

**Florida  
Power**  
CORPORATION

June 16, 1982  
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Mr. J. P. O'Reilly, Regional Administrator  
Office of Inspection & Enforcement  
U.S. Nuclear Regulatory Commission  
101 Marietta Street N.W., Suite 3100  
Atlanta, GA 30303

Subject: Crystal River Unit 3  
Docket No. 50-302  
Operating License No. DPR-72  
Special Report - Waste Gas Decay Tank

Dear Mr. O'Reilly:

On June 7 and 8, 1982, members of your staff participated in several telephone conversations with representatives of Florida Power Corporation (FPC) and the Office of Nuclear Reactor Regulation (NRR) to discuss a postulated common mode failure discovered by FPC in the Radioactive Waste Gas System. Specifically, the common inlet piping header and associated valves were not designed nor installed in accordance with Seismic Category I criteria. If this line failed during a seismic event and if each tank (total of 3) contained the Technical Specification limit of radioactivity of 47,000 Ci (Xe-133 equivalent), an event not bounded by the Final Safety Analysis Report (FSAR) for Crystal River Unit 3 (CR-3) would occur.

Upon identification of the common mode failure, FPC performed analyses to determine if the postulated event was bounded by the FSAR. Indeed, the Xe-133 equivalent for 1% failed fuel is 119,253 Ci from FSAR Table 14-54 while the waste gas decay tanks could potentially contain 141,000 Ci (Xe-133 equivalent) total. It should be noted that the one-hour dose at the exclusion distance would be increased from 1.44 Rem to 1.70 Rem if this event occurred. However, this is less than 0.6% of the 10CFR100 accident dose guidelines.

Analyses were then performed to determine if the tanks had ever contained more than 119,253 Ci (Xe-133 equivalent). They had not because (1) CR-3 had never had sufficient failed fuel to produce that much gas, and (2) even if the tanks had been filled to the Technical Specification limit simultaneously, the short time required for the radioactivity to decay to less than the FSAR assumptions (approximately one day) when combined with the probability of a seismic event at the Crystal River site results in a very small possibility for an event that would exceed the FSAR assumptions.

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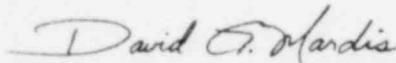
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Realizing the necessity for reporting this finding, but lacking guidance in Section 5.0 of the Appendix B Technical Specifications, FPC contacted your staff to discuss the reportability and FPC's proposed corrective actions. The reportability discussion resulted in this report. FPC's corrective actions are as follows:

- 1) Administratively limit the radioactivity in each tank to ≤39,751 Ci (Xe-133 equivalent until Item (2) is implemented.
- 2) Correct Appendix B Technical Specification 2.4.2.E as it is implemented by the upcoming Radiological Effluent Technical Specification (RETS) so the analyses of the FSAR are not exceeded (i.e., limit each Waste Gas Decay Tank 39,751 Ci (Xe-133 equivalent), and
- 3) FPC is reviewing this finding for possible 10 CFR 21 reportability.

FPC wishes to thank IE and NRR for their candor and technical feedback in reaching a safe and expeditious resolution to this concern.

Very truly yours,



David G. Mardis  
Acting Manager  
Nuclear Licensing

RMB:mm

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