

# Florida Power

CORPORATION  
Crystal River Unit 3  
Docket No. 50-302

January 31, 1996  
3F0196-16

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

Subject: NRC Inspection Report No. 50-302/95-14  
NRC to FPC letter, 3N0995-02, dated September 1, 1995

Reference: FPC to NRC letter, 3F0995-14, dated September 26, 1995  
Response to a Notice of Violation

Dear Sir:

In the subject Inspection Report of September 1, 1995, Florida Power Corporation (FPC) received a Notification of Violation concerning a postulated fire that could result in Makeup Tank vortexing and a 10 CFR 50, Appendix R concern. In the referenced letter, we provided our response. Please accept this correspondence, with its associated attachment, as a revised response.

Sincerely,

*P.M. Beard, Jr.*  
for

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

PMB/RLM

cc: Regional Administrator, Region II  
NRR Project Manager  
Senior Resident Inspector

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FLORIDA POWER CORPORATION  
NRC INSPECTION REPORT NO. 50-302/95-14  
REPLY TO A NOTICE OF VIOLATION

VIOLATION 50-302/95-14-02

10 CFR 50, Appendix R, Paragraph III.G, Fire Protection of Safe Shutdown Capability, requires, in part, that one train of systems necessary to achieve and maintain hot shutdown conditions from either the control room or the emergency control station(s) is free of fire damage.

Contrary to the above, on July 7, 1995, it was determined that a postulated fire on the 95 foot elevation in the auxiliary building could result in continuous hydrogen (H<sub>2</sub>) addition to the makeup tank, leading to vortexing in the makeup tank which could cause damage to the running makeup pump (High Pressure Injection Pump). The postulated fire could also result in the loss of function to the idle makeup pumps. The existing plant configuration could allow a single event to render the entire makeup and purification system inoperable.

ADMISSION OR DENIAL OF THE ALLEGED VIOLATION

Florida Power Corporation (FPC) accepts the violation.

REASON FOR THE VIOLATION

The cause of this event was a design analysis error in that the original Analysis/Calculation for hydrogen pressure in the Makeup Tank (MUT-1) did not take into consideration vortexing at reduced inventory in the tank.

CORRECTIVE STEPS THAT HAVE BEEN TAKEN AND THE RESULTS ACHIEVED

1. A formal operability evaluation was conducted in accordance with NOD-14, titled "Evaluating Operability and Determining Safety Function Status". This activity was completed on July 7, 1995 and found the makeup system to be operable based on the ability to isolate the H<sub>2</sub> to MUT-1 with Makeup Valve (MUV) MUV-493, the H<sub>2</sub> regulator manual isolation valve.
2. There are two methods to add H<sub>2</sub> to the MUT, opening MUV-493 to allow H<sub>2</sub> through the regulator (MUV-491) or bypassing the regulator by opening the manual bypass valve (MUV-492). MUV-492 and MUV-493 have been proceduralized to ensure only one will be opened by a "dedicated operator" during hydrogen addition. The valve to be opened will depend on the method used.
3. A Short Term Instruction (STI) and an Operations Study Book (OSB) entry were issued to operations personnel to specify requirements to administratively control MUV-492 and MUV-493 while the procedural changes noted above were prepared.
4. FPC Nuclear Engineering Design management personnel reviewed this issue with Mechanical and Instruments & Controls engineers to heighten awareness of this event. This activity was completed on September 15, 1995.

CORRECTIVE STEPS THAT WILL BE TAKEN TO AVOID FURTHER VIOLATIONS

After lengthy reviews of the assumptions used in calculating the available operator response time during different fire scenarios, the long term resolution to this issue was determined to be:

- a) Continue to leave the regulator (MUV-491) normally isolated and use the manual isolation valves to add hydrogen to the MUT as described above. It was also agreed that manually charging the MUT with hydrogen would not be considered an Operator Work Around and that long term, this method was preferred because it is fast and puts more focus on the evolution.
- b) Generate a design change to lower the setpoint on MUV-491 to a value that would bring it into compliance with design assumptions, adding a level of defense when using the regulator to add H<sub>2</sub> to the MUT.

DATE WHEN FULL COMPLIANCE WILL BE ACHIEVED

Full compliance was achieved on July 7, 1995 with the operability evaluation that found the makeup system to be operable based on the ability to isolate the H<sub>2</sub> to MUT-1 with MUV-493, the H<sub>2</sub> regulator manual isolation valve.

Additionally, the design change in item b. above will be issued and installed during the upcoming Refuel 10 outage scheduled for the Spring of 1996.

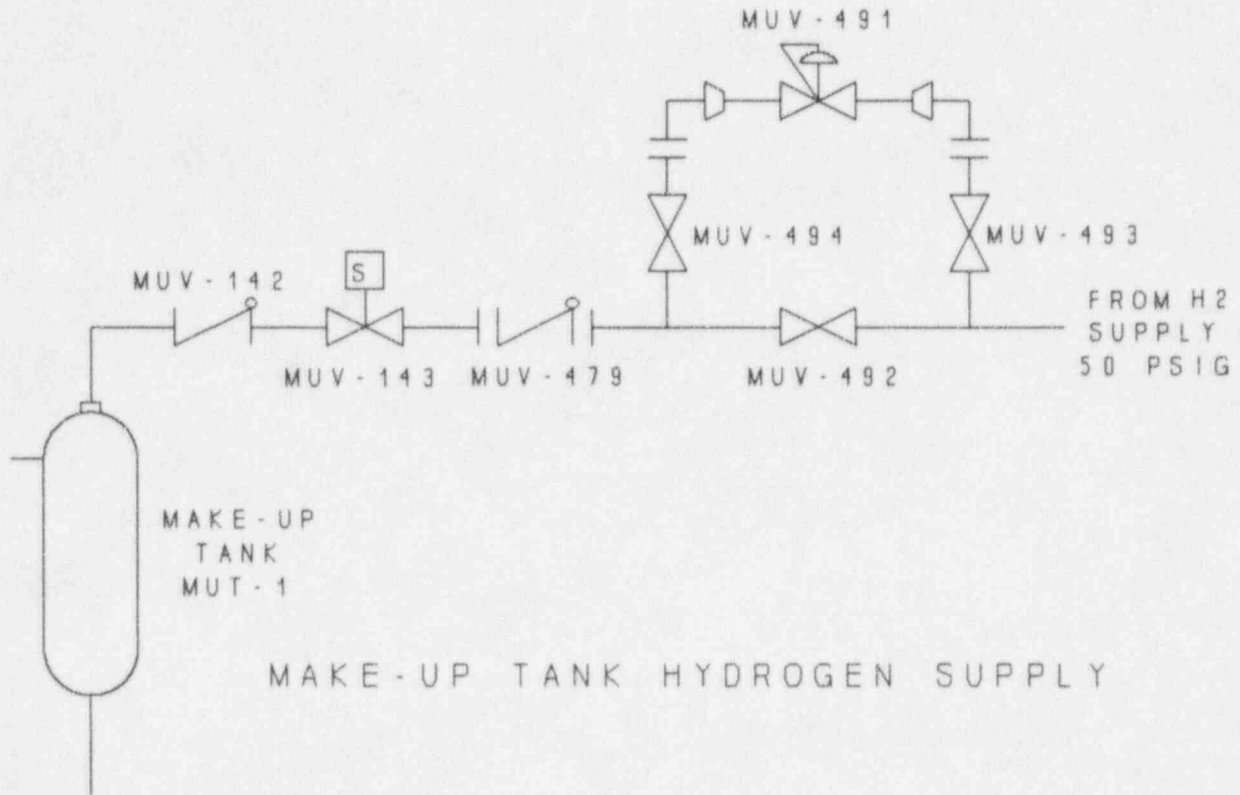


FIGURE 1