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TECHNICAL EVALUATION REPORT

Audit of Plant Specific License Conversions
to Standard Technical Specifications
Crystal River Unit 3
Docket No. 50-298

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SUMMARY

This report documents the Idaho National Engineering Laboratory (INEL) audit of the Crystal River Unit 3 improved technical specifications, and appropriate associated documentation to ensure that the improved technical specifications reflect the facility as described in the licensee Final Safety Analysis Report and docketed correspondence, and that the improved technical specifications and licensee procedures and controls reflect all the appropriate provisions or conditions of the NRC approval as documented in the NRC Safety Evaluation Report. This report finds the licensee has successfully implemented the improved technical specifications.

PREFACE

This report is supplied as part of the "Technical Assistance in Support of Audits on Plant-Specific License Conversions to Standard Technical Specifications." It is being conducted for the U.S. Nuclear Regulatory Commission, Office of Nuclear Reactor Regulation, Division of ~~Operating~~ PROJECT Reactor Support, by Lockheed Idaho Technologies Company, National Nuclear Operations Analysis Department.

Audit of Plant Specific License Conversions to STS
Crystal River Unit 3 (Docket No. 50-298)

1. INTRODUCTION

During the low-power testing phases at the Grand Gulf 1 plant, it was found that some discrepancies existed between the plant Technical Specifications (TS) and the Final Safety Analysis Report (FSAR), Safety Evaluation Report (SER) or the as-built conditions for the plant. As a result of the discrepancies, a program was initiated to audit the TS for Near-Term Operating License (NTOL) plants. Based on the NRC experience with these audit reviews and findings, the NRC has decided to initiate an independent audit process for the plants that are converting their TS to the improved Standard Technical Specifications (STS).

This report provides the results of an audit of the Crystal River Unit 3 improved TS, and appropriate associated documentation to ensure that the improved TS reflect the facility as described in the licensee FSAR and docketed correspondence, and that the improved TS and licensee procedures and controls reflect all the appropriate provisions or conditions of the NRC approval as documented in the NRC SER.

During the time period that Crystal River Unit 3 is implementing the improved TS, the INEL performed a comparative audit of the Crystal River Unit 3 improved TS, the relocated requirements, the previous version of the Crystal River TS, the FSAR as amended, associated docketed correspondence, and the SER. The review specifically covered the limiting conditions for operation associated with the following TS sections:

- a. Safety Limits (all of Section 2)
- b. Reactor Protection System (RPS)
- c. Engineered Safety Feature Actuation Systems (ESFAS)
- d. Emergency Feedwater Initiation and Control Systems (EFIC)
- e. Containment Spray and Cooling Systems
- f. Containment Isolation Valves
- g. RCS Pressure Isolation Valve (PIV) Leakage
- h. Electrical Power System
- i. Administrative Controls

2. NRC SPECIFIED REQUESTED ACTIONS

A comparison of the new TS to the old TS and the current update of the FSAR was performed to develop an audit scope for each of the listed TS sections. This identified a scope for the audit review to (1) include a wide range of relocated and reformatted TS requirements, (2) cover material described in the staff SER, and (3) cover a variety of relocation complexity.

The subsequent performance of the site audit of licensee documents was to verify that the licensee complied with the following:

- POLY-UNIT
- a. Relocated requirements are appropriately incorporated in applicable documents (e.g., FSAR or procedures) as discussed in the staff SER.
- VERIFY THAT

- b. Any relocatable requirements that were modified are properly justified and traceable.
- c. Verify that appropriate controls are applied to former TS requirements while they are being relocated, and that plans for documenting the relocated requirements into the FSAR or applicable licensee-controlled documents are being implemented.
- d. Evaluate licensee methods for controlling implementation of and changes to relocated requirements.
- e. Assess licensee implementation of selected items from the staff evaluation, based on the audit scope.

The scope of the audit required nine specific areas of review. These nine (9) areas for review are:

- a. Safety Limits (all of Section 2)
- b. Reactor Protection System (RPS)
- c. Engineered Safety Feature Actuation System (ESFAS)
- d. Emergency Feedwater Initiation and Control Systems (EFIC)
- e. Containment Spray and Cooling Systems
- f. Containment Isolation Valves
- g. RCS Pressure Isolation Valve (PIV) Leakage
- h. Electrical Power System
- i. Administrative Changes removed from TS, specifically:
The revised Quality Assurance (QA) Plan addressing these old TS items: a) Review and Audits [6.5], b) Review and Approval Process, and Temporary Change Process [6.8.2 & 3], c) Record Retention [6.10], and d) Process Control Program [6.14].

After the initial review of the documents, the reviewer generated a list of questions and/or additional avenues of inquiry for the on-site audit. These items are listed in groups and the "item" number relates to the area of review listed above.

