there is a dispute about any payment invoiced by the County, the invoiced amount not in dispute shall be promptly paid as described above, and any amount disputed which is ultimately determined to have been payable prior to the actual date of payment shall be paid with interest, at the Late Payment Rate, from the date due to the date of payment.

c. During the term of this Agreement, the District shall invoice Calpine annually for the lease payment required pursuant to Paragraph 8.e, commencing in the month BHEC begins accepting stormwater from the County.

d. All undisputed lease payments properly invoiced by the District for leased property shall be payable to the District by wire transfer, or such other payment method as the District and Calpine may agree upon. If Calpine fails to pay any undisputed payments properly invoiced by the District when due, Calpine shall owe interest on the unpaid amount, accruing daily at the Late Payment Rate as defined in Section 9.e below, from the date the same is due until paid. If prior to the expiration of the applicable period for payment of invoices stated above, Calpine disputes that the provision of any leased property is in accordance with this Agreement, Calpine shall, prior to the expiration of such period, provide the District with written notice identifying the basis for such dispute and the amount of the payment invoiced by the District in dispute. Thereafter, the payment of such disputed amount shall be deferred until such dispute has been resolved to the satisfaction of Calpine and the District. If there is a dispute about any payment invoiced by the District, the invoiced amount not in dispute shall be promptly paid as described above, and any amount disputed which is ultimately determined to have been payable prior to the actual date of payment shall be paid with interest, at the Late Payment Rate, from the date due to the date of payment.

e. "Late Payment Rate" means a rate of interest per annum equal to the Prime Rate quoted in the Wall Street Journal plus 5%, or the maximum rate permitted by applicable Law, whichever is less.

10. **Conditions Precedent; Termination**:

a. The parties acknowledge that Calpine is in the process of obtaining permits for the construction of BHEC. If for any reason any permit or permits necessary to construct, operate and maintain the BHEC are not granted, or for any other reason Calpine does not go forward with the BHEC project, then this Agreement may be terminated by Calpine at its discretion. In the event Calpine has made any payments under the Option Contract(s) as described in Paragraph 2.b, such payment or payments shall be non-refundable, even in the event of termination pursuant to this Paragraph 10.

b. Calpine shall, at the time of County's issuance of the building permit for BHEC, comply with the County's Administrative Policy requirements with respect to insurance and indemnification as set forth in the Indian River County Administrative Policy Manual AM1000.6, Risk Management Section, Insurance Subject, under the subtitle C. Major Contract for Service. At the same time, Calpine shall also provide the same coverage with respect to insurance and indemnification to the District.

c. Termination for Default: An "Event of Default" is defined as follows: i) a failure by a Party to satisfy its material obligations under the Agreement which is not remedied within thirty (30) days of written notice from the affected Party of such failure; ii) a failure by Calpine to pay any undisputed amounts properly invoiced by the County or the District within the time period specified for payment which is not remedied within thirty (30) days of written notice from the County or District, as applicable, of such failure; and iii) a failure by the County to provide the daily stormwater which it is otherwise capable of providing and not utilized to meet agricultural

demands per Section 4(e) which is not remedied within thirty (30) days of written notice from Calpine of such failure. If an event of default occurs the affected Party(ies) may terminate this Contract and pursue whatever rights and remedies it/they may have at law or in equity.

11. **Excuse from Performance**:

If for any reason during the Term of this Agreement, any local, state or federal government or agency shall fail or refuse; (i) to issue any necessary permit or grant any necessary approval; or (ii) modify any applicable permit or regulation when requested to do so; or (iii) require any change in the operation of the treatment, transmission, and/or distribution systems for the application and use of the stormwater by Calpine; then, to the extent that such action shall substantially affect any party's performance under the terms of this Agreement, the affected party shall be excused from the performance thereof. The parties hereto shall immediately undertake to renegotiate that portion, and only that portion, of this Agreement affected by such requirements so that this Agreement, as renegotiated, will be in conformity with such permits, approvals or requirements.

12. **Decisions by the County or District**:

In those circumstances set forth herein in which a decision must or can be made by the County or the District, neither the County nor the District shall exercise such discretion in an arbitrary or unreasonable manner, nor will the County or the District unreasonably or arbitrarily

withhold or delay a decision or approval. For purposes of this Agreement, decisions on behalf of the County shall be made by the County Administrator, unless such decisions are required by law to be made by the County Commission. For purposes of this Agreement, decisions on behalf of the District shall be made by the Superintendent of the District, unless such decisions are required by law to be made by the Board of Supervisors of the District.

13. **Notices**:

All notices required or authorized under this Agreement shall be given by telephone and in writing, and shall be served by United States Mail to the parties at the addresses listed below (or as such addresses may be changed from time to time in the manner):

COUNTY:
Mr. James Davis
Public Works Director
Indian River County
1840 25th Street
Vero Beach, FL 32960

WITH COPY TO:
Mr. Joseph A. Baird
County Administrator
Indian River County
1840 25th Street
Vero Beach, FL 32960

DISTRICT:
Mr. David Gunter
Superintendent
Indian River Farms Water Control District
4400 20th Street
Vero Beach, FL 32966

WITH COPY TO: Mr. Michael O'Haire
O'Haire, Quinn, Candler & Casalino
311 Cardinal Drive
Vero Beach, FL 32963

CALPINE: Mr. Donald Walters
Vice President Operations
Blue Heron Energy Center L.L.C.
The Island Center
2701 N. Rocky Point Drive, Suite 1200
Tampa, FL 33607
Fax: (813) 637-7399

WITH COPY TO: Mr. Joseph Regnery
Regional Counsel
Calpine Corporation
The Island Center
2701 N. Rocky Point Drive, Suite 1200
Tampa, FL 33607
Fax: (813) 637-7399

Mr. Timothy R. Eves
Vice President Marketing and Sales
Calpine Corporation
The Island Center
2701 N. Rocky Point Drive, Suite 1200
Tampa, FL 33607
Fax: (813) 637-7399

14. **Disclaimer of Third Party Beneficiaries:**

This Agreement is solely for the benefit of the parties signing hereto, their successors and assigns, and no right or cause of action shall accrue upon or by reason hereof to or for the benefit of any third party not a signatory hereof.

15. **Severability**:

If any part of this Agreement is found invalid or unenforceable by any court of competent jurisdiction, such invalidity or unenforceability shall not affect the other parts of this Agreement if the rights and obligations of the parties contained therein are not materially prejudiced, and if the intentions of the parties can continue to be effectuated. To that end, this Agreement is declared severable.

16. **Legal Fees**:

The prevailing party in any mediation, litigation or appeal relating to this Agreement shall be entitled to recover its reasonable attorneys' fees from the other party for all matters. Indian River County, Florida, shall be the proper venue for any litigation involving this Agreement. In the event of Federal jurisdiction, venue shall be in the Southern District of Florida.

17. **Entire Agreement**:

This Agreement supercedes all previous agreements or representations, either verbal or written, heretofore in effect between the County, the District and Calpine that may have concerned the matters covered herein. No additions, alterations, or variations to the terms of this Agreement shall be valid, nor can the provisions of this Agreement be waived by either party unless

such additions, alterations, or waivers are expressly set forth in writing duly executed by the parties hereto.

18. **Waiver of Jury Trial**:

It is mutually agreed by and between County, the District and Calpine that each of the parties do hereby waive trial by jury in any action, proceeding or claim which may be brought by either of the parties hereto against the other on any matters concerning or arising out of this Agreement.

19. **Assignment:**

Calpine shall have the right to collaterally assign, convey and transfer all or part of its interest in this agreement to any one or more financial lenders providing funding to the Project. The County and the District shall consent to and acknowledge such collateral assignment by issuing a consent and acknowledgement, consenting and acknowledging the financial lenders' rights to step in and take over ownership and operations of BHEC in the event of a foreclosure or similar type action under the lending arrangements. In addition Calpine shall have the right to assign, convey and transfer all of its interest in this agreement to an affiliate or subsidiary that assumes ownership and responsibility for operation of the Project, provided that Calpine shall not be relieved of its obligations. Otherwise, neither party may assign, convey or transfer all or any part of its interest

in this agreement without the express prior written consent of the other party, which consent shall not be unreasonably withheld.

20. **Choice of Law:**

This Agreement shall be governed by the laws of the State of Florida.

21. **St. Johns River Water Management District (SJRWMD):**

The County and the District shall support Calpine in obtaining the permits and approvals needed from the SJRWMD to satisfy the terms of this Agreement, including the conditions for site certification from the SJRWMD for BHEC.

22. **Dispute Resolution:**

In the event a dispute arises between any of the Parties regarding any alleged breach or default under, or the application or interpretation of any provision of, this Agreement, the aggrieved Party shall promptly notify the other Party(ies) to this Contract of the dispute within thirty (30) days after such dispute arises and the Parties shall attempt in good faith to resolve the dispute. If the Parties shall have failed to resolve the dispute within thirty (30) days after receipt of such notice, each Party shall appoint a representative who shall have full authority to negotiate a settlement, which settlement shall be subject to the approval of the respective Party's board. If the

Parties representatives shall have failed to resolve the dispute within thirty (30) days after appointment, the Parties representatives shall seek the assistance of an independent non-binding mediator to mediate a satisfactory resolution. Should the Parties still be unable to resolve the dispute to their individual satisfactions after participating in mediation, any Party may bring suit in the Circuit Court of the 19th Judicial Circuit of the State of Florida, or if such court does not have jurisdiction over such dispute, in the United States District Court of the Southern District of Florida.

Execution: By the signatures of their authorized representatives below, the County, the District and Calpine enter into this Agreement.

INDIAN RIVER COUNTY

By: _____
Commissioner Arthur R. Neuberger
Vice-Chairman, Indian River County Board of
County Commissioners

BCC Approved: August 10, 2004

By: _____
Mr. Joseph A. Baird
County Administrator

By: _____
Mr. William G. Collins II
County Attorney

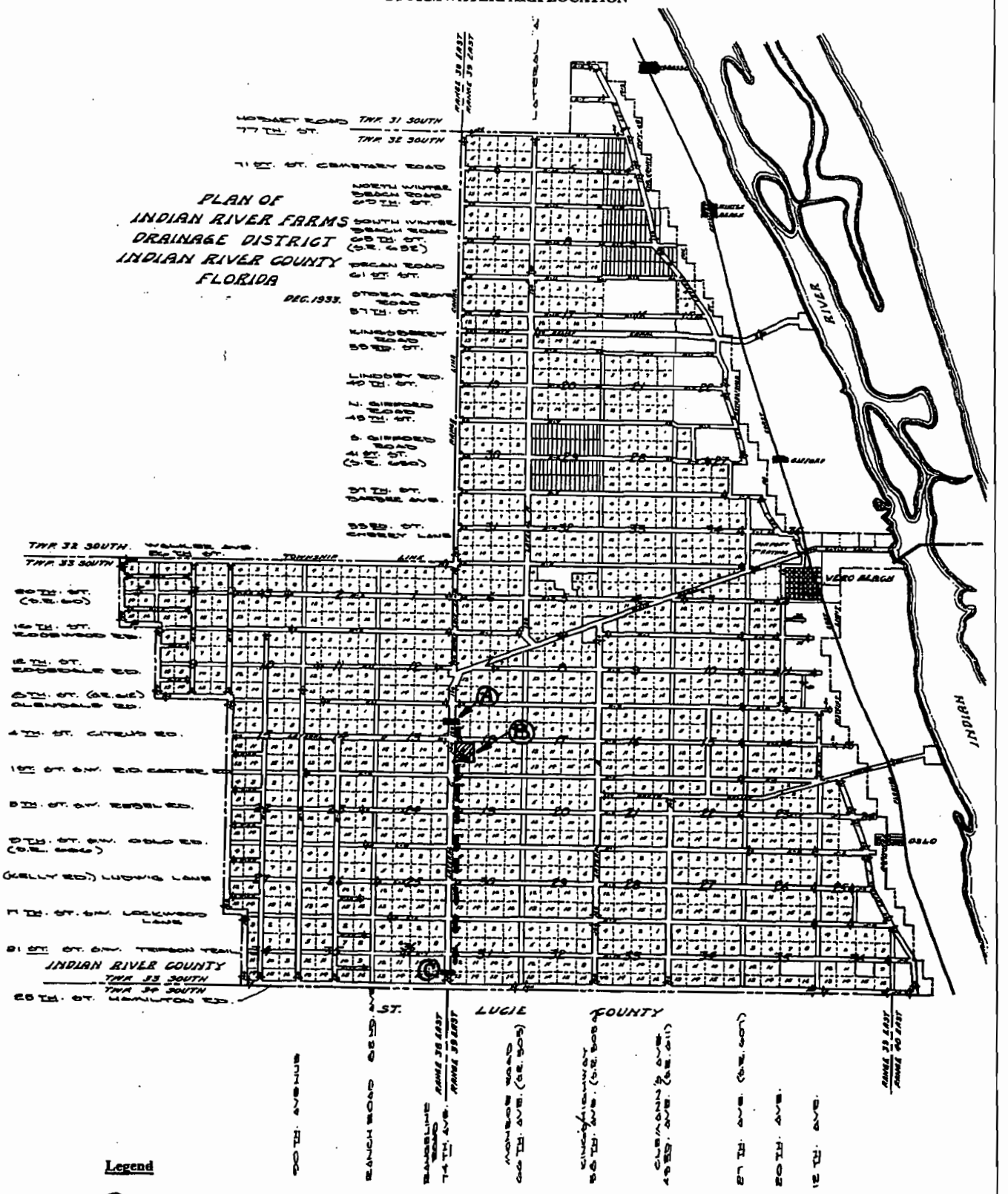
INDIAN RIVER FARMS WATER CONTROL DISTRICT

By: _____
Mr. Scott Lambeth
President of Board

BLUE HERON ENERGY CENTER, L.L.C.

