

Florida Power

CORPORATION
Crystal River Unit 3
Docket No. 50-302

December 21, 1995
3F1295-20

Document Control Desk
U. S. Nuclear Regulatory Commission
Washington, DC 20555

Subject: Technical Specification Change Request No. 202, Supplement 2
24 Month Fuel Cycle Surveillance Extensions

References: 1. FPC to NRC letter, 3F0595-01, dated May 31, 1995
2. FPC to NRC letter, 3F1195-25, dated November 28, 1995

Dear Sir:

In Reference 1, Florida Power Corporation (FPC) made application to change most of refueling interval Technical Specification required surveillances for Crystal River 3 (CR-3) from 18 to 24 months to accommodate the current two year refueling interval. As a result of NRC concerns with the original methodology used to study instrument drift, FPC revised the methodology and is in the process of revising the instrument drift studies. That revised methodology is described in Reference 2. This submittal further supplements that information in response to a teleconference conducted on December 19, 1995. Based on that teleconference, we understand that our statistical approach to project instrument drift to 30 months (2 years plus 25%) is not sufficient, by itself, to justify issuance of the Technical Specification amendment. Therefore, FPC is providing additional engineering justification which we believe demonstrates the adequacy of the instruments for a 30 month calibration interval, based solely on historical data, and without reliance on statistical analysis.

Historical calibration data has been evaluated for all instruments to be extended to a 24 month calibration frequency. Engineering judgement was utilized to assess the data for the following characteristics:

- 1) Has the equipment performed within the tolerances specified in calibration procedures?
- 2) Does the equipment tend to have random drift?
- 3) Does equipment drift appear to be independent of calibration interval?

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As-found and as-left data were evaluated to determine how the equipment performed. The instruments have, except on rare occasions, performed within the acceptance criteria of the calibration procedures used to satisfy Technical Specification calibration requirements. Equipment performing outside specified as-found tolerances is considered to be inoperable and is not returned to service until it is left within the as-left requirements. We believe that if excessive instrument drift were going to be a problem with the extended surveillance interval, it would also be a problem with the current surveillance interval. That has not been the case.

Instrument drift tended to be random in nature in that the devices would drift in both the positive and negative direction. This tendency to "cross" zero reduces the impact of drift since it does not build in one direction for an extended period of time.

Instrument drift per interval was evaluated by inspection of the data per calibration interval. With but a few exceptions, the instruments did not appear to have time dependent drift. Instruments whose data could not support this conclusion were not included in the request for calibration extension to 24 months.

In addition, the Reactor Protection System (RPS), Emergency Feedwater Initiation and Control (EFIC) System, and Engineered Safeguards Actuation System (ESAS) use manufacturer's stated drift in the development of setpoints for all but a few of the instruments. (Note that Reference 2 incorrectly indicated this included all instruments in these systems.) FPC's primary setpoint methodology is to use vendor provided drift for setpoint development when it is available. This method is endorsed by NRC Generic Letter 91-04 and Instrument Society of America (ISA) Recommended Practice ISA-RP67.04 Part II, "Methodologies for the Determination of Setpoints for Nuclear Safety-Related Instrumentation."

Most of the transmitters in these systems were supplied by Rosemount Nuclear Instruments. For these transmitters, FPC utilizes the 30 month drift term applicable to these transmitters (0.2% times the upper range limit), as specified by Rosemount. For some other components, the vendor provided drift is less than 30 months. In these cases a 30 month drift term is derived in accordance with ISA-RP67.04. For example, for the Bailey 880 equipment utilized in the CR-3 RPS and ESAS, the vendor has specified a one month drift term. FPC has expanded this to a 30 month drift term by the square root of the sum of the squares method.

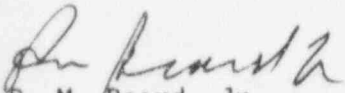
For the Rosemount transmitters included in the drift studies, the difference between the as-left and as found data has generally exceeded the manufacturer's stated drift term between 15 and 25% of the time. It should be noted, however, that the differences between as-found and as-left data result from the effects of not only drift but also from measurement and test equipment, temperature differences between calibrations, instrument accuracy, and power supply effects to name a few. This implies that the value we consider to be drift is conservative since all of the above mentioned terms are already included in channel uncertainty calculations. Also, FPC has noted an improvement in the agreement between as-left and as-found data toward the end of the data collection

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period. This is attributed to more accurate test equipment and improved procedures that require more consistent calibration methodologies. This observation strengthens FPC's belief that the majority of the difference observed between as-left and as-found data is due to factors other than instrument drift.

From this, we conclude that the calibration interval for the subject instrumentation can be extended as requested in Reference 1 with minimal impact on plant operations and without undue risk to the health and safety of the public.

Sincerely,



P. M. Beard, Jr.
Senior Vice President
Nuclear Operations

PMB:AEF

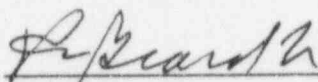
xc: Regional Administrator, Region II
Senior Resident Inspector
NRC Project Manager

ATTACHMENT TO LETTER NO. 3F1295-20

STATE OF FLORIDA

COUNTY OF CITRUS

P. M. Beard, Jr. states that he is the Senior Vice President, Nuclear Operations for Florida Power Corporation; that he is authorized on the part of said company to sign and file with the Nuclear Regulatory Commission the information attached hereto; and that all such statements made and matters set forth therein are true and correct to the best of his knowledge, information, and belief.

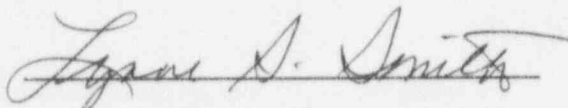


P. M. Beard, Jr.
Senior Vice President
Nuclear Operations

Subscribed and sworn to before me, a Notary Public in and for the State and County above named, this 21st day of December, 1995.

LYNNE S. SMITH

Notary Public (print)



Notary Public

Notary Public, State of Florida at Large,

My Commission Expires: _____



UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

IN THE MATTER)

FLORIDA POWER CORPORATION)

DOCKET NO. 50-302

CERTIFICATE OF SERVICE

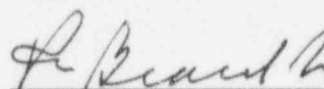
P. M. Beard, Jr. deposes and says that the following has been served on the Designated State Representative and Chief Executive of Citrus County, Florida, by deposit in the United States mail, addressed as follows:

Chairman,
Board of County Commissioners
of Citrus County
Citrus County Courthouse
Inverness, FL 34450

Administrator,
Radiological Health Services
Department of Health and
Rehabilitative Services
1323 Winewood Blvd.
Tallahassee, FL 32301

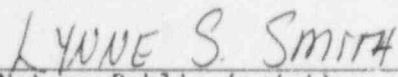
A copy of Technical Specification Change Request No. 202, Supplement 2.

FLORIDA POWER CORPORATION

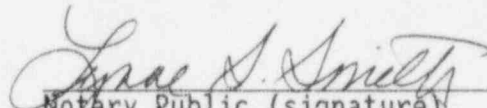


P.M. Beard, Jr.
Senior Vice President
Nuclear Operations

SWORN TO AND SUBSCRIBED BEFORE ME THIS 21st DAY OF ^{December}~~MAY~~, 1995



Notary Public (print)



Notary Public (signature)

Notary Public, State of Florida at Large
My Commission Expires:

