

January 28, 1985

Docket Nos. 50-250  
and 50-251

Distribution  
NRC PDR  
ORB#1 RDG  
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JKramer  
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ACRS (10)

Mr. J. W. Williams, Jr., Vice President  
Nuclear Energy Department  
Florida Power and Light Company  
Post Office Box 14000  
Juno Beach, Florida 33408

Dear Mr. Williams:

Reference: Tac Nos. 45176 and 45177

SUBJECT: INADEQUATE CORE COOLING INSTRUMENTATION (ICCI) SYSTEM -  
NUREG-0737, ITEM II.F.2

By letters dated March 10, 1983, April 13, 1984 and June 15, 1984, you provided responses to Generic Letter 82-28 relating to the ICCI system for the Turkey Point Plant Units 3 and 4. Your initial responses were supplemented on September 13 and 20, 1984. The supplemental information addressed the open items discussed during our implementation audit at the Turkey Point site on August 8, 1984, and our draft Safety Evaluation (SE) dated August 14, 1984.

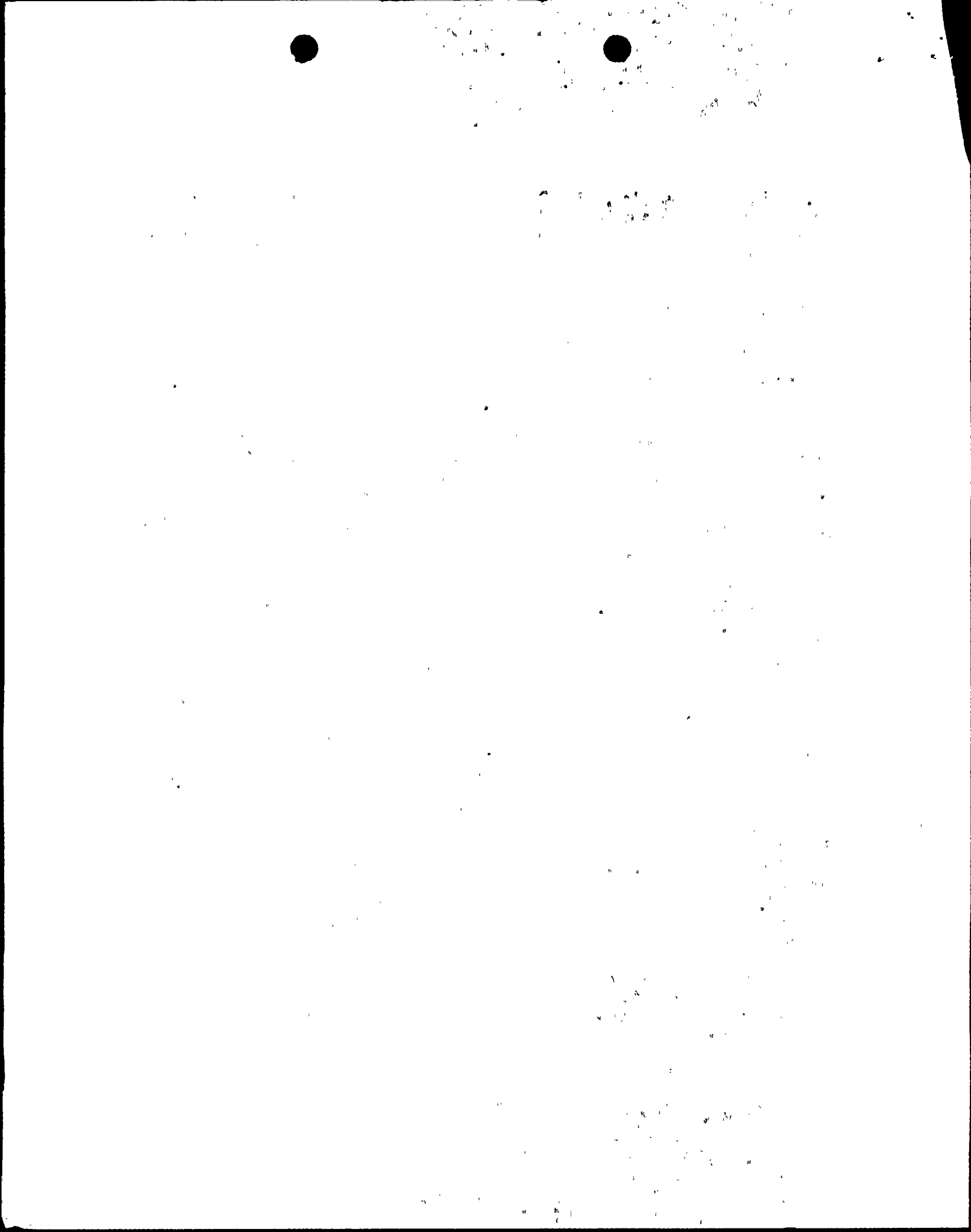
We have reviewed your submittals in accordance with the guidance provided in NUREG-0737, Item II.F.2. The details of our review are included in the enclosed SE. We have concluded that the ICCI system for the Turkey Point Plant Units 3 and 4 is in accordance with the guidance provided in NUREG-0737, Item II.F.2, and is acceptable.

Our acceptance, as indicated in the enclosed SE, is based on the upgrading of the vital inverters, interconnecting the Qualified Safety Parameter Display Systems (QSPDS) to the Safety Assessment System (SAS), implementation of the revised procedures for the ICCI and Technical Specifications changes for the Reactor Vessel Level Monitoring System.

By letter dated January 16, 1984, you provided an updated status of the Turkey Point ICCI system implementation. We understand that the vital inverters will be upgraded during the Unit 4 outage (Fall 1985) and the Unit 3 outage (1986). The interconnection of the QSPDS to SAS will be made during the Unit 3 and 4 outages scheduled for 1985 (Spring Unit 3, Fall Unit 4). The revised procedures for the ICCI will be implemented by January 25, 1985. The proposed plant specific Technical Specifications will be submitted to the NRC by March 15, 1985.

We have completed our review effort related to the above referenced TAC numbers. However, we request that any change in the status of the items identified above be provided. We will establish new TAC numbers for our review of your proposed Technical Specifications when they are submitted.

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F PDR



Mr. Williams

-2-

January 28, 1985

The reporting and/or recordkeeping requirements of this letter affect fewer than ten respondents; therefore, OMB clearance is not required under P.L. 96-511.

Sincerely,

/s/SAVarga

Steven A. Varga, Chief  
Operating Reactors Branch #1  
Division of Licensing

Enclosure:  
As stated

cc w/enclosure:  
See next page

ORB#1:DL  
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SVarga  
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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D. C. 20555

January 28, 1985

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and 50-251

Mr. J. W. Williams, Jr., Vice President  
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Post Office Box 14000  
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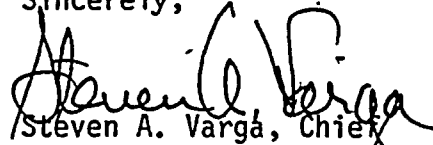
Mr. Williams

-2-

January 28, 1985

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Steven A. Varga, Chief  
Operating Reactors Branch #1  
Division of Licensing

Enclosure:  
As stated

cc w/enclosure:  
See next page

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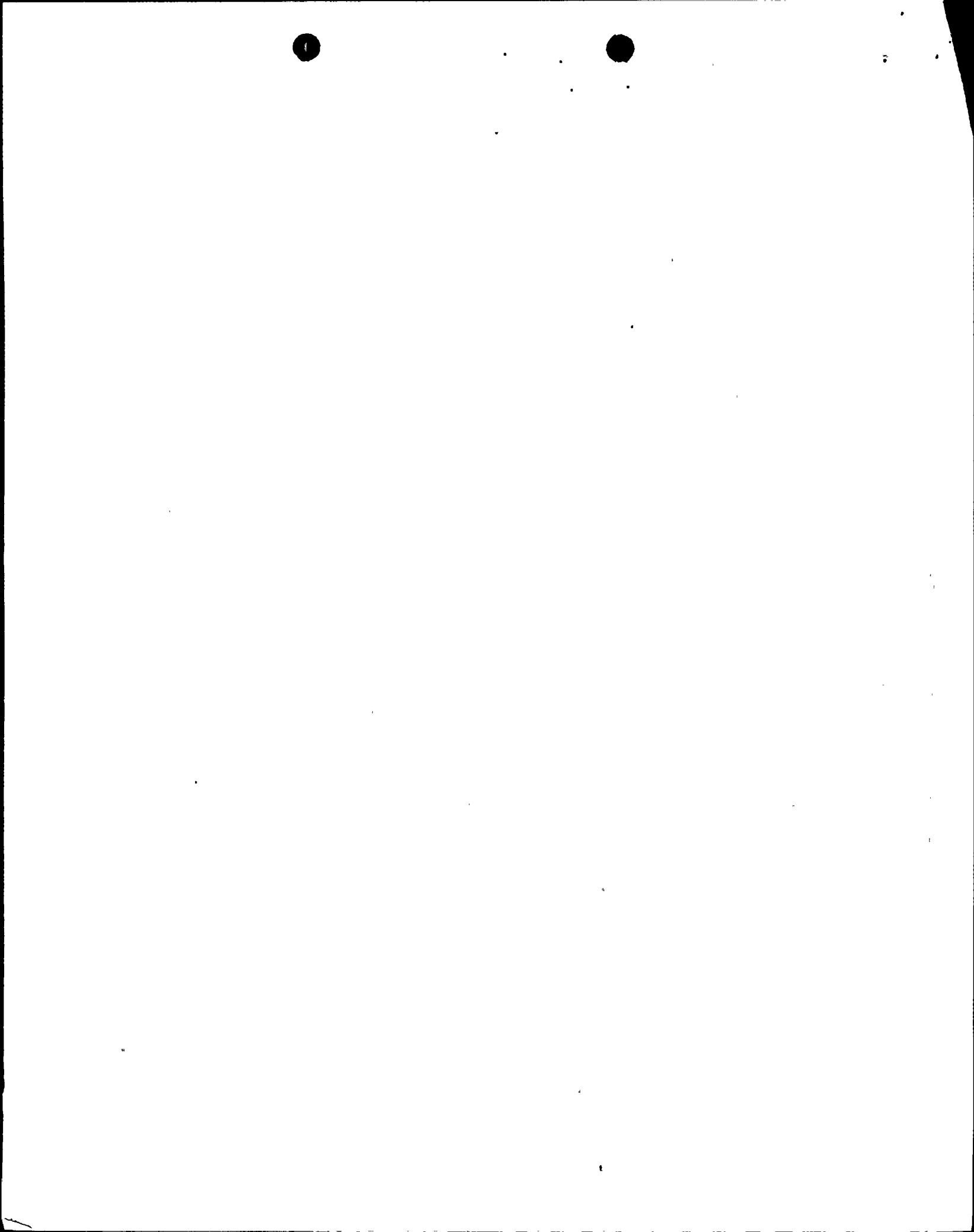
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SAFETY EVALUATION  
FLORIDA POWER AND LIGHT COMPANY  
IMPLEMENTATION OF THE INADEQUATE CORE COOLING (ICC) INSTRUMENTATION SYSTEM  
FOR TURKEY POINT PLANT UNITS 3 AND 4

The ICC instrumentation system at Turkey Point consists of Subcooling Margin Monitor (SMM), Reactor Vessel Level Monitoring System (RVLMS), and Core Exit Thermocouples (CET). All of the equipment is installed and operational.

The staff evaluation <sup>(1)</sup> of the Florida Power and Light Company (FP&L) responses <sup>(2),(3),(4)</sup> to NRC Generic Letter No. 82-28 (GL 82-28) concluded that additional information with respect to the power supply for ICCI, the operational status of the final ICCI system, and the implementation letter report were needed in order for the staff to conclude that the design of the ICC instrumentation system conforms to NUREG-0737 design requirements.

In response to the staff's request <sup>(1)</sup> for additional information and for the implementation letter report, the licensee has transmitted letters <sup>(5),(6)</sup> from J. W. Williams, Jr. (FP&L) to S. A. Varga (NRC) to address those concerns as follows:

A. Response to the power supply for ICCI and operational status of ICCI

1. The ICCI system is presently powered from panels 3(4)C202A and 3(4)C203A. These safety related panels are powered from the vital portion of MCC's 3(4)B and 3(4)C. The present power supplies represent an interim configuration until the Vital Inverters of Turkey Point are replaced. At that time, the ICCI will be transferred to the 120 volt vital a.c. system and powered from the Vital Instrumentation panels. These panels are fed from the battery chargers and backed up by the safety related plant batteries. The ICCI system will be

powered from inverters after the 1985 Fall outage for Unit 4 and after the 1986 outage for Unit 3.

2. The ICCI system has been completely installed except for the interconnecting cable from the Qualified Safety Parameter Display System (QSPDS) to the Safety Assessment System (SAS), which is planned to be completed in Spring 1985 for Unit 3 and in Fall 1985 for Unit 4, and except for the replacement of the Vital Inverters, which is described in Item 1 above. The system is in operation.

B. Response to the implementation letter report

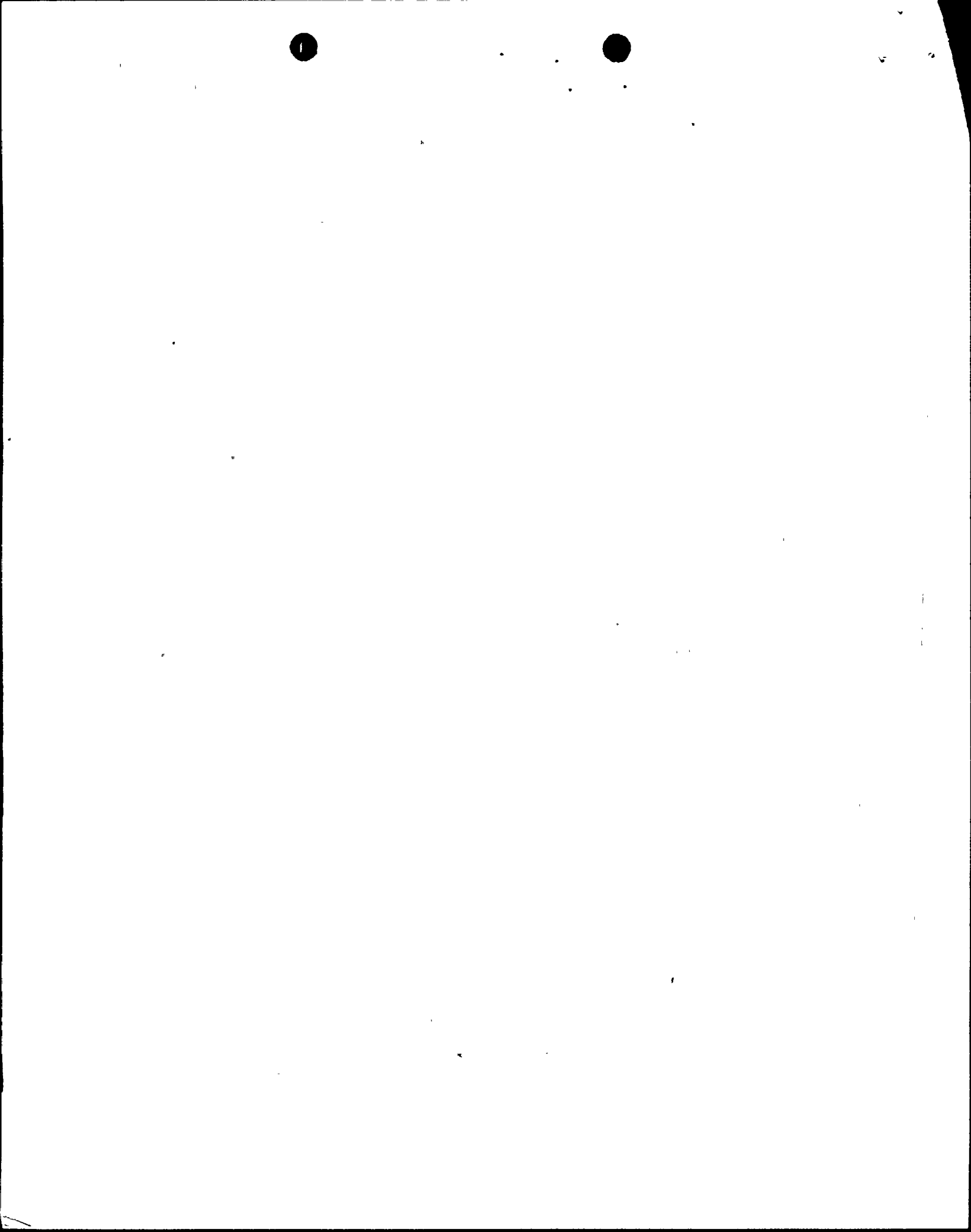
1. The installation, functional testing, and calibration of the RVLMS portion of the ICCI system were completed by December 16, 1983 for Turkey Point Unit 3 and May 25, 1984 for Turkey Point Unit 4. The functional testing and calibration were completed in accordance with Temporary Procedure TP 0065, "Qualified Safety Parameter Display System Functional Test & Calibration". This documentation is available for inspection at the Turkey Point Plant.
2. Based on the test results obtained, the RVLMS performs in accordance with design expectations and within design error tolerances. There were no deviations from the design performance specifications. As discussed during the staff audit on August 8, 1984, there are a number of hardware and software problems which remain to be resolved, FPL is pursuing resolution of those problems with the vendor, Combustion Engineering.



3. The QSPDS for the Turkey Point plant is only used to process the ICCI system parameters, and is not a back-up Safety Parameter Display System. The RVLMS is the split probe type with two sensors in the upper head and six sensors in the upper plenum. The Vital Inverters will be upgraded to power the ICCI system.
4. The staff position on the appropriate operability requirements for the RVLMS have been transmitted to the licensee and a commitment to incorporate the staff position into a Technical Specification for this system has been provided by the licensee.
5. FPL has requested approval of the plant-specific installation of the RVLMS for the Turkey Point Plant since the RVLMS has been installed and is operational.
6. The emergency operating procedures used for operator training will conform to the technical content of NRC approved EOP guidelines (Westinghouse Owners Group Emergency Response Guidelines (WOG ERG), Revision 0). The existing plant operating and emergency procedures have been revised to reflect the ICCI system and will be implemented in December 1984. The revisions will be consistent with the technical content of the NRC approved WOG ERG. However, implementation of plant specific emergency procedures based on the WOG ERG will not occur until December 31, 1985.

### Evaluation

The staff has reviewed the FP&L responses (2), (3), (4), (5), (6) to NRC concerns with respect to conformance with the requirements of NUREG-0737, Item II.F.2. Based on this review in conjunction with our previous evaluation (1) and the implementation review of the ICCI installation conducted at the Turkey Point

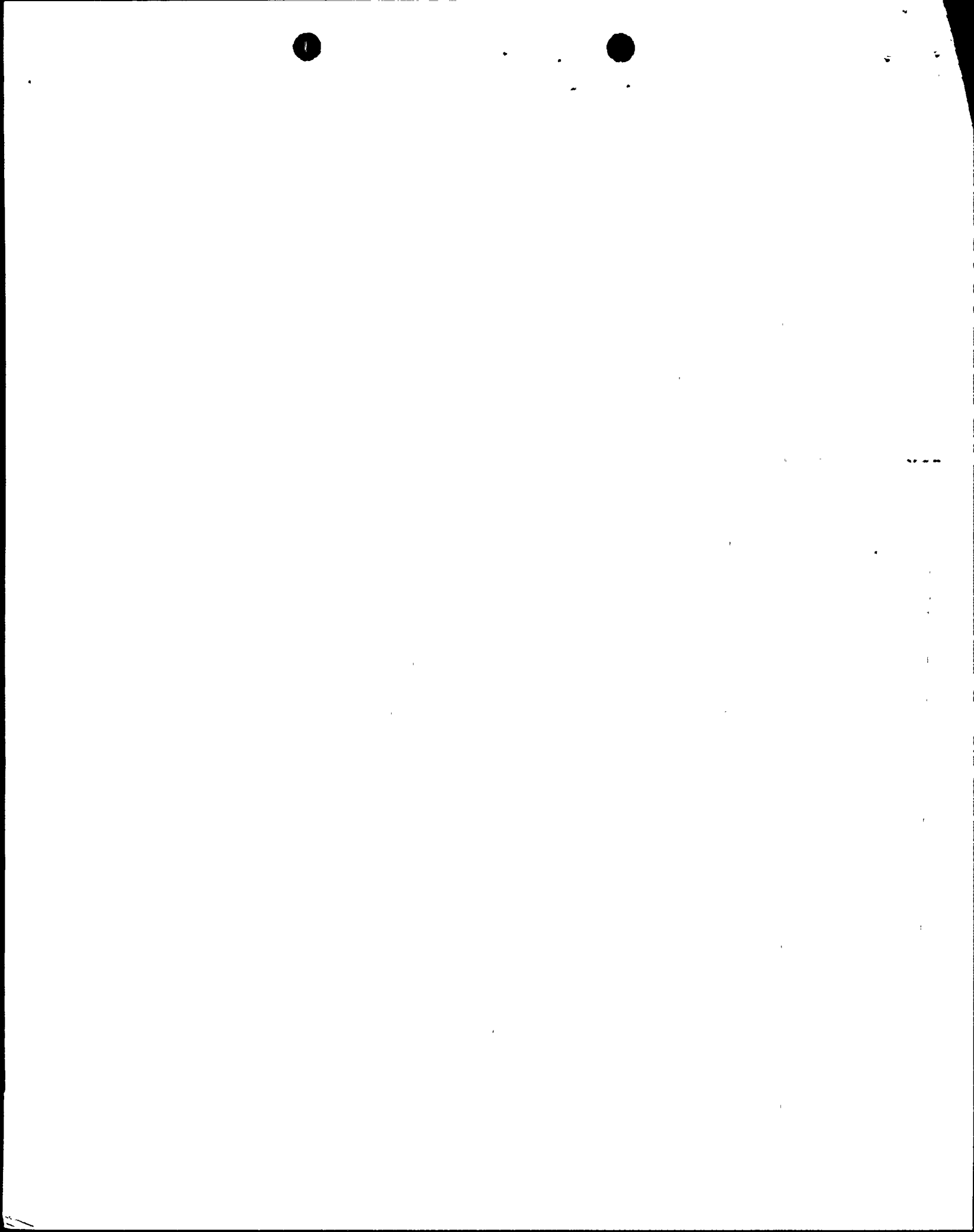


Plant on August 8, 1984, our conclusions follow:

1. The current redundant RVLMS, which has been installed, calibrated and is fully operational, is acceptable.
2. The commitments to upgrade the Vital Inverters for ICCI power supplies, to connect QSPDS to SAS, and to incorporate the reactor vessel inventory tracking system into the Technical Specifications for accident monitoring instrumentation are acceptable.
3. The proposed schedule to complete upgrading of the Vital Inverters during the 1985 outage for Unit 4 and the 1986 outage for Unit 3, to implement revised EOPs for ICC in December 1984, and to connect interconnecting cable from QSPDS to SAS in Spring 1985 for Unit 3 and in Fall 1985 for Unit 4 is acceptable.

Regarding the Turkey Point Procedures and displays, review of the Procedures Generation Package (PGP) and review for acceptance of the licensee's Control Room Design Review (CRDR) (required by Generic Letter No. 82-33), which will include procedures and displays for inadequate core cooling, is in progress and may require further changes to Turkey Point Units 3 and 4 EOPs and displays. Any additional changes to Turkey Point EOPs and displays resulting from the staff review of PGP and CRDR should be addressed by FP&L in a separate submittal corresponding to the schedule committed in response to GL 82-33.

Based on the results of our review, we conclude that upon completion of the upgrading of the existing ICCI, implementation of the revised procedures for ICC, and implementation of Technical Specification changes for the RVLMS system, the ICC instrumentation for Turkey Point Plant, Units 3 and 4 in response to GL 82-28 will be in compliance with the NUREG-0737 Item II.F.2 requirements and is acceptable. In the interim, RVLMS is approved for