By: _____
Mr. Timothy R. Eves
Vice President – Marketing & Sales

STORMWATERPARK LOCATION



Legend

(A) = Radial Gate on Lateral C (Pump Location)

(B) = IRC Stormwaterpark location

(C) = Blue Heron Energy Center Site

—— = Pipeline Routing

EXHIBIT B

STORMWATER PARK and WATER SUPPLY SYSTEM OPERATIONAL REQUIREMENTS

Operation of the stormwater park shall be conducted in a way to meet two objectives,

1. compliance with water quality goals of the County and SJRWMD, including applicable permits and regulations; and

2. Provision of water for use by BHEC which will not adversely impact the operation of BHEC or its water treatment systems.

To this end, Calpine, the County and the District will agree on operating practices for the stormwater park and associated treatment systems that will support these objectives.

Specifically:

1. No metal based coagulants, precipitants or other water treatment chemicals (including alum, or ferric chloride) will be used in the stormwater park

2. No treatment which would significantly increase the dissolved solids concentration of the stormwater park water (such as lime flocculation) will be used in the stormwater park.

3. No water treatment chemicals containing silica, silicates, or hydroxides of silica will be used in the stormwater park. It is understood that copper hydroxides are used for agricultural purposes and that copper hydroxides will, therefore, be present in the stormwater park as will any agricultural chemicals customarily used in agricultural practices in Indian River County, Florida.

4. No Brine (reverse osmosis reject) generated from the County's water treatment systems shall be introduced to the stormwater park.

5. The collection, handling and disposal of trash, debris, vegetative matter and other solid wastes generated within the stormwater park, including the debris and other solids collected on the traveling screen at Calpine's stormwater park pumping station, shall be the responsibility of the County.

6. The stormwater park will be designed and operated to minimize the accumulation of solids, including debris, sediment, silt and fills, in the area of the pumps withdrawing water to BHEC.

Constituent Test Parameters. The following list of constituents shall be tested, as applicable, in accordance with paragraph 5.b of the Agreement:

CONSTITUENT
pH Units
Total Phosphorus, mg/l as P
Total Nitrogen, mg/l as N
BOD5, mg/l
Total Suspended Solids, mg/l
Total Dissolved Solids, mg/l
Calcium Hardness, mg/l as CaCO3
Magnesium Hardness, mg/l as CaCO3
Sulfate, mg/l as SO4
Silica, mg/l as SiO2
Aluminum, mg/l as Al
Iron, mg/l as Fe
Manganese, mg/l as Mn
Priority Pollutants per 40CFR 423

