



Florida Municipal Power Agency

Susan Schumann
Environmental Licensing and Permitting

September 13, 2010

Mr. Michael Halpin, P.E.
Administrator, Siting Coordination Office
Florida Department of Environmental Protection
3900 Commonwealth Boulevard
Douglas Office Building, MS-48
Tallahassee, FL 32399-3000

Re: **Cane Island Power Park Unit #4, PA 98-38A2**
Post Certification Modification to Site Certification Application
Authorized Groundwater Withdrawal Facilities

Dear Mr. Halpin,

On behalf of the Florida Municipal Power Agency (FMPA) and the Kissimmee Utility Authority (KUA), I am pleased to submit, for your internal distribution and review, this request for modification of the Cane Island Power Park Site Certification, PA 98-38A2, in accordance with Chapter 403.516 Florida Statutes and Chapter 61-17.211 Florida Administrative Code.

The request proposes the elimination of Well #10, the increase of capacities of Wells #7, 8, and 9 from 500 gpm to 665 gpm each (total 1,995 gpm), and revision to the well casing size installed for Cane Island Units #1 thru #4, to reflect as-built conditions. No change in withdrawal limits or allocations is requested.

We look forward to working with you and your staff as you review this request. Please contact me at (407) 355-7767 or via e-mail at susan.schumann@fmpa.com if you have any questions.

Sincerely,

Susan Schumann
Environmental Licensing & Permitting
Florida Municipal Power Agency

Enclosures

**Cane Island Power Park
Site Certification Modification Request**

Authorized Groundwater Withdrawal Facilities

September 2010

MODIFICATION REQUEST

Cane Island Power Park

Authorized Groundwater Withdrawal Facilities

Proposed Activity

In accordance with Chapter 403.516 Florida Statutes and Chapter 62-17.211 Florida Administrative Code, the Florida Municipal Power Agency (FMPA) and the Kissimmee Utility Authority (KUA) request a modification of the Cane Island Power Park Site Certification (PA 98-38A2) to construct and operate revised groundwater wells previously certified with Unit 4 at the Cane Island site, and correct the Units 1-3 well diameters to as-built conditions. The Cane Island Power Park is located in rural northwest Osceola County, 20 miles southwest of Orlando, and 5 miles west of Kissimmee as shown on attached Figure 2.1-1 – Regional Site Location from the Site Certification Application.

Four, 6 inch casing, 500 gpm wells were previously approved to support Unit 4 operation, as listed in Condition of Certification XXIII.B.2.d. Based on pump test results, FMPA and KUA request modification of these wells to authorize three, 10 inch casing, 665 gpm wells. Essentially, the approved volume will be withdrawn using fewer wells with larger pumps. Well locations for the three wells have not changed.

Purpose/Reason for Activity

The Site Certification for Unit 4 includes five new wells: one well for general plant usage and four wells for emergency cooling water when the reclaim water source is not available or adequate. The locations of five new wells added with Unit 4 and the existing six wells installed with Units 1 through 3 are shown in attached Drawing D013384-STWL00001 Sheet 1, Rev 4 which is the latest site arrangement. Well 11 is the new general plant water usage well with a capacity of 250 gpm. Wells 7, 8, 9 and 10 are the new emergency cooling water wells with a capacity of 500 gpm each. Wells 7, 8, 9 and 11 have been drilled, tested and developed. During the drilling of Well 10, geological conditions would not allow the driller to safely complete the well and the well was abandoned. If Well 10 is to be installed, it would have to be moved to another portion of the site. Instead of drilling a new Well 10, the capacity of Wells 7, 8 and 9 will be increased to 665 gpm which yields 1,995 gpm three well capacity versus the presently permitted 2,000 gpm four well capacity. The testing and development of these three wells indicates that the increased capacity is readily available.

FMPA and KUA also wish to correct the project record concerning the existing wells.

Technical Description of Activity

The increased capacity will be achieved by installing larger and longer pumps in the presently installed casings. The following indicates the approximate anticipated drawdowns for the original 500 gpm and the proposed 665 gpm wells.

Anticipated Operational Drawdown (feet)		
Well Number	500 gpm	665 gpm
7	20	27
8	4	5
9	11	15

Independent of increasing the capacity, the casing size selected by the drilling contractor was 10 inches instead of 6 inches. This larger casing size was required for the 500 gpm pumps and can accommodate the pump size required for the increased flow and corresponding required head. It should be noted (and as documented in well reports submitted for the existing wells installed with Units 1 - 3) that the casing sizes for the existing wells are larger (8 and 10 inch) than 6 inches in order to accommodate the pump sizes that were required to provide the specified flows.

Environmental Consequences of Activity

The assessment of impacts to groundwater due to the addition of the wells with Unit 4 is contained in Section 5.3.2 of the Site Certification Application. As noted in that section, the addition of the wells and the associated water allocation "will have no effects on existing domestic, irrigation, or other public water supply wells due to the ground water withdrawal." The assessment remains true with the proposed modification as discussed herein.

The ground water modeling performed for the SCA impact assessment was performed with an existing numerical groundwater flow model known as the STOPR model which was provided by the SFWMD. The modeling effort was based on using one hypothetical Unit 4 well with a withdrawal rate of 2.92 mgd. The modeling shows that the Unit 4 well had negligible effect on the surficial aquifer and the Unit 4 well effect was overwhelmed by the surficial conditions during drought conditions. The impact to the Upper Floridan Aquifer was shown as an increase in the 1 foot drawdown contour from 1 mile (Unit 1-3 wells) to 1.75 miles (Unit 1-4 wells) from the center of the site.

