

file copy
7/1BEFORE THE STATE OF FLORIDA
DEPARTMENT OF ENVIRONMENTAL REGULATION

IN RE:)

))
FLORIDA POWER CORPORATION,)
CRYSTAL RIVER UNITS 4 & 5,)
MODIFICATION OF CONDITIONS)
OF CERTIFICATION,)
CITRUS COUNTY, FLORIDA.)
_____)

PA 77-09

ORDER MODIFYING CONDITIONS OF CERTIFICATION

This matter came on to be heard by the Secretary of the Department of Environmental Regulation at a duly noticed public hearing on May 22, 1980. Having reviewed the evidence and all necessary documents, and otherwise being fully advised in the premises, the Department hereby enters this Order and finds:

1. The Secretary of the Department of Environmental Regulation has the authority to enter this Order pursuant to Special Condition III C. to the Certification Order entered by the Governor and Cabinet of the State of Florida on November 21, 1978.

2. The Recommendation of the Southwest Florida Water Management District, Order No. 80-22, copy attached as Exhibit B, is in accordance with all applicable statutes and rules and regulations of the Department, the Findings of Fact contained therein are based on competent, substantial evidence, and the Conclusions of Law contained therein are correct.

Therefore be it ORDERED

1. The aforesaid Recommendation of the Southwest Florida Water Management District, Order No. 80-22, be adopted by the Department, and

[]
MAY 22 1980
DIVISION OF ENVIRONMENTAL REGULATION
TALLAHASSEE, FLORIDA

2. The aforesaid Certification Order be modified in accordance with Exhibit A attached hereto and incorporated herein.

DONE AND ORDERED this 22 day of May, 1980.

FILING AND ACKNOWLEDGEMENT

FILED, on this date, pursuant to S120.52 (9), Florida Statutes, with the designated Department Clerk, receipt of which is hereby acknowledged.

Clerk

5-22-80
Date

Jacob D. Varn

JACOB D. VARN
Secretary

Department of Environmental
Regulation
2600 Blair Stone Road
Twin Towers Office Building
Tallahassee, Florida 32301

cc: All parties

III. Groundwater

- A. The use of groundwater from a linear wellfield for plant service water for Units 4 and 5 shall be minimized to the greatest extent practicable, but in no case shall exceed 3 mgd on a maximum daily basis from any new wells or 1.0 mgd on an average annual basis.

B. Well Criteria

The submission of well logs and test results and location, design and construction of wells to provide plant service water shall be in accordance with applicable rules of the Department of Environmental Regulation and the Southwest Florida Water Management District (SWFWMD). Total water use per month shall be reported monthly to SWFWMD commencing with the start of construction.

*C. Well Withdrawal Limits

FPC is authorized to make a combined average annual withdrawal of 1,000,000 gallons of water per day with a maximum combined withdrawal rate not to exceed 3,000,000 gallons during a single day. Withdrawals may be made from a linear wellfield consisting of up to seven (7) wells whose locations are prescribed in the table below.

FPC WELL NO.	WITHDRAWAL POINT		GALLONS PER DAY		GALLONS PER DAY
	LATITUDE	LONGITUDE	MAXIMUM		AVERAGE
PW-1	28 57 36	82 37 48	756,000		262,500
PW-2	28 57 36	82 37 42	756,000		262,500
PW-3	28 57 36	82 37 36	756,000		262,500
PW-4	28 57 36	82 37 30	756,000		262,500
PW-5	28 57 36	82 37 24	756,000		262,500
PW-6	28 57 36	82 37 18	756,000		262,500
PW-7	28 57 36	82 37 13	756,000		262,500

D. Water Use Restriction

Said water is restricted to uses other than main stream condensing. Any change in the use of said water will require a modification of this condition.

