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WILLIAM H. CHANDLER  
1920-1992

July 28, 1997

Blanca Bayo, Director  
Division of Records and Reporting  
Florida Public Service Commission  
2549 Shumard Oak Boulevard  
Tallahassee, Florida 32399-0850

Via Hand Delivery

RE: Clay Electric Cooperative, Inc.  
and Florida Power & Light Company  
Docket No. 970512-EU

Dear Ms. Bayo:

I am enclosing herewith the original and fifteen (15) copies of Clay Electric Cooperative Inc.'s Prepared Direct Testimony of Herman Dyal, William C. Phillips, and Henry Barrow which I would appreciate your filing in this docket.

Very truly yours,

John H. Haswell

*Dyal - 07618-97*  
*Phillips - 07619-97*  
*Barrow 07620-97*

- ACK \_\_\_\_\_
- AFA \_\_\_\_\_
- APP \_\_\_\_\_
- CAF \_\_\_\_\_ JHH/lez
- CMU \_\_\_\_\_ cc: Mark Logan, Esquire
- CTR \_\_\_\_\_ Robert Elias
- EAG \_\_\_\_\_ William C. Phillips
- LEG \_\_\_\_\_ 1 Herman Dyal
- LIN 3 + org Henry Barrow
- OPC \_\_\_\_\_
- RCH \_\_\_\_\_
- SEC \_\_\_\_\_ 1
- WAS \_\_\_\_\_
- OTH \_\_\_\_\_

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DOCUMENT NUMBER-DATE

07618 JUL 28 97

FPSC-RECORDS/REPORTING

**ORIGINAL  
FILE COPY**

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

In Re: Petition of Florida Power & Light )  
Company to Resolve a Territorial Dispute with )  
Clay Electric Cooperative in Baker County )  

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Docket No.: 970512-EU

Filed: July 28, 1997

**PREPARED DIRECT TESTIMONY  
OF HERMAN DYAL  
ON BEHALF OF  
CLAY ELECTRIC COOPERATIVE, INC.**

DOCUMENT NUMBER-DATE  
07618 JUL 28 97  
FPSC-RECORDS/REPORTING

1 Q. Please state your name and business address.  
2 A. Herman Dyal, Clay Electric Cooperative, Inc., Post Office Box 308, Keystone  
3 Heights, Florida 32656.  
4  
5 Q. What is your current occupation and position?  
6 A. I am a licensed professional engineer and Director of Engineering for Clay Electric  
7 Cooperative, Inc.  
8  
9 Q. How long have you worked for Clay Electric Cooperative, Inc. ("Clay")?  
10 A. (Need answer)  
11  
12 Q. Before becoming Director of Engineering, what other positions have you held at Clay  
13 and for long?  
14 A. I was Division Chief of Distribution Engineering for 11 years.  
15  
16 Q. What is your education?  
17 A. I have a Bachelor of Science in Electrical Engineering from the University of Florida,  
18 which I received in 1973.  
19  
20 Q. What is your professional experience as an engineer?  
21 A. I have worked some 24 years in the utility industry.  
22  
23 Q. What professional licenses do you hold in Florida and any other states?  
24 A. I am a registered Professional Engineer in Florida and Georgia.  
25

1 Q. What professional associations do you belong to?

2 A. I am a member of the Institute of Electrical and Electronic Engineers. (IEEE)

3

4 Q. Describe Clay's electric facilities in Baker County, Florida, including their type and  
5 capacity?

6 A. We serve some 1900 members in Baker County. We operate over 230 miles of  
7 distribution lines, one mile of 115 kV transmission line and one substation  
8 (Sanderson) in Baker County. As you can see by the shaded map of Baker County,  
9 Exhibit \_\_\_\_\_ (HD -9) we serve a large portion of Baker County that is not taken up  
10 in timber land, the Lake Butler Wild Life Management Area or Osceola National  
11 Forest.

12

13 Q. Approximately when were Clay's first electric facilities constructed in Baker County?

14 A. We have been serving members in Baker County since the early 1940's, in fact the  
15 single phase line along the easterly part of Arnold Rhoden Road was built in 1947.  
16 The Sanderson Substation was built in 1973, along with one mile of 115 kV  
17 transmission line to serve the substation.

18

19 Q. Describe Clay's facilities in the area of the Baker County Industrial Park where the  
20 new River City Plastics facility is being constructed?

