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FEBRUARY 27 1990

L-90-77
10 CFR 50.36

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

Gentlemen:

Re: St. Lucie Units 1 and 2
Docket Nos. 50-335 and 50-389
1989 Annual Operating and
Steam Generator Inservice Inspection Report

Pursuant to Technical Specification 6.9.1.4, the 1989 Annual Operating Report for St. Lucie Units 1 and 2 is attached. Also, pursuant to Technical Specification 4.4.5.5, the 1989 Steam Generator Inservice Inspection Report for St. Lucie Unit 2 is attached.

Very truly yours,

D. A. Sager
Vice President
St. Lucie Plant

DAS/WFK/gp

Attachments

cc: Stewart D. Ebneter, Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, St. Lucie Plant

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1989 ANNUAL OPERATING REPORT

ST. LUCIE UNITS 1 AND 2

AND

1989 ST. LUCIE UNIT 2

STEAM GENERATOR INSERVICE INSPECTION REPORT

9003060110

TABLE OF CONTENTS

SECTION 1

St. Lucie

Annual 10 CFR 50.59 Report

A summary of changes to the facility as described in the Final Safety Analysis Report (FSAR) (10 CFR 50.59 (A)(1)(i)) is submitted by separate letters at the same time as the annual FSAR update for each unit (July 22 for St. Lucie Unit 1 and April 6 for St. Lucie Unit 2).

Changes to procedures as described in the FSAR (10 CFR 50.59(A)(1)(ii)) and tests and experiments not described in the FSAR (10 CFR 50.59(A)(1) (iii)) are attached.

10 CFR 50.59 Evaluations

Temporary Changes via Jumper/Lifted Lead Requests

10 CFR 50.59 Evaluations for Temporary Changes via Jumper/Lifted Leads

Unit 1 **Request Number** 9-18

Component / System Affected

Hydropneumatic Tank to Domestic Water

Description of Change

This jumper will prevent the loss of domestic water system by welding in a new pipe and remove jumper line #2-SW-13.

Safety Evaluation

The activity does not increase the probability of occurrence of an accident previously identified in the FUSAR, nor increase the consequences of an accident previously evaluated in the FUSAR.

This activity does not increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the FUSAR, nor increase the consequences of malfunction of equipment important to safety previously evaluated in the FUSAR.

This activity does not create the possibility of a malfunction of equipment important to safety of a different type than previously evaluated in the FUSAR, nor reduce the margin of safety as defined in the basis for any technical specification.

Basis: The domestic water system serves no safety function since it is not required for safe shutdown nor to mitigate the consequences of an accident. Domestic water is not connected to any system which is a potential source of radioactive contamination.

10 CFR 50.59 Evaluations for Temporary Changes via Jumper/Lifted Leads

Unit 1 **Request Number** 9-26

Component / System Affected

HVE-8A and 8B, Containment Main Purge

Description of Change

This jumper will prevent main purge from shutting down when MCCs A6 and B6 are de-energized.

Safety Evaluation

The activity does not increase the probability of occurrence of an accident previously identified in the FUSAR, nor increase the consequences of an accident previously evaluated in the FUSAR.

The activity does not increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the FUSAR, nor increase the consequences of malfunction of equipment important to safety previously evaluated in the FUSAR.

The activity does not create the possibility of a malfunction of equipment important to safety of a different type than previously evaluated in the FUSAR, nor reduce the margin of safety as defined in the basis for any technical specification.

The FUSAR evaluates the purge assuming containment integrity. This jumper will be installed only with the main hatch open.

10 CFR 50.59 Evaluations for Temporary Changes via Jumper/Lifted Leads

Unit 1 **Request Number** 9-28

Component / System Affected

TT-1112 HB and TT-1122 HB

Description of Change

While trouble-shooting noise, I&C discovered the shield connected to negative (terminal 5) of output, rather than connected to ground (terminal 13), as indicated on CWD 382. The manufacturer recommends connecting shield to ground. This jumper/lifted lead request is to lift the shield from terminal 5 and land it on the transmitter ground.

Safety Evaluation

The disabling of hot leg RTD TE-1122HA and cold leg RTD TE-1112CA inputs to the RPS does not represent an unreviewed safety question because of the following reasons:

1) With regard to the probability of accidents and equipment malfunctions addressed in the FSAR, the RTDs are not utilized in the determination of accident probability. The RPS uses an average hot leg signal (i.e., other hot leg signals are available) and a maximum cold leg signal. Considering these acts, disabling the subject RTDs would have no impact on the probabilities of accident or equipment malfunctions addressed in the FSAR.

2) With regard to the consequences of accidents and equipment malfunctions addressed in the FSAR, required safety related functions (assuming design basis single failures) will operate as required. The TM/LP trip related with these RTDs is not utilized for any steam generator asymmetric events. With regard to other events which utilize the TM/LP trips, since the RPS channel averages the hot leg signal and selects the maximum cold leg signal, disabling one hot and one cold leg RTD to one RPS channel would not alter the results of the transient analysis for four pump operation. Therefore, the consequences of accidents or equipment malfunctions would not be affected.

3) With regard to accidents and equipment malfunctions which are different than those previously evaluated in the FSAR, no new equipment is being added, and safety systms will function as assumed in the cycle 6 reload analyses. Thus no new types of accidents or equipment malfunctions have been created.

4) With regard to the margin of safety as defined in the bases for the Technical Specifications, for the reasons outlined in items 1 and 2 above, disabling of the hot leg RTD TE-1122HA and cold leg RTD TE-1112CA will not result in a reduction of that margin.

10 CFR 50.59 Evaluations for Temporary Changes via Jumper/Lifted Leads

Unit 1 **Request Number** 9-29

Component / System Affected

RPS Channel A delta T power

Description of Change

TE-1112HA failed high, causing RPS channel A to trip. The action will repair TE-1112HA and reland leads.

Safety Evaluation

The disabling of hot leg RTD TE-1122HA and cold leg RTD TE-1112CA inputs to the RPS does not represent an unreviewed safety question because of the following reasons:

1) With regard to the probability of accidents and equipment malfunctions addressed in the FSAR, the RTDs are not utilized in the determination of accident probability. The RPS uses an average hot leg signal (i.e., other hot leg signals are available) and a maximum cold leg signal. Considering these acts, disabling the subject RTDs would have no impact on the probabilities of accident or equipment malfunctions addressed in the FSAR.

2) With regard to the consequences of accidents and equipment malfunctions addressed in the FSAR, required safety related functions (assuming design basis single failures) will operate as required. The TM/LP trip related with these RTDs is not utilized for any steam generator asymmetric events. With regard to other events which utilize the TM/LP trips, since the RPS channel averages the hot leg signal and selects the maximum cold leg signal, disabling one hot and one cold leg RTD to one RPS channel would not alter the results of the transient analysis for four pump operation. Therefore, the consequences of accidents or equipment malfunctions would not be affected.

3) With regard to accidents and equipment malfunctions which are different than those previously evaluated in the FSAR, no new equipment is being added, and safety systms will function as assumed in the cycle 6 reload analyses. Thus no new types of accidents or equipment malfunctions have been created.

4) With regard to the margin of safety as defined in the bases for the Technical Specifications, for the reasons outlined in items 1 and 2 above, disabling of the hot leg RTD TE-1122HA and cold leg RTD TE-1112CA will not result in a reduction of that margin.

10 CFR 50.59 Evaluations for Temporary Changes via Jumper/Lifted Leads

Unit 1 **Request Number** 9-44

Component / System Affected

1A and 1B MSIV Air Accumulator

Description of Change

This jumper/lifted lead request is to install an electric air compressor on a temporary basis as back-up to the MSIV air accumulator. The compressor will be required until a permanent solution to the problem is resolved.

Safety Evaluation

The proposed temporary modification has been reviewed and was deemed to not involve an unreviewed safety question since:

1) The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report (FSAR) will not be increased because the proposed temporary modification will be performed on the non-nuclear safety related instrument air system and will not change the operability, degrade closure time, or change any other function or capability of the MSIV. Therefore, the probability of occurrence or the consequences of an accident are not increased.

2) The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created because there is no change in function or capabilities of the MSIVs or their control system. In addition, no new failure modes for safety related equipment have been created.

3) The margin of safety as defined in the bases for any Technical Specification is not reduced since there is not change in the ability of the MSIVs to respond as required to maintain the bases of the applicable technical specfications.

The implementation of this change does not require a change to the plant technical specifications.

10 CFR 50.59 Evaluations for Temporary Changes via Jumper/Lifted Leads

Unit 1 **Request Number** 9-51

Component / System Affected

HVA-3A, Control Room A/C

Description of Change

This lifted lead will prevent HVA-3A Comp. from starting and will keep heaters energized.

Safety Evaluation

The proposed activity does not increase the probability of occurrence of an accident previously identified in the FUSAR, nor increase the consequences of an accident previously evaluated in the FUSAR.

The activity does not increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the FUSAR, nor increase the consequences of malfunction of equipment important to safety previously evaluated in the FUSAR.

Basis: 9.4.1.2 Equipment in control room is qualified for higher temperatures than if all three chiller units were lost.

The proposed activity does not create the possibility of a malfunction of equipment important to safety of a different type than previously evaluated in the FUSAR.

Basis: 9.4.1.2 Control room equipment can withstand loss of all three chiller units.

The proposed activity does not reduce the margin of safety as defined in the basis for any technical specification.

Basis: T/S 3.7.7.1 requires two operable A/C units. Two were operable at the time of the jumper/lifted lead.

10 CFR 50.59 Evaluations for Temporary Changes via Jumper/Lifted Leads

Unit 2 **Request Number** 9-05

Component / System Affected

Aux Feedwater and AFAS

Description of Change

This action will remove test boxes and land lifted leads to prevent AFAS actuation while performing OP 2-0030127 "Reactor Plant Cooldown - Hot Standby to Cold Shutdown."

Safety Evaluation

The activity does not increase the probability of occurrence of an accident previously identified in the FUSAR, nor increase the consequences of an accident previously evaluated in the FUSAR.

The activity does not increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the FUSAR, nor increase the consequences of malfunction of equipment important to safety previously evaluated in the FUSAR.

Basis: AFAS is not required to be operable in modes 4, 5, and 6, based on T/S 3/4 3.2.2.

The activity does not create the possibility of a malfunction of equipment important to safety of a different type than previously evaluated in the FUSAR.

Basis: AFAS is not required to be operable in modes 4, 5, and 6.

The proposed activity does not reduce the margin of safety as defined in the basis for any technical specification.

Basis: AFAS is not required to be operable in modes 4, 5, and 6.

10 CFR 50.59 Evaluations for Temporary Changes via Jumper/Lifted Leads

Unit 2 **Request Number** 9-16

Component / System Affected

Non-essential load breaker 2A5 MCC

Description of Change

This jumper is provided to allow non-essential portion of 480V MCC 2A5 to be energized while the relays (B2952) that open the MCC breaker on a SIAS are being moved. This SIAS interlock to the breaker is not needed while the fuel is off-loaded.

Safety Evaluation

The activity does not increase the probability of occurrence of an accident previously identified in the FUSAR, nor increase the consequences of an accident previously evaluated in the FUSAR.

The activity does not increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the FUSAR, nor increase the consequences of malfunction of equipment important to safety previously evaluated in the FUSAR.

Basis: N/A with fuel off-loaded.

The activity does not create the possibility of a malfunction of equipment important to safety of a different type than previously evaluated in the FUSAR.

Basis: N/A with fuel off-loaded.

The activity does not reduce the margin of safety as defined in the basis for any technical specification.

Basis: N/A with fuel off-loaded.

10 CFR 50.59 Evaluations for Temporary Changes via Jumper/Lifted Leads

Unit 2 **Request Number** 9-17

Component / System Affected

Non-essential load breaker 2A6 MCC

Description of Change

This jumper is provided to allow non-essential portion of 480V MCC 2A6 to be energized while the relays (B2952) that open the breaker to this MCC on a SIAS are being moved. This SIAS interlock to the breaker is not needed while the fuel is off-loaded.

Safety Evaluation

The activity does not increase the probability of occurrence of an accident previously identified in the FUSAR, nor increase the consequences of an accident previously evaluated in the FUSAR.

The activity does not increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the FUSAR, nor increase the consequences of malfunction of equipment important to safety previously evaluated in the FUSAR.

Basis: N/A while fuel is off-loaded.

The activity does not create the possibility of a malfunction of equipment important to safety of a different type than previously evaluated in the FUSAR.

Basis: N/A while fuel is off-loaded.

The activity does not reduce the margin of safety as defined in the basis for any technical specification.

Basis: N/A while fuel is off-loaded.

10 CFR 50.59 Evaluations for Temporary Changes via Jumper/Lifted Leads

Unit 2 **Request Number** 9-18

Component / System Affected

Nonessential Load Breaker 2A8 MCC

Description of Change

This jumper is provided to allow non-essential portion of 480V MCC 2A8 to be energized while the relays that open the breaker (B2952) to the MCC on a SIAS are being moved. This SIAS interlock to the breaker is not needed while the fuel is off-loaded.

Safety Evaluation

The activity does not increase the probability of occurrence of an accident previously identified in the FUSAR, nor increase the consequences of an accident previously evaluated in the FUSAR.

The activity does not increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the FUSAR, nor increase the consequences of malfunction of equipment important to safety previously evaluated in the FUSAR.

Basis: N/A while fuel is off-loaded.

The activity does not create the possibility of a malfunction of equipment important to safety of a different type than previously evaluated in the FUSAR.

Basis: N/A while fuel is off-loaded.

The activity does not reduce the margin of safety as defined in the basis for any technical specification.

Basis: N/A while fuel is off-loaded.

10 CFR 50.59 Evaluations for Temporary Changes via Jumper/Lifted Leads

Unit 2 **Request Number** 9-20

Component / System Affected

Nonessential Load Breaker 2A5 MCC

Description of Change

This jumper is provided to allow non-essential portions of 480V MCC 2A5 to be energized while the relays (B2952) that open the MCC breaker on a SIAS are being moved. This SIAS interlock to the breaker is not needed while the fuel is off-loaded.

Safety Evaluation

The activity does not increase the probability of occurrence of an accident previously identified in the FUSAR, nor increase the consequences of an accident previously evaluated in the FUSAR.

The activity does not increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the FUSAR, nor increase the consequences of malfunction of equipment important to safety previously evaluated in the FUSAR.

Basis: N/A with fuel off-loaded.

The activity does not create the possibility of a malfunction of equipment important to safety of a different type than previously evaluated in the FUSAR.

Basis: N/A with fuel off-loaded.

The activity does not reduce the margin of safety as defined in the basis for any technical specification.

Basis: N/A with fuel off-loaded.

10 CFR 50.59 Evaluations for Temporary Changes via Jumper/Lifted Leads

Unit 2 **Request Number** 9-35

Component / System Affected

PS-21-4A ICW "A" lube water pressure annunciation

Description of Change

This change will revise PC/M 043-287 to remove PS-21-4A and associated wiring. Lube water for the "A" ICW pump is no longer used. PC/M 043-287 removed the flow switches, but did not address the pressure switch. With no lube water pressure, annunciator E-15 is locked in.

Safety Evaluation

This proposed change does not involve an unreviewed safety question because:

1) The probability of occurrence or the consequences of an accident or the malfunction of equipment important to safety previously evaluated in the safety analysis report has not been increased. The previous accidents evaluated in the FSAR include loss of one ICW pump and/or loss of one vital bus. Both accidents result in one fully functional ICW train. The probability of occurrence or consequences of an accident or malfunction does not increase as a result of this modification since the probability of failure of an ICW pump has not increased and the modifications do not adversely impact the operability of any safety related functions.

2) The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created. The modifications proposed herein do not create the possibility for an accident or malfunction of a different type that any previously evaluated in the FSAR. Failure modes associated with pump 2A are identical with those previously analyzed failure modes associated with the non-modified pumps 2B and 2C, with the exception of lubewater piping failures, the failure of which cannot result in failure of the 2A pump. Also, no new active components are added by this modification which could adversely impact other safety related equipment or functions. Failure of the modified components will not impact any other safety related equipment or functions.

3) The margin of safety as defined in the bases for any technical specification has not been reduced. This modification has no adverse impact on the operability of the affected ICW system as addressed in the Technical Specifications. No changes to the Technial Specifications are required and no new technical specifications are required by this modification.

10 CFR 50.59 Evaluations for Temporary Changes via Jumper/Lifted Leads

Unit 2 **Request Number 9-37**

Component / System Affected

2A ICW annunciator E-15 low lube water pressure/flow

Description of Change

This jumper will clear annunciator E-15 by placing PS-21-4A back in service, or remove with supplement to PC/M 043-287.

Safety Evaluation

This proposed change does not involve an unreviewed safety question because:

1) The probability of occurrence or the consequences of an accident or the malfunction of equipment important to safety previously evaluated in the safety analysis report has not been increased. The previous accidents evaluated in the FSAR include loss of one ICW pump and/or loss of one vital bus. Both accidents result in one fully functional ICW train. The probability of occurrence or consequences of an accident or malfunction does not increase as a result of this modification since the probability of failure of an ICW pump has not increased and the modifications do not adversely impact the operability of any safety related functions.

2) The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created. The modifications proposed herein do not create the possibility for an accident or malfunction of a different type that any previously evaluated in the FSAR. Failure modes associated with pump 2A are identical with those previously analyzed failure modes associated with the non-modified pumps 2B and 2C, with the exception of lubewater piping failures, the failure of which cannot result in failure of the 2A pump. Also, no new active components are added by this modification which could adversely impact other safety related equipment or functions. Failure of the modified components will not impact any other safety related equipment or functions.

3) The margin of safety as defined in the bases for any technical specification has not been reduced. This modification has no adverse impact on the operability of the affected ICW system as addressed in the Technical Specifications. No changes to the Technial Specifications are required and no new technical specifications are required by this modification.

10 CFR 50.59 Evaluations for Temporary Changes via Jumper/Lifted Leads

Unit 2 **Request Number 9-47**

Component / System Affected

2A2 RCP Upper Seal Cavity Press High and Low Pressure Annunciator

Description of Change

This jumper will silence an audible alarm.

Safety Evaluation

The activity does not increase the probability of occurrence of an accident previously identified in the FUSAR, nor increase the consequences of an accident previously evaluated in the FUSAR.

The activity does not increase the probability of occurrence of a malfunction of equipment important to safety previously evaluated in the FUSAR, nor increase the consequences of malfunction of equipment important to safety previously evaluated in the FUSAR.

The activity does not create the possibility of a malfunction of equipment important to safety of a different type than previously evaluated in the FUSAR, nor reduce the margin of safety as defined in the basis for any technical specification.

Basis: RCPs are not safety-related. They are not required for the safe shutdown of the plant. Forced circulation is the preferred method for cooling but natural circulation provides the necessary heat removal capability when RCPs are unavailable.

10 CFR 50.59 Evaluations for Temporary Changes via Jumper/Lifted Leads

Unit 2 Request Number 9-49

Component/System Affected

2B1 RCP Reverse Rotation and Gasket Leakage Pressure Switch

Description of Change

This action will fix ground on 2B1 RCP and restore lifted leads.

Safety Evaluation

Removing the annunciator capabilities from FS-1176 and FS-1177 would not constitute an unreviewed safety question based on the following:

(1) The probability of occurrence or the consequences of an accident or malfunction previously evaluated in the FSAR is not increased. Both flow switches monitor oil flow in the lube oil system at the main thrust bearing bracket. In order for a reverse rotation condition to exist, the RCP would have to be stopped and restarted, and the Anti-reverse Rotation device would have to malfunction in its entirety. If the RCP were to be stopped while the unit was at power, the unit would trip due to low RCS flow (RPS trip unit). Should the pump be restarted, and the motor somehow reverse rotation, one pin in the anti-reverse rotation device is capable of holding the pump stationary against the torque produced by the application of 100% voltage in such a reverse phase rotation. Therefore, even though the control room operators were unaware of a reverse rotation condition existing, the anti-reverse rotation device would prevent the pump from turning in the wrong direction.

(2) The possibility of an accident or malfunction of a different type than any previously evaluated in the FSAR has not been created. When the RCP shaft stops rotating when the motor is stopped, the pins in the anti-reverse rotation device prevent the RCP from rotating in the reverse direction, even against 100% voltage applied to the motor in the reverse phase. With annunciator capabilities lost to the operators, it is conceivable that the pump may be restarted; while damage to the motor may result, and the anti-reverse rotation device would prevent backflow through the RCP and the 2B steam generator, thus corresponding to a cooldown using less than four RCPs for RCS circulation. As the unit is designed to accommodate a natural circulation cooldown, no new accidents or malfunctions are assumed to be created.

(3) The margin of safety as defined in the basis for the Technical Specifications is not reduced. Reverse rotation indication is not required by Tech Specs.

Removing the annunciator capabilities on PS-1170 does not constitute an unreviewed safety question based on the following:

(1) The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the FSAR is not increased. PS-1170 is discussed in section 5.2.5, "Detection of Leakage Through RCS Pressure Boundary," of the FSAR. The primary indications of RCS leakage are given as the containment sump level and containment radioactivity alarms. As the loss of annunciator in the 2B1 RCP gasket pressure switch does not affect any of these primary indications, no existing analyses are affected.

(2) A possibility for an accident or malfunction of a different type than any evaluated previously in the FSAR is not created. With no indication of gasket leakage in the control room, the operators would still be made aware of any RCS pressure boundary leakage

10 CFR 50.59 Evaluations for Temporary Changes via Jumper/Lifted Leads

Unit 2 Request Number 9-49

Component/System Affected

2B1 RCP Reverse Rotation and Gasket Leakage Pressure Switch

Safety Evaluation

(continued)

detectable by the RCS Pressure Boundary leakage detection system. This system is capable of detecting unidentified leakage of 1.0 gpm or less within one hour. This redundant capability ensures that RCS inventory is maintained within analyzed limits.

(3) The margin of safety as defined in the basis for any technical specification is not reduced. Unit 2 TS 3.4.6.1 and 3.4.6.2 state the operability requirements for the RCS leakage detection systems and RCS leakage. The inoperability of the RCP gasket pressure switch is not included in these technical specifications and is bounded by the capabilities of the leakage detection system. Therefore, the margin of safety defined by the bases for the technical specifications is not affected.

10 CFR 50.59 Evaluations

Summaries of Evaluations Approved by St. Lucie Facility Review Group

St. Lucie Unit 1
Potential Leaking Steam Generator Tube Plugs

Introduction:

During maintenance operations at St. Lucie Unit 1, visual inspection of the primary side of the tubesheet revealed a total of approximately sixteen plugs in steam generator A and five plugs in steam generator B exhibiting signs of potential leakage. The plugs in question are Westinghouse mechanical plugs installed during the December 1985 refueling outage. In addition, eleven plugs in steam generator A and six in steam generator B installed at the same time as the plugs with apparent signs of leakage were not inspected due to inspection fixture interference.

Safety Evaluation:

It is concluded that an unreviewed safety question does not exist relative to the potentially leaking plugs since

(1) The probability of occurrence of a design basis accident is not increased since the complete circumferential severance of a plug resulting in a plug top release will not rupture the parent tube.

(2) The consequences of a previously postulated design basis accident are not made more severe since no accident mitigating equipment or systems have been altered and a steam generator severed tube plug would not be expected to produce any greater effects than those analyzed for a rupture of a steam generator tube as discussed in the SAR. The mechanical expander functions as a leak limiting orifice and the maximum leakage expected through the severed plug is less than 80 gpm. This leakage is substantially less than the design basis tube rupture.

(3) The possibility of an accident of a different type than previously addressed in the SAR does not exist since a steam generator tube rupture concurrent with tube plug failure is considered not a possible failure mode. Only tube plug leakage (within Tech Spec limits) is expected for the limiting case of a tube fish-mouth failure.

St. Lucie Unit 1
LPSI Pump 1A Gland Plate Gasket Groove Modification

Introduction:

This safety evaluation permits the removal of .022" of metal from the inboard face of the 1A LPSI pump gland ring until the next scheduled teardown of the pump. At that time, the gland should be restored to the original design to eliminate the need to maintain unique gaskets in stores for the two pumps.

Safety Evaluation:

The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety evaluated in the FSAR has not been increased because:

1) the design minimum wall of the LPSI pump pressure boundary has not been changed.

2) the removal of .022" of metal from the face of the gland ring will not have an adverse effect on the operation of the mechanical seal.

Therefore, the probability of LPSI pump failure has not been increased and the consequences of a LPSI pump failure remain the same.

The possibility of an accident or malfunction of a different type than any previously evaluated in the SAR has not been created since this modification does not alter the operational characteristics of the 1A LPSI pump. In addition, this change affects no other system design bases. Therefore, no new accident or malfunction is created.

The margin of safety as defined in the basis for any Technical Specification has not been reduced because the Technical Specification requirement for two operable LPSI pumps is maintained.

St. Lucie Unit 2
Increase pH Limit in the Secondary System

Introduction:

This change will increase the secondary system feedwater/condensate pH specification to permit operation with a feedwater pH up to 10.0. Increasing the pH in the secondary system reduces erosion/corrosion in the secondary system and reduces the transport of corrosion products to the steam generators.

Safety Evaluation:

The change does not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report because:

1) increasing pH in the secondary system will reduce corrosion product transport by reducing corrosion of ferrous materials,

2) increasing pH in the secondary system will not increase corrosion of other secondary materials

3) increasing pH will not increase the likelihood of caustic stress corrosion cracking of the steam generator tubing because the chemicals used are volatile.

The change does not increase the possibility of an accident or malfunction of a different type than any previously evaluated in the SAR because:

1) only chemicals that have been previously considered by the FSAR are used to increase the pH in the secondary system, and

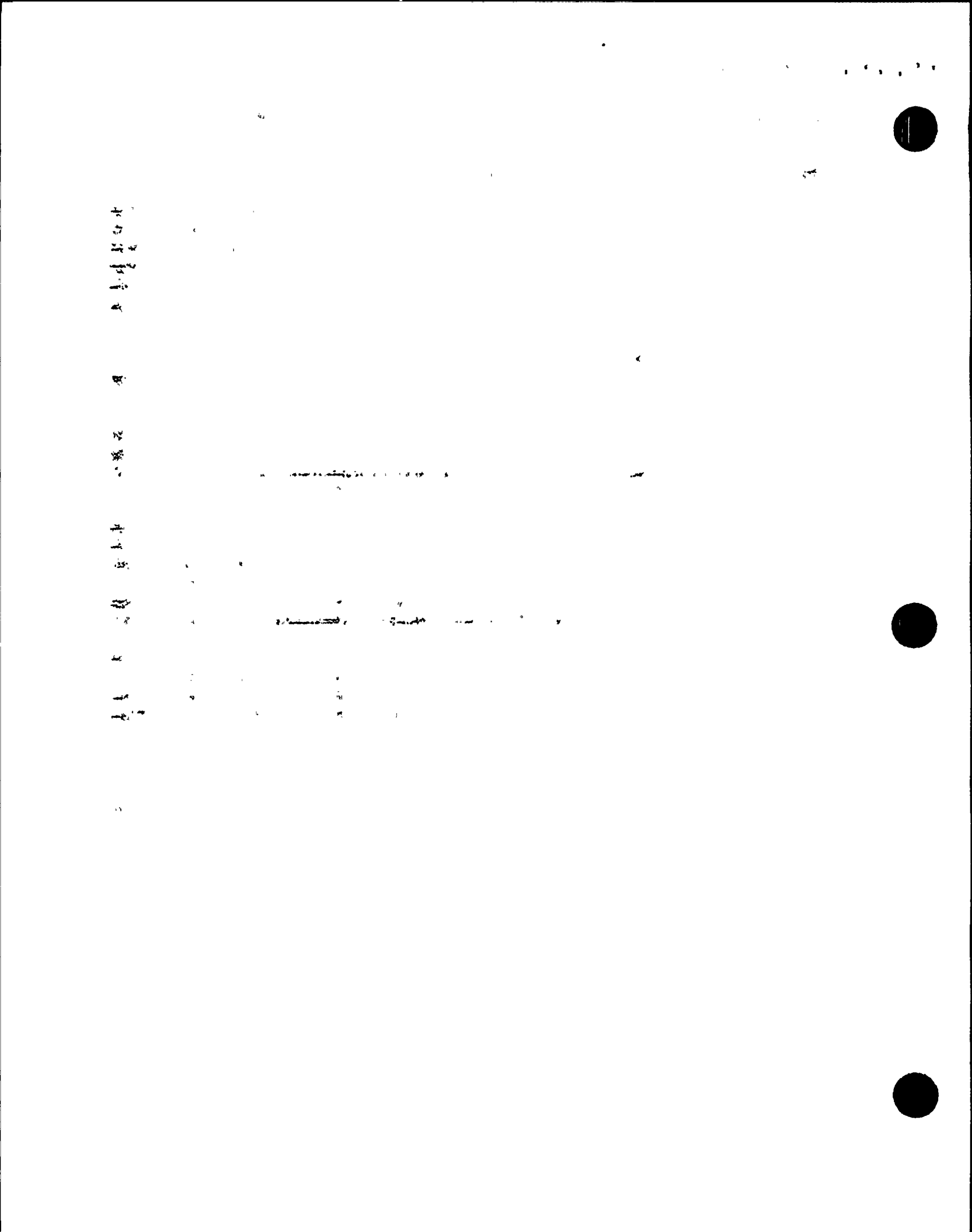
2) the change will not result in other forms of corrosion attack on the steam generator tubing.

The change does not reduce the margin of safety as defined in the basis for any technical specification because:

1) increasing pH reduces corrosion in the secondary system,

2) increasing pH does not increase corrosion of the steam generator materials, and

3) the change is consistent with T.S. B 3/4 & 4.5 to operate in such a manner that the secondary coolant will be maintained within those parameter limits found to result in negligible corrosion of the steam generator tubes.



St. Lucie Plant
Temporary Installation of the Intake Canal Sonar Zone Isolation Net

Introduction:

Plant Change/Modification 045-986 installed an underwater intrusion detection system. An unacceptable number of alarms were occurring, and have been attributed to the number of large fish in the intake canal. In order to move these fish away from the system, the plant has asked the Land Utilization department to temporarily install a net across the intake canal downstream of the detection system. After a net is installed, the detection system will be operated for a thirty day period to verify that it is operating properly.

Safety Evaluation:

Placing this net temporarily across the intake canal does not involve an unreviewed safety question, and the following are the bases:

(1) The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the SAR is not increased. The temporary placement of the net has no impact on the function of the intake canal, and therefore no impact on the plant. The net has no ability to impact any analysis previously evaluated in the SAR.

(2) The possibility for an accident or malfunction of equipment of a different type than any previously evaluated in the SAR is not created. There is no concern during the installation phase of the project due to the large number of people and equipment that will be utilized. Once the net is installed, the configuration that will be used to hold it in place leaves it single failure proof. The net will be moored using two large fluked anchors, a 1/2" stainless steel fail safe cable attached to the intruder barrier, and three ropes anchoring the top of the net to the two banks.

(3) The margin of safety as defined in the basis for any Technical Specification is not reduced by this temporary change. The change has absolutely no impact on Tech Spec 3.7.4 for Unit 1 and 2 which requires two independent loops of ICW to be available. The temporary installation of this net does not therefore reduce the margin of safety as defined in the basis for any Tech Spec.

St. Lucie Unit 1
Increase pH Limit in the Secondary System

Introduction:

This change will increase the secondary system feedwater/condensate pH specification to permit operation with a feedwater pH up to 10.0. Increasing the pH in the secondary system reduces erosion/corrosion in the secondary system and reduces the transport of corrosion products to the steam generators.

Safety Evaluation:

The change does not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report because:

1) increasing pH in the secondary system will reduce corrosion product transport by reducing corrosion of ferrous materials,

2) increasing pH in the secondary system will not increase corrosion of other secondary materials

3) increasing pH will not increase the likelihood of caustic stress corrosion cracking of the steam generator tubing because the chemicals used are volatile.

The change does not increase the possibility of an accident or malfunction of a different type than any previously evaluated in the SAR because:

1) only chemicals that have been previously considered by the FSAR are used to increase the pH in the secondary system, and

2) the change will not result in other forms of corrosion attack on the steam generator tubing.

The change does not reduce the margin of safety as defined in the basis for any technical specification because:

1) increasing pH reduces corrosion in the secondary system,

2) increasing pH does not increase corrosion of the steam generator materials, and

3) the change is consistent with T.S. B 3/4 & 4.5 to operate in such a manner that the secondary coolant will be maintained within those parameter limits found to result in negligible corrosion of the steam generator tubes.

St. Lucie Unit 2
Boric Acid Makeup System Insulation Removal

Introduction:

The request to remove insulation was due to the fact that (1) Plant Change/Modification 283-288 permits the temporary de-energization of portions of the BAM system heat tracing and 2) the insulation was removed over a period of time by various departments for various reasons. The removed insulation is considered to be a temporary change concurrent with the trial implementation of the Boric Acid Concentration Reduction Technical Specifications and is effective for the duration of the PSL-2 Cycle 5 and subsequent end-of-cycle refueling outage.

Safety Evaluation:

The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety evaluated in the SAR has not been increased because:

1) the de-energization of heat tracing for the BAM system piping and valves eliminates the need for insulation, and

2) the removal of the insulation will not affect the seismic qualification of the piping because:

a) reduced weight on piping increases the natural frequency of the piping and therefore seismic acceleration/loads decrease,

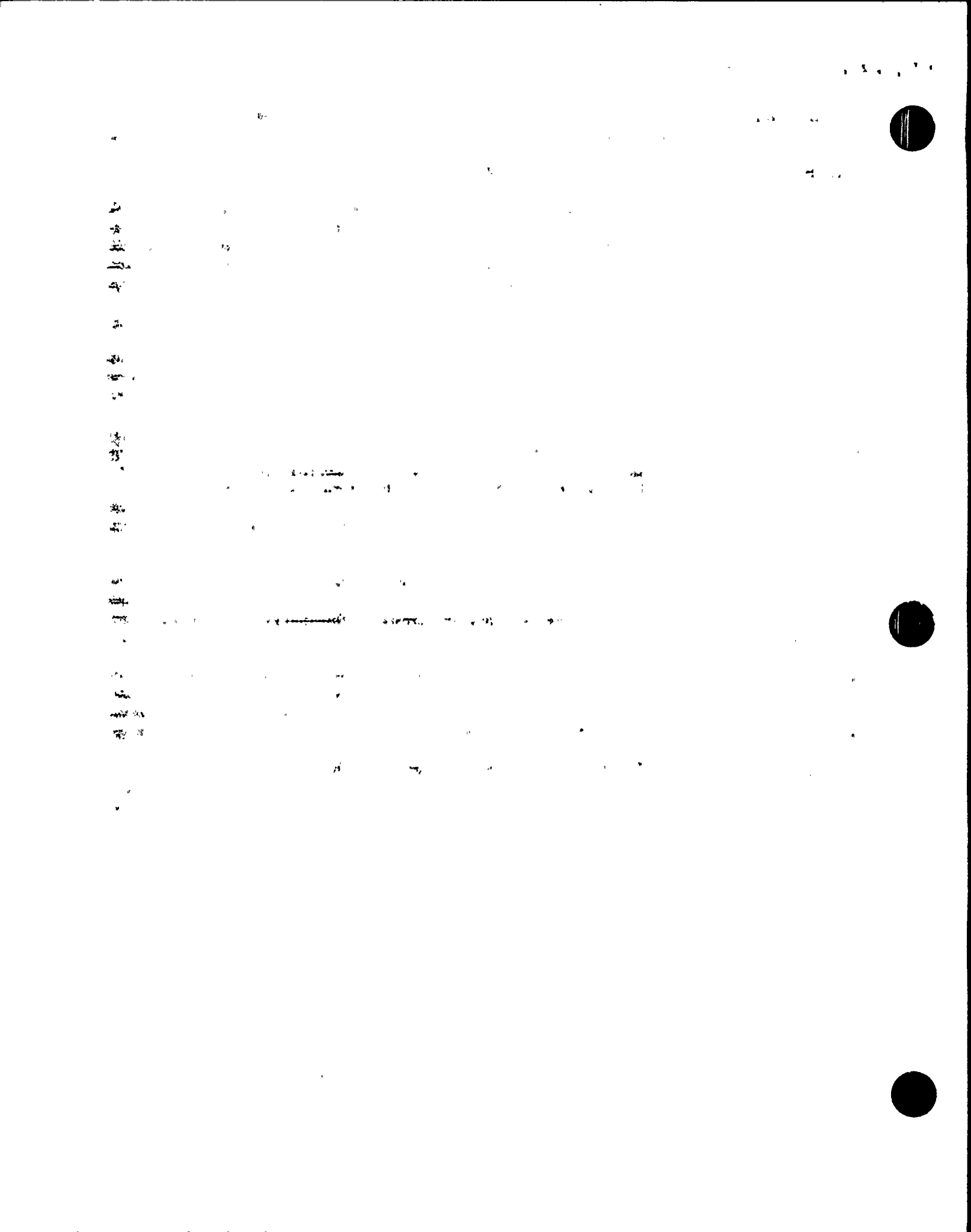
b) reduced weight decreases loading on supports/restraints, and

c) the removed insulation does not provide a support/restraint function in conjunction with any seismic support.

Therefore, the probability of BAM system failure has not been increased and the consequences of the BAM system failure remains the same.

The possibility of an accident of malfunction of a different type than any evaluated previously in the SAR has not been created since this modification does not alter the operational characteristics of the BAM system. In addition, this change affects no other system design bases because the safety requirements for the insulation are not required due to the de-energization of heat tracing. Therefore, no new accident or malfunction is created.

The margin of safety as defined in the basis for and Technical Specification has not been reduced because the Technical Specification requirement for BAM system heat tracing was eliminated as a result of the Boric Acid Concentration Reduction effort.



St. Lucie Unit 2
Core Shroud Indications Found During 1989 Refueling Examination

Introduction:

Two anomalous indications were noted on the core shroud during the 1989 refueling outage inspection. FPL requested a safety evaluation from Combustion Engineering to determine acceptability of the existing condition of the core shroud. C-E completed the evaluation and determined that the Core Shroud is acceptable for continued use in the existing condition, and there are no changes to the Technical Specifications required.

Safety Evaluation:

The probability of occurrence or consequences of an accident or malfunction of equipment important to safety previously evaluated in the SAR is not increased because the indications do not affect fit or function of the Core Shroud and the damage has no effect on the structural integrity of the shroud.

The design basis accidents or malfunctions are not impacted by the changes because no additional stresses are induced by the indications and there are no mechanisms present for cracking or further damage to develop. As a result, the consequences of an accident or malfunction are not increased. The systems important to safety are not impacted by these anomalies: therefore there are no effects on failure modes associated with the probability of a failure of a system important to safety.

The possibility for an accident or malfunction of a different type than any previously evaluated in the SAR is not created. The noted anomalies do not result in a new unanalyzed condition because the fit, function, and strength of the core shroud are not affected, therefore the change does not impact plant operation or response.

The margin of safety as defined in the bases for any Technical Specification is not reduced. There is no reduction on the margin of safety as defined in the bases of the Technical Specifications. The Technical Specification requirements are met by the noted anomalies because there is no increase in the probability of exceeding a safety limit.

The change does not degrade the performance of a safety system below that determined in the SAR. There are no changes to the consequences on any protective boundary and there is no impact on the Technical Specifications.

St. Lucie Unit 2
Increased RCS Lithium Program

Introduction:

The purpose of the pH chemistry control program is to minimize the inventory of corrosion products circulating in the RCS and reduce the amount of corrosion products activated (i.e., crud) by minimizing its deposition on fuel cladding surfaces. The eventual release of crud from fuel surfaces and accumulation in cooler RCS regions, such as the steam generators, is the principal contributor to out-of-core radiation field buildup. The basis for operating with a pH in the 6.9 range was that the composition of the crud was believed to be magnetite, and accumulation of corrosion products on the fuel surfaces would be minimized.

Safety Evaluation:

The probability of occurrence or consequences of an accident or malfunction of equipment important to safety previously evaluated in the SAR is not increased because the effect of operating at the higher lithium and pH levels proposed does not result in an increase in the probability of fuel failure either directly or indirectly. Corrosion failure is not probable as neither sufficient lithium concentration nor a high enough pH exists for accelerated corrosion to occur. Nor is there any secondary failure mechanisms that might increase the probability of fuel cladding failure. Corrosion levels will not be greater than previously experienced, and no accelerated hydrogen pickup due to lithium has been demonstrated, consequently no weakening of the cladding or failure due to hydriding will occur.

Neither the probability nor the consequences of any accident previously analyzed are increased because operation at a higher lithium concentration and pH does not result in fuel corrosion or mechanical behavior either greater than or different from previously considered in the input to any safety analysis.

The proposed increase in lithium concentration does not increase the materials' corrosion rate nor does it increase the incident of stress corrosion of the components wetted by the primary coolant or its letdown to other systems. The slight increase in operating pH will have no adverse effect on the design life or performance of equipment important to safety, based on ample test data. Therefore, the increase in lithium concentration and pH does not increase the probability of an accident or malfunction of equipment important to safety.

The possibility for an accident or malfunction of a different type than any previously evaluated in the FSAR is not increased, because neither the fuel nor its modes of operation will be changed by operating at the proposed lithium and pH limits. No changes to the fuel or to the fuel operating environment, other than increasing the lithium and pH, are being proposed. Because these changes have no impact on the design of the fuel or its operation, the possibility of creating a new or different type of accident than previously analyzed in the FSAR is not created.

The margin of safety as defined in the basis of any technical specification is not reduced because the limitations of fuel performance include the power distribution limits which ensure that peak fuel cladding temperatures, heat rate, power density and DNB related parameters are maintained within their analyzed normal and transient conditions in the safety analyses.

There are no changes in any fuel analysis input or assumptions are required as a result of the proposed change nor are any changes to analysis methodology necessary to describe fuel rod behavior. As no inputs, assumptions, or methods have changed, the results of previous safety analyses remain unchanged and the margin of safety for any technical specification is not reduced. All of the fuel performance parameters described previously are not adversely affected

by the proposed increases in lithium concentration.

The limitations on the RCS chemistry ensure that corrosion of the components wetted by primary water is minimized and reduce the potential for RCS leakage or failure due to stress corrosion. Increasing the lithium concentration as proposed will not reduce the corrosion protection nor increase the potential for stress corrosion, and the structural integrity of the wetted components will not be adversely affected. The previously analyzed performance of wetted materials regarding stress levels and fatigue are not changed. Therefore, the margin of safety as defined in the bases of any technical specification is not reduced.

St. Lucie Unit 1
Increasing RCS Lithium Level

Introduction:

The purpose of the pH chemistry control program is to minimize the inventory of corrosion products circulating in the RCS and reduce the amount of corrosion products activated (i.e., crud) by minimizing its deposition on fuel cladding surfaces. The eventual release of crud from fuel surfaces and accumulation in cooler RCS regions, such as the steam generators, is the principal contributor to out-of-core radiation field buildup. The basis for operating with a pH in the 6.9 range was that the composition of the crud was believed to be magnetite, and accumulation of corrosion products on the fuel surfaces would be minimized.

Safety Evaluation:

The proposed increase in lithium concentration does not increase corrosion nor increase the corrosion rate nor increase the incidence of stress corrosion of the components wetted by primary coolant or its letdown to other systems. The resultant increases to a slightly more basic primary chemistry will have no effect on the probability of an accident or equipment failure, since the material integrity or performance of equipment important to safety will not be adversely affected.

The operability of the spray addition system ensures that sufficient amounts of sodium hydroxide is added to the containment spray in the event of a LOCA to maintain a pH value of 8.5 and 11.0. The increase in lithium concentration is negligible compared to the sodium hydroxide concentration in the containment spray and containment sump solution and does not alter the resultant pH for the analyzed events. The basis for the spray additive system and the consequences of an analyzed event is not affected.

Therefore, the proposed increase in lithium level does not increase the probability or consequences of an accident or equipment malfunction previously evaluated.

The corrosion rates will not increase for the plant components in contact with primary coolant or letdown. The design life of these components is not reduced and therefore the probability of any failure is not increased, and the operation of the plant is not affected.

The proposed increase in lithium level will not create a malfunction or a different failure mechanism than previously evaluated.

The limitations on the RCS chemistry defined in the technical basis ensure that corrosion of the components wetted by primary water is minimized and reduce the potential for RCS leakage or failure due to stress corrosion. Increasing the lithium concentration as proposed will not reduce the corrosion protection nor increase the potential for stress corrosion of any affected components. The increase in lithium will not be detrimental to the safety margin or performance of the wetted components, since the structural integrity will not be adversely affected.

Therefore, the proposed change in lithium levels will not reduce the margin of safety as defined for any technical specification basis.

St. Lucie Unit 2
Drain Valve for LT-1103 Low Pressure Connection, Installation of Plug

Introduction:

The drain valve for the level transmitter (LT-1103) for the pressurizer level - cold condition was leaking at the seat. No replacement valve was available. The proposed modification to prevent leakage is to plug the downstream side of the valve. A 1/2" plug 4" long will be welded into the outlet of the subject valve.

Safety Evaluation:

This change does not involve an unreviewed safety question and the following are the bases for this conclusion.

(1) The probability of occurrence or the consequences or an accident or malfunction of equipment important to safety previously evaluated in the SAR is not increased because the plugging of the valve prevents the leakage problem but does not hinder the performance of the level transmitter. The added weight of the valve is insignificant and will not create a seismic concern.

(2) The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created, since the plugging of a drain valve does not affect the operation of any safety equipment.

(3) The margin of safety as defined in the basis for any technical specification is not affected by this change, as mentioned above. This change requires no change to the Unit 2 Technical Specifications.

St. Lucie Unit 2
Safety Evaluation of Regulatory Guide 1.63

Introduction:

Regulatory Guide 1.63, "Electric Penetration Assemblies in Containment Structures for Light Water Cooled Nuclear Power Plant," presents methods acceptable to the NRC staff for complying with General Design Criterion 50 of Appendix A and with Appendix B with respect to the mechanical , electrical, and test requirements for the design, qualification, construction, installation, and testing of electric penetration assemblies in containment structures of light water cooled nuclear power plants.

Safety Evaluation:

The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the SAR is not increased. The identification of the proper mode of operation in the evaluation indicates that power isolation of the SIT isolation valves and SDC valves does not increase the probability of occurrence or the consequences of an accident.

The possibility for an accident or malfunction of a different type than previously evaluated is not created. The Conax test report has shown that a failure of the electrical penetration is not possible. In addition, the technical specification has shown that providing power to these circuits until mode 2 is in conformance with R.G. 1.63. Therefore, the possibility for an accident or malfunction of a different type is not created.

The margin of safety as defined in the technical specification is not impacted by this safety evaluation. The fact that some of these circuits do not have dual isolation devices does not violate technical specification 3.6.1.1. Failure of the electrical penetration would not occur after a multi-phase fault.

St. Lucie Unit 2
Use of Crouse-Hinds FS/FD Boxes on Target Rock Solenoid Valves

Introduction:

Currently at St. Lucie, a gasketed Crouse-Hinds (C-H) FS/FD box is being used as the slice box for Target Rock model 74Q solenoid valves. The purpose of this evaluation is to demonstrate that this box is sufficient to permit limit switches to remain operational for the required ninety minutes post-accident and thus does not constitute an unreviewed safety question.

Safety Evaluation:

The limit switches will be able to provide indication for at least the required operability time and thus accomplish their safety related function. Therefore, the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the SAR are not increased.

The use of the C-H FS/FD box will not increase the possibility of an accident or malfunction of a different type of any evaluated previously in the FSAR since the limit switches will operate as required. Thus no new modes of failure are being introduced.

The margin of safety as defined in the basis for any technical specification will not be reduced since the operation of the solenoid valves is not affected.

St. Lucie Unit 2
CCW Heat Exchanger Operation with Ten Percent Tube Plugging Limitation

Introduction:

During the St. Lucie 2 1989 refueling outage, the component cooling water heat exchanger (CCW-Hx) tubes were examined using Eddy Current Testing (ECT). The ECT results of the "B" CCW Hx indicated that 105 tubes contained credible flaws with 70% or greater through-wall penetration. Seventy percent has been established as the maximum permissible flaw depth to preclude leakage during the next cycle of operation. This amount, combined with the tubes already plugged, totals 186, or about 9.3% of the total CCW Hx tube population of 1996.

The operability of the CCW system is defined as having sufficient cooling capacity for continued operation of equipment during normal and accident conditions. The analysis of the Spent Fuel Pool Cooling System and the analysis for the design basis accident utilize a maximum CCW system service temperature of 100°F. The description for the Intake Cooling Water System (ICW) which services the CCW Hx is sized to ensure adequate heat removal at design inlet temperature of 95°F. However, the ICW inlet temperature has not been recorded to exceed 89°F. The purpose of this safety evaluation is to demonstrate that operating St. Lucie 2 with up to 10% of the tubes plugged in each CCW Hx with a maximum Intake Cooling Water inlet temperature of 90°F does not constitute an unreviewed safety question.

Safety Evaluation:

The probability of occurrence or consequences of an accident or malfunction of equipment important to safety previously evaluated in the SAR is not increased. ICW services the CCW Hx, and the previously analyzed CCW Hx outlet temperatures will be maintained for both normal and accident heat load. At the changed (lower) ICW design inlet temperature it was determined that 10% of the CCW Hx tubes could be plugged. The change in ICW design inlet temperature does not create the consequences of an accident because the analyzed temperatures in the Safety Analysis will be maintained at the beginning and during the postulated accidents. The probability or consequence of equipment malfunction is not increased since the CCW Hx outlet temperatures will still be maintained within design specifications for all the safety-related equipment or equipment important to safety.

The possibility for an accident or malfunction of a type different than any evaluated previously in the SAR is not created. The lower ICW design inlet temperature provides sufficient CCW Hx margin to allow 10% of the tubes to be plugged. Although the CCW Hx surface area is reduced, the CCW Hx outlet temperature is maintained within the specified and analyzed values provided equipment specifications and the FSAR. Since the design bases and performance of the CCW system are not adversely affected with 10% tubes plugged and a 90°F design ICW inlet temperature, the possibility of an accident or malfunction of a type different than that previously evaluated in the FSAR is not created.

The bases for the CCW and ICW systems operability provided in the technical specification is to ensure sufficient cooling capacity is available for continued operation of equipment during normal and accident conditions. The redundant cooling capacity of these systems, assuming a single failure, is consistent with the assumptions used in the safety analysis.

The CCW Hx was designed and built with a specific amount of safety margin (i.e., excess tube surface area) for servicing the normal and accident heat loads. The calculation to justify a 10% tube plugging limit with a design seawater temperature of 90°F retains that amount of safety margin, while demonstrating that the CCW Hx outlet temperature will be maintained as previously analyzed in the FSAR. The redundancy of either system is not impacted by this change

since one CCW Hx still provides 100% cooling capacity. The changed ICW temperature does permit a reduction in CCW Hx surface area; however, the margin of safety is not reduced since it has been determined by calculation that the lower ICW design temperature provides ample CCW Hx margin. Therefore the margin of safety as defined in the basis of the technical specification is not reduced since the original amount of safety margin in the CCW Hx is maintained.

St. Lucie Unit 2
Reconstituted Fuel Assemblies

Introduction:

Ultrasonic Testing (UT) by Babcock and Wilcox identified failed or possible failed fuel rods in St. Lucie 2 region E assemblies E04, E13, and E37 and in region F assemblies F20 and F31. The fuel rods that UT had indicated to be failed or possibly failed were replaced with stainless steel rods as a precautionary measure.

Safety Evaluation

Combustion Engineering concludes that the reconstitution of these assemblies:

(1) Does not involve any increase in the probability or consequences of an accident previously evaluated.

(2) Does not create the possibility of a new or different kind of accident relative to accidents previously evaluated.

(3) Does not involve a reduction in the margin of safety.

Stainless steel rods were not placed in locations which would significantly perturb the neutronic performance or safety behavior of these assemblies.

St. Lucie Unit 1
Injection of Nitrogen into the Condenser North-Central Pedestal Base Plate Enclosure

Introduction:

During periodic analysis of the condensate leaving the condenser hotwell, it was noticed that the oxygen concentration in the condensate was approaching the maximum limit. Investigation of the various possible sources of oxygen that may be creating this abnormality revealed an air in-leakage. It was determined that the injection of nitrogen into the condenser anchor bolts enclosure would prevent the entrance of air into this enclosure.

Safety Evaluation:

The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased. The condenser and condensate system, which are affected by the data collection, are not used in any safety analysis for accidents or malfunction of equipment and as such are non-safety related and will have no effect on equipment vital to plant safety.

The possibility for an accident or malfunction of equipment of a different type than any previously evaluated in the safety analysis report is not created. The components involved in this modification have no safety-related function and no changes have been made to the operational design of the system.

The margin of safety as defined in the bases for any Technical Specification is not affected by this temporary data collection activity and by the subsequent plugging of the hole drilled in the condenser pedestal enclosure wall since the components involved in this activity are not included in the bases of any Technical Specification. The implementation of this activity and the subsequent plugging of the hole drilled in the condenser pedestal enclosure wall does not require a change to the plant Technical Specifications.

St. Lucie Unit 2
Reactor Vessel Nozzle Plugs

Introduction:

Reactor vessel nozzle plugs are devices that are installed in the hot and cold legs of the reactor vessel. They are installed from the reactor vessel side. They provide a boundary between the refueling pool and main coolant piping. During this mode of operation, the Technical Specifications require that one shutdown cooling loop be operable and in operation with fuel in the reactor. As such, only one hot leg plug can be installed with fuel in the reactor vessel.

Safety Evaluation:

The change described herein does not increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report. The installation, use and removal of a plug in only one hot leg at a time with fuel in the reactor vessel will occur only in mode 6 when the water level above the top of the reactor pressure vessel flange is greater than or equal to twenty-three feet. During this time only one shutdown cooling loop is required to be operable and in operation. Since only one hot leg may be plugged at a time, this change does not affect the decay heat removal capabilities of the Shutdown Cooling System.

The consequences of a hot leg plug seal failure in regard to loss of decay heat removal is similar to that of a pool seal failure in that both the SG manway and the pool seal are above the horizontal centerline of the hot legs. To maintain residual heat removal capability, the water level must be above the horizontal centerline of the hot leg (mid loop). Potential paths of RCS inventory loss have been considered. No inventory will be lost out of the steam generator hot leg manway or the RTD thermowell nozzle holes because they are located above the centerline. RCS inventory can be lost from the drain line if the isolation valve is not shut. Inventory lost through this nozzle is 54 gpm and is well within the makeup capacity of the shutdown cooling system. In addition, three hot leg RTD nozzles were assumed to be cut out and conservatively located at the centerline. The flow rate required to equal this loss was calculated to be approximately 100 gpm. This combined leakage flow rate of 154 gpm, to maintain greater than mid-loop operation, is also well within the makeup capabilities of available makeup sources. These factors will ensure that shutdown cooling will not be lost due to air binding of the pump and that residual heat removal capability will be maintained.

The change does not create the possibility for an accident or malfunction of a different type than previously evaluated in the safety analysis report. The installation, use and removal of a plug in only one hot leg at a time with fuel in the reactor vessel is bounded by the current safety analysis report. This includes the loss of shutdown cooling, refueling pool drain down due to hot leg plug seal failure, and fuel failure due to lifting heavy loads over the reactor vessel. No changes to systems or plant conditions will be made which affect or change the previously evaluated safety analysis. These changes therefore do not create the possibility for an accident or malfunction of a different type than previously evaluated.

The change does not reduce the margin of safety as defined in the basis for any technical specification. The installation, use and removal of a plug in only one hot leg at a time with fuel in the reactor vessel does not require any changes to the technical specifications. The technical specifications require that only one shutdown cooling loop be operable and in operation when in mode 6 and if the water level above the top of the reactor pressure vessel flange is greater than or equal to twenty-three feet, the bases for the technical specifications remain unchanged. These changes therefore do not reduce the margin of safety as defined in the basis for any technical specification.

St. Lucie Unit 1
Instrument Air Supply to Main Steam Isolation Valve

Introduction:

An instrument air line for MSIV I-HCV-08-1A is a 1/4 inch copper tubing line which functions as a bypass line to main instrument air supply line with solenoid valve 7A. The main instrument air line with solenoid valve 7A supplies air to MSIV to keep it open. Plant personnel found the subject 1/4 inch copper tubing line leaking. In order to keep the MSIV I-HCV-08-1A open and not lose the air pressure, plant personnel performed an interim replacement by installing a 1/4 inch stainless steel (SS) braided hose line in place of copper tubing.

Safety Evaluation:

The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously analyzed in the safety analysis report will not be increased.

The possibility of an accident or malfunction of a different type than any previously evaluated in the safety analysis report will not be created.

The margin of safety as defined in the bases for technical specifications is not reduced.

The installation of SS braided tubing in place of copper tubing does not create any change to the existing design from system viewpoint. The SS braided tubing line assists in keeping the MSIV I-HCV-08-1A open during a test mode. Any malfunction in this line will initiate closure of the MSIV I-HCV-08-1A, which is the intended safety function. Thus the design change does not impair the intended safety function.

Therefore, the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety as defined in the SAR is not increased.

A malfunction in the 1/4 inch tubing will not prevent the MSIV associated with this line from performing its intended function. Therefore, no new type of accident or malfunction is created.

The subject 1/4 inch line does not have any effect on the technical specification requirements for the MSIV. Therefore, the margin of safety as defined in the bases for technical specifications is not reduced.

St. Lucie Unit 2
Cycle 5 Reload Safety Evaluation

Introduction:

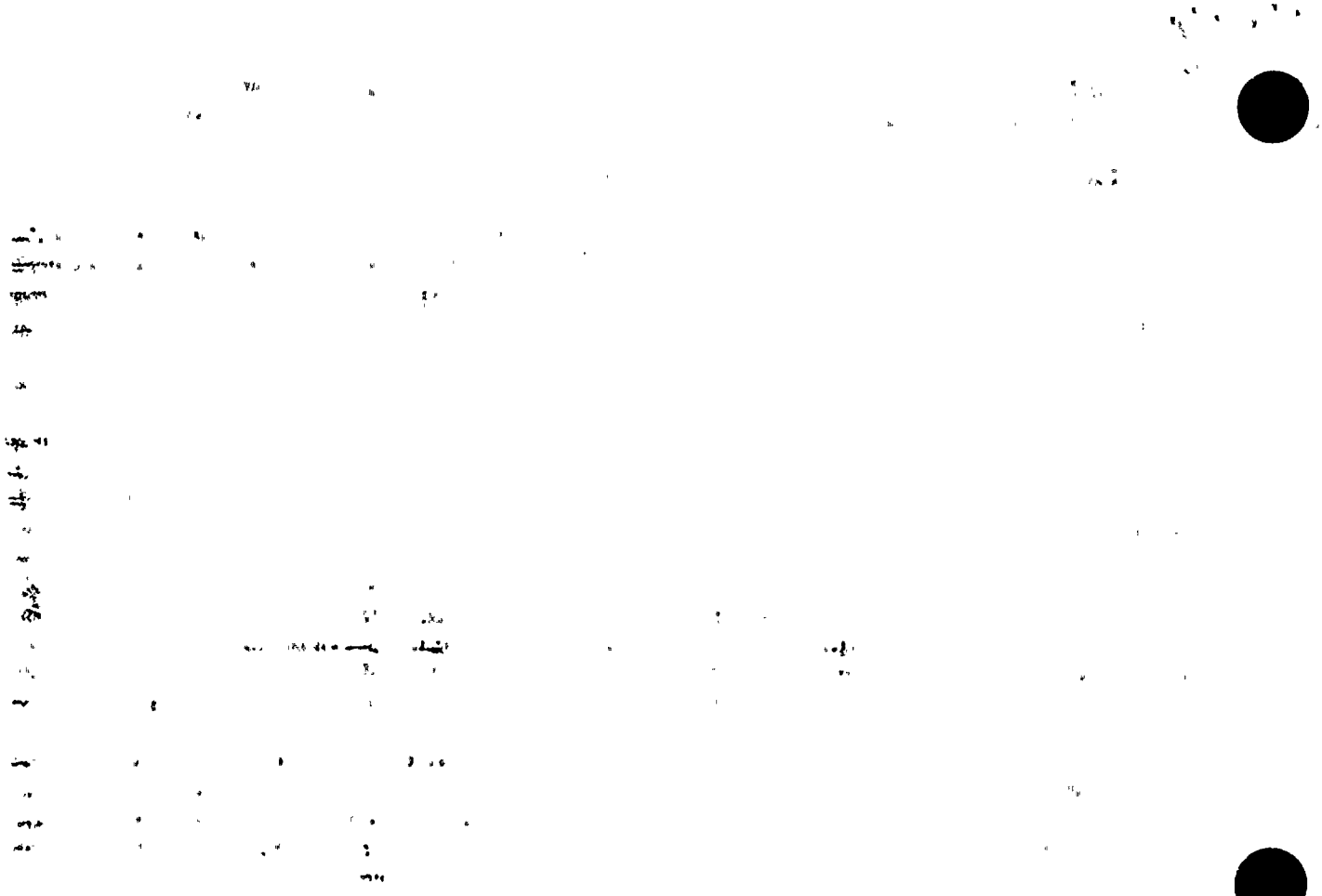
This reload evaluation concerns modifications made to the fuel being loaded into the core. Fuel assemblies in region G will be modified to render them more resistant to debris-induced failure.

Safety Evaluation:

The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased. The St. Lucie Unit 2 Cycle 5 reload design does not change the overall configuration of the plant. The mode of operation of the plant remains unchanged. Changes to the fuel assembly design to make the assembly resistant to debris-induced fretting do not change the mechanical or thermal-hydraulic performance of the fuel assembly. The mode 6 Boron Dilution Event was reanalyzed and the results were found to meet acceptance criteria. The Small and Large Break LOCA events were re-evaluated against the Cycle 5 fuel design changes and shown to meet acceptance criteria. The Reload Safety Evaluation report demonstrates that the consequences of an accident or malfunction have not been increased beyond those evaluated in the previous analyses since all transients meet current criteria.

A possibility for an accident or malfunction of a different type than any previously evaluated in the safety analysis is not created. The St. Lucie Unit 2 Cycle 5 reload design does not change the overall configuration of the plant. The design of the debris resistant Region G assemblies is the same as that of other assemblies residing in the core, with the exception of minor lower end fitting changes and the use of longer end caps on fuel rods. Therefore, a possibility for a new accident or equipment malfunction has not been created.

The margin of safety as defined in the basis for any Technical Specification is not reduced. The St. Lucie Unit 2 Cycle 5 reload design neutronics input and the resulting safety analysis has been reviewed, and in all cases the results are well within the acceptance criteria of the design basis. Based on FPL's independent review of the RSE report it can be concluded that the St. Lucie Unit 2 Cycle 5 reload design does not result in a reduction to the margin of safety relative to the Technical Specification basis for St. Lucie Unit 2 Cycle 5.



St. Lucie Unit 2
Operation of the A ICW Header with Pressure Transmitter PT-21-8A Temporarily Out Of Service

Introduction:

Pressure transmitter PT-21-8A provides annunciation in the control room for low pressure in the Unit 2 "A" ICW header. There remain alternate methods for ensuring proper operation of the "A" header. This situation will continue until a replacement can be installed or the present transmitter replaced.

Safety Evaluation:

The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased. Operation of the "A" ICW header with PT-21-8A temporarily out of service is bounded by the ICW design basis to provide a heat sink for the CCW system under design basis accident conditions, assuming a single failure coincident with a loss of offsite power.

The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created. There are several alternative parameters that can be monitored to ensure proper operation of the "A" ICW header with PT-21-8A temporarily out of service. This does not create any new scenarios for accidents or malfunctions of equipment.

The margin of safety as defined in the basis for any Technical Specification is not affected by this change. PT-21-8A does not directly affect operability of the "A" ICW header. The bases of the technical specifications is not affected as the header remains available with several alternate means of monitoring its performance. This change requires no change to the Unit 2 Technical Specifications.

St. Lucie Units 1 and 2
Change in Auxiliary Cooling Water Systems Corrosion Inhibitor Specification

Introduction:

St. Lucie 1 and 2 used potassium dichromate as the corrosion inhibitor for the auxiliary cooling water systems from initial startup until the summer of 1985 when a change to molybdate chemistry was made. Since the changeover to molybdate/TTA chemistry control, the plant has reported problems with occasional "crud bursts" in the systems and an on-going problem with high suspended solids in the Unit 2 CCW system. The change will add nitrates (200-500 ppm) to the current corrosion inhibitor solution used in the auxiliary cooling water systems.

Safety Evaluation:

The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the FUSAR are not increased.
(1) The proposed corrosion inhibitor serves the same function as that of the current inhibitor.
(2) The proposed corrosion inhibitor in no way affects the ability of the CCW system to perform as designated.
(3) The proposed corrosion inhibitor provides improved corrosion inhibition for the CCW system components to help minimize corrosion and maintain integrity of the system. Attachments F, G, and H of this report document corrosion rates for sodium-based and potassium-based molybdate/nitrate corrosion inhibitor programs. When used in recommended concentrations, these programs provide as effective corrosion inhibition as the original potassium chromate chemistry.
(4) Higher concentrations (500 ppm) of the corrosion inhibitor will provide increased system corrosion protection capability.
(5) Although the corrosion inhibitor is normally purchased in a premixed solution, the ability to purchase individual components to the specifications listed in the chemistry specifications book will allow the system chemistry to be adjusted to provide the maximum system protection.

The possibility of an accident or malfunction of a different type than any previously evaluated in the FUSAR will not be created.

(1) No mechanical components are changed or altered. The proposed corrosion inhibitor is more effective at minimizing corrosion than the inhibitor currently used. The material is non-toxic and non-hazardous in the concentrations used.
(2) If a CCW/RCS interface leak were to occur during operation, leakage would be from the RCS into the CCW system. The CCW system is equipped with a radiation monitor to determine if leakage exists between the RCS and CCW. If a leak developed during shutdown, the CCW could enter the RCS. Routine sampling of RCS fluids as specified in plant chemistry procedures would identify a contaminant intrusion.

The margin of safety as defined in the basis for any technical specification is not reduced.
(1) The plant technical specifications do not specify a particular type of corrosion inhibitor.
(2) Nitrites are a proven corrosion inhibitor, and have been shown to enhance the capability of molybdates to control corrosion in closed cooling water systems. Testing has shown that solutions containing 500 ppm of molybdates and nitrites provide optimum passivation for carbon steel components. If system corrosion is controlled at a low level the chance of equipment failure caused by corrosion will be reduced.

St. Lucie Unit 2
Irretrievable O_2 Monitor Inside Containment

Introduction:

During maintenance in the Unit 2 containment building on December 27, 1989, an O_2 monitor was dropped inside the secondary shield wall and cannot be retrieved with the reactor at power. The monitor measures approximately 1-1/2" x 4" x 7".

Safety Evaluation:

The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the FUSAR are not increased. Section 6.2.2.2.3 of the FUSAR describes that debris generated inside containment as a result of an accident will be confined between the primary and secondary walls. Large debris generated here is prevented from reaching and possibly damaging the sump by the trash racks (3/4" gaps) located at the secondary shield wall openings. These trash racks would prevent the meter from reaching the containment sump located outside the secondary shield wall. The sump design provides additional protection by incorporating a 90 mil fine mesh filter screen to protect the ECCS suction from entrained particles. These screens are sized to eliminate particles too large to pass through the fuel assemblies, which is the most restrictive flow path in the system. Particle smaller than this would pass through all system components including reactor, pumps, heat exchangers, and spray nozzles.

The possibility of an accident or malfunction of a different type than any evaluated previously in the FUSAR will not be created. Operation with the O_2 monitor inside containment does not involve any changes to the plant of its design basis other than combining with debris generated inside containment as a result of an accident. Debris generated inside containment as a result of an accident is analyzed in section 6.2.2.2.3 of the FUSAR.

The margin of safety as defined in the basis for any technical specification is not reduced. The O_2 monitor is prevented from reaching and possibly damaging the sump by the trash racks located at the secondary shield wall openings. The sump design provides additional protection by incorporating a 90 mil fine mesh filter screen to protect the ECCS suction from entrained particles. These screens are sized to eliminate particles too large to pass through the reactor fuel assemblies which is the most restrictive flow path in the system. Particles smaller than this would pass through all system components including reactor, pumps, heat exchangers, and spray nozzles. The technical specification basis is not reduced during operation with the O_2 monitor inside containment.

St. Lucie Unit 1
Repair of 1"-MS-49 Downstream of I-HCV-08-1A by the Installation of a Valve and Welded Cap

Introduction:

This change will install temporary modification in accordance with the attached safety evaluation and restore the line to the original design configuration during the next unit 1 refueling outage.

Safety Evaluation:

The proposed activity does not increase the probability of occurrence of an accident previously evaluated in the SAR since this modification does not affect any accident initiating components. This modification occurs outside the steam trestle, close to the turbine building, and cannot affect any equipment capable of initiating an accident. Any failure of this modification is encompassed by the analyzed main steam line break described in FSAR section 3, appendix 3C.

The consequences of an accident previously evaluated in the SAR have not been increased by this modification since it does not affect any equipment required to mitigate the effects of an accident. Failure of non-seismic (not Class I) portions of main steam or feedwater lines, the major portions of which are run through the turbine building, cannot adversely affect the mitigation of the consequences of the postulated accidents and the capability to bring the unit to a cold shutdown condition since there is not safety related equipment located in the turbine building.

The probability of occurrence of a malfunction of equipment important to safety previously evaluated in the safety analysis report has not been increased by this modification. The only safety related equipment that could be affected by a break in the main steam or feedwater lines are the three auxiliary feedwater pumps which are located under the trestles. This modification is outside the steam trestle, and is therefore unable to affect any safety related equipment.

The consequences of a malfunction of equipment important to safety previously evaluated in the SAR have not been increased since this modification does not affect any equipment important to safety and is to be implemented in a section of piping which is not required to mitigate the consequences of a postulated accident.

The possibility of an accident of a different type than any previously evaluated in the safety analysis report has not been created since this modification does not add or affect any equipment capable of initiating an accident. The proposed modification does not provide a new mode of normal or emergency plant operation.

The possibility of a malfunction of a different type than any previously evaluated in the safety analysis report has not been created since this temporary modification will not inhibit or otherwise adversely affect the operation of any equipment important to safety.

The proposed activity does not reduce the margin of safety as defined in the basis for any technical specification since this modification does not affect any code safety valves, main steam isolation valves or any components as described in the basis for any plant technical specifications for the main steam system.

St. Lucie Unit 1
Main Steam Isolation Valves Actuator Air Pressure Testing

Introduction:

As part of the instrument air upgrade modification, the air system operating pressure band was increased to provide the required MSIV pressure. Due to an apparent leakage of instrument air and pressure loss in the instrument air system, the required pressure could not be maintained. A temporary air system was installed to provide an additional air supply to maintain MSIV pressure above the alarm setpoint.

Safety Evaluation:

The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the FSAR is not increased. The MSIVs provide steam line isolation by closing for all analyzed plant accidents. The design of the MSIV control system is such that closure can be assured within the technical specification time requirement of 6 seconds whether actuator air is above the alarm setpoint (greater than 102psig) or at lower pressures between 102 and 98 psig. In addition, for the SGTR case, sufficient air exists in the MSIV to facilitate closure up to 30 minutes into the accident.

The possibility of an accident or malfunction of equipment of a different type than any previously evaluated in the FSAR is not created. The configuration of the main steam system and MSIVs will not be altered as a result of the data gathering system. Operability of the system and the MSIVs with respect to accident mitigation will not be altered. The additional Heise gages and tie-in tubing required to support the evolution will be attached independently to each MSIV. Failure of the temporary equipment could result in failure of the associated MSIV only. Single MSIV failure is already addressed by the FSAR.

The margin of safety as defined by the technical specifications is not reduced. The requirement for MSIV closure within 6 seconds will not be reduced during the data gathering session. Previous testing has verified closure capability within the 6 second time restraint at pressures significantly lower than the expected 98 psig.

St. Lucie Unit 2
Leak Repair on 2A Main Feedwater Pump

Introduction:

The outer lip of the flange half on the nut fastener side of the MFWP 2A will be drilled with from one to three 7/16 inch diameter holes to allow injection of sealant into the annulus between the flange studs and their locating holes.

Safety Evaluation:

The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the FSAR will not be increased because the proposed repair will be performed on non-nuclear safety related MFWP 2A. The repair will not degrade the integrity of the pump since the drilled injection holes, required for the repair, are sufficiently small and are located in a sufficiently low stressed region of the flange.

The possibility for an accident or malfunction of a different type than any previously evaluated in the FSAR is not created because the total failure of the main feedwater pump is within the spectrum of accidents previously evaluated in the FSAR. The sealant to be utilized for the proposed repair will be injected in such a manner and quantity that the sealant cannot be introduced into the secondary system.

The margin of safety as defined in the bases for any technical specifications is not reduced since the Main Feedwater Pump 2A does not form part of the bases of any technical specification.

St. Lucie Units 1 and 2
Waste Gas Drain System

Introduction:

The purpose of this evaluation is to justify the use of a condensate removal system off the refrigerant cooler at the suction of the Automatic Gas Analyzer sample pump. The implementation of this temporary modification involves the installation of a pump to ensure that a sufficient pressure differential exists to provide proper drainage, a vacuum tank which will act as an accumulator, and a pressure switch to initiate drainage and prevent sample pump damage.

Safety Evaluation:

The probability of occurrence of an accident previously evaluated in the SAR has not increased since this modification does not affect any accident initiating components. The function of the gaseous waste management system, to monitor and control the release of gaseous radioactive effluents to the environment, will not be affected by this temporary modification.

The consequences of an accident previously evaluated in the SAR have not been increased by this modification since this modification does not affect any equipment required to mitigate the effects of an accident. This modification will in no way affect any radiation monitoring equipment which controls the release of gaseous radioactive effluents to the environment.

The probability of occurrence of a malfunction of equipment important to safety previously evaluated in the SAR has no been increased since this modification will help to preclude sample pump failure due to water ingestion. This modification does not alter the function of any existing components, and thus does not increase the possibility of their failure.

The consequences of a malfunction of equipment important to safety previously evaluated in the SAR have not been increased since this modification reduces the possibility of sample pump failure and the possible release of radioactive gaseous effluents into the RAB. The consequences of a failure are no worse than a complete failure of the sample pump or a sample line rupture.

The possibility of an accident of a different type than any evaluated previously in the SAR has no been created since this modification does not add or affect any equipment capable of initiating an accident. The implementation of this temporary modification will not affect any radiation monitoring devices which control the release of gaseous radioactive effluents to the environment.

The possibility of a malfunction of a different type than any evaluated previously in the SAR has not been created since this temporary modification will not inhibit or otherwise adversely affect the operation of the GWMS automatic gas analyzer. The components of the modification are in compliance with the SAR requirements for the system elements.

The proposed modification does not reduce the margin of safety as defined in the basis for any technical specification since the requirement of operability of at least one analyzer system will be maintained.

St. Lucie Unit 1
Main Steam Isolation Valves Temporary Instrument Air Supplies

Introduction:

Due to leakage of instrument air and pressure drop in the instrument air system, the instrument air pressure at the supply to MSIVs is less than 102 psig as specified by PC/M 050-186. If instrument air pressure goes lower, there may be an unintended closure of the affected MSIV. To avoid unnecessary challenges to safety systems, a temporary air compressor will be used to supplement instrument air to the MSIV through instrument air line 3/4-IA-153, in addition to compressed air bottles which are now being used.

Safety Evaluation:

The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the FSAR will not be increased because the proposed temporary modification will be performed on the non-nuclear safety related instrument air system and will not change the operability, degrade closure time, or change any other function or capability of the MSIV.

The possibility for an accident or malfunction of a different type than any previously evaluated in the SAR is not created because there is no change in function or capabilities of the MSIVs or their control system. In addition, no new failure modes for the safety-related equipment have been created.

The margin of safety as defined in the bases for nay technical specification is not reduced since there is no change in the ability of the MSIVs to respond as required to maintain the bases of the applicable technical specifications.

St. Lucie Unit 1
Testing of Diverse Scram System Modules

Introduction:

As part of the project to meet the requirements of the ATWS Rule, a Diverse Scram System (DSS) has been designed by Consolidated Controls Corporation (CCC) and will be installed in the St. Lucie Unit 1 Engineered Safety Features Actuation System cabinets. CCC intends to conduct functional tests on prototype modules to ensure compatibility with the existing system, to check interchangeability, and to check in-cabinet module operation.

Safety Evaluation:

The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the SAR will not be increased because one of four channels will be considered inoperable at any time. This leaves the channel functions in a two-out-of-three trip condition during the majority of the test. For a short period of time that the function is one-out-of-three logic (i.e., during isolation module changeout), the condition is more conservative than plant technical specification limiting conditions.

The possibility for an accident or malfunction of a different type than any previously evaluated in the SAR will not be created because the trip logic conditions are those previously evaluated and are specifically stated in the plant technical specifications. In addition, since the cabinet design separates and electronically isolates measurement channels from each other and safety channels from each other, feedback affecting other channels is unanticipated. Therefore the operation of another channel will not be adversely affected.

The margin of safety as defined in the basis for any technical specification is not reduced since the T/S allow for plant operations in a two-out-of-three trip logic for a specified time period.

St. Lucie Unit 1
Boraflex Panel Integrity Assessment Program

Introduction:

St. Lucie Unit 1 will be conducting a Boraflex Integrity Assessment Program to determine the integrity of the Boraflex panels used in the design of the region 1 spent fuel storage racks. Certain aspects of the program have been provided to and approved by the NRC. These aspects include the frequency of testing and the number of cells to be tested, as well as the scheduling of the test.

Safety Evaluation:

The SAR evaluates the consequences and probability of a fuel handling accident and a cask drop accident. Since the test tool and calibration cell to be used weigh less than a fuel assembly, and since all lifting operations will be conducted in accordance with plant procedures, the probability of an accident has not been increased. The lifting and handling of the test tool will not occur over spent fuel, and the test tool contains only a very small (1.3 millicurie) neutron source. Therefore, the radiological consequences of a postulated dropping of the test tool are bounded by the previously analyzed accident scenarios since the test tool cannot damage any fuel and does not contain any fuel. Also, since the test tool and calibration cell weigh less than a fuel assembly, no damage will occur to the spent fuel pool structure. Based on this, the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the SAR have not been increased.

The SAR evaluates the dropping of equipment in the spent fuel pool. These accidents are bounded by the fuel handling accident and the cask drop accident. Since the test tool and calibration cell do not introduce any interaction potentials other than the dropping of equipment, and they weigh less than a fuel assembly, the possibility of an accident or malfunction of a different type than any previously evaluated in the SAR has not been created.

St. Lucie Unit 1 T/S 3.9.7 prohibits loads in excess of 2000 lb. from being carried over spent fuel assemblies. This ensures that no more than one fuel assembly is damaged in a fuel handling accident. T/S 3.9.13 identifies the maximum load to be handled by the fuel cask crane to be twenty-five tons. This restriction ensures the structural integrity of the spent fuel pool in the event of a cask drop accident. The two specifications ensure that the accident analysis provided in Chapter 15 of the FSAR remains valid. Section 5 of the Technical Specifications discusses the criticality restrictions for the spent fuel pool (Keff < 0.95). These restrictions ensure that there is adequate subcriticality margin at all times. The test tool neutron source is so small that the effect on the multiplication factor Keff is negligible. The test tool and calibration cell both weigh much less than the technical specification limit of 2000 lb. and will not be carried over spent fuel. The test tool will be carried over spent fuel storage racks, but will not be carried over the cells containing fuel. Therefore, since all equipment is less than 2000 lb., and within all design requirements of the lifting equipment, the margin of safety as defined in the basis for any technical specification has not been reduced.

St. Lucie Unit 2
Component Cooling Water Heat Exchangers 2A and 2B Expandable Rubber Tube Plugs

Introduction:

During previous St. Lucie Unit 2 outages, the CCW heat exchanger tubes were examined, with the results showing the need to plug some of the tubes. One hundred thirteen of the tubes plugged used an expandable rubber type material. The Yuba plugging procedure detailed in Instruction Manual 2998-3511, however, identifies only metallics as the recommended plug material.

Safety Evaluation:

The use of expandable rubber tube plugs in place of metallic tube plugs in the CCW heat exchangers will not increase the probability of occurrence or consequences of an accident or malfunction of equipment important to safety previously evaluated in the SAR. Testing has shown that these plugs will continue to perform their desired function even when subjected to worst case (accident) pressures, temperatures, and chemistry conditions. The CCW heat exchangers will continue to perform their design function during all normal and accident conditions.

The rubber plugs will not become dislodged, even under the most adverse temperature and differential pressure conditions, and therefore there is no accident or malfunction of a type different than any evaluated previously.

The bases for the CCW system operability provided in the technical specification is to ensure that sufficient cooling capacity is available for continued operation of equipment during normal and accident conditions. Use of the rubber plugs in lieu of the metallic plugs will not reduce the cooling capacity of the CCW system, since the tube plugging criteria has not been exceeded. As such, the margin of safety has not been reduced. There are no technical specifications which are affected or changed by use of the expandable rubber plugs in the CCW heat exchangers.

St. Lucie Unit 1
Temporary Use of Two Spare Fuse Holders on RTGB 106

Introduction:

Recently in RTGB 106, fuse block CCC points F55 and F56, the fuse clip holders, were damaged. This was caused by the insulating barrier between the positive fuse F55 and the negative fuse F56 breaking off and the opposite polarities of the 125V DC circuit coming into contact with each other. A replacement for the damaged fuse block is currently unavailable. By using two spare fuse holders on fuse block ZZ and four jumpers, the containment isolation valves FCV-25-2, 4, and 6 can be returned to service. This is only a temporary measure until replacement parts can be procured and installed.

Safety Evaluation:

The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased as demonstrated in the evaluation section. The temporary use of the spare fuse holders and jumpers does not adversely impact the accident analysis as previously evaluated in the safety analysis report.

The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created. The fuse blocks CCC and ZZ are the same train power supplies. Therefore use of the spare fuse holders and jumpers does not introduce any new accident scenarios.

The margin of safety as defined by the basis for any technical specification has not been reduced since the basis of any technical specification is not affected. The requirements of the evaluation ensure that the temporary use of the spare fuse holders and jumpers have no adverse interaction with other equipment. The operability requirement for this component imposed by the Technical Specifications is met.

St. Lucie Unit 2
Temporary Installation of Cable for RCP 2A2 Upper Oil Reservoir Level Indication

Introduction:

Shortly after the last Unit 2 startup, level indication for the 2A2 RCP upper oil reservoir was lost. It was determined that Cable 20112E, from the sensing probe to transmitter LT-1166, had failed. A temporary replacement cable was installed from the sensing probe to the level transmitter. Due to the insufficient length of the replacement cable, it could not be routed through the existing conduit. It was therefore routed external to the conduit from the 2A2 RCP to LT-1166 located on the 43' level of the RCB.

Safety Evaluation:

The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report is not increased. The temporary installation of the cable can have no impact on any equipment important to safety. Failure of the cable cannot result in any adverse effects on equipment important to safety. The temporary installation of the cable cannot impact any analysis previously evaluated in the safety analysis report.

The possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report is not created. Failure of the cable cannot result in any adverse effects on equipment important to safety. Routing of the cable outside of the conduit does not introduce any new accident scenarios.

The margin of safety as defined by the basis for any technical specification is not reduced by the temporary installation of the cable. There are no technical specifications associated with this level instrumentation.

St. Lucie Unit 2
Submergence of Valve V-6341, Reactor Drain Tank Pump Suction Isolation Valve

Introduction:

St. Lucie Unit 2 Non-Conformance Report 2-253, Description of Condition, indicates that valve V-6341, RDT Pump Suction Isolation Valve, is located at elevation 9 ft of the RCB. This is below the post-LOCA flood level. The limit switch and solenoid valve associated with this valve are mounted on it. However, all the solenoids were designed to be located above the flood level elevation.

Safety Evaluation:

The probability of occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the SAR are not increased since the safety function of the valve, closing on CIS, is not affected. The functionality of the solenoid under submerged conditions is not affected, and the limit switches under submerged conditions will also perform the required function by providing valve position indication for sufficient duration for operators to assess containment isolation.

Leaving the solenoid and the limit switches in the present location will not increase the possibility of an accident or malfunction of a different type of any evaluated previously in the FSAR since valve V-6341 will close on CIS under submergence conditions. Thus, no new modes of failure are being introduced.

The margin of safety as defined in the basis for any technical specification will not be reduced since the operation of the reactor drain system is not affected and containment integrity is maintained.

SECTION 2

Steam Generator

In-Service Inspection

St. Lucie Unit 2

SECTION 2

STEAM GENERATOR IN-SERVICE INSPECTION
Unit 2 Technical Specification 4.4.5.5

The inspection of the St. Lucie Unit 2 Steam Generators was conducted by Florida Power & Light, Material Codes and Inspection Group, supplemented by FPL certified Eddy Current personnel and complemented by contractor personnel. The Eddy Current In-Service Inspection of Steam Generators was performed during the 1989 Unit 2 refueling outage. One hundred percent of each steam generator was inspected.

The information concerning Eddy current Testing and Tube Plugging was submitted as part of the Owner's Data Report for Inservice Inspection (Form NIS-1). This was submitted in accordance with the provisions of the ASME Code, Section XI, (IWA-6230) by FPL letter L-89-253 dated July 17, 1989. Selected pages of the above report have been included in this section.

FPL

FORM NIS-BB OWNERS' DATA REPORT FOR EDDY CURRENT EXAMINATION RESULTS
As required by the provisions of the ASME CODE RULES

EDDY CURRENT EXAMINATION RESULTS						
PLANT: St. Lucie Unit # 2 EXAMINATION DATES: February 9, 1989 Thru March 1, 1989						
STEAM GENERATOR	TOTAL TUBES INSPECTED	TOTAL INDICATIONS		TUBES PLUGGED AS PREVENTIVE MAINTENANCE	TUBES PLUGGED THIS OUTAGE	TOTAL PLUGGED TUBES IN S/G
		20% - 39%	40% - 100%			
A	8203	52	6	7	13	221
B	8256	41	4	3	7	162

LOCATION OF INDICATIONS

(20% - 100%)

STEAM GENERATOR	U BENDS	EGGCRATES 1 TO 7		PARTIAL SUPPORTS 8 AND 9		TOP OF TUBE SHEET TO # 1 EGGCRATE	
	DHB to DCB	H/L	C/L	H/L	C/L	H/L	C/L
A	54	1	2	0	0	0	1
B	40	0	1	2	0	1	1

Remarks:

ASR = Adjacent stay rod tube
TRS = Tube restriction
TBP = To be plugged

CERTIFICATION OF RECORD

We certify that the statements in this report are correct and the tubes inspected were tested in accordance with the requirements of Section XI of the ASME Code.

Florida Power & Light Co.

5/15/89
DATE

BY

FLORIDA POWER & LIGHT COMPANY
700 UNIVERSE BLVD.
JUNO BEACH, FLORIDA
33408

ST. LUCIE NUCLEAR PLANT
P.O.BOX 128
FT.PIERCE, FLORIDA
33454

UNIT 2

STEAM GENERATOR 2A & 2B

1989 EDDY CURRENT RESULTS

CUMULATIVE REPORT

CUMMULATIVE DISTRIBUTION SUMMARY
ST. LUCIE 2
02/89

COMPONENT : S/G # A

Date : 04/17/89
Time : 1:58 PM

Examination Dates : 02/09/89 thru 03/01/89

Total Number of Tubes Inspected .....: 8203

Total Indications
Between 20% and 39% .....: 52
Greater than or equal to 40% ...: 6

Total Tubes Plugged as Preventive Maint : 7
Total Tubes Plugged .....: 13

Location Of Indications 20% to 100%

Hot Leg		Cold Leg	
TSH -.5 to 01H -2.1 :	0	TSC -.5 to 01C -2.1 :	1
01H -2.0 to 07H +2.0 :	1	01C -2.0 to 07C +2.0 :	2
07H +2.1 to DHB -3.1 :	0	07C +2.1 to DCB -3.1 :	0
DHB -3.0 to DCB -3.0 :	54		

PLUGGABLE TUBES LIST
St. Lucie 2
02/89

COMPONENT :STG #A

Page : 1 of 1
Date : 04/14/89
Time : 9:53 AM

ROW	LINE	ZONE	REQ EXT	LEG	TESTED EXTENT	REEL	CH	PROBE	LOCATION	%	Volts	Deg	Dataset
126	48	14	TEH	C	TEH PC	AC121	1	A-580-SF/RM	DHT 0.0	45	6.4	110	DEGRADED
136	64	14	TEH	C	TEH	AC124	1	A-580-SF/RM	DHT 0.0	PTP	4.7	130	IMPERFECT
94	66	16	TEH	C	TEH PCGY	AC116	M 1	A-580-SF/RM	VS4 0.7	40	5.1	95	IMPERFECT
39	73	4	TEH	C	TEH PCGY	AC006	1	A-580-SF/RM	DHB 0.0	PTP	3.6	120	IMPERFECT
42	76	4	TEH	C	TEH PSGY	AC006	M 1	A-580-SF/RM	VS3 0.5	PTP	1.1	108	IMPERFECT
135	81	15	TEH	C	TEH GY	AC064	M 1	A-580-SF/RM	VS4 -0.8	PTP	2.5	102	IMPERFECT
50	86	6	TEH	C	TEH GY	AC069	1	A-580-SF/RM	DCT 0.0	PTP	2.4	129	IMPERFECT
			TEH	C	TEH PSGN	AC069	1	A-580-SF/RM	DHB 0.0	PTP	0.5	129	IMPERFECT
47	87	6	TEH	C	TEH GN	AC069	1	A-580-SF/RM	DHT 0.0	PTP	0.4	135	IMPERFECT
			TEH	C	TEH GM	AC069	1	A-580-SF/RM	DCT 0.0	PTP	2.8	129	IMPERFECT
			TEH	C	TEH PSGN	AC069	1	A-580-SF/RM	DHB 0.0	PTP	1.3	126	IMPERFECT
94	90	17	TEH	C	TEH PSGM	AC056	M 1	A-580-SF/RM	VS3 1.0	40	3.2	97	IMPERFECT
40	96	6	TEH	C	TEH PSGN	AC069	M 1	A-580-SF/RM	VS3 -0.7	48	2.5	90	DEGRADED
50	96	6	TEH	C	TEH PSGN	AC069	M 1	A-580-SF/RM	VS3 -0.7	48	1.3	90	DEGRADED
115	129	10	TEH	C	TEH PC	AC048	1	A-580-SF/RM	TSH 14.5	LPI	0.0	0	1-S
56	150	8	TEH	C	TEH PSGY	AC034	M 1	A-580-SF/RM	VS3 1.0	43	1.8	87	BALANCE

Number of Pluggable Tubes : 13

Number of Indications : 16

Selection Criteria :
PerCent T.W. ...: 40
Includes ADI,NQI,DSI,DTI,DRI,LPI,TBP,TRS,PTP Codes

CUMMULATIVE EXAMINATION REPORT
St. Lucie 2
OUTAGE : 02/89

COMPONENT : STG #A
DESCRIPTION : 20% TO 100%

Date : 4/ 3/89
Time : 12:33 PM

Extent						02/89						N/A					
Row	Lin	Leg	Req	Tst/Note	Reel	Probe	Location	Volts	Deg	Ch	%	Diff	Location	Volts	Deg	Ch	%
86	22	C	TEH	TEH PS	AC105	A-580-SF/RH	VS3 -.8	2.0	112	M 1	23						
92	26	C	TEH	TEH PS	AC106	A-580-SDF/RH	VS4 -1.0	.5	98	M 1	35						
93	27	C	TEH	TEH PSGN	AC106	A-580-SDF/RH	VS4 .7	2.8	97	M 1	36						
98	28	C	TEH	TEH PS	AC107	A-580-SF/RH	VS4 -.6	.9	112	M 1	20						
98	30	C	TEH	TEH	AC107	A-580-SF/RH	VS2 .4	.6	125	1	28						
105	33	C	TEH	TEH	AC108	A-580-SF/RH	VS2 .3	1.0	132	1	21						
55	37	C	TEH	TEH GN	AC103	A-580-SF/RH	VS3 1.0	2.0	102	M 1	28						
126	48	C	TEH	TEH PC	AC121	A-580-SF/RH	DHT .0	6.4	110	1	45						
		C	TEH	TEH	AC121	A-580-SF/RH	VS1 -.9	1.5	113	M 1	21						
20	52	C	TEH	TEH SSGN	AC002	A-580-SF/RH	06H 33.9	.5	120	1	33						
84	52	C	TEH	TEH PS	AC112	A-580-SF/RH	VS3 .1	2.0	127	1	27						
95	57	C	TEH	TEH	AC114	A-580-SF/RH	VS2 .8	.8	106	M 1	27						
127	59	C	TEH	TEH	AC123	A-580-SF/RH	VS1 .9	1.1	107	M 1	24						
131	61	C	TEH	TEH	AC123	A-580-SF/RH	DHT .0	.9	130	1	23						
19	63	C	TEH	TEH GN	AC005	A-580-SF/RH	VS3 -.9	.8	110	M 1	27						
94	64	C	TEH	TEH SS	AC115	A-580-SF/RH	VS2 1.0	1.8	101	M 1	32						
134	64	C	TEH	TEH	AC124	A-580-SF/RH	DHT .0	2.8	131	1	24						
6	64	C	TEH	TEH	AC124	A-580-SF/RH	DHT .0	4.7	130	1	25						
94	66	C	TEH	TEH PCGY	AC116	A-580-SF/RH	VS4 .7	5.1	95	M 1	40						
		C	TEH	TEH GM	AC116	A-580-SF/RH	VS4 .2	1.3	100	M 1	35						
39	73	C	TEH	TEH PCGY	AC006	A-580-SF/RH	DHB .0	3.6	120	1	33						
45	73	C	TEH	TEH GM	AC006	A-580-SF/RH	DCB .0	1.3	132	1	22						
47	73	C	TEH	TEH PSGN	AC006	A-580-SF/RH	VS3 .8	1.8	113	M 1	24						
135	73	C	TEH	TEH PSGN	AC062	A-580-SF/RH	VS1 .7	1.2	112	M 1	22						
82	74	C	TEH	TEH	AC117	A-580-SF/RH	VS1 -.7	1.2	103	M 1	29						
42	76	C	TEH	TEH PSGY	AC006	A-580-SF/RH	VS3 .5	1.1	108	M 1	29						
53	77	C	TEH	TEH GN	AC014	A-580-SF/RH	DHB .0	.5	133	1	21						
44	78	C	TEH	TEH	AC006	A-580-SF/RH	DHB .0	2.3	131	1	23						
49	79	C	TEH	TEH SSGN	AC006	A-580-SF/RH	VS3 .0	.7	124	1	30						
		C	TEH	TEH SSGN	AC006	A-580-SF/RH	VS3 .6	1.5	95	M 1	36						
47	81	C	TEH	TEH SSGN	AC006	A-580-SF/RH	VS3 -1.0	1.4	105	M 1	23						
135	81	C	TEH	TEH GY	AC064	A-580-SF/RH	VS4 -.8	2.5	102	M 1	30						
53	83	C	TEH	TEH GN	AC016	A-580-SF/RH	DCB .0	.9	126	1	28						
50	84	C	TEH	TEH PSGN	AC007	A-580-SF/RH	DCT .0	1.9	134	1	22						
49	85	C	TEH	TEH GN	AC069	A-580-SF/RH	DHB .0	.6	134	1	21						
59	85	C	TEH	TEH PCGN	AC075	A-580-SF/RH	DHB .0	.5	134	1	21						
50	86	C	TEH	TEH PSGN	AC069	A-580-SF/RH	DHB .0	.5	129	1	26						
		C	TEH	TEH GY	AC069	A-580-SF/RH	DCT .0	2.4	129	1	26						
92	86	C	TEH	TEH PCGN	AC055	A-580-SF/RH	VS2 -1.0	.9	114	M 1	21						
47	87	C	TEH	TEH GN	AC069	A-580-SF/RH	DHT .0	.4	135	1	20						
		C	TEH	TEH PSGN	AC069	A-580-SF/RH	DHB .0	1.3	126	1	29						
		C	TEH	TEH GM	AC069	A-580-SF/RH	DCT .0	2.8	129	1	26						
4	90	C	TEH	TEH PS	AC069	A-580-SF/RH	DHT .0	.4	131	1	24						

CUMMULATIVE EXAMINATION REPORT
St. Lucie 2
OUTAGE : 02/89

COMPONENT : STG #A
DESCRIPTION : 20% TO 100%

Date : 4/ 3/89
Time : 12:33 PM

			Extent				02/89						N/A				
Row	Lin	Leg	Req	Tst/Note	Reel	Probe	Location	Volts	Deg	Ch	%	Diff	Location	Volts	Deg	Ch	%
94	90	C	TEH	TEH PSGM	AC056	A-580-SF/RM	VS3 1.0	3.2	97	M 1	40						
43	91	C	TEH	TEH PS	AC069	A-580-SF/RM	DHB .0	.6	135	1	20						
109	91	C	TEH	TEH	AC056	A-580-SF/RM	TSC 5.0	.9	130	1	25						
49	95	C	TEH	TEH	AC069	A-580-SF/RM	DCT .0	.6	128	1	27						
40	96	C	TEH	TEH PSGN	AC069	A-580-SF/RM	VS3 -.7	2.5	90	M 1	48						
42	96	C	TEH	TEH	AC069	A-580-SF/RM	DHT .0	.4	135	1	20						
50	96	C	TEH	TEH PSGN	AC069	A-580-SF/RM	VS3 -.7	1.3	90	M 1	48						
47	97	C	TEH	TEH GN	AC069	A-580-SF/RM	VS3 .6	1.2	109	M 1	27						
53	97	C	TEH	TEH GN	AC077	A-580-SF/RM	04C 26.3	.6	135	1	20						
43	99	C	TEH	TEH	AC069	A-580-SF/RM	04C 11.9	1.2	134	1	21						
31	101	C	TEH	TEH GN	AC070	A-580-SF/RM	DCT .0	.7	129	1	31						
126	106	C	TEH	TEH GN	AC045	A-580-SF/RM	VS1 -.9	.6	99	M 1	35						
87	129	C	TEH	TEH PSGN	AC039	A-580-SF/RM	VS3 .8	1.9	110	M 1	24						
93	131	C	TEH	TEH PSGN	AC040	A-580-SF/RM	VS2 .7	1.8	99	M 1	39						
56	150	C	TEH	TEH PSGY	AC034	A-580-SF/RM	VS3 1.0	1.8	87	M 1	43						

Number of INDICATIONS Selected from Current Outage : 58
Number of TUBES Selected from Current Outage : 52

CUMMULATIVE DISTRIBUTION SUMMARY
ST. LUCIE 2
02/89

COMPONENT : S/G # B

Date : 04/17/89
Time : 1:58 PM

Examination Dates : 02/09/89 thru 03/01/89

Total Number of Tubes Inspected .....: 8256

Total Indications
Between 20% and 39% .....: 41
Greater than or equal to 40% ...: 4

Total Tubes Plugged as Preventive Maint : 3
Total Tubes Plugged .....: 7

Location Of Indications 20% to 100%

Hot Leg		Cold Leg	
TSH -.5 to 01H -2.1 :	1	TSC -.5 to 01C -2.1 :	1
01H -2.0 to 07H +2.0 :	0	01C -2.0 to 07C +2.0 :	1
07H +2.1 to DHB -3.1 :	2	07C +2.1 to DCB -3.1 :	0
DHB -3.0 to DCB -3.0 :	40		

PLUGGABLE TUBES LIST
St. Lucie 2
02/89

COMPONENT :STG #8

Date : 04/14/89
Time : 9:53 AM

ROW	LINE	ZONE	REQ EXT	LEG	TESTED EXTENT	REEL	CH	PROBE	LOCATION	%	Volts	Deg	Dataset
47	79	4	TEH	C	TEH PCGY	BC008	1	A-580-SF/RM	DHT 0.0	PTP	3.2	128	IMPERFECT
46	80	4	TEH	C	TEH PSGY	BC008	1	A-580-SF/RM	DHB 0.0	PTP	2.6	131	IMPERFECT
56	80	3	TEH	C	TEH PSGN	BC016	M 1	A-580-SF/RM	VS3 0.9	50	1.5	94	IMPERFECT
46	82	4	TEH	C	TEH PCGY	BC008	1	A-580-SF/RM	DHB 0.0	41	3.1	117	IMPERFECT
48	86	6	TEH	C	TEH PSGY	BC070	1	A-580-SF/RM	DCT 0.0	46	1.5	114	1-S
96	94	17	TEH	C	TEH SCGY	BC057	1	A-580-SF/RM	VS3 0.5	PTP	0.8	134	IMPERFECT
			TEH	C	TEH GY	BC057	M 1	A-580-SF/RM	VS2 -0.9	PTP	2.4	112	IMPERFECT
31	101	6	TEH	C	TEH SSGM	BC071	1	A-580-SF/RM	DCT 0.0	46	0.9	113	IMPERFECT

Number of Pluggable Tubes : 7

Number of Indications : 8

Selection Criteria :
PerCent T.W. ...: 40
Includes ADI,NQI,DSI,DTI,DRI,LPI,TBP,TRS,PTP Codes

CUMMULATIVE EXAMINATION REPORT
St. Lucie 2
OUTAGE : 02/89

COMPONENT : STG #8
DESCRIPTION : 20% TO 100%

Date : 4/ 3/89
Time : 12:34 PM

	Extent					02/89						N/A					
Row	Lin	Leg	Req	Tst/Note	Reel	Probe	Location	Volts	Deg	Ch	%	Diff	Location	Volts	Deg	Ch	%
96	24	C	TEH	TEH	BC107	A-580-SF/RM	08H -1.1	.9	97	M 1	38						
97	41	C	TEH	TEH PC	BC110	A-580-SF/RM	VS4 .6	.7	140	1	21						
68	50	C	TEH	TEH GN	BC009	A-580-SF/RM	VS3 -.9	.5	117	M 1	25						
57	51	C	TEH	TEH PSGN	BC010	A-580-SF/RM	VS3 -1.0	.8	105	M 1	37						
131	55	C	TEH	TEH PS	BC124	A-580-SF/RM	DCB .0	.7	139	1	23						
39	69	C	TEH	TEH GN	BC007	A-580-SF/RM	VS3 .9	1.1	109	M 1	30						
52	76	C	TEH	TEH PCGN	BC015	A-580-SF/RM	VS3 .8	.8	107	M 1	38						
43	77	C	TEH	TEH PSGN	BC008	A-580-SF/RM	DCB .0	1.2	139	1	20						
50	78	C	TEH	TEH PC	BC008	A-580-SF/RM	DCT .0	.4	136	1	23						
47	79	C	TEH	TEH PCGY	BC008	A-580-SF/RM	DHT .0	3.2	128	1	31						
49	79	C	TEH	TEH PC	BC008	A-580-SF/RM	DCT .0	1.5	131	1	28						
51	79	C	TEH	TEH PSGN	BC016	A-580-SF/RM	DCB .0	.7	139	1	23						
57	79	C	TEH	TEH PSGN	BC016	A-580-SF/RM	DCT .0	1.1	133	1	29						
46	80	C	TEH	TEH PCGY	BC008	A-580-SF/RM	DHB .0	2.6	131	1	28						
56	80	C	TEH	TEH PSGN	BC016	A-580-SF/RM	VS3 .9	1.5	94	M 1	50						
47	81	C	TEH	TEH PC	BC008	A-580-SF/RM	DHT .0	1.7	140	1	20						
46	82	C	TEH	TEH PCGY	BC008	A-580-SF/RM	DHB .0	3.1	117	1	41						
9	83	C	TEH	TEH	BC121	A-580-SF/RM	VS3 -.7	1.7	110	M 1	30						
7	85	C	TEH	TEH	BC070	A-580-SF/RM	DCB .0	1.9	139	1	22						
53	85	C	TEH	TEH PSGM	BC076	A-580-SF/RM	DCB .0	1.0	131	1	24						
48	86	C	TEH	TEH SS	BC070	A-580-SF/RM	DHB .0	.8	137	1	24						
		C	TEH	TEH PSGY	BC070	A-580-SF/RM	DCT .0	1.5	114	1	46						
52	88	C	TEH	TEH PSGN	BC076	A-580-SF/RM	VS3 .7	1.1	110	M 1	20						
54	90	C	TEH	TEH PS	BC077	A-580-SF/RM	DCB .0	.4	137	1	21						
87	93	C	TEH	TEH PSGN	BC057	A-580-SF/RM	VS3 -.9	.5	112	M 1	24						
96	94	C	TEH	TEH GY	BC057	A-580-SF/RM	VS2 -.9	2.4	112	M 1	24						
		C	TEH	TEH SCGY	BC057	A-580-SF/RM	VS3 .5	.8	134	1	28						
94	96	C	TEH	TEH PSGN	BC057	A-580-SF/RM	VS2 -1.0	1.0	108	M 1	28						
96	96	C	TEH	TEH SSGN	BC057	A-580-SF/RM	VS2 -1.0	.9	106	M 1	30						
		C	TEH	TEH PSGN	BC057	A-580-SF/RM	VS3 .8	1.7	113	M 1	23						
35	97	C	TEH	TEH PSGN	BC070	A-580-SF/RM	DHB .0	.4	138	1	23						
89	97	C	TEH	TEH PSGN	BC058	A-580-SF/RM	VS4 .9	.6	103	M 1	34						
97	97	C	TEH	TEH	BC058	A-580-SF/RM	TSH 21.6	.6	140	1	21						
34	98	C	TEH	TEH PSGN	BC070	A-580-SF/RM	VS3 -.8	.9	104	M 1	34						
35	99	C	TEH	TEH	BC070	A-580-SF/RM	DCB .0	.6	137	1	24						
31	101	C	TEH	TEH SSGM	BC071	A-580-SF/RM	DCT .0	.9	113	1	46						
89	103	C	TEH	TEH GN	BC059	A-580-SF/RM	VS2 -.9	.9	110	M 1	27						
52	110	C	TEH	TEH GN	BC081	A-580-SF/RM	VS3 .5	.6	109	M 1	25						
96	114	C	TEH	TEH GN	BC036	A-580-SF/RM	VS2 -.8	1.5	112	M 1	26						
129	115	C	TEH	TEH PSGN	BC047	A-580-SF/RM	08H .9	1.2	124	M 1	23						
94	122	C	TEH	TEH PSGN	BC038	A-580-SF/RM	VS2 -.7	.5	114	M 1	24						
55	125	C	TEH	TEH PSGN	BC029	A-580-SF/RM	VS3 -.9	1.3	113	M 1	34						
4	126	C	TEH	TEH SSGN	BC039	A-580-SF/RM	VS2 -.9	.6	114	M 1	26						

CUMMULATIVE EXAMINATION REPORT
St. Lucie 2
OUTAGE : 02/89

COMPONENT : STG #8
DESCRIPTION : 20% TO 100%

Date : 4/ 3/89
Time : 12:34 PM

		Extent					02/89						N/A				
Row	Lin	Leg	Req	Tst/Note	Reel	Probe	Location	Volts	Deg	Ch	%	Diff	Location	Volts	Deg	Ch	%
108	136	C	TEH	TEH	BC041	A-580-SF/RH	01C 31.0	.9	126	M 1	20						
12	166	C	TEH	TEH PSGN	BC028	A-580-SF/RH	TSC 27.0	.8	135	1	27						

Number of INDICATIONS Selected from Current Outage : 45
Number of TUBES Selected from Current Outage : 42

FLORIDA POWER & LIGHT COMPANY
700 UNIVERSE BLVD.
JUNO BEACH,FLORIDA
33408

ST. LUCIE NUCLEAR PLANT
P.O.BOX 128
FT.PIERCE,FLORIDA
33454

UNIT 2

STEAM GENERATOR 2A & 2B

LIST OF TOTAL TUBES PLUGGED

1989 CUMULATIVE REPORT

CUMMULATIVE EXAMINATION REPORT
St. Lucie 2
OUTAGE : 02/89

COMPONENT : STG #A
DESCRIPTION : VERIFIED EXISTING PLUGGED TUBES AND 02/89 PLUGGABLES

Date : 3/ 1/89
Time : 9:26 AM

	Extent					02/89						N/A					
Row	Lin	Leg	Req	Tst/Note	Reel	Probe	Location	Volts	Deg	Ch	%	Diff	Location	Volts	Deg	Ch	%
60	18	C	TEC	TEC	AC099	A-580-SF/RH					PLG						
66	18	C	TEC	TEC	AC099	A-580-SF/RH					PLG						
74	26	C	TEC	TEC	AC101	A-580-SF/RH					PLG						
68	30	C	TEC	TEC	AC101	A-580-SF/RH					PLG						
94	36	C	TEC	TEC	AC108	A-580-SF/RH					PLG						
36	38	C	TEC	TEC	AC095	A-580-SF/RH					PLG						
44	38	C	TEC	TEC	AC095	A-580-SF/RH					PLG						
44	44	C	TEC	TEC	AC097	A-580-SF/RH					PLG						
7	47	C	TEC	TEC	AC085	A-580-SDF/RH					PLG						
126	48	C	TEH	TEH PC	AC121	A-580-SF/RH	DHT .0	6.4	110	1	45						
		C	TEH	TEH PC	AC121	A-580-SF/RH	DHT .0	6.4	110	1	45						
18	50	C	TEC	TEC	AC001	A-580-SF/RH					PLG						
20	50	C	TEC	TEC	AC001	A-580-SF/RH					PLG						
40	50	C	TEC	TEC	AC001	A-580-SF/RH					PLG						
44	50	C	TEC	TEC	AC001	A-580-SF/RH					PLG						
91	51	C	TEC	TEC	AC112	A-580-SF/RH					PLG						
95	51	C	TEC	TEC	AC112	A-580-SF/RH					PLG						
90	52	C	TEC	TEC	AC112	A-580-SF/RH					PLG						
92	52	C	TEC	TEC	AC112	A-580-SF/RH					PLG						
19	53	C	TEC	TEC	AC002	A-580-SF/RH					PLG						
66	56	C	TEC	TEC	AC009	A-580-SF/RH					PLG						
94	56	C	TEC	TEC	AC113	A-580-SF/RH					PLG						
57	59	C	TEC	TEC	AC010	A-580-SF/RH					PLG						
133	59	C	TEC	TEC	AC123	A-580-SF/RH					PLG						
88	60	C	TEC	TEC	AC114	A-580-SF/RH					PLG						
100	60	C	TEC	TEC	AC114	A-580-SF/RH					PLG						
33	61	C	TEC	TEC	AC004	A-580-SF/RH					PLG						
100	62	C	TEC	TEC	AC115	A-580-SF/RH					PLG						
136	64	C	TEH	TEH	AC124	A-580-SF/RH	DHT .0	4.7	130	1	PTP						
21	65	C	TEC	TEC	AC005	A-580-SF/RH					PLG						
23	65	C	TEC	TEC	AC005	A-580-SF/RH					PLG						
24	66	C	TEC	TEC	AC005	A-580-SF/RH					PLG						
26	66	C	TEC	TEC	AC005	A-580-SF/RH					PLG						
28	66	C	TEC	TEC	AC005	A-580-SF/RH					PLG						
94	66	C	TEH	TEH PCGY	AC116	A-580-SF/RH	VS4 .7	5.1	95	H 1	40						
25	67	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
27	67	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
29	67	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
28	68	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
30	68	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
29	69	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
31	69	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
105	69	C	TEC	TEC	AC116	A-580-SF/RH					PLG						

CUMMULATIVE EXAMINATION REPORT
St. Lucie 2
OUTAGE : 02/89

COMPONENT : STG #A
DESCRIPTION : VERIFIED EXISTING PLUGGED TUBES AND 02/89 PLUGGABLES

Date : 3/ 1/89
Time : 9:26 AM

			Extent					02/89						N/A					
Row	Lin	Leg	Req	Tst/Note	Reel	Probe	Location	Volts	Deg	Ch	%	Diff	Location	Volts	Deg	Ch	%
30	70	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
32	70	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
34	70	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
36	70	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
31	71	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
33	71	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
35	71	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
37	71	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
32	72	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
34	72	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
36	72	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
33	73	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
35	73	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
37	73	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
39	73	C	TEH	TEH PCGY	AC006	A-580-SF/RH	DHB .0	3.6	120	1	PTP						
34	74	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
36	74	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
38	74	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
40	74	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
35	75	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
37	75	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
39	75	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
36	76	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
38	76	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
40	76	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
42	76	C	TEH	TEH PSGY	AC006	A-580-SF/RH	VS3 .5	1.1	108	M 1	PTP						
50	76	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
52	76	C	TEC	TEC	AC014	A-580-SF/RH					PLG						
37	77	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
39	77	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
41	77	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
49	77	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
36	78	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
38	78	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
40	78	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
42	78	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
37	79	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
39	79	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
41	79	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
43	79	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
45	79	C	TEC	TEC	AC006	A-580-SF/RH					PLG						
59	79	C	TEC	TEC	AC015	A-580-SF/RH					PLG						
38	80	C	TEC	TEC	AC006	A-580-SF/RH					PLG						

CUMMULATIVE EXAMINATION REPORT
St. Lucie 2
OUTAGE : 02/89

COMPONENT : STG #A
DESCRIPTION : VERIFIED EXISTING PLUGGED TUBES AND 02/89 PLUGGABLES

Date : 3/ 1/89
Time : 9:26 AM

		Extent					02/89						N/A					
Row	Lin	Leg	Req	Tst/Note	Reel	Probe	Location	Volts	Deg	Ch	%	Diff	Location	Volts	Deg	Ch	%	
40	80	C	TEC	TEC	AC006	A-580-SF/RH					PLG							
42	80	C	TEC	TEC	AC006	A-580-SF/RH					PLG							
44	80	C	TEC	TEC	AC006	A-580-SF/RH					PLG							
46	80	C	TEC	TEC	AC006	A-580-SF/RH					PLG							
50	80	C	TEC	TEC	AC006	A-580-SF/RH					PLG							
37	81	C	TEC	TEC	AC006	A-580-SF/RH					PLG							
39	81	C	TEC	TEC	AC006	A-580-SF/RH					PLG							
41	81	C	TEC	TEC	AC006	A-580-SF/RH					PLG							
43	81	C	TEC	TEC	AC006	A-580-SF/RH					PLG							
45	81	C	TEC	TEC	AC006	A-580-SF/RH					PLG							
49	81	C	TEC	TEC	AC006	A-580-SF/RH					PLG							
135	81	C	TEH	TEH GY	AC064	A-580-SF/RH	VS4 -.8	2.5	102	H 1	PTP							
38	82	C	TEC	TEC	AC006	A-580-SF/RH					PLG							
40	82	C	TEC	TEC	AC006	A-580-SF/RH					PLG							
42	82	C	TEC	TEC	AC006	A-580-SF/RH					PLG							
44	82	C	TEC	TEC	AC007	A-580-SF/RH					PLG							
48	82	C	TEC	TEC	AC007	A-580-SF/RH					PLG							
52	82	C	TEC	TEC	AC015	A-580-SF/RH					PLG							
54	82	C	TEC	TEC	AC015	A-580-SF/RH					PLG							
39	83	C	TEC	TEC	AC007	A-580-SF/RH					PLG							
41	83	C	TEC	TEC	AC007	A-580-SF/RH					PLG							
43	83	C	TEC	TEC	AC007	A-580-SF/RH					PLG							
45	83	C	TEC	TEC	AC007	A-580-SF/RH					PLG							
49	83	C	TEC	TEC	AC007	A-580-SF/RH					PLG							
55	83	C	TEC	TEC	AC016	A-580-SF/RH					PLG							
57	83	C	TEC	TEC	AC016	A-580-SF/RH					PLG							
38	84	C	TEC	TEC	AC007	A-580-SF/RH					PLG							
40	84	C	TEC	TEC	AC007	A-580-SF/RH					PLG							
42	84	C	TEC	TEC	AC007	A-580-SF/RH					PLG							
44	84	C	TEC	TEC	AC007	A-580-SF/RH					PLG							
39	85	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
41	85	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
43	85	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
45	85	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
99	85	C	TEC	TEC	AC055	A-580-SF/RH					PLG							
38	86	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
40	86	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
42	86	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
44	86	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
48	86	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
50	86	C	TEH	TEH PSGH	AC069	A-580-SF/RH	DHB .0	.5	129	1	PTP							
		C	TEH	TEH GY	AC069	A-580-SF/RH	DCT .0	2.4	129	1	PTP							
87	87	C	TEC	TEC	AC069	A-580-SF/RH					PLG							

CUMMULATIVE EXAMINATION REPORT
St. Lucie 2
OUTAGE : 02/89

COMPONENT : STG #A
DESCRIPTION : VERIFIED EXISTING PLUGGED TUBES AND 02/89 PLUGGABLES

Date : 3/ 1/89
Time : 9:26 AM

			Extent					02/89						N/A					
Row	Lin	Leg	Req	Tst/Note	Reel	Probe	Location	Volts	Deg	Ch	%	Diff	Location	Volts	Deg	Ch	%		
39	87	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
41	87	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
43	87	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
45	87	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
47	87	C	TEH	TEH GN	AC069	A-580-SF/RM	DHT .0	.4	135	1	PTP								
		C	TEH	TEH PSGN	AC069	A-580-SF/RM	DHB .0	1.3	126	1	PTP								
		C	TEH	TEH GM	AC069	A-580-SF/RM	DCT .0	2.8	129	1	PTP								
79	87	C	TEC	TEC	AC075	A-580-SF/RM					PLG								
127	87	C	TEC	TEC	AC066	A-580-SF/RM					PLG								
38	88	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
40	88	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
42	88	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
44	88	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
37	89	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
39	89	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
41	89	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
43	89	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
[illegible]	89	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
[illegible]	90	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
38	90	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
40	90	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
42	90	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
94	90	C	TEH	TEH PSGM	AC056	A-580-SF/RM	VS3 1.0	3.2	97	H 1	40								
37	91	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
39	91	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
41	91	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
36	92	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
38	92	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
40	92	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
42	92	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
44	92	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
106	92	C	TEC	TEC	AC056	A-580-SF/RM					PLG								
35	93	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
37	93	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
39	93	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
34	94	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
36	94	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
38	94	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
40	94	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
33	95	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
35	95	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
37	95	C	TEC	TEC	AC069	A-580-SF/RM					PLG								
[illegible]	95	C	TEC	TEC	AC069	A-580-SF/RM					PLG								

CUMMULATIVE EXAMINATION REPORT
St. Lucie 2
OUTAGE : 02/89

COMPONENT : STG #A
DESCRIPTION : VERIFIED EXISTING PLUGGED TUBES AND 02/89 PLUGGABLES

Date : 3/ 1/89
Time : 9:26 AM

		Extent					02/89						N/A					
Row	Lin	Leg	Req	Tst/Note	Reel	Probe	Location	Volts	Deg	Ch	%	Diff	Location	Volts	Deg	Ch	%	
32	96	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
34	96	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
36	96	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
40	96	C	TEH	TEH PSGN	AC069	A-580-SF/RH	VS3 -.7	2.5	90	H 1	48							
50	96	C	TEH	TEH PSGN	AC069	A-580-SF/RH	VS3 -.7	1.3	90	H 1	48							
31	97	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
33	97	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
35	97	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
39	97	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
49	97	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
30	98	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
32	98	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
34	98	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
36	98	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
38	98	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
29	99	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
31	99	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
33	99	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
35	99	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
107	99	C	TEC	TEC	AC058	A-580-SF/RH					PLG							
28	100	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
30	100	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
32	100	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
34	100	C	TEC	TEC	AC069	A-580-SF/RH					PLG							
82	100	C	TEC	TEC	AC058	A-580-SF/RH					PLG							
25	101	C	TEC	TEC	AC070	A-580-SF/RH					PLG							
27	101	C	TEC	TEC	AC070	A-580-SF/RH					PLG							
29	101	C	TEC	TEC	AC070	A-580-SF/RH					PLG							
33	101	C	TEC	TEC	AC070	A-580-SF/RH					PLG							
121	101	C	TEC	TEC	AC044	A-580-SF/RH					PLG							
24	102	C	TEC	TEC	AC070	A-580-SF/RH					PLG							
26	102	C	TEC	TEC	AC070	A-580-SF/RH					PLG							
28	102	C	TEC	TEC	AC070	A-580-SF/RH					PLG							
46	102	C	TEC	TEC	AC070	A-580-SF/RH					PLG							
21	103	C	TEC	TEC	AC070	A-580-SF/RH					PLG							
23	103	C	TEC	TEC	AC070	A-580-SF/RH					PLG							
128	110	C	TEC	TEC	AC046	A-580-SF/RH					PLG							
105	111	C	TEC	TEC	AC061	A-580-SF/RH					PLG							
94	118	C	TEC	TEC	AC036	A-580-SF/RH					PLG							
6	122	C	TEC	TEC	AC050	A-580-SDF/RH					PLG							
12	122	C	TEC	TEC	AC016	A-580-SF/RH					PLG							
115	129	C	TEH	TEH PC	AC048	A-580-SF/RH	TSH 14.5			1	LPI							
116	130	C	TEC	TEC	AC048	A-580-SF/RH					PLG							

CUMMULATIVE EXAMINATION REPORT
St. Lucie 2
OUTAGE : 02/89

COMPONENT : STG #A
DESCRIPTION : VERIFIED EXISTING PLUGGED TUBES AND 02/89 PLUGGABLES

Date : 3/ 1/89
Time : 9:26 AM

		Extent					02/89						N/A				
Row	Lin	Leg	Req	Tst/Note	Reel	Probe	Location	Volts	Deg	Ch	%	Diff	Location	Volts	Deg	Ch	%
25	133	C	TEC	TEC	AC019	A-580-SF/RH					PLG						
27	133	C	TEC	TEC	AC019	A-580-SF/RH					PLG						
65	139	C	TEC	TEC	AC031	A-580-SF/RH					PLG						
32	140	C	TEC	TEC PS	AC021	A-580-SF/RH					PLG						
54	142	C	TEC	TEC	AC032	A-580-SF/RH					PLG						
76	146	C	TEC	TEC	AC033	A-580-SF/RH					PLG						
34	148	C	TEC	TEC	AC023	A-580-SF/RH					PLG						
33	149	C	TEC	TEC	AC023	A-580-SF/RH					PLG						
56	150	C	TEH	TEH PSGY	AC034	A-580-SF/RH	VS3 1.0	1.8	87	H 1	43						
51	153	C	TEC	TEC	AC034	A-580-SF/RH					PLG						

Number of INDICATIONS Selected from Current Outage : 225
Number of TUBES Selected from Current Outage : 221

Henry Labieniec 3/3/89

VERIFIED BY CE HENRY LABIENIEC DATE

CUMMULATIVE EXAMINATION REPORT
St. Lucie 2
OUTAGE : 02/89

COMPONENT : STG #8
DESCRIPTION : VERIFIED EXISTING PLUGGED TUBES AND 02/89 PLUGGABLES

Date : 3/ 1/89
Time : 10:09 AM

			Extent					02/89						N/A					
Row	Lin	Leg	Req	Tst	Note	Reel	Probe	Location	Volts	Deg	Ch	%	Diff	Location	Volts	Deg	Ch	%	
89	25	C	TEH	TEC		BC107	A-580-SF/RM					PLG							
72	26	C	TEH	TEC	SS	BC102	A-580-SF/RM					PLG							
96	28	C	TEH	TEC		BC108	A-580-SF/RM					PLG							
96	38	C	TEH	TEC		BC110	A-580-SF/RM					PLG							
21	65	C	TEH	TEC		BC006	A-580-SF/RM					PLG							
23	65	C	TEH	TEC		BC006	A-580-SF/RM					PLG							
24	66	C	TEH	TEC		BC006	A-580-SF/RM					PLG							
26	66	C	TEH	TEC		BC006	A-580-SF/RM					PLG							
28	66	C	TEH	TEC		BC006	A-580-SF/RM					PLG							
25	67	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
27	67	C	TEH	TEC		BC006	A-580-SF/RM					PLG							
29	67	C	TEH	TEC		BC006	A-580-SF/RM					PLG							
28	68	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
30	68	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
29	69	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
31	69	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
33	69	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
[illegible]	69	C	TEH	TEC		BC127	A-580-SF/RM					PLG							
[illegible]0	70	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
32	70	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
34	70	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
31	71	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
33	71	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
32	72	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
34	72	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
36	72	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
38	72	C	TEH	TEC	SS	BC007	A-580-SF/RM					PLG							
33	73	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
35	73	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
37	73	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
39	73	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
34	74	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
36	74	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
38	74	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
35	75	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
37	75	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
39	75	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
41	75	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
36	76	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
38	76	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
40	76	C	TEH	TEC		BC007	A-580-SF/RM					PLG							
37	77	C	TEH	TEC		BC008	A-580-SF/RM					PLG							
[illegible]9	77	C	TEH	TEC		BC008	A-580-SF/RM					PLG							

CUMMULATIVE EXAMINATION REPORT
St. Lucie 2
OUTAGE : 02/89

COMPONENT : STG #B
DESCRIPTION : VERIFIED EXISTING PLUGGED TUBES AND 02/89 PLUGGABLES

Date : 3/ 1/89
Time : 10:09 AM

			Extent					02/89						N/A				
Row	Lin	Leg	Req	Tst/Note	Reel	Probe	Location	Volts	Deg	Ch	%	Diff	Location	Volts	Deg	Ch	%
41	77	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
36	78	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
38	78	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
40	78	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
42	78	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
37	79	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
39	79	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
41	79	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
43	79	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
45	79	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
47	79	C	TEH	TEH PCGY	BC008	A-580-SF/RH	DHT .0	3.2	128	1	PTP						
38	80	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
40	80	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
42	80	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
44	80	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
46	80	C	TEH	TEH PSGY	BC008	A-580-SF/RH	DHB .0	2.6	131	1	PTP						
48	80	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
6	80	C	TEH	TEH PSGN	BC016	A-580-SF/RH	VS3 .9	1.5	94	M 1	50						
7	81	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
39	81	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
41	81	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
43	81	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
45	81	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
38	82	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
40	82	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
42	82	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
44	82	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
46	82	C	TEH	TEH PCGY	BC008	A-580-SF/RH	DHB .0	3.1	117	1	41						
54	82	C	TEH	TEC SS	BC016	A-580-SF/RH					PLG						
39	83	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
41	83	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
43	83	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
45	83	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
38	84	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
40	84	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
42	84	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
44	84	C	TEH	TEC	BC008	A-580-SF/RH					PLG						
39	85	C	TEH	TEC	BC070	A-580-SF/RH					PLG						
41	85	C	TEH	TEC	BC070	A-580-SF/RH					PLG						
43	85	C	TEH	TEC	BC070	A-580-SF/RH					PLG						
45	85	C	TEH	TEC	BC070	A-580-SF/RH					PLG						
38	86	C	TEH	TEC	BC070	A-580-SF/RH					PLG						
0	86	C	TEH	TEC	BC070	A-580-SF/RH					PLG						

CUMMULATIVE EXAMINATION REPORT
St. Lucie 2
OUTAGE : 02/89

COMPONENT : STG #B
DESCRIPTION : VERIFIED EXISTING PLUGGED TUBES AND 02/89 PLUGGABLES

Date : 3/ 1/89
Time : 10:09 AM

			Extent				02/89						N/A					
Row	Lin	Leg	Req	Tst/Note	Reel	Probe	Location	Volts	Deg	Ch	%	Diff	Location	Volts	Deg	Ch	%	
42	86	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
44	86	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
48	86	C	TEH	TEH PSGY	BC070	A-580-SF/RM	DCT .0	1.5	114	1	46							
37	87	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
39	87	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
41	87	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
43	87	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
45	87	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
49	87	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
38	88	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
40	88	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
42	88	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
44	88	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
46	88	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
37	89	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
39	89	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
41	89	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
43	89	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
45	89	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
47	89	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
131	89	C	TEH	TEC	BC066	A-580-SF/RM					PLG							
36	90	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
38	90	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
40	90	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
42	90	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
46	90	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
37	91	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
39	91	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
41	91	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
43	91	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
49	91	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
61	91	C	TEH	TEC	BC077	A-580-SF/RM					PLG							
36	92	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
38	92	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
40	92	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
35	93	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
37	93	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
39	93	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
41	93	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
34	94	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
36	94	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
38	94	C	TEH	TEC	BC070	A-580-SF/RM					PLG							
40	94	C	TEH	TEC	BC070	A-580-SF/RM					PLG							

CUMMULATIVE EXAMINATION REPORT
St. Lucie 2
OUTAGE : 02/89

COMPONENT : STG #8
DESCRIPTION : VERIFIED EXISTING PLUGGED TUBES AND 02/89 PLUGGABLES

Date : 3/ 1/89
Time : 10:09 AM

		Extent					02/89						N/A					
Row	Lin	Leg	Req	Tst/Note	Reel	Probe	Location	Volts	Deg	Ch	%	Diff	Location	Volts	Deg	Ch	%	
96	94	C	TEH	TEH GY	BC057	A-580-SF/RH	VS2 -.9	2.4	112	M 1	PTP							
		C	TEH	TEH SCGY	BC057	A-580-SF/RH	VS3 .5	.8	134	1	PTP							
33	95	C	TEH	TEC	BC070	A-580-SF/RH					PLG							
35	95	C	TEH	TEC	BC070	A-580-SF/RH					PLG							
37	95	C	TEH	TEC	BC070	A-580-SF/RH					PLG							
32	96	C	TEH	TEC	BC070	A-580-SF/RH					PLG							
34	96	C	TEH	TEC	BC070	A-580-SF/RH					PLG							
36	96	C	TEH	TEC	BC070	A-580-SF/RH					PLG							
31	97	C	TEH	TEC	BC070	A-580-SF/RH					PLG							
33	97	C	TEH	TEC	BC070	A-580-SF/RH					PLG							
30	98	C	TEH	TEC	BC070	A-580-SF/RH					PLG							
32	98	C	TEH	TEC	BC070	A-580-SF/RH					PLG							
29	99	C	TEH	TEC	BC070	A-580-SF/RH					PLG							
31	99	C	TEH	TEC	BC070	A-580-SF/RH					PLG							
28	100	C	TEH	TEC	BC070	A-580-SF/RH					PLG							
30	100	C	TEH	TEC	BC070	A-580-SF/RH					PLG							
36	100	C	TEH	TEC	BC070	A-580-SF/RH					PLG							
2	100	C	TEH	TEC	BC058	A-580-SF/RH					PLG							
25	101	C	TEH	TEC	BC071	A-580-SF/RH					PLG							
27	101	C	TEH	TEC	BC071	A-580-SF/RH					PLG							
29	101	C	TEH	TEC	BC071	A-580-SF/RH					PLG							
31	101	C	TEH	TEH SSGM	BC071	A-580-SF/RH	DCT .0	.9	113	1	46							
24	102	C	TEH	TEC	BC071	A-580-SF/RH					PLG							
26	102	C	TEH	TEC	BC071	A-580-SF/RH					PLG							
28	102	C	TEH	TEC	BC071	A-580-SF/RH					PLG							
21	103	C	TEH	TEC	BC071	A-580-SF/RH					PLG							
23	103	C	TEH	TEC	BC071	A-580-SF/RH					PLG							
96	110	C	TEH	TEC	BC061	A-580-SF/RH					PLG							
93	111	C	TEH	TEC	BC061	A-580-SF/RH					PLG							
97	119	C	TEH	TEC	BC037	A-580-SF/RH					PLG							
115	123	C	TEH	TEC	BC048	A-580-SF/RH					PLG							
118	124	C	TEH	TEC	BC048	A-580-SF/RH					PLG							
61	131	C	TEH	TEC	BC030	A-580-SF/RH					PLG							
63	153	C	TEH	TEC	BC035	A-580-SF/RH					PLG							

Number of INDICATIONS Selected from Current Outage : 163
Number of TUBES Selected from Current Outage : 162

Henry Labieniec 3/3/89

VERIFIED BY CE HENRY LABIENIEC DATE

SECTION 3

St. Lucie

Mangrove Study

Technical Specification 4.7.6.1.2

In accordance with Technical Specification 4.7.6.1.2., FPL conducted the St. Lucie Mangrove Photographic Survey in June 1989. The survey revealed that the deterioration of the mangroves east of the power plant between the intake and discharge canals remains in excess of 10%, compared to the 1975 baseline condition.

An engineering evaluation, to determine the effects of deteriorating mangroves on the FSAR wave runup analysis, was completed in July 1987. This evaluation concluded that the mangroves are not required to maintain the design basis of the St. Lucie site to protect safety-related structures and equipment from Probable Maximum Hurricane surge and erosion damage. Therefore, the deterioration of the mangroves does not create a condition of safety significance.

Activities have been in progress to improve the vitality of the mangroves, and the coverage of the area in questions has improved by almost 6% when compared to the 1988 condition. In 1990 fertilizing, water pumping regimes and additional planting are expected to further improve the condition of the area.

SECTION 4

Personnel Exposure Report

Technical Specification 6.9.1.5