E. Emergency Shortages

In the event an emergency water shortage should be declared pursuant to Section 373.175 or 373.246, F.S., by Southwest Florida Water Management District for an area including the location of these withdrawal points, the Department pursuant to Section 403.516, F.S., may alter, modify, or declare to be inactive, all or parts of Special Condition III, A-G. An authorized Water Management District Representative, at any reasonable time, may enter the property to inspect the facilities.

F. Monitoring and Reporting

FPC shall, within the time limits hereinafter set forth, complete the following items, and if it fails to complete them by the specified time, then Special Condition III A-G shall automatically become null and void.

1. FPC shall install and continuously maintain totalizing flow measurement devices on withdrawal point(s) as listed. Said devices shall have and maintain an accuracy within five percent of the actual flow under the installed operating conditions.

Permittee shall notify the District upon completion of new installation prior to commencement of withdrawal.

Alternative flow measuring systems may be substituted upon written approval by the Director of the Regulatory Division of the SWFWMD in advance of installation.

2. FPC shall submit to SWFWMD, on forms available from the District, a record of pumpage for each meter installed in F.1. above. Said pumpage records shall be provided on a monthly basis. Reports will be sent to:

Chief, Processing and Records
Southwest Florida Water Management
District
5060 U.S. Highway 41, South
Brooksville, Florida 33512

3. FPC shall maintain and operate continuous water level recorders on wells MZ-21, MZ-2D, and PW-7 located at Florida Power Corporation pump test site in Citrus County, Florida. FPC shall manually measure water levels monthly in wells MZ-2S, MZ-1S, MZ-1I and MZ-1D. Detailed hydrographs of water level fluctuations shall be constructed with the data collected from the water level recorders and shall be submitted to SWFWMD monthly.

4. Water quality analysis shall be performed on water withdrawn from each production well and from wells MZ-2I and MZ-2D. The water samples collected from each of the referenced wells shall be collected immediately after removal by pumping of a quantity of water equal to two casing volumes. The water quality analyses shall be performed monthly during the first year of operation, four times (January, May, September, and December) during the second year and twice each year (May and September) thereafter. Results shall be submitted to SWFWMD by the fifteenth (15th) day of the month following the month during which such analyses were performed. Testing for the following constituents is required:

Calcium	Magnesium	Sodium
Potassium	Bicarbonate	Sulfate
Chloride	Nitrate	Total Dissolved Solids
Specific	Gross Alpha	Total Phosphate
Conductance	Radiation	
Radium 226 (only if gross Alpha is greater than 15 pci/l)		

5. In the event that SWFWMD determines there is a significant change in the water quality, the Department pursuant to Section 403.516, F.S., may require the permittee to reduce or cease withdrawal from these groundwater sources.

G. Minimum Water Level Restrictions

The Department and SWFWMD may, at a future date pursuant to Section 403.516, F.S., establish a minimum water level in the aquifer or aquifers hydrologically associated with these withdrawals, which may require FPC to reduce or cease withdrawal from these groundwater sources at times when water levels fall below these minimums.

05/05/80

BEFORE THE GOVERNING BOARD
SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

IN RE:

FLORIDA POWER CORPORATION)
CRYSTAL RIVER UNITS 4 & 5)
MODIFICATION OF CONDITIONS)
OF CERTIFICATION NO. PA 77-09)
CITRUS COUNTY, FLORIDA)

ORDER NO. 80-22

PERMITTEE.)

RECOMMENDATION OF GOVERNING BOARD TO
THE SECRETARY, DEPARTMENT OF ENVIRONMENTAL
REGULATION, ON MODIFICATION OF
SPECIAL CONDITION III OF
CERTIFICATION ORDER.

This Matter came on to be heard by the Governing Board of Southwest Florida Water Management District at a Public Hearing on April 1, 1980. Said Public Hearing, being duly and properly noticed, was conducted at District Headquarters, 5060 U. S. Highway 41 South, Brooksville, Florida, and all parties hereto were present or given the opportunity to be present, and, together with the general public, were given an opportunity to present testimony and evidence. The Board, having reviewed the application and all documents in the File of Record, having heard testimony, and having received and examined all documentary evidence, makes the following

FINDINGS OF FACT:

1. The Southwest Florida Water Management District received on November 26, 1979, a request from Florida Power Corporation for modification of Special Condition of Certification III-C for its Crystal River Units 4 and 5. The Request for Modification seeks reduction of the number of wells in the freshwater well field near Route 19, Crystal River, Florida, from 21 wells to 7 wells (4 production wells and 3 stand-by wells). The modification would increase the average daily withdrawal from the production wells from 50,000 gallons per day to 262,500 gallons per day on average and from 144,000 gallons per day to not more than 756,000 gallons per day per well during any single day. There is no increase in the total withdrawal from the well field being requested.

2. Special Condition III-C attached to the Certification Order of the Governor and Cabinet for Crystal River Units 4 and 5 authorizes the Department of Environmental Regulation to modify the withdrawal limitations

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on the freshwater well field associated with these new units provided the Southwest Florida Water Management District concurs and provided the new withdrawal rates do not cause a violation of Southwest Florida Water Management District regulations.

3. The Request for Modification from Florida Power is equivalent to an increase from an average withdrawal rate of 50,000 gallons per day per well to 262,500 gallons per day per well and an increase on maximum withdrawal rates from 144,000 gallons per day per well to 756,000 gallons per day per well. This Request for Modification has been handled by District staff as though it were a request for modification of a consumptive use permit.

4. The proposed modified locations for authorized withdrawals in the quantities of 1,000,000 gallons per day (average annual) at quantities not to exceed 3,000,000 gallons per day have been assessed as a composite withdrawal site in accordance with the Southwest Florida Water Management District Consumptive Use Permitting criteria set forth in Section 16J-2.11, Florida Administrative Codes; and, based upon supporting documentation submitted by Florida Power Corporation, and the evaluation of such data by staff of the District:

(a) The proposed withdrawal will not cause the rate of flow of a stream or other watercourse to be lowered below the minimum rate of flow established by the Board.

(b) The proposed withdrawal will not cause the level of the potentiometric surface to be lowered below the regulatory level established by the Board.

(c) The proposed withdrawal will not cause the level of the surface of water to be lowered below the minimum level established by the Board.

(d) The proposed withdrawal will not significantly induce salt water encroachment.

(e) The proposed withdrawal will not cause the water table to be lowered so that the lake stages or vegetation will be adversely and significantly affected on lands other than those owned, leased or otherwise controlled by the applicant.

(f) The proposed withdrawal will not cause the level of the potentiometric surface under lands not owned, leased or otherwise controlled by the applicant to be lowered more than five feet (5').

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(g) The proposed withdrawal will not cause the level of the water table under lands not owned, leased or otherwise controlled by the applicant to be lowered more than three feet (3').

(h) The proposed withdrawal will not cause the level of the surface of water in any lake or other impoundment to be lowered more than one foot (1') unless the lake or impoundment is wholly owned, leased or otherwise controlled by the applicant.

(i) The proposed withdrawal will not cause the potentiometric surface to be lowered below sea level.

(j) The proposed withdrawal will not exceed the water crop of lands owned, leased or otherwise controlled by the applicant.

5. A copy of a proposed Modified Special Condition III is attached hereto as Exhibit 1, and made a part hereof by reference. Conditions which have been fully executed have been deleted and some wording has been clarified. Special Condition III-C has been modified to authorize withdrawals from any of seven (7) wells designated PW-1 through PW-7, with each well limited nevertheless to an average withdrawal rate of 262,500 gallons per day (average annual) and a maximum withdrawal rate of 756,000 gallons during any single day. The total authorized combined withdrawal remains unchanged at an average withdrawal rate of 1,000,000 gallons per day (average annual) with a maximum combined rate not to exceed 3,000,000 gallons per day.

