

# Florida Power

CORPORATION

Crystal River Unit 3

Docket No. 60-302

March 5, 1993

3F0393-02

U. S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, D. C. 20555

Subject: Loss Of Fill-Oil In Transmitters Manufactured By Rosemount  
Bulletin 90-01, Supplement 1

Dear Sir:

Florida Power Corporation (FPC) is submitting, as an attachment to this letter, our response to the subject NRC bulletin. The bulletin requests replacement or enhanced surveillance monitoring of Rosemount Model 1153 Series B and Series D and Model 1154 transmitters manufactured prior to July 11, 1989, used in safety-related systems or systems installed in accordance with 10 CFR 50.62, ATWS Rule. FPC has identified approximately eighty-two (82) transmitters which fall within the scope of this supplement.

Based on the program currently in place at Crystal River Unit 3 (CR-3), FPC meets or exceeds the requirements presented in Bulletin 90-01, Supplement 1.

Sincerely,

Gary L. Boldt  
Vice President  
Nuclear Production

GLB/GMF  
Attachment

xc: Regional Administrator, Region II  
Senior Resident Inspector  
NRR Project Manager  
Alex Marion (NUMARC)

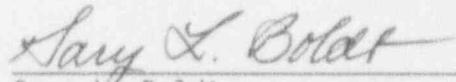
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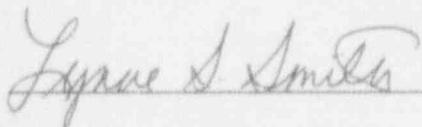
STATE OF FLORIDA

COUNTY OF CITRUS

Gary L. Boldt states that he is the Vice President, Nuclear Production 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.

  
\_\_\_\_\_  
Gary L. Boldt  
Vice President  
Nuclear Production

Subscribed and sworn to before me, a Notary Public in and for the State and County above named, this 5<sup>th</sup> day of March, 1993.

  
\_\_\_\_\_  
Notary Public

Notary Public, State of Florida at Large,

My Commission Expires: \_\_\_\_\_  
Notary Public, State of Florida at Large  
My Commission Expires Dec. 18, 1995  
Bonded thru Agent's Notary Brokerage

## ATTACHMENT

Florida Power Corporation's response to NRC Bulletin 90-01, Supplement 1 is as follows:

### Requested Action 1a:

Expediently replace, or monitor for the life of the transmitter on a monthly basis using an enhanced surveillance monitoring program, any transmitters that have a normal operating pressure greater than 1500 psi and that are installed in reactor protection trip systems, ESF actuation systems or ATWS systems. Action for those transmitters that have not met the Rosemount psi-month threshold criterion should be expedited. At their discretion, licensees may monitor using an enhanced surveillance program at least once every refueling cycle, but not exceeding 24 months, transmitters in this category if the appropriate psi-month threshold criterion recommended by Rosemount has been reached, and the monitoring interval is justified based upon transmitter performance in service and its specific safety function. The justification should show that a sufficiently high level of reliability for the function is provided by the redundancy or diversity of applicable instrumentation and control systems, commensurate with the importance of the function, when considered in conjunction with the overall performance of the reactor protection trip system, ESF actuation systems, or ATWS system. Provide to the NRC a copy of the licensee justification to extend the enhanced surveillance program beyond the monthly test interval for transmitters that have reached the appropriate psi-month threshold criterion recommended by Rosemount.

### FPC Response to 1a:

Crystal River Unit 3 (CR-3) has classified thirty-three (33) transmitters in this category. Twenty-three (23) of these (the RPS and ES Actuation) are presently monitored weekly by the CR-3 drift trending program. Another two (2) (ATWS System) are presently monitored by the Safety Parameter Display System (SPDS) and have recently been added to the CR-3 drift trending program. The other 8 (High Pressure Injection Flow) are new transmitters (manufactured after July 1989) and are, therefore, exempt from a monitoring program.

