

The Light company

Houston Lighting & Power South Texas Project Electric Generating Station P. O. Box 289 Wadsworth, Texas 77483

November 25, 1996
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File No.: G09.16
10 CFR 50.55a
STI : 30140799

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

South Texas Project
Unit 1 and Unit 2

Docket Nos. STN 50-498 and 50-499

Request for Relief from ASME Boiler and Pressure Vessel Code Section XI
Valve Relief Request No. RR-55, RR-53 Rev 1 and RR-34 Rev 1 (Unit 1) and
Valve Relief Request No. RR-51, RR-49 Rev 1 and RR-31 Rev 1 (Unit 2)

Reference: ST-HL-AE-5338, TAC M95187 (Unit 1) AND TAC M95188 (Unit 2)

Pursuant to 10 CFR 50.55a(f) the South Texas Project (STP) submits revisions to Valve Relief Requests (RR) RR-55, RR-53 Rev 1 and RR-34 Rev 1 for Unit 1 and RR-51, RR-49 Rev 1, and RR-31 Rev 1 for Unit 2 (Attachment 1, 2 and 3) to use an alternate testing frequency in assessing operational readiness for various check valves in the Essential Cooling Water (ECW), Standby Diesel Fuel Oil (DO) and Safety Injection (SI) Systems. Attachment 4 is provided to support the review.

The STP Technical Specifications allowed outage times on the Essential Cooling Water System, Safety Injection System and each Standby Diesel Generator (SBDG) are of sufficient length each operating cycle to perform maintenance normally performed in a refueling outage. Approval of these Relief Requests will allow STP to coordinate the inservice testing (IST) work with these planned system maintenance outages and help minimize the total time these ESF systems are out of service. The implementation of the proposed Relief Requests will be done in accordance with the STP Configuration Risk Management Program.

Upon NRC approval of these Relief Requests, STP will commence using these alternate testing intervals for the IST of the subject check valves and will revise the STP Unit 1 and Unit 2 Pump and Valve IST Plans.

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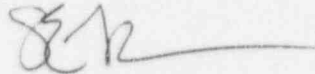
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Project Manager on Behalf of the Participants in the South Texas Project

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Drawings located in Central Files

Should have any questions regarding this request, please contact Mr. W. Roger Harris at (512) 972-8475, Mr. Mark Ebel at (512) 972-7744, or me at (512) 972-7162.



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MRE/

Attachment 1: Valve Relief Request RR-55
Valve Relief Request RR-51

Attachment 2: Valve Relief Request RR-53, Rev 1
Valve Relief Request RR-49, Rev 1

Attachment 3: Valve Relief Request RR-34, Rev 1
Valve Relief Request RR-31, Rev 1

Attachment 4: Piping and Instrumentation Drawings:
SBDG Fuel Oil Storage and Transfer,
Essential Cooling Water, and Safety
Injection Systems

Houston Lighting & Power Company
South Texas Project Electric Generating Station

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ATTACHMENT 1
VALVE RELIEF REQUEST
RR-55 AND RR-51

STP UNIT 1 VALVE RELIEF REQUEST RR-55
STP UNIT 2 VALVE RELIEF REQUEST RR-51

System

Essential Cooling Water (ECW)

Applicable Valves

ECW Pump Discharge Vent Check Valves
EW-0370A, EW-0370B, and EW-0370C

ECW Discharge Strainer Emergency Backflush Check Valves
EW-0403, EW-0404, and EW-0405

Test Requirement

Exercise check valves for operability at least once every three (3) months.

Basis for Relief

- 1) The valves are currently disassembled and inspected during refueling outages in accordance with Generic Letter 89-04, Position 2, because the inspection removes a train of ECW from service which also removes the associated trains of Component Cooling Water, Residual Heat Removal, Essential Chilled Water, Spent Fuel Pool Cooling, and Standby Diesel Generators from service. Previous Technical Specification (TS) Limiting Condition for Operation (LCO) Allowed Outage Times (AOT) were not sufficient to conduct the inservice test at power.
- 2) The South Texas Project has AOT's which will provide sufficient time to allow these inservice tests to be performed during the AOT window.
- 3) Allowing testing during these specific system outage windows will ensure component operability while minimizing safety system unavailability.
- 4) Disassembly and inspection requires partial system draindown and significant maintenance and operations resources.
- 5) Attempts to utilize non-intrusive techniques have provided inconclusive results to date.

Alternate Testing

These check valves will be verified operable by disassembling and inspecting one valve from each sample group on a nominal refueling cycle frequency of 18 months ($\pm 25\%$). This will not result in a reduction in the number of inspections that would have been performed over the life of the plant at the previous refueling outage test frequency. This inspection will be conducted during an Essential Cooling Water AOT outage or refueling outage to ensure no degradation has occurred and to provide baseline data for any future non-intrusive check valve testing methods. By disassembling each valve during its associated AOT outage or refueling outage, all valves in both sample groups will be disassembled and inspected within six years as required by Generic Letter 89-04, Position 2. If a generic failure occurs, a plan of action for inspecting the remaining valves in the sample group will be developed utilizing the Condition Reporting Process and the guidance provided in Generic Letter 91-18. This plan of action will take into account the potential failure modes and their associated plant impacts and will be implemented in a time frame commensurate with their safety significance.

ATTACHMENT 2

VALVE RELIEF REQUEST

RR-53, REV 1 AND RR-49, REV 1

STP UNIT 1 VALVE RELIEF REQUEST RR-53, REV 1
STP UNIT 2 VALVE RELIEF REQUEST RR-49, REV1

Applicable Valves

Fuel Oil Drain Tank Recirculation Check Valves to Fuel Oil Storage Tank
DO-0056, DO-0062, & DO-0068

Standby Diesel Generator Attached Fuel Oil Pump Return Checks to Fuel Oil
Storage Tank
DO-0126, DO-0127, & DO-0128

System

Diesel Generator Fuel Oil Storage & Transfer (DO)

Test Requirement

Exercise check valves for operability at least once every three (3) months.

Basis for Relief

- 1) The valves are currently tested at refueling outages because the Standby Diesel Generators are required to be out of service to perform these inservice tests and previous Technical Specification (TS) Limiting Condition for Operation (LCO) Allowed Outage Times (AOT) were not sufficient to conduct the inservice test and perform a disassembly and inspection, if warranted.
- 2) The South Texas Project has an AOT approved on the Standby Diesel Generators which provides sufficient time to allow these inservice tests to be performed during the AOT window. The AOT will permit a 14 day Standby Diesel Generator outage per TS 3.8.1.1 for each Standby Diesel Generator.
- 3) These check valves are operating in diesel oil which is a clean lubricating medium. STP has been testing these valves since 1991 and there have been no generic failures identified.

Alternative Testing

Each set of these check valves will be verified operable by back-seating the valves to verify they have closed on a nominal refueling cycle frequency of 18 months ($\pm 25\%$). This will not result in a reduction in the number of inspections performed over the life of the plant. This process requires draining of 50 to 100 gallons of diesel fuel per test and inoperability of the associated diesel. The applicability of various non intrusive testing techniques are being evaluated for these small lift check valves. Should an acceptable technique be identified, it will be substituted for the method described above. This testing will be performed in conjunction with a Standby Diesel Generator AOT outage or refueling outage. If any check valve is found inoperable, it shall be disassembled to determine the cause. If a generic failure occurs, a plan of action for inspecting the remaining valves in the sample group will be developed utilizing the Condition Reporting Process and the guidance provided in Generic Letter 91-18. This plan of action will take into account the potential failure modes and their associated plant impacts and will be implemented in a time frame commensurate with their safety significance.

ATTACHMENT 3
VALVE RELIEF REQUEST
RR-34, REV 1 AND RR-31, REV 1

STP UNIT 1 VALVE RELIEF REQUEST RR-34, REV 1
STP UNIT 2 VALVE RELIEF REQUEST RR-31, REV 1

Applicable Valves

Safety Injection Pump Suction Checks
SI-0002A, SI-0002B, & SI-0002C

System

Safety Injection (SI)

Test Requirement

Exercise check valves for operability at least once every three (3) months.

Basis for Relief (Open Exercise)

These check valves can only be exercised (full stroke) by simulating LOCA conditions (pumping into the RCS with RCS at zero or very low pressure) in order to get full pump flows.

Alternative Testing (Open Exercise)

These check valves will be required to be exercised (partial stroke) at least once every three (3) months by running pumps at normal recirculation flows, and exercised (full stroke) each refueling outage by injecting into the RCS with the vessel head off using the appropriate pump(s) at full flow.

Basis for relief (Closed Exercise)

- 1) Closure of these check valves cannot be verified by non-intrusive means. There are no external position indicators on these valves and due to the soft closure of these valves (due to pump coastdown) acoustic methods are not conclusive. In addition, magnetic methods are also not conclusive.
- 2) Draindown of a portion of the safety injection system is required to perform disassembly and inspection of the valves.
- 3) Disassembly and inspection can only be accomplished during the 7 day Safety Injection System LCO window or during refueling outages.

- 4) Local leakage rate testing of other SI valves and other maintenance activities are now being conducted during the 7 day Safety Injection System LCO windows. Conducting the disassembly and inspection of these check valves in conjunction with LLRTs or other maintenance activities would accomplish the following:
- a) Increase the availability of the Safety Injection System during refueling outages which would lower the overall risk during the outages. The online risk should not be increased if performed during the AOT window since the Safety Injection Train will already be removed from service for LLRTs or other maintenance.
 - b) Radwaste should be reduced as the inspections will be performed with other draindown work during the LCO week.
 - c) There will be a reduction in outage manpower and resource requirements for both maintenance and operations personnel.
 - d) A reduction in radiation exposure should be realized because personnel will have to perform drain and fill operations once.

Alternative Testing (Closed Exercise)

At least one check valve from the sample group will be verified operable by disassembly and inspection on a nominal refueling cycle frequency of 18 months ($\pm 25\%$). This will not result in a reduction in the number of inspections performed over the life of the plant. If a generic failure occurs, a plan of action for inspecting the remaining valves will be developed utilizing the Condition Reporting Process and the guidance provided in Generic Letter 91-18. This plan of action will take into account the potential failure modes and their associated plant impacts and will be implemented in a time frame commensurate with their safety significance. This will ensure that all check valves in this sample group are inspected within six years as required by Generic Letter 89-04, Position 2. Approval of this Relief Request will not preclude STP from performing these inspections during refueling outages should some other scope of work make it necessary to drain a train of SI.

ATTACHMENT 4

PIPING AND INSTRUMENT DRAWINGS:

SBDG FUEL OIL STORAGE AND TRANSFER SYSTEM (DO)

ESSENTIAL COOLING WATER SYSTEMS (ECW)

SAFETY INJECTION SYSTEM (SI)

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