The total pumping capacity with this requested modification will be essentially the same (5 gpm less) as the presently permitted capacity. The geographic center of the three wells is approximately 140 feet east and 260 feet south of the four wells geographic center. The modeling 1 foot drawdown contour was farthest from the center of the site in the north and west directions. Thus, this well capacity reallocation would tend to decrease the farthest distance that the one foot contour extends from the center of the site.

Effect of Activity on Certification/Conditions of Certification

The Cane Island Power Park has been in operation since 1995; certification of Unit 4 was received in December 2008. Condition of Certification XXIII.B.2.d describes the authorized withdrawal facilities and currently reads:

d. Authorized Withdrawal Facilities

- 2 - 6" X 400' X 200 GPM wells cased to 150 feet
- 4 - 6" X 400' X 450 GPM wells cased to 150 feet
- 4 - 6" X 400' X 500 GPM wells cased to 150 feet
- 1 - 6" X 400' X 250 GPM well cased to 150 feet

FMPA and KUA request modification of this condition to read:

d. Authorized Withdrawal Facilities

- 2 - 8" X 400' X 200 GPM wells cased to 150 feet
- 4 - 10" X 400' X 450 GPM wells cased to 150 - 155 feet
- 3 - 10" X 400' X 665 GPM wells cased to 150 - 161 feet
- 1 - 10" X 400' X 250 GPM well cased to 150 feet

No change in Authorized Daily Withdrawals (XXIII.B.2.a), Emergency Cooling Tower Makeup Water (XXIII.B.2.b), or Authorized Annual Withdrawals (XXIII.B.2.c) is requested.

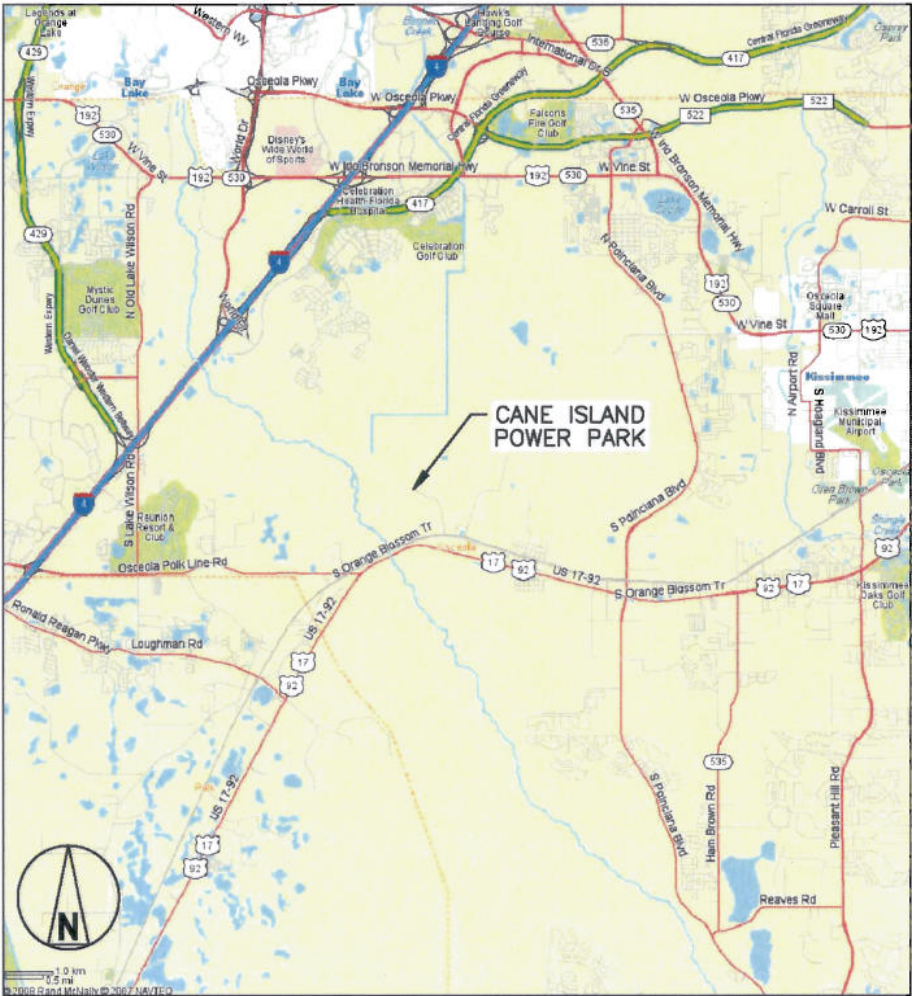
FMPA and KUA provide this information for compliance evaluation in accordance with the existing Conditions of Certification and acknowledge that approval, installation, and operation of the revised wells requested herein will require a modification of the existing Cane Island Power Park Site Certification.

ATTACHMENTS:

Regional Site Location (Figure 2.1-1)

Site Arrangement/Well Locations (Drawing D0133384-STWL00001 Sheet 1, Rev 4)

LOCATION OF
OSCEOLA COUNTY IN
THE STATE OF FLORIDA



BLACK & VEATCH
CORPORATION

ENGINEER	JMS	DRAWN	MRR	0	04/01/2008	ISSUED FOR CONSTRUCTION	MRR	JMS	MJS	MJS	SAA
CHECKED	MJS	DATE	04/01/2008	NO	DATE	REVISIONS AND RECORD OF ISSUE	DRN	DES	CHK	PDE	APP

FLORIDA MUNICIPAL POWER AGENCY
CANE ISLAND POWER PARK UNIT 4

PROJECT
147651-4STA-S1002

DRAWING NUMBER
0

REGIONAL SITE LOCATION

CODE

AREA

FIGURE 2.1-1

RUM02825
A1ASLO11
03/26/08
ACAD 16.1s (LMS Tech)
A2 1=1
09:28:14