6. In light of the fact that modification of Condition III-C will shift the center of withdrawals, it is appropriate that modification to Special Condition III-F, relating to Monitoring and Report be also accomplished. It is proposed that Special Condition III-F.3. be modified to provide that Wells MZ-2I, MZ-2D and PW-7 be maintained as continuously recording water level monitor wells, and that Wells MZ-2S, MZ-1S, MZ-1I and MZ-1D be manually measured monthly. Reports will be submitted monthly instead of quarterly.

7. It is further appropriate that Special Condition III-F.1. be modified to current flow measuring standards to provide for greater accuracy of data, and that both Special Condition III-F.2. and III-8. be modified to provide for monthly reporting of metered pumpage and total monthly use.

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8. It is further appropriate that Special Condition III-F.4. be modified, in light of now known actual withdrawal points, to reduce the number of water quality monitoring wells and to specifically designate Wells MZ-2I and MZ-2D, in addition to all production wells, for water quality sampling.

9. Two Objections have been received in response to notice of this pending application for modification of Special Condition III-C of Certification. Each of the Objectors own property approximately one-half mile south of FPC's property line. It has been calculated that the potentiometric surface at FPC's south property line will be lowered less than two feet as a result of FPC's withdrawals at the average authorized withdrawal rate and less than three feet at the maximum withdrawal rate. The resultant lowering of the static water levels in the Objectors water wells will be less than three inches during average withdrawals and less than one foot during maximum withdrawals. The change proximately resulting from the reduction in the number of withdrawal points previously authorized and the consequent increase in withdrawal rate per well, as this change is related to potential for interference with the Objector's legal use of water, is less than one-half foot.

In accordance with the foregoing, and in consideration of applicable laws and regulations, the Board makes the following

CONCLUSIONS OF LAW:

10. The Applicant has established that the intended consumptive use:

- a) is a reasonable-beneficial use;
- b) is consistent with the public interest; and
- c) will not interfere with any legal use of water existing at the time of the application.

11. The intended consumptive use is in compliance with the requirements of Chapter 373, Florida Statutes, and Chapter 16J, Florida Administrative Code.

Wherefore, upon consideration, it is

ORDERED

12. That this Order and Exhibit 1 attached hereto be and it is hereby adopted and approved by this Board as its recommendation to the Secretary, Florida Department of Environmental Regulation, for Modification of Special Condition III of Certification for Crystal River Units 4 and 5.

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13. That General Counsel is authorized and directed to do all legal acts necessary to accomplish this action of the Board, including such stipulations as may facilitate such Modifications.

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

DATE: May 6, 1980

Derrill S. McAtter
DERRILL S. McATEER, CHAIRMAN

ATTEST:

N. Brooks Johns
N. BROOKS JOHNS, SECRETARY

SEAL

Director Regulatory

Staff Attorney

Board Counsel

FILED WITH CLERK, SWFWMD
ON May 15, 1980

J. R. Engert
AS CLERK, SWFWMD

05/05/80 wp4

III. Groundwater

- A. The use of groundwater from a linear wellfield for plant service water for Units 4 and 5 shall be minimized to the greatest extent practicable, but in no case shall exceed 3 mgd on a maximum daily basis from any new wells or 1.0 mgd on an average annual basis.

B. Well Criteria

The submission of well logs and test results and location design and construction of wells to provide plant service water shall be in accordance with applicable rules of the Department of Environmental Regulation and the Southwest Florida Water Management District (SWFWMD). Total water use per month shall be reported ~~quarterly~~ monthly to SWFWMD commencing with the start of construction.

*C. Well Withdrawal Limits

FPC is authorized to make a combined average annual withdrawal of 1,000,000 gallons of water per day with a maximum combined withdrawal rate not to exceed 3,000,000 gallons during a single day. Withdrawals may be made from a linear wellfield consisting of up to ~~twenty-one (21)~~ seven (7) wells whose locations are prescribed in the table below.

FPC Well No.		WITHDRAWAL POINT		GALLONS PER DAY		GALLONS PER DAY	
		LATITUDE	LONGITUDE	MAXIMUM		AVERAGE	
A	PW-1	28 57 36	82 37 48	144,000	756,000	50,000	262,500
B	PW-2	28 57 36	82 37 42	144,000	756,000	50,000	262,500
C	PW-3	28 57 36	82 37 36	144,000	756,000	50,000	262,500
D	PW-4	28 57 36	82 37 30	144,000	756,000	50,000	262,500
E	PW-5	28 57 36	82 37 24	144,000	756,000	50,000	262,500
F	PW-6	28 57 36	82 37 18	144,000	756,000	50,000	262,500
G	PW-7	28 57 36	82 37 13	144,000	756,000	50,000	262,500
H		28 57 37	82 37 07	144,000	3,000,000	50,000	1,000,000
I		28-57-37	82-37-07	144,000		50,000	
J		28-57-37	82-36-56	144,000		50,000	
K		28-57-37	82-35-57	144,000		50,000	
L		28-57-37	82-35-46	144,000		50,000	
M		28-57-37	82-35-40	144,000		50,000	
N		28-57-44	82-36-35	144,000		50,000	
O		28-57-44	82-36-29	144,000		50,000	
P		28-57-44	82-36-24	144,000		50,000	
Q		28-57-44	82-36-18	144,000		50,000	
R		28-57-44	82-36-13	144,000		50,000	
S		28-57-44	82-36-07	144,000		50,000	
T		28-57-45	82-36-07	144,000		50,000	
U		28-57-45	82-35-56	144,000		50,000	
				<u>3,000,000</u>		<u>1,000,000</u>	

After wells have been constructed, Southwest Florida Water Management District will evaluate the individual wells and may recommend to the Department authorization of increase in withdrawals based upon hydrologic characteristics for the individual wells provided that the provisions of rules of the District relating to drawdown at the boundary of the property shall be observed. The Department pursuant to Section 403.516, F.S., may modify the above withdrawal limitations with the concurrence of SWFWMD.

*Revised 5/5/80

D. Water Use Restriction

Said water is restricted to uses other than main steam condensing. Any change in the use of said water will require a modification of this condition.

E. Emergency Shortages

In the event an emergency water shortage should be declared pursuant to Section 373.175 or 373.246, F.S., by Southwest Florida Water Management District for an area including the location of these withdrawal points, the Department pursuant to Section 403.516, F.S., may alter, modify, or declare to be inactive, all or parts of Special Condition III, A-G. An authorized Water Management District Representative, at any reasonable time, may enter the property to inspect the facilities.

F. Monitoring and Reporting

FPC shall, within the time limits hereinafter set forth, complete the following items, and if it fails to complete them by the specified time, then Special Condition III A-G shall automatically become null and void.

1. FPC shall install propeller-drive-flow-meters-in-compliance with-SWFMD-specifications-on-all-production-wells, and continuously maintain totalizing flow measurement devices on withdrawal point(s) as listed. Said devices shall have and maintain an accuracy within five percent of the actual flow under the installed operating conditions.

Said-meter-shall-be-installed-prior-to-commencement-of withdrawal.

Permittee shall notify the District upon completion of new installation prior to commencement of withdrawal.

Alternative flow measuring systems may be substituted upon written approval by the Director of the Regulatory Division of SWFWMD in advance of installation.

