ENCLOSURE 1

SAFETY EVALUATION REPORT

PUMP AND VALVE TESTING PROGRAM RELIEF REQUESTS

FLORIDA POWER CORPORATION

CRYSTAL RIVER UNIT 3

DOCKET NO. 50-302

INTRODUCTION

By letters dated November 7, 1989, and March 7, 1990, Florida Power Corporation (FPC) submitted three relief requests concerning the inservice pump and valve testing program (IST) for Facility Operating License DPR-72 for Crystal River Unit 3 (CR 3). Relief requests V-115 proposed use of OM-1 instead of PTC 25.3 for safety/relief valve testing. Relief request V-366 requested relief from the requirements of valve remote position indication verification. Relief request V-371 requested relief from the requirements governing fluctuations in hydraulic pump readings.

DESCRIPTION AND DISCUSSION

Relief Request Number V-115

The licensee has requested relief to utilize the reference in the ASME Code, Section XI, IWV-3510, 1986 Edition to ANSI/ASME OM-1, 1981, for all the requirements for inservice testing of safety and relief valves with the exception of the main steam safety valves which will remain in a five-year test frequency. Relief is being requested from the requirements of the ASME Code, Section XI, 1983 Edition through Summer 1983 Addenda which contains testing frequency requirements and references the ANSI Performance Test Code 25.3, 1976.

Basis for Relief

The alternative code is a more recent standard and more appropriate for all safety/relief valve testing requirements in the field.

Evaluation

The licensee has requested relief from the safety/relief valve testing requirements of their code of record, the ASME Code, Section XI, 1983 Edition through Summer 1983 Addenda. As an alternative, the licensee proposes to

utilize the applicable requirements of the 1986 Edition of the ASME Code, Section XI. Use of the 1986 Edition has been approved by the NRC in that this edition of Section XI has been incorporated by reference in 10 CFR 50.55a(b)(2).

The licensee has indicated that they will follow all the OM-1, 1981, requirements for inservice testing of safety and relief valves with the exception of the main steam safety valves which will remain in a five year test frequency. OM-1, 1981, requires that PWR main steam safety valves be tested in accordance with the frequency requirements for ASME Code Class 1 safety valves which are on a five year test frequency. Therefore, this exception is not necessary.

Based on the acceptability of the licensee's proposal, as explained above, relief is granted pursuant to 10 CFR 50.55a(a)(3)(i).

Relief Request Number V-366

Relief Requested

The licensee has requested relief from the ASME Code, Section XI, IWV-3300 requirements for observation of valve position to verify accurate remote position indication. The valves covered by this request are LRV-70, LRV-71, LRV-72, and LRV-73 which perform postaccident hydrogen purge isolation.

Verification that valve position is accurately indicated by remote indicators will be accomplished indirectly by observation of affected system parameters which can include items such as establishment and cessation of flow or change in indicated system pressure or level.

Basis for Relief

These are solenoid operated valves. The solenoid operators are enclosed in a "can" that is seal welded closed. There is no method to visually verify the valve stem position without cutting the closure weld.

Evaluation

The licensee has indicated that it is not possible to verify valve stem position directly and correlate valve stem position with the remote indicators since the valves are totally encapsulated. As an alternative the licensee has proposed relying on system parameters to verify valve position. This method will provide the same information and may in some cases provide more reliable verification of valve position than simple observation of valve stem position. Therefore, the proposed alternative is acceptable and relief is granted pursuant to 10 CFR 50.55a(a)(3)(i).

Relief Request V-371

Relief Requested

The licensee has requested relief for the chilled water pumps from the requirements of the ASME Code, Section XI, IWP-4150 which requires that instrument fluctions be reduced to within 2% of the observed reading. The licensee has proposed to assure that "steady-state" conditions are met and then average the flow readings. Upon achieving the desired average flow reading, which will be within 2% of the required reading, the remaining pump data will be gathered in accordance with Section XI requirements.

Basis for Relief

The Chilled Water Pumps in the CR3 Pump and Valve Inservice Testing Program have not had flow measurement requirements imposed on them as allowed by Request for Relief V-370. In V-370, Flow measurements were not required to be taken due to a damaged flow element. Request V-370 was withdrawn, as a result of a new element being installed, and flow measurements were subsequently imposed.

The design and operation of the Chilled Water System results in low flow conditions. The element used to measure flow is an annubar type that, under lower flow conditions, typically will indicate hydraulic fluctuations in measurement. This, coupled with the physical location of the element downstream of an elbow produces an indication of hydraulic fluctuation that cannot be reduced to be within 2% of the required reading.

Evalulation

The licensee had indicated that manual averaging techniques will be used to reduce pump hydraulic instrument fluctions. Based upon NRC understanding of the Code, this type of averaging is permitted to meet the requirements of IWP-4150. Therefore, relief from the Code requirements is not necessary.

In Crystal River 3 LER 90-003, the licensee has indicated that Engineering is pursuing enhancing the existing instrumentation which will provide a digital averaging technique. We would encourage the licensee to pursue this enhancement.