### Requested Action 1b:

Replace, or monitor for the life of the transmitter on a quarterly basis using an enhanced surveillance monitoring program, any transmitters that have a normal operating pressure greater than 1500 psi and that are used in safety-related applications but are not installed in reactor protection trip systems, ESF actuation systems, or ATWS systems. At their discretion, licensees may monitor using an enhanced surveillance program at least once every refueling cycle, but not exceeding 24 months, transmitters in this category if the appropriate psi-month threshold criterion recommended by Rosemount has been reached, and the monitoring interval is justified based upon transmitter performance in service and its specific function. Provide to the NRC a copy of the licensee justification to extend the enhanced surveillance program beyond the quarterly test interval for transmitters that have reached the appropriate psi-month threshold criterion recommended by Rosemount.

FPC Response to 1b:

CR-3 has two (2) transmitters in this category. They are low range reactor pressure transmitters used for indication only and have no automatic actuation function. One meets the criteria for a "mature" transmitter and has been installed for three years. It is presently monitored every refueling. The other transmitter is new and, therefore, exempt from a monitoring program.

Requested Action 1c:

[For PWRs] Replace, or monitor at least once every refueling cycle, but not exceeding 24 months, using an enhanced surveillance program until the transmitter reaches the appropriate psi-month threshold criterion recommended by Rosemount, any transmitters that have a normal operating pressure greater than 500 psi and less than or equal to 1500 psi and that are installed in reactor protection trip systems, ESF systems, or ATWS systems.

FPC Response to 1c:

CR-3 has twenty-five (25) transmitters in this category, monitored by trending of as-found calibration data during refueling interval calibration (the Rosemount method). Twenty-four (24) of the 25 are Emergency Feedwater Initiation and Control (EFIC) transmitters. Ten of the 24 EFIC transmitters are presently monitored by the plant computer but do not provide the redundancy needed for the drift trending program. All transmitters will be added to the weekly monitoring program as soon as the remainder transmitters are added to the plant computer. The other one transmitter is new, and is therefore exempt from a monitoring program.

Requested Action 1d:

Replace, or monitor at least once every refueling cycle, but not exceeding 24 months, using an enhanced surveillance monitoring program until the transmitter reaches the appropriate psi-month threshold criterion recommended by Rosemount, any transmitters used in safety-related systems that have a normal operating pressure greater than 500 psi and less than or equal to 1500 psi, and that are not installed in reactor protection trip systems, ESF actuation systems, or ATWS systems.

FPC Response to 1d:

Same response as 1c for EFIC.

Requested Action 1e:

At licensee discretion, exclude from the enhanced surveillance program any transmitters that have a normal operating pressure greater than 500 psi and less than or equal to 1500 psi that have reached the appropriated psi-month threshold criterion recommended by Rosemount (60,000 psi-months or 130,000 psi-months depending on the range code of the transmitter). A high degree of confidence should be maintained for detecting failure of these transmitters caused by a loss of fill-oil and a high degree of reliability should be maintained for the function consistent with its safety significance.

FPC Response to 1e:

CR-3 does not have any transmitters in this category.

Requested Action 1f:

At licensee discretion, exclude from the enhanced surveillance program any transmitters that have a normal operating pressure less than or equal to 500 psi. A high degree of confidence should be maintained for detecting failure of these transmitters caused by a loss of fill-oil and a high degree of reliability should be maintained for the function consistent with its safety significance.

FPC Response to 1f:

CR-3 has twenty-two (22) transmitters in this category and meets the intent of the supplement through administrative controls and training of the technicians.

Requested Action 2:

Evaluate the enhanced surveillance monitoring program to ensure that the program provides measurement data with an accuracy range consistent with that needed for comparison with manufacturer drift data criteria for determining degradation caused by a loss of fill-oil.

FPC Response to 2:

FPC's drift trending program (enhanced surveillance monitoring program) for CR-3 gathers on-line data from redundant channels of instrumentation using the plant computer and compares the channels against each other. Data is collected and plotted weekly. Properly operating redundant transmitters will indicate the same process value within calibration tolerance and, consequently, trend together. Failing transmitters will drift away from the redundant channels and be rapidly identified. This program has been in place for thirteen (13) months and has proven successful in identifying failing transmitters twice during that period. This program is in effect for all primary system RPS and ES Actuation transmitters and will eventually be expanded to include all CR-3 Rosemount transmitters.