

# CATEGORY 1

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 AUTH. NAME:      AUTHOR AFFILIATION  
 HOVEY, R.J.      Florida Power & Light Co.  
 RECIP. NAME:      RECIPIENT AFFILIATION  
 REYES, L.A.      Region 2 (Post 820201)

SUBJECT: Special rept: on 970401, "OMS PORV Actuation," was caused by  
 Nuclear Plant Supervisor discussion in area of dedicated  
 RCS pressure control Reactor Control Officer, distraction  
 during critical evolution. NPS counseled. W/970424 ltr.

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APR 24 1997

L-97-102  
10 CFR 50.36

Luis A. Reyes  
USNRC Region II  
Atlanta Federal Center  
61 Forsyth St., SW, Suite 23T85  
Atlanta, GA 30323

Dear Mr. Reyes:

Re: Turkey Point Unit 3  
Docket No. 50-250  
Special Report - Overpressure  
Mitigating Systems - PORV Actuation

In accordance with Technical Specification 6.9.2, the attached Special Report is provided for your information.

Should there be any questions on this information, please contact us.

Very truly yours,

R. J. Hovey  
Vice President  
Turkey Point Plant

Attachment

CLM

cc: Document Control Desk, USNRC, Washington, D.C.  
T. P. Johnson, Senior Resident Inspector, USNRC, Turkey Point Plant

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## SPECIAL REPORT

### Purpose:

This Special Report is submitted in accordance with the requirements of Technical Specification (T.S.) 3.4.9.3, Action e, which requires the submission of a Special Report pursuant to T.S. 6.9.2 in the event either the Power Operated Relief Valves (PORVs) or a 2.20 square inch vent is used to mitigate a Reactor Coolant System (RCS) pressure transient.

### Event and Action Taken:

On April 1, 1997, Turkey Point Unit 3 was in Mode 4 with Reactor Coolant System (RCS) pressure at approximately 300 psig, RCS average temperature at 96°F, and the Overpressure Mitigation System (OMS) operational. Operations was performing procedure 3-OP-041.8, "Filling and Venting the Reactor Coolant System," which requires several RCS pressure changes while the system is water solid. Evolution briefings were conducted with personnel involved, and a Reactor Control Operator (RCO) was assigned as the dedicated watchstander responsible for solid water pressure control. RCS pressure had been increased twice to about 350 psig for the one minute runs of the 3C and 3B Reactor Coolant Pumps (RCPs), then decreased to about 150 psig for venting.

During the pressure increase in preparation for the one minute run of the 3A RCP, the dedicated RCO was distracted from his primary function of RCS pressure control by the Nuclear Plant Supervisor's (NPS's) discussion with other control room personnel concerning the ongoing evolutions. At 1:50 a.m., during this discussion, the Overpressure Mitigating System (OMS) High Pressure Alert annunciated at 400 psig. The dedicated RCO immediately stopped the running charging pump. Although no Operations personnel saw the position indication for either of the PORVs change or saw the PORV Open annunciator, they did hear the relays changing state, indicating an OMS actuation. The OMS system operated as designed, with PORV (or PORVs) lifting at about 415 psig.

Reducing RCS pressure from the opening setpoint to the reset pressure takes a momentary actuation of the PORV. One or both of the PORVs lifted momentarily and properly reseated as verified by an increase in the pressure and level in the Pressurizer Relief Tank at the time the RCS pressure started to decrease. This information was obtained from the Emergency Response Data Acquisition and Display System (ERDADS).

After the event, RCS pressure was stabilized, then decreased to 300 psig and held there while the event was investigated.



Causes:

The primary cause of this event was the NPS's discussion in the area of the dedicated RCS pressure control RCO, distracting him during a critical evolution.

Other causal factors are as follows:

1. Management oversight was ineffective. The Management On Shift (MOS) is a temporary position established at the discretion of plant management to observe on-shift activities and report concerns or unsafe acts to the NPS. The MOS designee when the PORV actuated was not in direct oversight of a critical evolution.
2. A slower rate of pressure increase would have provided time for the operator to react when the OMS High Pressure Alert annunciated, without resulting in a PORV actuation, but the procedure did not specify a rate of pressure increase.
3. The OMS High Pressure Alert setpoint of 400 psig does not provide sufficient warning prior to the PORV actuation pressure of 415 psig.

Note: Special Report L-93-28 reported the previous PORV actuation in January, 1993. Corrective Action #3 stated that, "An evaluation will be performed to determine if a change in the OMS alarm annunciator setpoint is necessary to allow more time for the operator to respond to an increase in RCS pressure during evolutions with the RCS in a water solid condition. The existing alarm annunciator setpoint is 400 psig, and the PORV lift setpoint is 415 psig."

The evaluation was completed, indicating that a lower alarm setpoint was possible, but would require additional hardware (a dual comparator). Rather than modify hardware, more stringent administrative controls were placed on RCS pressure limits during solid water operations. This incident showed that, although the procedural controls were more stringent, they were not explicit, in that they did not specify a rate of pressure increase.

Corrective Actions:

1. The NPS was counseled concerning distracting personnel during critical evolutions.
2. The MOS designee was counseled concerning his primary function: oversight of control room restart evolutions.

3. The operator assigned as the dedicated RCS pressure control RCO was counseled on letting himself be distracted from his specific assigned responsibility.
4. The factors leading to the PORV actuation were discussed with all personnel involved, emphasizing the importance of monitoring RCS pressure during solid water operations.
5. Operations has scheduled a self-assessment, which will include this event.
6. Procedure 3/4-OP-041.8 will be revised to include:
  - a standard shift briefing emphasizing solid water operations, and that care must be taken not to distract personnel. This briefing will also be included in 3/4-OP-041.2, "Pressurizer Operation."
  - Management's expectations on the rate of pressure increase, on use of the automatic mode for the pressure control valve if available, on stopping at specified pressure plateaus, and a caution to monitor the rate of change as pressure increases.
7. This event, and the resultant procedure changes, will be presented to licensed operators during the pre-outage training segment of Licensed Operator Continuing Training.
8. The OMS High Pressure Alert setpoint will be reduced to a lower value, as determined by Operations and Engineering. The setpoint will be changed prior to the Unit 4 refueling outage presently scheduled for October, 1997.





APR 24 1997

L-97-102

10 CFR 50.36

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