UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
Florida Power & Light Company	)	Docket No. 50-335
	)	
(St. Lucie Unit No. 1)	)	

ANSWER TO ORDER TO SHOW CAUSE

Introduction

Pursuant to Part V of the Order to Show Cause dated January 2, 1980, Florida Power & Light Company (FPL), hereby submits this Answer to the Order. The Order requires all "Category A" requirements (except the requirement of 2.1.7.a of NUREG-0578) referred to in Part II to be implemented by February 15, 1980. Prior to issuance of the Order, FPL's maintenance plans and projected load requirements had resulted in a scheduled shutdown date of March 15, 1980. All Category A items required to be completed by the Order, with the exception of the in-containment work associated with valve position monitoring for the primary power operated relief valves and the pressurizer

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safety valves, are scheduled to be implemented by February 15, 1980, without the necessity of a unit shutdown. The installation of the valve position monitoring system, however, requires a unit shutdown for an estimated period of from 4 to 7 days. The additional unit outage would result in an unnecessary expenditure of approximately 128 thousand to 224 thousand barrels of oil at a total replacement power cost of approximately $2,800,000 to $4,900,000. As shown below, the installation of a valve position monitoring system by February 15, 1980 will result in at best an unmeasurable change in safety when compared to installation by March 15, 1980 (an additional operating interval of only 29 days). The societal cost involved with such an outage clearly outweighs the small potential safety benefit.

Existing Provisions for Determining Valve Positions

Power Operated Relief Valves (PORV's)

- Each PORV already has position indication in the Control Room. This position indication provides the status of the PORV pilot valve which provides an accurate and reliable indication of PORV position.

- The 2 PORV discharge lines meet at a common header which contains a temperature sensor which alarms in the control room and indicates flow through one or both of the PORV's. These alarms are on the front control board and readily noticeable to the operator.

- The PORV's both discharge to the Quench Tank. The Quench Tank also has indications and alarms in the control room for the following parameters: pressure, temperature, and level. These alarms, indicating flow into the tank, are also on the front of the main control board, thus readily noticeable to the operator.

- Each PORV has a block valve (in series) which can be used to isolate the PORV. Controls and position indication are on the front of the main control board.

This combination of instrumentation and isolation valves provides redundant and diverse capability of detecting and identifying an open or leaking PORV. Such instrumentation has proven effective in the past for operator identification of leakage through these valves and can be relied upon to provide the operator with an accurate and reliable indication of PORV position for the short operating interval until March 15, 1980.

Pressurizer Safety Valves

- Each safety valve has a temperature sensor in its individual discharge piping. These sensors alarm in the control room on the front control board. This alerts the operators of flow through the valve(s).

- The safety valves (3) all discharge to the Quench Tank. The Quench Tank has temperature, pressure, and level annunciation in the control room on the front of the main control board. These alarms indicate flow into the tank.

This combination of instrumentation provides redundant and diverse capability of detection and identification of a leaking safety valve.

Discussion

The aforementioned indications, available to the operators, provide redundant and diverse capability for identifying open or leaking power operated relief valves or pressurizer safety valves. Additionally, the TMI-2 experience has resulted in operator training to improve operator capability for recognizing and responding to a stuck open relief or safety valve. This training has increased operator awareness of the stuck open valve scenario. Emergency procedures have also been reviewed and modified as necessary in order to maximize effectiveness in safely controlling a stuck open pressurizer relief or safety valve. The addition of the valve position monitoring system will provide further redundancy to the already redundant capability of identifying flow through pressurizer relief and safety valves. However, the presence or absence of additional valve position indication is not expected to alter the basic operator action that would be used to control or mitigate the consequences of transients caused by a stuck open relief or safety valve.

Conclusions

- Increased operator awareness and procedural reviews and modifications have further increased the ability to properly detect and respond to a stuck open relief or safety valve.

- The existing capability at St. Lucie Unit 1 for detection of open or leaking relief or safety valves is redundant, diverse, and adequate for the proposed extended operating interval (29 days). Due to the short duration of this interval, the addition of a valve position monitoring system would not have a measurable effect on overall safety.

- The potential for having a transient requiring operation of a pressurizer relief or safety valve is small because of the short duration of the proposed extended operating interval. It follows that the potential for having a stuck open pressurizer relief or safety valve during this interval is even smaller.

- It is reasonable to conclude that existing instrumentation will provide adequate protection of the public health and safety for the duration of the proposed extended operating interval (29 days).

Therefore, it is concluded that delaying the installation of valve position monitors on the power operated relief valves and the pressurizer safety valves for 29 days beyond February 15, 1980 will not adversely affect the health and safety of the public.

Modification Requested

For the foregoing reasons, FPL requests that the Order to Show Cause be modified by replacing the words "By February 15, 1980", appearing in the fifth line of Part V of the Order with the words "By March 15, 1980".

Respectfully submitted
on behalf of FPL,

A. D. Schmidt
Vice President
Power Resources

Date: January 22, 1980

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AFFIDAVIT OF SERVICE

I am A. D. Schmidt, and am employed by Florida Power & Light Company as Vice President. I hereby certify that copies of the attached Letter to Harold R. Denton, "Answer to Order to Show Cause" and the affidavit of A. D. Schmidt, all dated January 22, 1980, have been served on the following this 22 day of January, 1980:

Docketing & Service Section
Office of the Secretary
U. S. Nuclear Regulatory Commission
Washington, D. C. 20555 (20 copies)

James P. Murray, Jr., Esq.
Director and Chief Counsel
Rulemaking and Enforcement Division
Office of the Executive Legal Director
U. S. Nuclear Regulatory Commission
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A. D. Schmidt

Subscribed and sworn before me
this 22 day of January, 1980

Cheryl I. Fredrick
Notary
Notary Public, State of Florida at Large
My Commission Expires October 30, 1983
Bonded thru Maynard Bonding Agency