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Docket No.: 50-389

Dr. Robert E. Uhrig, Vice President
Advanced Systems & Technology
Florida Power & Light Company
P. O. Box 529100
Miami, Florida 33152

Dear Dr. Uhrig:

SUBJECT: ST. LUCIE PLANT, UNIT 2 FSAR - REQUEST FOR ADDITIONAL INFORMATION

From the review of your application for an operating license by the Procedures and Test Review Branch, we find that we need additional information regarding the St. Lucie Plant, Unit 2 FSAR. The specific information (which was provided to Mr. Boissy on June 9, 1981) required is listed in the Enclosure.

Responses to the enclosed request should be submitted by July 31, 1981. If you cannot meet this date, please inform us within seven days after receipt of this letter of the date you plan to submit your responses.

Please contact Mr. Nerses (301-492-7468), St. Lucie 2 Project Manager, if you desire any discussion or clarification of the enclosed report.

Sincerely,

Original signed by
Robert L. Tedesco

Robert L. Tedesco, Assistant Director
for Licensing
Division of Licensing

Enclosure:
As stated

cc: See next page.

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640.0 PROCEDURES & TEST REVIEW BRANCH

640.1 (14.2.2.1) Subsection 14.2.2.1 states that all of the startup groups adhere to established procedures for reporting and recording deficiencies and discrepancies found during inspections and tests. Provide further information concerning the source and control of the established procedures used by the St. Lucie Operating Organization for this purpose.

640.2 (14.2.4.1) Subsection 14.2.4.1 states that if a significant period of time has elapsed between procedure approval and implementation, the assigned engineer reviews the procedure prior to implementation. Define, or reference the administrative document that defines a significant period of time.

640.3 (14.2.4.4) Provide a commitment that changes to startup phase test procedures will be in accordance with Technical Specifications. Section 16.0 of Amendment 3 (6/81) states that the Technical Specifications will be provided as a separate document in 1981. This issue will be discussed further after the St. Lucie Technical Specifications have been received.

640.4 (14.2.7) Certain exceptions and clarifications to regulatory guides in Subsection 14.2.7 are not acceptable. Modify Subsection 14.2.7 or other appropriate subsections to address the following:

(1) Regulatory Guide 1.68

1.c - Provide a commitment to include in your test program any design features to prevent or mitigate anticipated transients without scram (ATWS) that may in the future be incorporated into your plant design.

1.h(5) - Subsections 4.3.2.3.2 and 4.3.2.4.3.2 and Table 4.3-4 indicate that the moderator temperature coefficient of reactivity is substantially negative, especially near

end-of-cycle (EOC) when boron concentration is near zero. Either clarify why cold water interlocks are not necessary for core protection in your plant or modify your test program description to clearly indicate that the interlocks and permissive circuitry necessary for the prevention of injecting cold water into the critical reactor core are tested during your preoperational test phase.

1.h(10) - Include or reference tests which demonstrate that the ultimate heat sink canal has sufficient cross-sectional flow area to mitigate the consequences of LOCA on one unit while safely shutting down the other unit as stated in Subsection 3.1.5.

1.j(22) - Either clearly indicate why you take exception to this item, or delete it as an exception since you commit to testing your Containment Pressure Monitoring instrumentation in Subsection 14.2.12.1.7G as described in Subsection 7.2.1.1.1.9, and your Reactor Cavity Sump Leak Detector in Subsection 14.2.12.1.7F.

1.n(18) The exception to 1.n (18) states that heat tracing systems are not applicable. Delete this exception since the boron heat tracing system test is described in Subsection 14.2.12.1.10P.

4.t - Provide a description of flow (without pumps) and temperature data from St. Lucie Unit 2 that will be compared with St. Lucie Unit 1 to verify similar circulation characteristics.

5.b - The xenon oscillation control tests are described in item 5.d, not 5.b. Provide a test description for xenon oscillation control that:

(a) provides criteria to be used in determining if the cores are sufficiently similar to allow a reduction of testing on St. Lucie Unit 2, and
(b) describes the xenon oscillation control tests that will be performed on St. Lucie Unit 2 if these criteria are not met.

5.x - The exception states that testing of ESF equipment and auxiliary support systems will be completed prior to core load and that only those items affected by heatup are retested. Identify which systems are affected by heatup and provide or reference tests which describe their retesting.

5.k.k - Demonstrate that the dynamic response of the plant for the loss of or bypassing of the feedwater heaters from a credible single failure or operator error that would result in the most severe case of feedwater temperature reduction is in accordance with design and verifies the safety analysis assumptions for a decrease of feedwater enthalpy stated in Subsection 15.1.3.

5.m.m - The exception provides inadequate technical justification for substituting the 100% turbine trip

test for the 100% main steam valve isolation valves closure. Provide adequate technical justification for the test substitution, provide technical justification for performing the test at a lower power level, or delete this exception and include the appropriate test description.

(2) Regulatory Guide 1.79

c.1.b(2) - Subsection 6.3.4.1 states that "ECCS system flow tests are performed to verify that the design performance of the ECCS system and individual components is attained". Delete this exception to Regulatory Guide 1.79 and provide a recirculation test of the LPSI system to demonstrate adequate vortex control and NPSH, or provide technical justification for this exception and reference or provide the bases for the calculation.

640.5 (14.2.7) (14.2.10.2) Include in your Initial Criticality description (Subsection 14.2.10.2) the following items from Regulatory Guide 1.68, Appendix A.3, or provide technical justification for their omission:

(1) Reference the predicted critical boron condition and describe the actions to be taken if the actual critical boron concentration at the all-rods-out (ARO) condition deviates from prediction.

(2) Ensure that initial criticality is approached in a manner that will result in a startup rate of no more than one decade per minute at criticality.

640.6 (14.2.11) Modify Subsection 14.2.11 to state that all preoperational and startup test procedures will be made available to NRC inspectors for review not less than 60 days prior to their intended use.

640.7 (14.2.11) Verify that the completion of the required preoperational testing that is required prior to fuel loading includes

review and approval of test results. If portions of any preoperational tests are intended to be conducted, or their results approved, after fuel loading: (1) list each test; (2) state what portions of each test will be delayed until after fuel loading; (3) provide technical justification for delaying these portions; and (4) state when each test will be completed (key to test conditions defined in Chapter 14). Note that any test that you do not intend to begin prior to fuel loading should be included in your startup test phase instead of the preoperational test phase.

640.8 (14.2.12) Identify any of the post-fuel loading tests described in Section 14.2 which are not essential towards the demonstration of conformance with design requirements for structures, systems, components, and design features that meet any of the following criteria:

(1) Will be relied upon for safe shutdown and cooldown of the reactor under normal plant conditions and for maintaining the reactor in a safe condition for an extended shutdown period.

(2) Will be relied upon for safe shutdown and cooldown of the reactor under transient (infrequent or moderately frequent events) conditions and postulated accident conditions, and for maintaining the reactor in a safe condition for an extended shutdown period following such conditions.

(3) Will be relied upon for establishing conformance with safety limits or limiting conditions for operation that will be included in the facility technical specifications.

(4) Are classified as engineered safety features or will be relied upon to support or assure the operation of engineered safety features within design limits.

(5) Are assumed to function or for which credit is taken in the accident analysis for the facility (as described in the Final Safety Analysis Report).

(6) Will be utilized to process, store, control, or limit the release of radioactive materials.

640.9 (14.2.12) Subsection 14.2.12 lists as a general prerequisite that "construction activities have been completed". Clarify this statement if your intent is to complete construction on only those systems to be tested.

640.10 (14.2.12) Certain terminology used in the individual test descriptions is too vague and does not clearly indicate the source of the acceptance criteria to be used in determining test adequacy. In addition, tolerances are not given or appropriately referenced in many of the test descriptions. Modify the individual test description subsections to correct the vague terminology presented below or, if applicable, add a paragraph to Subsection 14.2.12 that provides a generic description of each of the unclear terms.

(1) Defined, specified, specifications

14.2.12.1.1C
1.2C (2 times)
1.2E
1.3G
1.3J
1.4B
1.4D
1.6D
1.6E
1.7E
1.7I
1.10K
1.10P
1.10Q
1.11B
1.11D
1.11E
2C

(2) Specified in the detailed procedure, defined by the detailed test procedure

14.2.12.1.7D (3 times)
1.7E (3 times)
1.10H

(3) Design, designed

14.2.12.1.1D
1.1E
1.1H
1.2B
1.3A
1.3C (2 times)
1.3D (2 times)
1.3G (2 times)
1.3H
1.3I
1.3K
1.3M
1.3N
1.6A
1.7C
1.8A
1.9D
1.10B
1.10C (2 times)
1.10D
1.10E (2 times)
1.10G
1.10H
1.10I
1.10J
1.10O
1.10Q
1.11C
1.11F (2 times)

2C
2E
3A
4A (3 times)

(4) Required, requirements

14.2.12.1.1E
1.2A
1.2E (3 times)
1.3A
1.3C (3 times)
1.3D (2 times)
1.3H
1.3L
1.4E
1.7F
1.10B
1.10J
1.10R (2 times)
1.11A
1.11B
1.11F
1.11G

(5) Desired

14.2.12.2B
2E

(6) Proper, properly, correct, correctly

14.2.12.1.1G
1.1H (3 times)
1.1I
1.2A
1.2B (7 times)
1.2C
1.2D
1.3F
1.3H

1.3I
1.4F (4 times)
1.6E
1.7B (2 times)
1.7E (2 times)
1.7G
1.8B
1.8C
1.9A (3 times)
1.9B (2 times)
1.9D
1.9F
1.9G (2 times)
1.9H (4 times)
1.10A (3 times)
1.10D
1.10I
1.10J (3 times)
1.10R
1.11C
1.11G
4F

(7) Prescribed setpoint, properly set, given setpoints, desired setpoints

14.2.12.1.1F
1.1H
1.3J
1.7G
2B
2J

(8) Verified, demonstrated

14.2.12.1.1E
1.1G
1.1H

1.3F
1.3M
1.4C
1.10F
1.10G
2H

(9) Predicted, prediction, anticipated

14.2.12.3B
3C
3D
3E
3G
4C
4G
4H
4I
4J
4L

(10) Satisfactory, adequate, reliable, sufficient, acceptable, consistent, agree, successfully, accurate, approximate

14.2.12.1.1D
1.1E
1.2A
1.2C
1.2D
1.7E
1.8B (2 times)
1.9B
1.9D
1.9E
1.9I

1.10B
1.10C
1.10D
1.10G
1.10H (2 times)
1.10N
1.11A
2D
2H
3B (2 times)
3C
3D (2 times)
3E
3G
4G
4H
4I
4J
4L (2 times)

(11) Maintain

14.2.12.1.1H
1.2D
1.3I
1.10J

(12) Measurement limitation, loop accuracies

14.2.12.2D
.3F

(13) Preselected, predetermined

14.2.12.1.1B
1.1C

640.11 (14.2.12) Our review of your test program description disclosed that the operability of several of the systems and components

listed in Regulatory Guide 1.68 (Rev. 2), Appendix A, may not be demonstrated by your initial test program. Expand your FSAR to include appropriate test descriptions (or identify existing descriptions) to address the following items from Appendix A, or provide technical justification for any exceptions to the guide in Subsection 14.2.7:

1. Preoperational Testing

1.a(3) Vibration monitoring of reactor internals
1.b(2) boronometer
1.e(5) steam extraction system
1.e(6) turbine stop and control valves
1.e(7) main condenser hotwell level control system
1.e(8) condensate system
1.e(9) feedwater system
1.e(10) feedwater heater and drain systems
1.e(12) auxiliaries used for maintaining condenser vacuum
1.h tests of protective devices such as leak-tight covers, structures, or housings provided to protect engineering safety features from flooding
1.h(1)(a) emergency core cooling system expansion and restraint tests
1.i(1) containment design overpressure structural tests
1.i(2) containment isolation valve functional and closure timing tests
1.i(8) containment isolation initiation logic
1.i(15) containment penetration pressurization system
1.j(2) main and auxiliary feedwater control system
1.j(9) pressure control systems designed to prevent leakage across boundaries (feedwater leakage control system)
1.j(10) seismic alarm using signal from St. Lucie Unit 1
1.j(14) instrumentation and controls that affect transfer of water supplies to auxiliary feedwater pumps, ECCS pumps, and containment spray pumps
1.j(16) hotwell level control system
1.j(17) feedwater level, bypass, and temperature control systems

1.j(18) auxiliary startup instrumentation (neutron response checks)

1.j(19) remote shutdown instrumentation

1.l(7) isolation features for liquid radwaste effluent systems

1.n(9) vent and drain systems for contaminated systems and areas, and drain and pumping systems serving essential areas

2. Initial Fuel Load and Precritical Testing

2.b control rod withdrawal and insert speeds, deceleration devices

2.g final calibration of source-range neutron flux measuring instrumentation and proper operation of alarms and protective functions of source- and intermediate-range monitors

4. Low Power Testing

4.d demonstrate adequate overlap of source- and intermediate-range neutron instrumentation

4.i demonstrate the operability of control rod withdrawal and insertion sequencers and control rod withdrawal inhibit or block functions over the reactor power range during which such features must be operable

5. Power-Ascension Tests

5.i control rod misalignment detection

5.s verification of performance of boron addition systems; integrated control system; reactor coolant flow control system; main, auxiliary feedwater control systems; hotwell level control systems; and reactor coolant makeup and letdown control systems

5.v verification of main steam system and feedwater system performance

5.w demonstration that concrete temperatures surrounding hot penetrations do not exceed design limits

5.ff demonstration that ventilation systems maintain design temperatures

5.ii demonstration that the dynamic response of the plant is in accordance with design for limiting reactor coolant pump trips

5.oo demonstration that designated plant components meet acceptable limits for thermal expansion, vibration, and dynamic response in accordance with design parameters during steady-state and transient conditions

640.12 (14.2.12) We could not conclude from our review of your individual test descriptions that comprehensive testing is scheduled for several systems and components. Therefore, clarify or expand the appropriate test descriptions to address the following items:

(1) 14.2.12.1.1C - Reference expected flow rates and acceptance criteria for actual flow rates

(2) 14.2.12.1.1F - Ensure that the safety valves are tested after installation and at operating temperature

(3) 14.2.12.1.2B - Reference acceptance criteria for flow and temperature control

(4) 14.2.12.1.2D - All means of reactivity addition should be tested to ensure that they are consistent with your safety analysis. Subsection 4.3.1.7 states that the boron charging portion of the CVCS is designed so that the potential amount and rate of reactivity insertion due to normal operation and postulated reactivity accidents does not result in exceeding design limits. Subsection 15.4.2.4 contains an analysis of a slow reactivity addition accident resulting from a failure in the boron addition system. Clearly indicate

that you will verify by operation that the maximum reactivity addition rates of this system do not exceed design rates or rates assumed in your safety analysis.

(5) 14.2.12.1.3A - Verify that paths for the air-flow test of containment spray nozzles overlap the water-flow test paths of the pumps to demonstrate that there is no blockage in the flow path.

(6) 14.2.12.1.3E - Reference acceptance criteria for minimum and maximum rates and rate of cooldown control.

(7) 14.2.12.1.3H - Conform to Sections C.2.a. (1), (3), (4), (7), (9) and C.2.b of Regulatory Guide 1.108, Revision 1. Reference testing duration and load-carrying capability (3), and number of valid tests (9). Provide acceptance criteria for Regulatory Guide 1.108, Revision 1.

(8) 14.2.12.1.4A - Reference acceptance criteria for control of secondary pressure.

(9) 14.2.12.1.4B - Ensure that safety valves lift and reset pressures are verified at operating temperature.

(10) 14.2.12.1.4D - Provide acceptance criteria for alarm, actuation, and indication circuits. Measure the full travel of the valves or provide technical justification for extrapolating the full closure time when only measuring 90%. If the measurement is to be based on 90% travel, calculate MSIV closure time as equal to the interval from deenergizing solenoids until the valve reaches 90% closed, plus the period from 10% closed to 90% closed times 1/8. or provide technical justification for any method which "double-counts" delay time.

(11) 14.2.12.1.4E - Our review of licensee event reports has disclosed several instances of auxiliary steam-driven feedwater pump failure to start on demand. It appears that many of these failures could have been avoided if more thorough testing had been conducted during the plant's initial

test programs. In order to discover any problems affecting pump startup and to demonstrate the reliability of your emergency cooling system, state your plans to demonstrate at least five consecutive, successful, cold, quick pump starts during your initial test program.

(12) 14.2.12.1.5 - Subsection 14.2.7 states compliance with Regulatory Guide 1.41; however, the implementation of the requirements of this Regulatory Guide are not described in your test description. Modify the required test descriptions of Subsection 14.2.12.1.5 to describe test procedures that will be used to comply with Regulatory Guide 1.41.

(13) 14.2.12.1.5F and G--State your plans to verify that individual cell limits are not exceeded during the design discharge test and to demonstrate that the DC loads will function as necessary to assure plant safety at a battery terminal voltage equal to the acceptance criterion that has been established for minimum battery terminal voltage for the discharge load test. Assure that each battery charger is capable of floating the battery on the bus or recharging the completely discharged battery within 24 hours while supplying the largest combined demands of the various steady-state loads under all plant operating conditions.

(14) 14.2.12.1.6B - Modify this test and Subsection 14.2.12.1.11B to conform to the testing requirements stated in Subsection 14.2.7, Regulatory Guide 1.68, 1.h(9). Verify that the fan motor currents are within specification at the maximum allowed pressure.

(15) 14.2.12.1.7G - It is our position that your description of the reactor protection system preoperational test include the following:

(1) Measure the response time of each RPS trip comparator;

(2) Account for process-to-sensor hardware (e.g., instrument lines, hydraulic snubbers) delay times; and

(3) Provide assurance that the response time of each primary sensor is acceptable.

(4) Provide assurance that the total reactor protection system response time is consistent with your accident analysis assumptions.

Note: Item 3 can be accomplished by measuring the response time of each sensor during the preoperational test, stating that the response time of each sensor will be measured by the manufacturer within two years prior to fuel loading, or describing the manufacturer's certification process in sufficient detail for us to conclude that the sensor response times are in accordance with design.

(16) 14.2.12.1.8A - Verify the operability of the Liquid Waste Management System by testing with representative chemical waste streams.

(17) 14.2.12.1.8D - Provide a description of the Solid Waste Management System preoperational tests that will be conducted prior to use.

(18) 14.2.12.1.9 - Commit to performing all load tests of the following Subsections at 125% of rated load for static tests and 100% of rated load for full operational tests and provide acceptance criteria for all interlocks, or provide justification for any exception to Regulatory Guide 1.68, 1.o(1)-(3) and 1.m(4):

(a) 14.2.12.1.9B
(b) 14.2.12.1.9E
(c) 14.2.12.1.9F
(d) 14.2.12.1.9G

(e) 14.2.12.1.9I
(f) 14.2.12.1.10R

(19) 14.2.12.1.10B - Provide a test method for system alarms and reference acceptance criteria for system alarms and isolation of non-essential headers on safety injection actuation signal (SIAS).

(20) 14.2.12.1.10G - Verify that high and low level alarms on the City Water Storage Tanks (CWST's), and fire pump automatic starts on low pressure and automatic transfer to emergency diesel generators on loss of offsite power, are in accordance with Appendix 9.5A, Section 4.2.

(21) 14.2.12.1.10K - Reference acceptance criteria for automatic controls.

(22) 14.2.12.1.10P - Reference acceptance criteria for system setpoints and alarms.

(23) 14.2.12.1.10R - List all Reactor Components Handling Systems that will be tested or include a separate subsection to meet the requirements of Regulatory Guide 1.68, 1.o.

(24) 14.2.12.1.11F - Verify that the emergency ventilation systems are capable of maintaining all ESF equipment within their design temperature range with the equipment operating in a manner that will produce the maximum heat load in the compartment. If it is not practical to produce maximum heat loads in a compartment, describe the methods that will be used to verify design heat removal capability of the emergency ventilation systems.

Note that it is not apparent that post-accident design heat loads will be produced in ESF equipment rooms during the power ascension test phase; therefore, simply assuring that area temperatures remain within design

limits during this period will probably not demonstrate the design heat removal capability of these systems. It will be necessary to include measurement of air and cooling water temperatures and flows and the extrapolations used to verify that the ventilation systems can remove the postulated post-accident heat loads.

(25) 14.2.12.2A - State that flow and coastdown testing will be performed for all permissible combinations of pump operation.

(26) 14.2.12.2B - State that testing will consist of control element assembly (CEA) drop tests at cold, maximum permissible flow conditions and at hot, full-flow, and no-flow conditions. State that any CEA's falling outside the two-sigma limit for similar CEA's at each test condition will be dropped three additional times.

(27) 14.2.12.2G - Provide acceptance criteria for water quality and corrosion inhibiting chemistry programs. Describe testing of water quality alarm functions.

(28) 14.2.12.3D - Modify your test procedure and acceptance criteria to confirm by analysis that the rod insertion limits will be adequate to ensure a shutdown margin consistent with accident analysis assumptions throughout core life, with the greatest worth control rod stuck out of the core.

(29) 14.2.12.4A - Include testing at 20 and 100% power. Commit to performing step and ramp changes of full design value, or explain how changes of a lower value can be used to determine proper response to design load swings. Provide or reference the core limits that are not to be exceeded.

(30) 14.2.12.4B - Initiate a turbine trip and simulate loss of offsite power simultaneously, and maintain loss of offsite power for 30 minutes to demonstrate that the necessary equipment, controls, and instrumentation are available following station blackout to remove decay heat from the core, using only emergency power supplies. Provide or reference the temperature and pressure limits that are not to be exceeded.

(31) 14.2.12.4D - State that:

(a) The reactor is tripped from outside the control room;

(b) The reactor is brought to HOT STANDBY by the operating crew from outside the control room and maintained there for at least 30 minutes;

(c) The reactor coolant temperature and pressure is lowered sufficiently to permit operation of the shutdown cooling system;

(d) This system is used to reduce reactor coolant temperature by at least 50°F, at a rate that does not exceed technical specification limits, to show the potential for achieving cold shutdown;

Or provide technical justification for any exception to Regulatory Guide 1.68.2 in Subsection 14.2.7. During the demonstration, only that equipment for which credit would be taken to perform an actual remote shutdown should be used.

(32) 14.2.12.4E - Verify that the proposed method for opening the main generator breakers subjects the turbine-generator to the maximum credible overspeed condition or trip the generator in such a way that will ensure this overspeed condition. Provide acceptance criteria

(and their bases) which show the required degree of convergence between predicted test results and actual test results. Specifically, (a) provide assurance that data will include traces of important plant parameters such as RCS pressure and temperature, pressurizer level, steam pressure, and power; and (b) provide a commitment that if any of the observed transients are more limiting than those predicted for the test case, you will perform analysis as necessary to justify them or to adjust control system settings and repeat the test.

(33) 14.2.12.4I - Demonstrate that the departure from nucleate boiling ratio (DNBR) is in accordance with design values.

640.13 (14.2.12) We have noted on other plant startups that the capacities of pressurizer power operated relief valves are sometimes in excess of the values assumed in the accident analyses for inadvertent opening or failure of these valves. Provide a description of the testing that demonstrates that the capacity of these valves is consistent with your accident analysis assumptions.

640.14 (14.2.12.1) It is not clear from your test description that you will meet the following requirements of Regulatory Guide 1.79 and 1.68, 1.h:

(1) Verification of system activation times.

(2) Test HPSI and LPSI pumps under maximum possible flow and maximum startup loading to verify adequate power supply and adequate margin to trip.

(3) Verify the capability of HPSI to deliver as required under accident conditions by conducting an analysis based upon as built HPSI pump and system head capacity curves.

(4) Test RWT level initiation of an RAS (Subsection 7.3.1.1.2).

(5) Verify that motor operated isolation valves for the Safety Injection Tanks (Subsection 6.3.2.2.1) operate against the highest possible differential pressure, i.e., zero RCS pressure and maximum expected accumulator precharge pressure.

(6) Verify that the interlocks and instrumentation described in Subsection 5.4.7.2.3 for overpressure protection for the Shut Down Cooling System operate to achieve the design function as stated.

640.15 (14.2.12.1) Recently, questions have arisen concerning the operability and dependability of certain ESF pumps. Upon investigation, the staff found that some completed preoperational test procedures did not describe the test conditions in sufficient detail. Provide assurance that the preoperational test procedures for ECCS and containment cooling pumps will require recording the status of the pumped fluid (e.g., pressure, temperature, chemistry, amount of debris) and the duration of testing for each pump.

640.16 (14.2.12.1) Describe the status of the power supplies to St. Lucie Unit 1 to ensure independence during power distribution testing on St. Lucie Unit 2. The descriptions should address both normal and emergency A.C. and D.C. power distribution systems. Provide assurance that cross-ties will not exist which could cause loss of emergency bus power to one unit due to testing of the other unit.

640.17 (14.2.12) Our review of licensee event reports has disclosed that many events have occurred because of dirt, condensed moisture, or other foreign objects inside instruments and electrical components (e.g., relays, switches, breakers). Describe any tests or inspections that will be performed or any administrative controls that will be implemented during your initial test program to prevent component failures such as these at your facility.

640.18
(14.2.12)

Our review of recent licensee event reports disclosed that a significant number of reported events concerned the operability of hydraulic and mechanical snubbers. Provide a description of the inspections or tests that will be performed following system operation to ensure that snubber operation is adequate. These inspections or tests should be performed preoperationally or, if the system for which snubbers are being inspected will not be subjected to significant transients prior to fuel loading, then inspections should be conducted following the startup transient tests.

# ERRATA

| Page | Subsection | |
|---|---|---|
| 14.2-1 | 14.2.1 | "Preoperational and Initial Startup Test Program for Water Cooled Power Reactors" should be "Initial Test Programs for Water-Cooled Nuclear Power Plants"<br>"of the extent" should be "to the extent" |
| 14.2-2 | 14.2.1.2 | "etc. and" should be "etc.," |
| 14.2-3 | | "assemblyy" should be "assembly"<br>"critical approach" should be "approach to criticality"<br>"50 ," should be "50," |
| | 14.2.2.1 | "Superintenddent" should be "Superintendent" |
| 14.2-4 | | "systems components" should be "systems and components"<br>"groups" should be "groups'" |
| 14.2-7 | 14.2.2.4 | "reviews or his designee" should be "or his designee reviews" |
| 14.2-8 | 14.2.2.5 | "duirng" should be "during" |
| 14.2-10 | 14.2.3.1 | "as, decontamination" should be "as decontamination" |
| 14.2-11 | 14.2.4.1 | "approved by" should be "approved by," |
| 14.2-12 | 14.2.4.3 | "and require" should be "and to require" |
| | 14.2.4.4 | "Procedures" should be "A procedures'" |
| 14.2-13 | 14.2.5 | "procedures is by the Plant Manager" should be "results is by the Plant Manager"<br>"designees reviews" should be "designees review" |
| 14.2-14 | | "next or" should be "next" |
| 14.2-15 | 14.2.7 | Regulatory Guide 1.52 should be 3/78 (R2). It is also incorrect in Section 1.8.<br>Regulatory Guide 1.68 is titled incorrectly. See first corrigendum on page 14.2-1.<br>Section 1.8 reference to this guide is incorrect.<br>"Taug" should be "Tavg" |
| 14.2-16 | | "Section a.(2)(d)" should be "Section 1.a(2)(d)" |

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|---|---|---|
| 14.2-16 | 14.2.7 | "discusses to" should be "discusses" |
| 14.2-17 | | "Item 17(18)" should be "Section 1.n(18)" |
| 14.2-18 | | "We do however," should be "We do, however," |
| 14.2-21 | | "testing are performed" should be "tests are performed"<br>Regulatory Guides 1.108 and 1.129 are not listed in Section 1.8. |
| 14.2-24 | 14.2.10.2 | "Critical approach" should be "approach to criticality" |
| | 14.2.11 | "Firgure" should be "Figure" |
| 14.2-30 | 14.2.12.1.1C | "obtained to" should be "obtained for" |
| 14.2-49 | 14.2.12.1.3H | "relibility" should be "reliability" |
| 14.2-54 | 14.2.12.1.3L | "enterlocking" should be "interlocking" |
| 14.2-56 | 14.2.12.1.3N | "ice-place" should be "in-place"<br>"Critiera" should be "Criteria"<br>"HEPA filters," should be "HEPA filters" |
| 14.2-58 | 14.2.12.1.4B | "pressure reset" should be "pressure and reset" |
| 14.2-61 | 14.2.12.1.4E | "startup, normal" should be "startup and normal" |
| 14.2-62 | 14.2.12.1.4F | "Controls" should be "Controls," |
| 14.2-64 | 14.2.12.1.5B | "480 V" should be "480V" |
| 14.2-70 | 14.2.12.1.5H | "descrived" should be "described" |
| 14.2-72 | 14.2.12.1.6B | "systems penetrations" should be "system penetrations"<br>"is preformed" should be "has been performed" |
| 14.2-79 | 14.2.12.1.7D | "is preformed" should be "are performed"<br>"by detail" should be " by the detailed" |
| 14.2-80 | 14.2.12.1.7E | Rewrite test method c) |
| 14.2-86 | 14.2.12.1.8B | "function" should be "functions" |
| 14.2-89 | 14.2.12.1.9A | "test are" should be "tests are"<br>"anti-siphen" should be "anti-siphon" |

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| 14.2-90 | 14.2.12.1.9B | "functioing" should be "functioning" |
| 14.2-92 | 14.2.12.1.9D | "interlocks limit" should be "interlocks, limit" |
| 14.2-93 | 14.2.12.1.9E | "spect" should be "spent" |
| 14.2-98 | 14.2.12.1.10A | "exchangers intake" should be "exchangers, intake" "thetemperature" should be "the temperature" |
| 14.2-99 | 14.2.12.1.10B | "thesurge" should be "the surge" "componet" should be "component" |
| 14.2-101 | 14.2.12.1.10D | "characterists" should be "characteristics" "exchanger demonstrate" should be "exchangers demonstrate" |
| 14.2-102 | 14.2.12.1.10E | "fillered" should be "filtered" |
| 14.2-104 | 14.2.12.1.10G | "actvation" should be "activation" |
| 14.2-105 | 14.2.12.1.10H | "detail" should be "detailed" |
| 14.2-107 | 14.2.12.1.10J | "to delives the" should be "to ensure the delivery of the" |
| 14.2-108 | 14.2.12.1.10K | "dischange" should be "discharge" |
| 14.2-111 | 14.2.12.1.10N | "systems," should be "systems" |
| 14.2-113 | 14.2.12.1.10P | "service" should be "service," "testing," should be "testing" |
| 14.2-114 | 14.2.12.1.10Q | "system," should be "system" |
| 14.2-120 | 14.2.12.1.11E | "conditioing" should be "conditioning" |
| 14.2-123 | | "takes" should be "take" |
| 14.2-124 | 14.2.12.2A | "valve" should be "value" |
| 14.2-126 | 14.2.12.2C | "equal" should be "equal to" |
| 14.2-130 | 14.2.12.2G | "perfent" should be "percent" |
| 14.2-133 | 14.2.12.2J | "swithgear is" should be "switchgear are" |
| 14.2-134 | 14.2.12.3A | "(Low 3-5)" should be "(Low (3-5)" |

| Page | Subsection | |
|---|---|---|
| 14.2-145 | 14.2.12.4E | "designed" should be "aligned" |
| Table 14.2-2 | 14.2.12.4F | There is no turbine trip test in Subsection 14.2.12.4. |

The following subsections of Section 14.2.12 contain unnecessary labels. For example, they may contain either a "1)" or an "a)" without a "2)" or a "b)", respectively:

| | | | | | |
|---|---|---|---|---|---|
| 1.1A | 1.4C | 1.6A | 1.9D | 1.10N | 2G |
| 1.1C | 1.4D | 1.6E | 1.9G | 1.11F | 2H |
| 1.2E | 1.4E | 1.7A | 1.9I | 2A | 2I |
| 1.3G | 1.5A | 1.7B | 1.10C | 2C | 3G |
| 1.3J | 1.5B | 1.7C | 1.10E | 2D | 4A |
| 1.3M | 1.5C | 1.7I | 1.10J | 2E | 4B |
| 1.4B | 1.5G | 1.7J | 1.10K | 2F | 4E |
| | | | | | 4H |