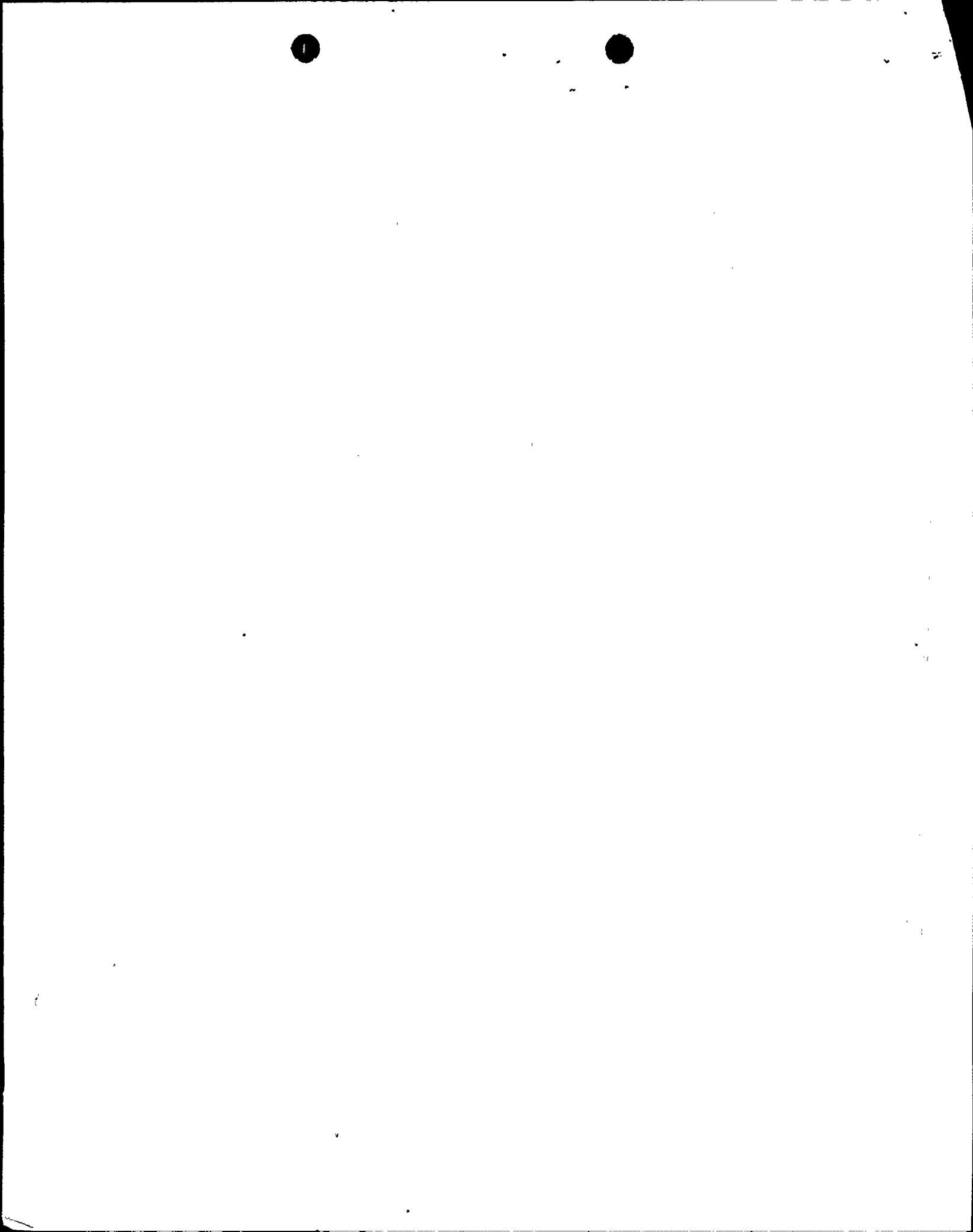


implementation subsequent to implementation of the revised Technical Specification relating to RVLMS.

Principal Contributors:

T. Huang  
J. Bongarra  
J. Kramer





References

1. USNRC, Letter to FP&L, dated August 14, 1984.
2. FP&L, Letter to USNRC, dated March 10, 1983.
3. FP&L, Letter to USNRC, dated April 13, 1984.
4. FP&L, Letter to USNRC, dated June 15, 1984.
5. FP&L, Letter to USNRC, dated September 13, 1984.
6. FP&L, Letter to USNRC, dated September 20, 1984.