2. FPC shall submit to SWFWMD, on forms available from the District, a record of pumpage for each meter installed in F.1. above. Said pumpage records shall be provided on a monthly basis, and shall be submitted by April-15, July-15, October-15, and January-15, for each preceding calendar quarter. Reports will be sent to:

Chief, Technical-Information-Service Processing and Records

Southwest Florida Water Management District
5060 U.S. Highway 41, South
Brooksville, Florida 33512

3. FPC shall maintain and operate continuous water level recorders on wells SMW-1, MZ-1, and WT-1 MZ-2I, MZ-2D, and PW-7 located at Florida POver Corporation pump test site in Citrus County, Florida. Water-levels-shall-be-monitored-only in-the-deep-zone-MZ-1D-of-well-MZ-1--FPC-shall-construct-an-additional-monitor-well-similar-to-MZ-1-with-any-construction modifications-approved-by-the-SWFMD-staff,-to-be-located-within-its-right-of-way-near-U.S.-Highway-19--Such-additional monitor-well-shall-be-designated-as-MZ-2-and-FPC-shall-maintain-and-operate-continuous-water-level-recorders-to-monitor-the-intermediate-zone-MZ-2I-and-the-deep-zone-MZ-2D-of-well-MZ-2. shall manually measure water levels monthly in wells MZ-2S, MZ-1S, MZ-1I and MZ-1D. Detailed hydrographs of water level fluctuations shall be constructed with the data collected from the water level recorders and shall be submitted to SWFWMD April-15, July-15, October-15, and January-15 for each preceding calendar quarter, monthly.

- 4, Water quality analysis shall be performed on water withdrawn from each production well and from the shallow (MZ-1S and MZ-2S), intermediate (MA-1I and MZ-2I), and deep (MZ-1D and MZ-2D) zones in Monitor Wells MZ-1 and MZ-2. Water withdrawn from MZ-1S and MZ-2S shall be supplied from that portion of the Floridan Aquifer between 60' and 245' below land surface. Water withdrawn from wells MZ-1I and MZ-2I shall be supplied from that portion of the Floridan Aquifer between 360' and 373' below land surface. Water withdrawn from well MZ-1D and MZ-2D shall be from that portion of the Floridan Aquifer between 472' and 488' below land surface. wells MZ-2I and MZ-2D.

The water samples collected from each of the referenced wells shall be collected immediately after removal by pumping of a quantity of water equal to two casing volumes. As monitor well MZ-2 is being constructed the EPC and staff of SWFWMD may determine and adjust the intervals to be monitored in accordance with hydrologic conditions determined from drilling logs.

The water quality analyses shall be performed monthly during the first year of operation, four times (January, May, September, and December) during the second year and twice each year (May and September) thereafter. Results shall be submitted to SWFWMD by the fifteenth (15th) day of the month following the month during which such analyses were performed. Testing for the following constituents is required:

Calcium	Magnesium	Sodium
Potassium	Bicarbonate	Sulfate
Chloride	Nitrate	Total Dissolved Solids
Specific Conductance	Gross Alpha	Total Phosphate
Radium 226 (only if gross Alpha is greater than 15 pci/l)	Radiation	

~~The design and location of wells MZ-1 and MZ-2 shall be as indicated by the attached Figures 1 and 2 respectively or as modified by the staff of SWFWMD.~~

- 5, In the event that SWFWMD determines there is a significant change in the water quality, the Department pursuant to Section 403.516, F.S., may require the permittee to reduce or cease withdrawal from these groundwater sources.

G. Minimum Water Level Restrictions

The Department and SWFWMD may, at a future date pursuant to Section 403.516, F.S., establish a minimum water level in the aquifer or aquifers hydrologically associated with these withdrawals, which may require FPC to reduce or cease withdrawal from these groundwater sources at times when water levels fall below these minimums.

Florida Power Corporation
Crystal River Units 4 & 5
Order No. 80-22

I HEREBY CERTIFY that a true copy of the foregoing has been mailed
by regular U. S. Mail to the below-listed parties of record this 16th day
of May, 1980.

GARY P. SAMS, ESQUIRE And
WADE HOPPING, ESQUIRE
P. O. BOX 5617
Tallahassee, FL 32301

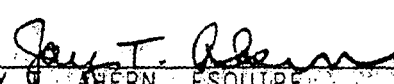
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