The site audit was performed to verify that the relocated requirements are:

- a. appropriately incorporated in applicable documents as described in the staff ~~SEX~~.
- b. justified and traceable,
- c. appropriately controlled during the relocation process,
- d. implemented according to documentation requirements for relocated material,
- e. implemented with the same rigor as the previous TS items, and
- f. implemented per the documentation requirements specified by the licensee.

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Items found to be deficient required additional evaluation to determine where in the change control process the failure occurred and if a systematic error exists.

3.1. Safety Limits (Section 2, of the improved TS.)

- 3.1.1. The Safety Limit (SL) 2.1.1.1 for maximum local fuel pin centerline temperature is assured by the Reactor Protection System (RPS) Instrumentation setpoints being as listed in LCO 3.3.1 as specified in the COLR.
- 3.1.2. SL 2.1.1.2 for Departure from Nucleate Boiling Ratio (DNBR) is assured by operation within the RPS setpoint limits of LCO 3.3.1 as specified in the COLR.
- 3.1.3. SL 2.1.1.3 for reactor coolant system (RCS) core outlet temperature and pressure limits are specified in Figure 2.1.1-1 of the improved TS.

The COLR addresses the following SLs, Limiting Conditions for Operation (LCOs), and Surveillance Requirement (SR), as numbered in the improved TS:

- SL 2.1.1.1 Fuel Pin Centerline Temperature Limit
SL 2.1.1.2 Departure from Nucleate Boiling (DNBR)
LCO 3.1.1 Shutdown Margin
LCO 3.1.3 Moderator Temperature Coefficient Limit
SR 3.1.7.1 Absolute Position Indicator/Relative Indicator Agreement Limits
LCO 3.2.1 Regulating Rod Insertion Limits
LCO 3.2.2 Axial Power Shaping Rod Insertion Limits
LCO 3.2.3 Axial Power Imbalance Operating Limits
LCO 3.2.4 Quadrant Power Tilt
LCO 3.2.5 Power Peaking Factors
LCO 3.3.1 Reactor Protection System Instrumentation
LCO 3.9.1 Refueling Boron Concentration

The site audit reviewed the completed procedures used to input the setpoints for the Nuclear Overpower RCS Flow and Measured Axial Power Imbalance. The review was to determine if the administrative controls (to input the setpoints of the Cycle 9 COLR, Rev. 1, page 3 [SL 2.1.1.1, SL 2.1.1.2, & LCO 3.3.1]) meet the criteria identified above in the Site Audit Verification Process.

Conclusion: Procedure SP-300 did not contain the limits in Rev. 1 of the COLR. The licensee's staff were knowledgeable of the deficiency and had a corrective action plan in place to correct it and had reviewed the safety significance of the deficiency. The scheduled correction date is December 1995.

3.2. Reactor Protection System

^{THE AUDITOR}
During [↑] The site audit determined not all RPS response times were relocated in the FSAR. It was determined some response times (i.e. reactor coolant pump/power; over power - flow - axial power imbalance) were not in the FSAR, but were in design basis documentation. The licensee's staff agreed to add the response times to the FSAR.

3.3. Engineered Safety Feature Actuation System

Sections 3.3.5 - ESAS Instrumentation
3.3.6 - ESAS Manual Initiation
3.3.7 - ESAS Automatic Actuation Logic

3.3.1. The improved TS identifies ^Y this system as the Engineered Safeguards Actuation System. SR 3.3.5.4 states, "Response time shall be within limits." The Bases, on page B 3.3-56, states, "Response time testing acceptance criteria are on a Function bases and are included in Reference 1 [FSAR Chapter 7]." The old technical specification Table 3.3-5, page 3/4 3-17, identified the values for the response times. The site review was not to check the individual values of the setpoints, but to determine if the change process ^{RELOCATION/} ~~meets~~ the criteria identified in the Site Audit Verification Process previously described. ^{MET}

Conclusion: The audit determined the relocated requirement(s) met the criteria.

3.3.2. There were no questions for sections 3.3.6 and 3.3.7.

3.4. Emergency Feedwater Initiation and Control Systems

Sections 3.3.11 - EFIC Instrumentation
3.3.12 - EFIC Manual Initiation
3.3.13 - EFIC Automatic Actuation Logic
3.3.14 - EFIC Emergency Feedwater (EFW) Vector Valve Logic
3.7.5 - Emergency Feedwater System

3.4.1. SR 3.3.11.4 states, "Verify EFIC RESPONSE TIME is within limits." Neither the Bases nor the FSAR specifically state the "limits."

^{DURING} Once the response times were identified in current ^{THE AUDITOR} licensee documentation, [↓] the site audit ^{RELOCATION/} was performed to determine if the change process ^{MET} meets the criteria identified in the Site Audit Verification Process described previously.

Conclusion: The audit determined the relocated requirement(s) met the criteria.

3.4.2. SR 3.7.5.3 requires, "Verify each EFW automatic valve that is not locked, sealed, or otherwise secured in position, actuates to the correct position on an

actual or simulated actuation signal." The Bases for this surveillance states that this SR also verifies the EFW control and block valves actuate on a simulated or actual vector valve control signal. Neither the old TS, under section 3.7.1.2, nor the bases made mention of the vector logic.

FSAR § 7.2.4.2 describes the "vector logic" OPEN/CLOSE commands based on steam generator pressures and levels.

Since the SR does not reference the vector logic actuation, during the site audit a review of the licensee's documentation for SR 3.7.5.3 was performed to assure the vector logic signals are included and the change process meets the criteria listed in the Site Audit Verification Process identified previously.

BY THE AUDITOR

RELOCATION/

PROCESS MET

Conclusion: The audit determined the relocated requirement(s) met the criteria.

3.4.3. No questions for sections 3.3.12 & 3.3.13.

3.5. Containment Spray and Cooling Systems

| | | |
|----------|---------|--|
| Sections | 3.6.4 - | Containment Pressure |
| | 3.6.5 - | Containment Air Temperature |
| | 3.6.6 - | Reactor Building Spray and Containment Cooling Systems |
| | 3.6.7 - | Containment Emergency Sump pH Control System |

3.5.1. SR 3.6.7.3 states, "Verify TSP-C solubility is within limits." The FSAR § 6.2 does not contain the "limits." The old TS had a limit of 0.5 lbs per 20 gallons of BWST liquid heated to 180° F to maintain a pH of ≥ 7.0 .

Once the "limits" were located in current licensee documents, the site audit was conducted to determine if the change process meets the criteria identified in the Site Audit Verification Process described previously.

Additionally, FSAR Table 6-15, page 6-57, Iodine Removal Evaluation Reactor Building Spray System, identifies the amount of TSP-C as 13,000 lbs. The SR 3.6.7.1 volume specification for TSP-C is ≥ 245 ft³ and ≤ 254 ft³.

The site audit was performed to determine if this change process meets the criteria identified in the Site Audit Verification Process described previously.

Conclusion: The audit determined the relocated requirement(s) met the criteria.

MET

RELOCATION/

3.5.2.

The improved TS Bases B 3.6.4 dealing with containment pressure references FSAR § 14.2.2.5.9 (Rev 20). The previous revision of this paragraph stated, "The RB spray started flowing at approximately 56 seconds, reaching full flow in approximately 71 seconds." The current revision states, "The RB spray is initiated and established at full flow within 120 seconds." No other changes concerning RB spray times were noted.

NEED TO SPECIFY OLD TS AND SUMMARIZE REVISIONS

DURING

THE AUDIT

MET

The site audit reviewed this change to determine if it meets the criteria listed under the Site Audit Verification Process. Additionally, related changes to the maximum containment pressure of 53.9 psig (design = 55.0 psig) were reviewed.

RELOCATION/

PROCESS

ANALYSIS DONE DURING RELOCATION

Conclusion: After the review of several licensee documents associated with moving the reactor building spray pumps loading sequence, the audit team members concluded the review was not properly performed. However, the licensee's administrative process discovered this error before implementation of the change. The FSAR is in error stating the full flow is attained in 120 seconds. Procedure SP-135C uses the correct value of 56 seconds.

NEED A CLOSURE STATEMENT. WHAT IS LICENSEE DOING OR GOING TO DO TO CORRECT PROBLEM.

3.5.3.

Old TS surveillance 4.6.2.1, page 3/4 C-11, identified a leak rate and surveillance on the reactor building spray system. The limit was ≤ 6 gal/hr.

LIMIT

DURING

The site audit reviewed the current applicability of this requirement. The auditors applied the criteria listed in the Site Audit Verification Process paragraph to the change process.

THE AUDIT

RELOCATION/

Conclusion: The audit determined the relocated requirement(s) met the criteria.

3.5.4.

SR 3.6.5.1 states, "Verify containment average air temperature is $\leq 130^\circ\text{F}$." The Bases for this describes an arithmetic average calculated using measurements taken at locations in the containment. The old TS surveillance listed four (4) specific containment temperature locations to be arithmetically averaged.

MET

During the audit this change was reviewed to determine if it meets the criteria listed under the Site Audit Verification Process criteria. Also, the auditors reviewed the procedures for deficiencies to verify actions are commensurate with the hazards.

SITE

RELOCATION/

BY THE AUDITOR

Conclusion: The audit determined the relocated requirement(s) met the criteria. However, the quality control of process computer mathematical calculations was found to be questionable. The audit team could not determine the standards used by the licensee for checking the calculation the computer performs to establish average containment temperature. As this

NEED MORE CLARIFICATION. WHAT KINDS OF SENTENCE - WHAT PROBLEMS WERE LOCATED AT? WHAT ACTIONS?

item was beyond the scope of the audit, the audit team identified this to the Resident Inspector for follow up.

3.5.5. No questions for section 3.6.6

3.6. Containment Isolation Valves

Section 3.6.3 - Containment Isolation Valves

The area of concern is addressed above in § 3.4.2.

3.7. RCS Pressure Isolation Valve (PIV) Leakage

Section 3.4.13 - RCS PIV Leakage

3.7.1. SR 3.4.13.2 & SR 3.4.1.3 are "new" to the technical specification arena.

DURING

MET

THE AUDITOR
RELOCATION
The site audit reviewed this change to determine if it meets the criteria listed under the Site Audit Verification Process. Also, the auditor conducted a review of the process for implementing "new" TS requirements.

Conclusion: This item of the audit check list was in error. The audit did not evaluate this item because it was not a relocation.

3.8. Electrical Power System

| | | |
|----------|---------|-----------------------------------|
| Sections | 3.8.1 - | AC Sources - Operating |
| | 3.8.3 - | Diesel Fuel Oil, and Starting Air |
| | 3.8.4 - | DC Sources - Operating |

3.8.1. FSAR Chapter 8, § 8.2.2.3 (Rev. 20), page 8-5, describes the 6900v to the reactor coolant pumps as supplied from the Startup Transformer, with the auto transfer switch in the "manual" position.

The previous revision (Rev. 19) said the 6900v bus was supplied from the Auxiliary Transformer, but the RCPs are not supplied by 1E power.

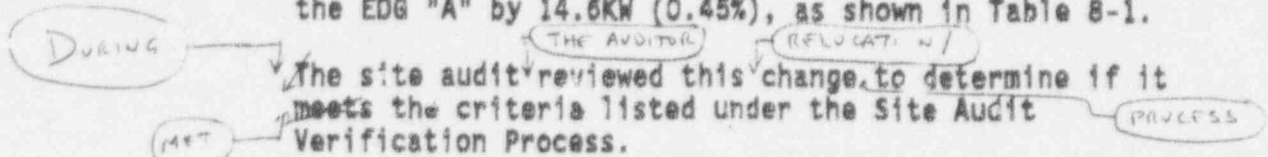
Although this is not a TS item, the audit was initially going to look at this change to assure appropriate review was completed.

Conclusion: The auditors did not evaluate this item as it is outside the scope of the audit.

3.8.2. Improved TS SR 3.8.1.4 requires verification that the Emergency Diesel Generator (EDG) day tank contains ≥ 245 gallons of fuel oil. The old TS placed this volume at ≥ 400 gallons.

The FSAR § 8.2.3.1 says that fuel oil storage for each of the units is sufficient for a minimum of 1 hour at all nameplate ratings.

Rev. 20 of the FSAR increased the identified load on the EDG "A" by 14.6KW (0.45%), as shown in Table 8-1.

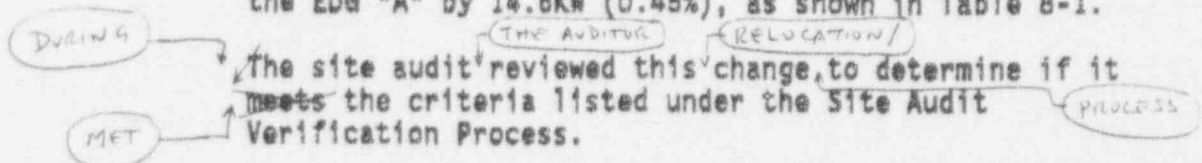


Conclusion: The audit determined the relocated requirement(s) met the criteria.

3.8.3. Improved TS SR 3.8.3.1 requires the EDG fuel oil storage tank to contain $\geq 18,589$ gallons of fuel. The old TS identified a minimum volume of 20,300 gallons.

The FSAR § 8.2.3.1 states that minimum fuel oil storage be sufficient for either unit to supply post-accident power for 7 days.

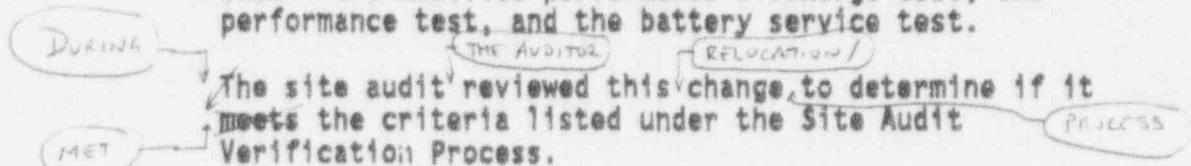
Rev. 20 of the FSAR increased the identified load on the EDG "A" by 14.6KW (0.45%), as shown in Table 8-1.