EXHIBIT C

PIPELINE ROUTING

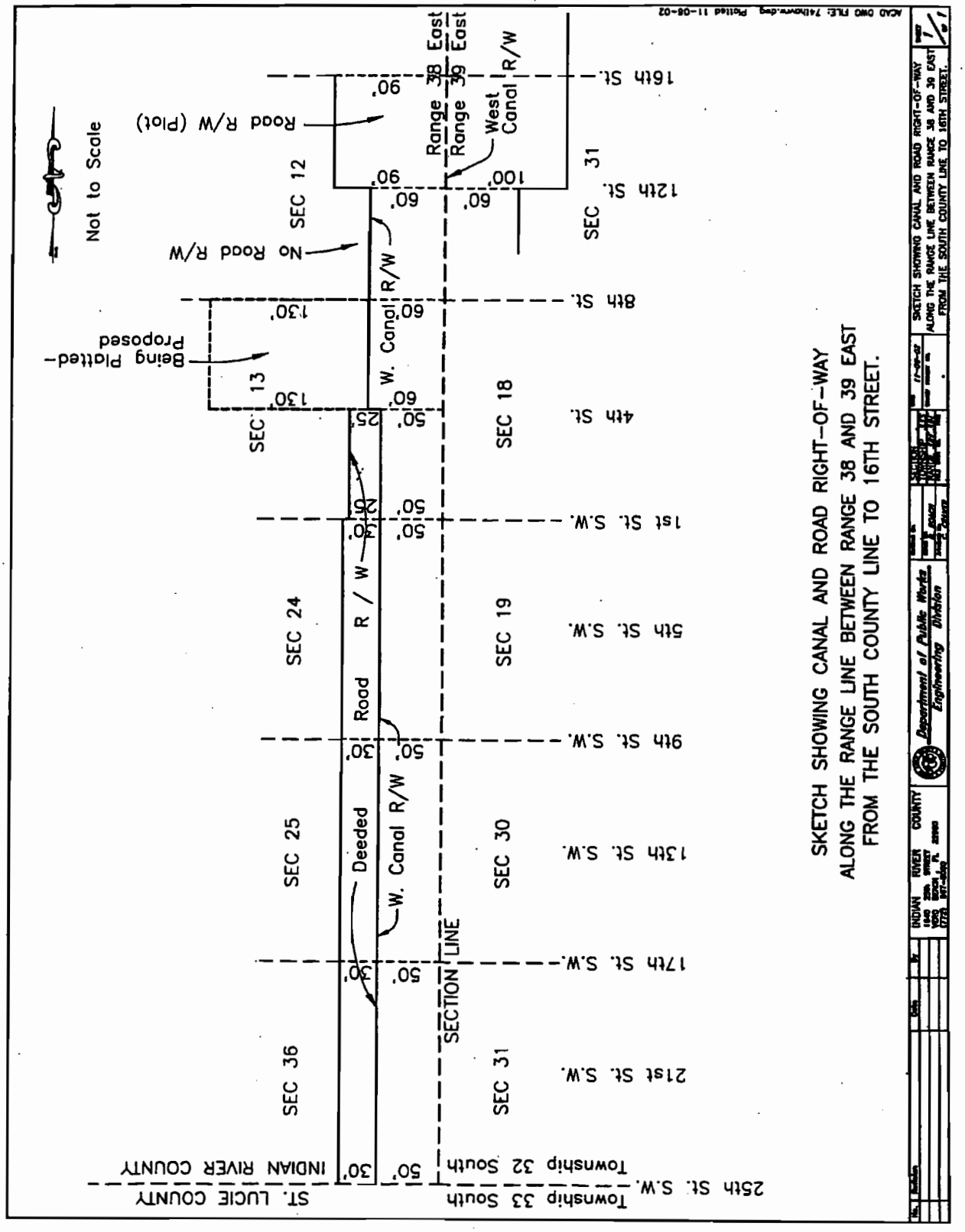


EXHIBIT D

CONSTITUENT MAKE-UP OF THE WATER IN THE DISTRICT's CANALS AND THE BRINE DISCHARGE FROM THE COUNTY'S SOUTH PLANT

Parameter	IRFWCD Canal Values (ppm) (see NOTE 1)	RO Brine Values (ppm)	Maximum Allowable Limits (see NOTE 2)
Aluminum	0.41	<0.3	0.41
Arsenic	<0.01	<0.01	<0.01
Barium	<0.1	<0.1	<0.1
Beryllium	<0.001	<0.001	<0.001
Boron	0.11	0.030	0.13
Cadmium	<0.001	<0.0011	<0.001
Calcium	92.62	250	105
Chromium	<0.01	<0.01	<0.01
Cobalt	<0.05	<0.05	<0.05
Copper	0.04	<0.05	0.041
Iron	1.03	<0.2	1.03
Lead	<0.01	<0.01	<0.01
Magnesium	31.15	300	52.7
Manganese	0.05	<0.04	0.05
Mercury	<0.0003	<0.0003	<0.0003
Nickel	<0.03	<0.03	<0.03
Selenium	<0.01	<0.01	<0.01
Silicon	9.92	100	17.2
Silver	<0.01	<0.013	<0.01
Sodium	164.85	500	192
Strontium	5.30	50	8.9
Thallium	<0.003	<0.02	<0.004
Zinc	<0.1	<0.1	<0.1
M-Alkalinity (as CaCO3)	122.85	400	145
Chloride	330.77	900	376
Conductivity (umhos/cm)	1397.69	3500	1566
Fluoride	0.35	5.0	0.72
Hardness (as CaCO3)	376.9	1100	435
Oil & Grease	2.1	NA	2.1
PH (stu)	7.48	8.0	7.5
Sulfate	88.40	500	121
Sulfide	<1.0	305	1.2
Total Dissolved Solids (TDS)	942.31	2500	1070
Total Organic Carbon (TOC)	17.08	8.0	16
Total Suspended Solids (TSS)	NA	8.0	5

NOTE 1: Seasonal variations in the IRFWCD Canal Vales are expected.

NOTE 2: These are the maximum allowable limits for cooling water supply to BHEC. Per paragraph 5.e of the Agreement, in the event the combination of canal water and RO brine supply to BHEC exceed these maximum values, the RO brine supply will be shut off.

ATTACHMENT C

URBAN LANDSCAPE IRRIGATION FORMS

LANDSCAPE IRRIGATION USE

(Submit 2 copies of application, supplemental information, drawings, calculations, etc.)

1. Complete this chart if water is requested for irrigation of lawns, common areas, aesthetic or recreational areas.

TYPE OF VEGETATION	NO. OF ACRES	IRRIGATION METHOD	AMOUNT REQUESTED (Mgals/Year)*	SOURCE NAME (lake, or well ID)
Trees and shrubs	**1.6**	**Sprinkler**	**2.3**	**Egret marsh stormwater park**
Low growing shrubs	**0.2**	**Sprinkler**	**0.3**	**Egret marsh stormwater park**
Sod	**7.6**	**Sprinkler**	**10.7**	**Egret marsh stormwater park**

2. Attach 2 copies of the following:

X a. Map (including scale) showing outline of irrigated areas according to vegetation type.