21 A. As you can see from Exhibit \_\_\_\_\_ (HD-2) we have the River City Plastics  
22 manufacturing plant which is just north of the Baker County Industrial Park. To the  
23 east some 1800-1900 feet we have a single phase 14.4 kV distribution line. Another  
24 approximately 5,000 feet to the east we have a three phase feeder line going north  
25 from our Sanderson Substation some 2-¼ miles to the south.

1 Q. How close is the nearest Clay electric facility to the River City Plastics approximate  
2 point of service?

3 A. Along the road some 1800-1900 feet to the entrance road.  
4

5 Q. How close is the nearest Florida Power & Light facility to the approximate location  
6 of the River City Plastics point of service?

7 A. I understand they will serve the site from their Wiremill Substation some 1800 feet  
8 from the entrance road.  
9

10 Q. What is the expected load of the River City Plastics plant and how will Clay provide  
11 that service?

12 A. The expected load at the plant is about 2,000 kW. To serve this anticipated load we  
13 will need to make some system improvements, as follows and referring to Exhibit  
14 \_\_\_\_\_ (HD-2):

15 1. The substation transformers at Sanderson Substation are rated 7500 kVA  
16 without additional cooling fans. The existing load is 6800 kVA. The  
17 additional load would exceed the base rating of the transformers but with the  
18 addition of cooling fans the transformer rating would increase to 10,500 kVA,  
19 well above the additional load.

20 2. The three phase line going north from the substation was converted to 25 kV  
21 operation in 1987. At that time a step-up transformer was installed at the  
22 substation to step the voltage up on the line from 12.47 kV to 24.94 kV. The  
23 transformer is rated 3750 kVA without additional cooling fans. The existing  
24 load is 2630 kVA. The additional load would exceed the base rating of the  
25 transformer but with the addition of cooling fans the rating would increase to



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TOTAL \$98,000.00

Q. Has River City Plastics requested the use of load management generators at its plant.

A. Yes. They felt the generators would provide them an on site power source which would be the most reliable in times of incimate weather. It would provide thom the ultimate reliability which they need in their manufacturing process.

Q. From an engineering standpoint is there any difference in the character and quality of service provided by the three phase line Clay will use from its Sanderson Substation together with the load management generators on site, and the service proposed by Florida Power & Light which would either be single or dual feed from its Wiremill Substation?

A. Yes there is. Our three phase line and the load management generators provide superior service of the quality and character required by the customer. We are not comparing two similar kinds of service, with one utility claiming its service would be incrementally better. We are evaluating two different kinds of service, one offered by Florida Power & Light and one offered by Clay. The service offered by Florida Power & Light is, for lack of a better way of saying it, standard three phase service, just like its other customer, Florida Wire & Cable is receiving. Clay is offering an innovative service that takes into account the unique operational needs of the customer through the use of load management generators for back-up as well as load management, which when coupled with Clay's three phase service is clearly a superior method of providing the required service.

If you compare just the three phase service from Florida Power & Light's

1 Wiremill Substation with Clay's three phase service from its Sanderson Substation,  
2 statistically there may be more exposure on Clay's 3.5 miles of three phase as  
3 opposed to Florida Power & Light's ½ mile of three phase. River City Plastics has  
4 reviewed outage records of both Florida Power & Light and Clay and it does not see  
5 a significant difference between the two. The customer recognizes there be some  
6 interruptions. His major concern is during times of intense storm weather. It is  
7 during these storms that he expects to experience outages as has occurred  
8 numerous times at his plant in Duval County. An outage to River City Plastics is any  
9 interruption of electricity of over 12-18 cycles. This is representative of almost any  
10 breaker operation of close and reclose. If he experiences an outage he loses his  
11 production lines. He has some 23 production lines which some 24 employees  
12 operate. This plant is scheduled to run 24 hours per day, seven days a week, all  
13 year. When the plant goes down due to an electrical outage it takes two people per  
14 production line to restart the line and approximately eight hours to get the line back  
15 to full production. This requires they call in another complete set of shift workers to  
16 help restart the plant. You can readily see the immediate costs they incur as a result  
17 of a blink in electrical power. Not only do they lose 8-10 hours of product production  
18 but they also must pay some 23 employees approximately eight hours of overtime.  
19 You can also see that it is critical that another "blink" not occur during the eight hours  
20 of restart or the process must start over.

21 It is during these intense storms that the service we offer is clearly difference  
22 from the service offered by Florida Power & Light. During a storm in the immediate  
23 area of the plant River City Plastics wants the ability to switch to our local  
24 management generators and separate from the existing distribution system. This  
25 will cut their exposure to the plant site only, not to the distribution line, substation,



1 or transmission line. Florida Power & Light is single or dual feed and would not  
2 reduce this exposure. The dual feed would only provide service in the case of a  
3 failure in the primary distribution or substation but would do nothing for a  
4 transmission failure.