Conclusion: The audit determined the relocated requirement(s) met the criteria.

3.8.4. Improved TS SRs 3.8.4.7 and 3.8.4.8 contain the various battery tests and the relationships between them: the modified performance discharge test, the performance test, and the battery service test.

NEED TO
SPECIFY OLD
TS AND EXISTING
REQUIREMENTS



Conclusion: The audit determined the relocated requirement(s) met the criteria.

3.8.5. No questions for sections:

- 3.8.2 - AC Sources - Shutdown
- 3.8.5 - DC Sources - Shutdown
- 3.8.6 - Battery Cell Parameters
- 3.8.7 - Inverters - Operating
- 3.8.8 - Inverters - Shutdown
- 3.8.9 - Distribution System - Operating
- 3.8.10 - Distribution System - Shutdown

3.9. Administrative Changes to Technical Specifications

3.9.1.

DURING

THE AUDITOR
The site audit reviewed the Plant Review Committee Meeting minutes. Items of interest included:

3.9.1.1. Quorum - Chairman (alternate) and five members (alternates).

3.9.1.2. Unreviewed safety question determination of reviewed material.

Conclusion: The audit determined the relocated requirement(s) met the criteria.

3.9.2.

DURING

THE AUDITOR
The site audit conducted a review of the procedures used for training and qualifying "Qualified Reviewers."

Conclusion: The audit determined the relocated requirement(s) met the criteria.

3.10. FSAR Text Containing Technical Specifications Relocated Material [Licensee Interoffice Correspondence]

3.10.1.

FSAR (Rev. 20) § 1.2.7, Snubbers, states procedures define visual inspection and functional testing of the snubbers.

The old TS section 3.7.9.1 (page 3/4 7-25) discussed snubbers, described the process of visual inspections, and gave acceptance criteria. It also described the functional test (excluding 50,000 lbs).

DURING

THE AUDITOR
RELOCATION / MET
The site audit reviewed this change to see if it meets the criteria of the Site Audit Verification Process. PROCESS

Conclusion: The audit determined the relocated requirement(s) met the criteria.

3.10.2.

FSAR (Rev. 20) § 1.12, Reporting Commitments, was formerly section 6.9.1 of TS. No comment.

3.10.3.

FSAR (Rev. 20) § 2.3.3.1, Meteorological Facility Operations, states procedures exist to qualitatively assess and calibrate this instrumentation. The old TS 3.3.3.4 required a minimum number of operable channels, a daily (24 hour) channel checks, and a semi-annual (6 months) calibration. The old bases describes the instrumentation being consistent with the recommendations of Regulatory Guide 1.23 Onsite Meteorological Programs (Feb 1972). The capability of the instrumentation is required to evaluate the needs for initiating protective measures to protect the health and safety of the public.

DURING

THE AUDITOR
RELOCATION / MET
The site audit reviewed this change to see if it meets the criteria of the Site Audit Verification Process. PROCESS

Conclusion: The audit determined the relocated requirement(s) met the criteria.

3.10.4.

FSAR (Rev.20) § 2.4.2.4.1, Operational Requirements, which is a new section, documents that procedures exist to monitor water level of the Gulf and obtain meteorological forecasts when a Hurricane Watch or a Hurricane Warning is in effect.

The old TS 3/4.7.6.1 forced limits on operations based on Gulf water level and Hurricane Warning. The 98' level is the maximum elevation at which facility flood control measures provide protection to safety related equipment.

The FSAR § 2.4.2.4, Facilities Required for Flood Protection, lists the following as equipment required to remain functional during the potential hurricane:

- On-site diesel power generators, and their support equipment
- Reactor decay heat removal equipment:
 - Nuclear Services Closed Cycle Cooling System
 - Decay Heat Removal System
 - Decay Heat Closed Cycle Cooling System
 - Nuclear Service & Decay Heat Seawater System

THE AUDIT
DURING → The site audit reviewed this change to see if it meets the criteria of the Site Audit Verification Process. *RELOCATION/* *MET* *PROCESS*

Conclusion: The audit determined the relocated requirement(s) met the criteria.

3.10.5.

FSAR (Rev. 20) § 2.5.4.4 Seismic Monitoring Instrumentation, which is a new section, lists the range of various sensors & their locations. The FSAR states procedures exist to qualitatively assess, functionally test, and calibrate this instrumentation.

The old TS (3.3.3.3) required a special report to be submitted after 30 days of the system/instrument being inoperable.