X b. List of all surface water bodies on or adjacent to the property boundary. Include lakes, ponds, rivers, canals etc.

X c. List of all wastewater treatment plants within a 5 mile radius of project. Provide the name and address of a contact person design capacity, current wastewater flows, and level of treatment.

M:\acad\040796\LandscapeX

11/30/2004 03:58:33 PM

30' UTILITY EASEMENT

30'-0" 74th AVENUE RIGHT OF WAY

100'-0" IRFWCD LATERAL C CANAL

75' IRFWCD EASEMENT

SLIDING GATE

STACK

TYPE C BUFFER

PROPERTY LINE

74th AVENUE

ACCESS DRIVEWAY

CEMS

AMMONIA TK

HRSG

BOILER FEED PUMPS

DEMIN TANKS

WATER TREATMENT BUILDING

PARKING

WATER TREATMENT SYSTEM

PARKING

DISCHARGE OUTFALL CONTROL STRUCTURE

PIPE RACK

STEAM TURBINE

COND PUMPS

GAS TURBINE

GAS TURBINE

STORM WATER DETENTION POND

COOLING TOWER

GT AIR INLET

GEN

PARKING

CONTROL ROOM/ ADMIN BLDG

PUMP AREA

PUMP AREA

RAW/FIRE WATER STORAGE TANK

WAREHOUSE

FIRE PUMP HOUSE

30' 21st STREET SW TRIPSON TRAIL RIGHT-OF-WAY

EAST RIGHT-OF-WAY LINE I-95

200'-0" SETBACK

CONTROL HOUSE

GAS REGULATING STATION

EXISTING WETLAND

JURISDICTIONAL BOUNDARY

CT ELECTRICAL ROOM & CHEMICAL FEED

CT ELECTRICAL ROOM & CHEMICAL FEED

EXISTING FENCE

30' IRFWCD SUBLATERAL C-7 CANAL

230 kV SWITCHYARD

15.0' WETLAND BUFFER

15.0' WETLAND BUFFER

EXISTING WETLAND

JURISDICTIONAL BOUNDARY

230 kV TRANSMISSION LINE CORRIDOR

INTERSTATE 95

TYPE A BUFFER

LEGEND

- SODDING
- TREES, SHRUBS AND MULCH
- LOW GROWING SHRUBS AND MULCH
- EXISTING NATURAL VEGETATION/ BUFFER (NOT IRRIGATED)

N

GRAPHIC SCALE

0 50 100 200

SCALE IN FEET

CONCEPTUAL LANDSCAPE PLAN

Source: Calpine, 2002; ECT, 2004.

CALPINE

BLUE HERON ENERGY CENTER

PAGE UL-1 SUPPLEMENTAL INFORMATION

Adjacent Water Bodies

The Indian River Farms Water Control District (IRFWCD) maintains canals on the east side, Lateral C, and north side, Sublateral C-7, of the Calpine Blue Heron parcel. These canals are manmade water bodies. No other surface waters are adjacent to the site.

Wastewater Treatment Plant Information*

North County Wastewater Treatment Plant
5150 9th Street Southwest
Vero Beach, FL 32968
M.R. Harper, Superintendent
772/770-5045

* A lower quality water than reclaimed water is proposed for use at the site; therefore, plant capacity, flows, and level of treatment were not obtained.

DRAFT
7-29-92

WATER CONSERVATION PLAN FORM

FOR URBAN LANDSCAPE IRRIGATION USE APPLICANTS

Section 12.9 - Applicant's Handbook:

All individual permit applicants for urban landscape irrigation uses must submit a water conservation plan for their proposed use. The plan must contain specific activities designed to conserve water. The **conservation plan must include** provisions for the following:

(a) A program for increasing the water use efficiency of the applicant's operation;

(b) An analysis of the economic, environmental and technical feasibility of reusing reclaimed water, recycling water on site, and utilizing the lowest quality water source possible;

(c) Develop and implement an employee awareness and education program concerning water conservation; and

(d) Procedures and time frames for implementation, and for periodic assessment and revision of the conservation plan.

In evaluating this form, the District will consider:

- your specific use relative to other similar uses
- available technology
- economic feasibility

General Information

Applicant / Owner Name: **Blue Heron Energy Center, L.L.C.**

C.U.P. Number _____

Date Plan Submitted: _____

Agent Name: **Benjamin Borsch**

Project Name: **Blue Heron Energy Center**

Section I

Water Use Efficiency

- If you already have any of the following information, please attach a copy of each to this form.

  ⇒ Soil Conservation Service (SCS) Irrigation Water Management Plan.

  ⇒ Other written information describing your water conservation activities.

1. Have you conducted a water audit of your grounds?

   Yes _____ No _____ **N/A - In Design**

   If yes, describe the audit procedure, results, and evaluation.

2. What method(s) do you use to determine when to begin irrigating?

   _____ Computerized System (describe inputs)
   _X_ Rain Gauges
   _____ Observation Well(s)
   _____ Soil Moisture Monitoring Device(s)
   _____ Judgment (explain) _____

   _____ Other (explain) _____

3. How often do you irrigate (if no rain during the week?)

   Two times per week - proposed

Note: **District rules prohibits irrigation between the hours of 10:00 am and 4:00 pm**

4. How many zones do you irrigate? **To be determined**

5. How is the system operated during an irrigation cycle?

____ Manually
_X_ Automatic / Timer

If the system is automatic or timed, what measures are taken to ensure that over watering does not occur during rainfall events?

Auto shut off with rain gauge

6. What is the length (hours) of a typical irrigation cycle for each zone?

_____

How is this determined? **Undetermined**

7. Are you aware of the supplemental irrigation requirements recommended by IFAS for urban landscape?

Yes _X_ No ____

If yes, do you irrigate within these recommendations?

Yes ____ No ____ **Undetermined**

If no, provide information to demonstrate why you cannot limit the irrigation to IFAS recommendations.

8. Do you use fertilizer? Yes _X_ No ____

If yes,

(a) Are the fertilizers applied through the irrigation system?

Yes ____ No _X_

(b) Do you fertigate during a regularly scheduled irrigation application?

Yes ____ No _X_

If no, **propose an implementation schedule** to coordinate fertilization with the irrigation cycle, or provide an explanation why it cannot be undertaken.

What months do you apply fertilizers? **Undetermined**

9. Do you over seed during the winter months?

Yes _____ No _____

10. Do you currently monitor your water use?

Yes _____ No _____

If Yes, (check all that apply:)

_____ Totalizing in-line flow meter

_____ Pump hour meter

_____ Fuel record conversion

_____ Other (explain):

Note: **New** applicants are required to install in-line totalizing flow meters to measure water use before initiating withdrawal.

Renewing applicants are required to measure water use within one year of permit renewal or by January 1, 1994, whichever is sooner, using either in-line flow meters or a District approved alternative method.

11. Please check any of the following irrigation system water conservation practices you have undertaken or plan to undertake.

Be sure to include implementation dates.

	N/A
__ Decrease acreage of irrigated turf	When? _____
__ Elimination of over seeding during winter	When? _____
__ On site weather station	When? _____
__ Professional irrigation consultation	When? _____
__ Irrigation management educational session	When? _____
__ Other (explain)_____	When? _____

12. Describe your procedure for maintaining even application of water to your turf.

Irrigation piping and heads will be designed with an even pressure.

13. Summarize your maintenance and repair schedule, by using the appropriate letter, indicate when each of the following tasks are done:

To be determined.

(a) Weekly (b) Monthly (c) Every time you irrigate
(d) As needed (e) Not feasible (f) not applicable

_____ Use pressure gauge to check system pressures and flow rates for leak and clog detection.

_____ Check controllers / timers for accuracy.

_____ Clean system components (i.e., valves, filters, meters).

_____ Repair leaks and clogs; replace worn or malfunctioning nozzles.

_____ Check to ensure sprinklers are not irrigating paved or other non-irrigated areas.

_____ Other (explain): _____

14. Please check which of the following irrigation system improvements you have undertaken or plan to undertake to conserve water.

Be sure to include implementation dates.

___	Computerized irrigation system	When?_____
___	Flow control nozzles	When?_____
___	Pressure regulation	When?_____
X	Rain sensor shutoff system	When? **Startup**
___	Soil moisture monitoring	When?_____
___	Other (explain) _____	When?_____

15. Has water efficient landscaping (Xeriscape) been incorporated into the facility design? Yes X No ____

If yes, describe how water efficient landscaping has been incorporated. **Proposed**

If no, **propose an implementation schedule** for the planting of water efficient landscaping, or provide an explanation of why this program cannot be undertaken.

Xeriscape planting is proposed with construction.

16. Please check any of the following conservation measures you have undertaken or plan to undertake.

Be sure to include implementation dates.

___	Soil Improvements	When?	_____
X	Mulching	When?	**Startup**
X	Efficient sprinklers	When?	**Startup**
X	Avoid water sidewalks	When?	**Startup**

17. Do you participate in the District's Benchmark Farms Program?

Yes ____ No X

If no, would you like to participate?

Yes ____ No X

Note: Participation in the Benchmark Farms Program **does not exempt** the applicant from meeting the water use monitoring requirements as stated in Section 6.7.1 of the Applicant's Handbook.