5 Our load management generators offer the only solution for dramatically  
6 reducing exposure to power interruption as well as providing power in case of failure  
7 to transmission system.

8  
9 Q. Did River City Plastics evaluate service proposals from both Florida Power & Light  
10 and Clay?

11 A. Yes. It did so through an engineering consultant who sought and received  
12 information from both Clay and Florida Power & Light.

13  
14 Q. Did River City Plastics formally request service from Clay?

15 A. Yes it did after reviewing a recommendation from its consultant. A copy of that  
16 request is attached as Exhibit \_\_\_\_\_ (HDB- 6 ) to Mr. Barrow's testimony.

17  
18 Q. Do you know why River City Plastics decided not to request service from Florida  
19 Power & Light?

20 A. Yes. Florida Power & Light would not offer the same service that Clay did.

21  
22 Q. Florida Power & Light claims that service from its Wiremill Substation is reliable and  
23 adequate for River City Plastics' needs, and implies that Clay's service, using load  
24 management generators will either be less reliable or at least no more reliable than  
25 Florida Power & Light's. Do you agree with that claim?

1 A. No. As I stated previously, the load management generators offer the only true  
2 alternative to significantly lowering River City Plastics exposure to storm related  
3 outages. It removes the exposure of the distribution line, substation and  
4 transmission line. Even if River City Plastics were not running the generators when  
5 an outage occurred they could have the units started and immediately begin  
6 restarting the plant with confidence their eight hour restart time would not be  
7 interrupted and production could be started immediately. Florida Power & Light's  
8 service with single feed could be out hours before service is restored in the case of  
9 an outage. If they had dual feed the outage could be reduced if the outage occurred  
10 on the distribution line or substation but not on the transmission line.

11

12 Q. Does this conclude your direct testimony?

13 A. Yes it does at this time. I may have more comments after reviewing Florida Power  
14 & Light responses to our discovery requests, reviewing depositions, and Florida  
15 Power & Light's direct testimony.

16

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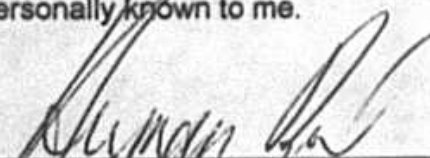
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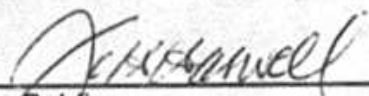
STATE OF FLORIDA     )  
                                  )  
COUNTY OF CLAY     )

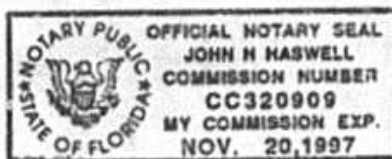
Docket No. 970512-EU

Before the undersigned authority, personally appeared Herman Dyal, who being first duly sworn, deposes and says that he is the Director of Engineering for Clay Electric Cooperative, Inc., a Florida corporation, that the foregoing is true and correct to the best of his knowledge, information and belief. He is personally known to me.

  
\_\_\_\_\_  
Herman Dyal  
Director of Engineering

Sworn to and subscribed before me this 28 day of July, 1997.

  
\_\_\_\_\_  
Notary Public  
State of Florida  
My Commission expires  
and my number is:



**CERTIFICATE OF SERVICE**

I HEREBY CERTIFY that a true and correct copy of the foregoing has been furnished by regular U.S. mail to the following:

Patrick M. Bryan, Esquire  
Florida Power and Light Company  
700 Universe Boulevard  
Juno Beach, Florida 33408

Robert Elias, Legal Division  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, Florida 32399