THE AUDIT
DURING → The site audit reviewed this change to see if it meets the criteria of the Site Audit Verification Process. *RELOCATION/* *MET* *PROCESS*

Conclusion: The audit determined the relocated requirement(s) met the criteria.

3.10.6.

FSAR (Rev. 20) §2.6.4, Radiological Environmental Monitoring Program, requires the environment around the plant be monitored for radiological releases.

INSERT A
Pg 15 A

Old TS 6.9.4.b previously addressed this requirement.

Conclusion: The audit determined the relocated requirement(s) met the criteria.

3.10.7.

FSAR Sections 4.2.3.3, Heatup, and 4.2.3.4, Cooldown, address the pressurizer limit of 100°F in any 1 hour period (heatup/cooldown). This change is consistent with the old TS limit (3.4.9.2). Improved TS 3.4.3 identifies the limit to be in the PTLR (Pressure Temperature Limits Report).

Improved TS LCO 3.4.3, RCS Pressure & Temperature (P/T) Limits, excludes the pressurizer.

DURING

The site audit reviewed this change to see if it meets the criteria of the Site Audit Verification Process. Also, a review of the document that "bounds" this exclusion was going to be performed.

THE AUDITOR

RELOCATION

MET

PROCESS

Conclusion: The audit team determined that this item was outside the scope of the audit.

INSERT B Pg 15 A

3.10.8.

FSAR (Rev. 20) § 4.2.3.6.3, Water Quality, states procedures exist to periodically verify compliance to the chemistry limits listed in TABLE 4-10. These values are consistent with the old TS. The old TS listed actions to be performed if the chemistry was out of specifications.

DURING

The site audit reviewed this change to see if it meets the criteria of the Site Audit Verification Process.

THE AUDITOR

RELOCATION

MET

PROCESS

Conclusion: The audit determined the relocated requirement(s) met the criteria.

3.10.9.

FSAR (Rev. 20) § 4.2.3.10, Reactor Coolant System Vents, documents that procedures exist to demonstrate each of the flow paths are functional.

Old TS Surveillance 4.4.11, page 3/4 4-34, required 18 month operability/position checks of the open valves, cycling remote operated valves, and actual system flow check. Additionally, the action statement curtailed operations if two vent systems became inoperable.

DURING

The site audit reviewed this change to see if it meets the criteria of the Site Audit Verification Process.

THE AUDITOR

RELOCATION

MET

PROCESS

Conclusion: The audit determined the relocated requirement(s) met the criteria.

INSERT A

DURING THE SITE AUDIT THE AUDITOR REVIEWED THIS RELOCATION/CHANGE PROCESS TO SEE IF IT MET THE CRITERIA OF THE SITE AUDIT VERIFICATION PROCESS.

INSERT B

2 SINCE THERE WAS NO CHANGE TO THE PREVIOUS TS REQUIREMENT WITH RESPECT TO THE PRESSURIZER.

3.10.10.

FSAR (Rev. 20) § 4.2.4.3, Pressurizer Spray, was changed to include the $\Delta 410^\circ\text{F}$ between the pressurizer steam temperature and the RCS cold leg temperature.

The old TS bases describes the limit to be in the design criteria assumed for the fatigue analysis performed in accordance with ASME Code requirements.

DURING

The site audit reviewed this change to see if it meets the criteria of the Site Audit Verification Process.

THE AUDITOR

RELOCATION/

MET

PROCESS

Conclusion: The audit determined the relocated requirement(s) met the criteria.

3.10.11

FSAR (Rev. 20) § 4.2.5.5, Emergency Boration Requirements, is new. This describes many limits for the boron injection systems and states that procedures exist to periodically verify compliance with these limits. Section 1.2 of the old TS previously listed these requirements.

THIS DOES NOT SEEM TO BE THE CORRECT SPECIFICATION NUMBER. 1.2 IN THE OLD TS WOULD BE A DEFINITION WHICH DOES NOT SPECIFY REQUIREMENTS. PROVIDE CORRECT NUMBER.

DURING

The site audit reviewed this change to see if it meets the criteria of the Site Audit Verification Process.

THE AUDITOR

RELOCATION/

MET

PROCESS

Conclusion: The audit determined the relocated requirement(s) met the criteria.

3.10.12.

FSAR (Rev. 20) § 4.3.11.4, System Minimum Operational Components, addresses the pressurizer code safety valve requirements during MODES 4 & 5 and prior to criticality. This section describes the operational limits required if no pressurizer safety valves are operable.

DURING

The site audit reviewed this change to see if it meets the criteria of the Site Audit Verification Process.

THE AUDITOR

RELOCATION/

MET

PROCESS

Conclusion: The audit determined the relocated requirement(s) met the criteria.

3.10.13.

FSAR (Rev. 20) § 7.3.3.4, Operational Requirements, is new. It describes the instrumentation available for surveillance of the axial power imbalance and quadrant tilt. It states that procedures exist to qualitatively assess and calibrate the incore detection system instrumentation.

NEED TO SPECIFY OLD TS AND CORRESPONDING REQUIREMENT

DURING

The COLR identifies improved TS LCOs 3.2.3, Axial Power Imbalance Operating Limits, and 3.2.4, Quadrant Power Tilt.

THE AUDITOR

RELOCATION/

MET

The site audit reviewed this change to see if it meets the criteria of the Site Audit Verification Process.

PROCESS

Conclusion: The audit determined the relocated requirement(s) met the criteria.

- 3.10.14. FSAR (Rev. 20) § 9.1.2.5, Leakage Considerations (Makeup & Purification System), contains a new paragraph describing requirements for makeup pump availability and various MODES. Old TS LCOs 3.1.2.4.1, 3.1.2.4.2, and 3.1.2.3 previously identified these requirements/actions. (This item relates with number 3.10.11. above.)

DURING

DURING

THE AUDITOR → RELOCATION/ → MET
The site audit reviewed this change to see if it meets the criteria of the Site Audit Verification Process.

PROCESS

Conclusion: The audit determined the relocated requirement(s) met the criteria.

- 3.10.15. FSAR (Rev 20) § 9.4.2.7, Operational Requirements (Decay Heat Removal System), contains a new paragraph to describe requirements for Decay Heat pump availability and various MODES. Old TS LCO 3.1.2.5 previously identified these requirements/actions. (This item relates to numbers 3.10.11. and 3.10.14. above.)

DURING

THE AUDITOR → RELOCATION/ → MET
The site audit reviewed this change to see if it meets the criteria of the Site Audit Verification Process.

PROCESS

Conclusion: The audit determined the relocated requirement(s) met the criteria.

- 3.10.16. FSAR (Rev 20) § 9.6.2.4, Operational Requirements, is a new paragraph describing procedures for assessing various crane interlocks, communications, and ventilation filter trains for fuel handling. Old TS Section 3.9, Refueling Operations, previously had these requirements.

The site audit reviewed this change to see if it meets the criteria of the Site Audit Verification Process.

Conclusion: The audit determined the relocated requirement(s) met the criteria.

- 3.10.16.1 Improved TS LCO 3.9.1 places limits on the boron concentrations in the RCS and the refueling canal as specified by the COLR.

NEED TO SPEAK OLD TS AND SUMMARIZE REQUIREMENT

THE AUDITOR → RELOCATION/ → MET
The site audit reviewed this change to see if it meets the criteria of the Site Audit Verification Process.

DURING → MET
Conclusion: The audit determined the relocated requirement(s) met the criteria.

PROCESS

- 3.10.17. FSAR (Rev 20) § 9.7.2.7, Operational Requirements (Plant Ventilation Systems), now contains a paragraph describing the Auxiliary Building Ventilation Exhaust requirements during "operational modes." The old TS Section 3/4 7.8, Auxiliary Building Ventilation Exhaust System, contained numerous surveillance

requirements on inspection and testing. FSAR (Rev 20) Section § 9.7.4.2, Auxiliary Building Exhaust Air & Adsorption Filters, increased the specification on efficiency from $\geq 99\%$ of the DOP (dioctyl phthalate) to "less than 0.05%." Old TS Surveillance 4.7.8.1.b specified a flow rate of 156,680 cfm while DOP testing. Old TS Surveillance 4.7.8.1.e specified the same flow of 39,170 cfm as identified in Rev. 20 of the FSAR.

DURING

THE AUDITOR RELOCATION/PROCESS MET
The site audit reviewed this change to see if it meets the criteria of the Site Audit Verification Process.

Conclusion: The audit determined the relocated requirement(s) met the criteria.

3.10.17.1. The FSAR specifies the Δ pressure across the HEPA, and absorbers to be less than 6 in. of water when tested at a flow rate of 39,170 cfm. Old TS Surveillance 4.7.8.1.d specified this limit at a flow rate of 156,680 cfm.

FILTERS

DURING

THE AUDITOR RELOCATION/PROCESS MET
The site audit reviewed this change to see if it meets the criteria of the Site Audit Verification Process.

Conclusion: The audit determined the relocated requirement(s) met the criteria.

3.10.18. FSAR (Rev 20) § 9.7.3.1, Chlorine and Sulfur Operational Requirements, specifies alarm setpoints for chlorine and sulfur dioxide. This paragraph states procedures exist to qualitatively assess, functionally test, and calibrate these instruments. Old TS LCOs 3.3.3.11.1 and 3.3.3.11.2 actions statement required control room ventilation in the recirculation mode.

DURING

THE AUDITOR RELOCATION/PROCESS MET
The site audit reviewed this change to see if it meets the criteria of the Site Audit Verification Process.

Conclusion: The audit determined the relocated requirement(s) met the criteria.

3.10.19. FSAR (Rev 20) § 10.1.3, Operational Limitations (Steam and Power Conversion System), now states a procedure exists to assess compliance to the limit of the secondary temperature greater than 110°F in the steam generators when the secondary pressure is greater than 273 psig.

Old TS 3/4 7.2 required hourly surveillance after secondary coolant in each steam generator has been determined to be greater than 110°F.

DURING

THE AUDITOR

RELOCATION/

PROCESS

MET

The site audit reviewed this change to see if it meets the criteria of the Site Audit Verification Process.

Conclusion: The audit determined the relocated requirement(s) met the criteria.

- 3.10.20. FSAR (Rev 20) § 11.4.2.1.1, Area Gamma Monitoring System, now states procedures exist to qualitatively assess, functionally test, and calibrate the fuel storage pool area radiation monitor.

DURING

THE AUDITOR

RELOCATION/

MET

The site audit reviewed this change to see if it meets the criteria of the Site Audit Verification Process.

PROCESS

Conclusion: The audit determined the relocated requirement(s) met the criteria.

- 3.10.21. FSAR (Rev 20) § 14.B.6.4.7, Operational Requirements (Evaluation of Purging as a Means of Controlling Post-accident Hydrogen Accumulation), is new to the FSAR. It identifies that procedures exist to verify proper function of the ventilation and filtration aspects of the hydrogen purge system.

The hydrogen purge system is better described as a purge "process." The purge process uses these systems: Containment Monitoring, Reactor Building Leak Rate Testing, and Reactor Building Purge Exhaust.

The filter efficiency listed in the FSAR (page 9-64b) has been increased from the old TS value of $\geq 99\%$ to less than 0.05% penetration.

DURING

THE AUDITOR

RELOCATION/

MET

The site audit reviewed this change to see if it meets the criteria of the Site Audit Verification Process.

PROCESS

Conclusion: The audit determined the relocated requirement(s) met the criteria.

3.11. Additional Avenues of Inquiry

- 3.11.1 Review any completed licensee sponsored audits/reviews of the implementation of the improved TS and the action plans these reviews may have generated.

Conclusion: The licensee had completed at least one additional review of the SER and implementation documentation and generated a revision to internal documentation to address three deficiencies.

- 3.11.2. If available, review the NRC response addressing the anomalies identified by the licensee in interoffice correspondence dated 3/3/94, NL94-0010, FSAR Text Containing Tech Spec Relocated Material.

- 3.11.2.1. If available, review the addressee's action to the above correspondence.

Conclusion: Additional correspondence was not available.

4. CONCLUSIONS

Florida Power Corporation (FPC) has successfully implemented the improved TSs at CR-3. The audit identified no safety related deficiencies. The deficiencies noted were:

- HAVE BEEN RELOCATED TO
- a. The process of implementing revisions of the Core Operation Limits Report (COLR) to operating procedures needs enhancement. The staff at CR-3 was knowledgeable of this deficiency and had an action plan in place to correct it. (See Section 3.1. Safety Limits.)
 - b. The old technical specifications gave values for various Reactor Protection System response times. The improved TS response time limits ~~should be in~~ the FSAR. The response times for 1) reactor coolant pump/power, and 2) over power - flow - axial power imbalance, were not in the FSAR, but were in other design basis documentation. The FPC staff agreed to add the response times to the FSAR. (See Section 3.2. Reactor Protection System.)
 - c. A revision to Section 14.2.2.5.9 of the FSAR added 49 seconds to the reactor building full flow response time. Evaluation of this change revealed the change was not adequately reviewed, however, the change had not been implemented because the error had been discovered by the licensee. (See Section 3.5.2.).
 - d. An item discovered during this audit but, outside the scope, was identified to the Resident Inspector for follow up. This item concerned the quality control of the process computer generated mathematical calculations. (See Section 3.5.4.).

5. REFERENCES

- a. Safety Evaluation by the Office of Nuclear Reactor Regulation Related to Amendment No. 149 to Operating License No. DPR-72.
- b. Final Draft of Crystal River Unit 3 Improved Technical Specifications (improved TS),
- c. "Old" Crystal River Unit 3 Technical Specifications,
- d. Florida Power Corporation interoffice correspondence FSAR Text Containing Tech Spec Relocated Material, March 3, 1994,
- e. Florida Power Corporation letter Cycle 9 Core Operating Limits Report, Revision 1 (COLR), March 28, 1994, and
- f. The Final Safety Analysis Report (Revision 20).