18. Are you interested in participating in research programs sponsored by the District?

Yes ____ No X

19. Describe any outdoor use of water (other than irrigation) for urban landscape irrigation not mentioned above (i.e., fountains).

N/A

Describe how water is conserved during these uses.

If water is not being conserved for these uses, **provide an implementation schedule** for conserving water, or provide an explanation why it cannot be undertaken.

Section II

LOWEST QUALITY WATER SOURCE FEASIBILITY ANALYSIS

Reuse of Reclaimed Water

Note: Reclaimed water is water that meets or exceeds FDER standards for reuse and that is reused for a beneficial purpose after flowing out of any wastewater treatment facility.

Section 10.3 (f), (g) – Applicant's Handbook:

(f) When reclaimed water is readily available **it must be used in place of higher quality water sources** unless the applicant demonstrates that its use is either not economically, environmentally or technologically feasible.

(g) The lowest quality water source, including reclaimed water **must be utilized for each consumptive use.**

1. Do you currently use reclaimed water for irrigation?

Yes _____ No **X**

If yes, give name of facility providing reclaimed water:

If no:

(a) Please provide the name(s), address, and contact person of all domestic wastewater facilities within a five mile radius of your site.

N/A - A lower quality water is being used.

Have you contacted these individuals about the availability of reclaimed water?

Yes **X** No _____

Provide a written response from the wastewater facility regarding availability.

(b) I agree to accept reclaimed water when it becomes available to me for irrigation.

Yes _____ No X

(c) If you have determined that reuse is not feasible, please provide documentation to show that reuse or reclaimed water is not economically, environmentally, or technologically feasible.

Lower quality water proposed for use.

2. What percentage of your irrigation requirement is obtained from:

Groundwater _____ %

Surface Water 100 % **Proposed Egret Marsh Stormwater Park**

3. How many acres are irrigated using the stormwater management system ponds or lakes?

Acres irrigated 0.0

4. Do you augment the surface water management system or lakes with groundwater wells? Yes _____ No X

If Yes,

(a) Do you monitor the surface water level and cease augmentation above a prescribed level?

Yes _____ No _____

If no, **propose an implementation schedule** to establish a water level to regulate augmentation, or provide an explanation of why it cannot be undertaken.

(b) Have you investigated plumbing the well(s) directly to the irrigation system?

Yes _____ No _____

5. Do you have tile drainage Installed to route excess water to the stormwater ponds?

Yes _____ No X

6. Do you use any other non-potable sources of water for irrigation?

Yes X No _____

If yes, please describe source and use of water.

IRFWCD canal water provided from the proposed Egret Marsh Stormwater Park

7. **Propose an implementation schedule** to reduce the reliance on groundwater for irrigation, or provide an explanation of why it cannot be undertaken.

Section III

EDUCATION PROGRAM / EMPLOYEE AWARENESS

N/A - The use of water from the canals benefits the Indian River Lagoon.

Note: The conservation plan **must contain an education program.** If you have not implemented a program to date, **propose an implementation schedule** or provide information why this program cannot be undertaken.

(Please attach examples of water conservation information you provide to the public and employees.)

1. Using the appropriate letter, please summarize on the following list which player education and employee awareness measures you have already implemented (I) or plan to implement (p).

	Activity	Implementation date
_____	Use bill stuffers to provide water conservation tips and information.	_____
_____	Use special mailings to provide water conservation tips and information	_____
_____	Use other means of advertising (radio, and TV public service announcements, billboards, newspaper or magazine ads) to encourage water conservation.	_____
_____	Provide water conservation materials to schools.	_____
_____	Conduct public tours of your site.	_____
_____	Operate informational booths which include water conservation literature	_____
_____	Seek employees' ideas for water conservation, using contests, suggestion boxes or other incentives.	_____
_____	Install signs in rest rooms, encouraging water conservation.	_____

_____ Publish and distribute water conservation tips and information, via newsletters, bulletin boards, or employee paychecks. _____

_____ Appoint an employee water conservation coordinator to design and implement your internal plan. _____

_____ Conduct other education and employee awareness activities. (please explain) _____

2. Of the education and awareness programs you have implemented, which have been especially effective?

3. Of the education awareness programs you have implemented, which have not been effective? Why?

Section IV

PLAN IMPLEMENTATION SCHEDULE SUMMARY

Note: **This is a specific requirement of the applicant's Water Conservation Plan.**

1. Go back through the Conservation plan and list all of the activities where you proposed an implementation schedule. Specific dates and / or time frames must be given.

Activity	Implementation Schedule
Construct irrigation system	**Mid 2007**

Note: A progress report must be submitted at the mid point of the permit to address the implementation of activities. Please keep a copy of this plan for your records.

Person Responsible for Implementing the Plan:

Signature

12/15/04
Date

813/637-7305
Phone Number