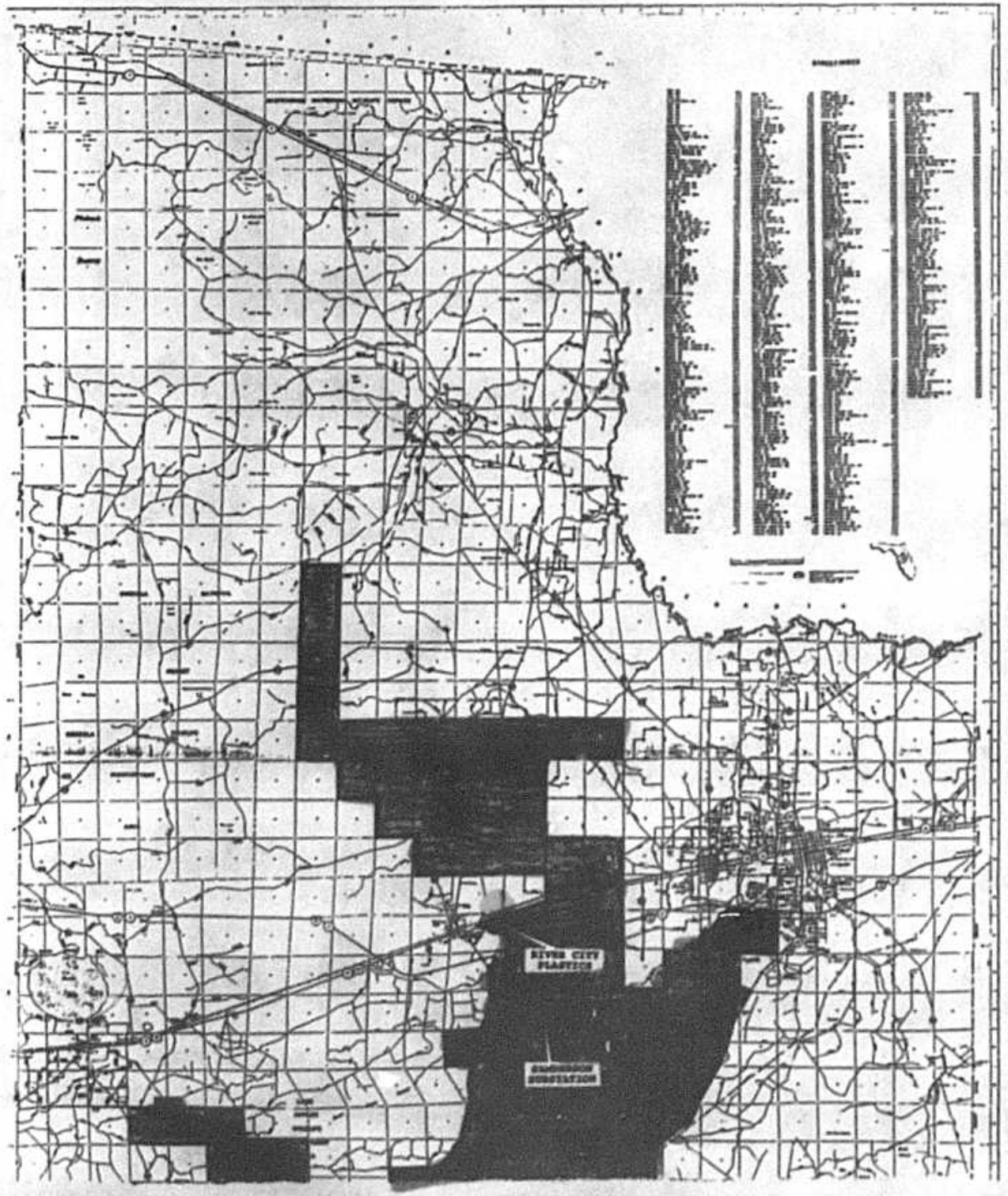
Mark K. Logan  
Bryant, Miller & Olive  
201 South Monroe Street  
Suite 500  
Tallahassee, Florida 32301

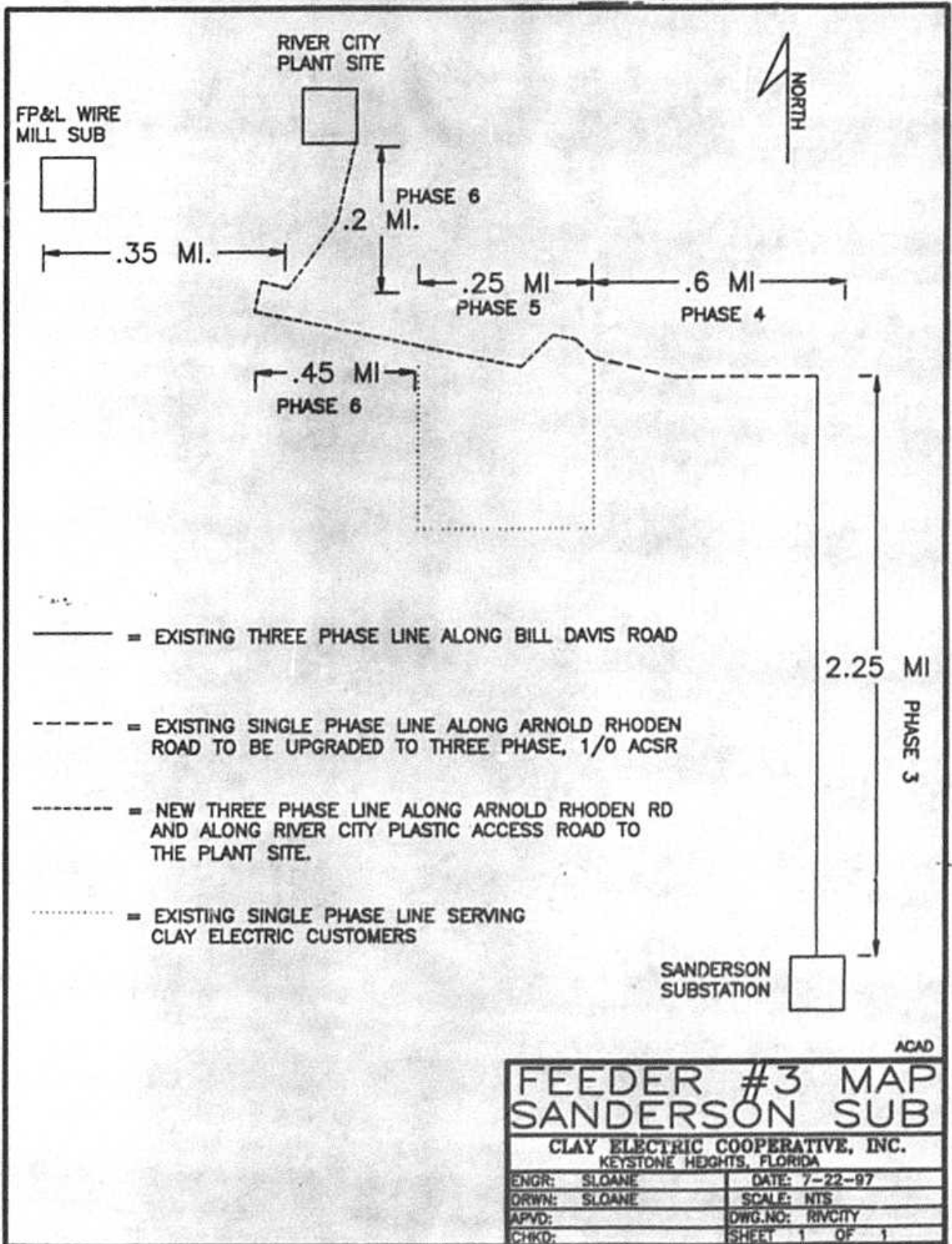
W. G. Walker, III, Vice President  
Florida Power and Light Company  
Regulatory Affairs  
Post Office Box 029100  
Miami, Florida 33102-9100

on this 28 day of July, 1997.

  
\_\_\_\_\_  
John H. Haswell

EXHIBIT \_\_\_\_\_ (HD-2.)





<b>FEEDER #3 MAP</b>	
<b>SANDERSON SUB</b>	
CLAY ELECTRIC COOPERATIVE, INC. KEYSTONE HEIGHTS, FLORIDA	
ENGR: SLOANE	DATE: 7-22-97
DRWN: SLOANE	SCALE: NTS
APVD:	DWG. NO: RVCITY
CHKD:	SHEET 1 OF 1

970512-EI

HERMAN Dyal  
DIRECT TESTIMONY

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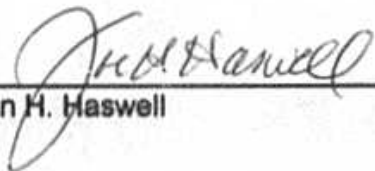
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on this 28 day of July, 1997.

  
\_\_\_\_\_  
John H. Haswell

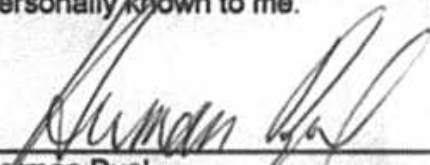
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7/28/97

**AFFIDAVIT**

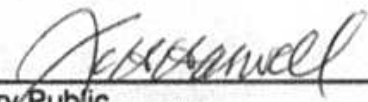
STATE OF FLORIDA     )  
                                  )  
COUNTY OF CLAY     )

Docket No. 970512-EU

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\_\_\_\_\_  
Herman Dyal  
Director of Engineering

Sworn to and subscribed before me this 28 day of July, 1997.

  
\_\_\_\_\_  
Notary Public  
State of Florida  
My Commission expires  
and my number is:

