

The Light company

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

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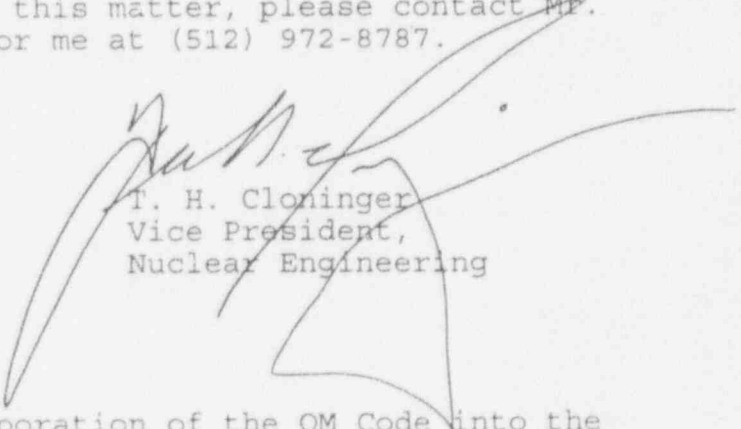
U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, DC 20555

South Texas Project
Unit 1 and Unit 2
Docket Nos. STN 50.498 and 50.499
Unit 1 Pump and Valve Inservice Test Plan
Revision 6, Supplement 1
Unit 2 Pump and Valve Inservice Test Plan
Revision 4, Supplement 1

Houston Lighting & Power requests that the Nuclear Regulatory Commission approve a request for incorporation of the OM Code into the South Texas Project Unit 1 and Unit 2 Pump and Valve Inservice Test (IST) Plans. This request is provided in Attachment 1.

In addition, Supplement 1 to Revision 6 of the Unit 1 Pump and Valve Inservice Test Plan and to Revision 4 of the Unit 2 Pump and Valve Inservice Test Plan is provided as Attachment 2 for your information and use.

If you have any questions on this matter, please contact Mr. A. W. Harrison at (512) 972-7298 or me at (512) 972-8787.



T. H. Cloninger
Vice President,
Nuclear Engineering

KJT/esh

Attachment: 1) Request for Incorporation of the OM Code into the Inservice Test Plans

210215 2) Supplement 1 to Revision 6 of the Unit 1 Pump and Valve Inservice Test Plan and Revision 4 of the Unit 2 Pump and Valve Inservice Test Plan

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

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Houston Lighting & Power Company
South Texas Project Electric Generating Station

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Request for Incorporation of the OM
Code into the Inservice Test Plans

STP requests permission to implement Sections 4.0 through 4.2.1.9 of the OM-10 Code, specifically all portions of the Code concerning Inservice testing of power operated valves. The following is a plan of action for implementing this change in test methods:

Once permission to use the OM Code has been granted, STP will begin the transition by implementing a revision to procedure OPGP03-ZE-0021, "Inservice Testing Program for Valves", allowing valves to be tested in accordance with the requirements of OM-1987 and Addendum OMa-1988, ASME Operations and Maintenance of Nuclear Power Plants'. Valve testing procedures will then be converted on a system by system basis. Prior to implementation of revisions of each procedure, the stroke time calculations will be revised, and the reference value and acceptance criteria for each valve will be calculated. This conversion process will be completed prior to the start of the second 10 year Inservice Inspection Interval. Since STP is only planning to adopt a portion of the OM Code for valve testing at this time, NRC acceptance of this plan for valve testing is requested.

STP is also requesting permission to implement the provisions of the OM-6 Code. The following is a plan of action for implementing this change in test methods:

Once permission to use the OM Code has been granted, STP will begin this transition by implementing a revision to procedure OPGP03-ZE-0022, "Inservice Testing Program for Pumps", allowing pumps to be tested in accordance with the requirements of OM-1987 and Addendum OMa-1988, "ASME Operations and Maintenance of Nuclear Power Plants". Pump testing procedures will be selected for OM implementation, based on vibration data history. Vibration pickup locations will be permanently marked on each pump. This will allow the use of either a magnetic pickup or a threaded pickup to take vibration readings. Pump procedures would incorporate the OM Code acceptance values. Pump procedures implementing the OM code will be scheduled on an individual basis, with an emphasis on completing all pump tests in a specific system before proceeding to another system. This conversion process will be completed prior to the start of the second 10 year Inservice Inspection Interval. Since STP is not converting all pumps to the OM Code at one time, NRC acceptance of this plan for pump testing is requested.

Supplement 1 to Revision 6 of the
Unit 1 Pump and Valve Inservice Test Plan

<u>Change Description</u>	<u>Affected Pages</u>
Change the test interval for the Containment Spray Pumps to semi-annual. (Approved Pump Relief Request Number 12 per ST-AE-HL-93719)	Page 7
Delete reference to Relief Request Number 10 concerning essential cooling water pump flow rate. In place calibration of the ECW annubars has been completed. The annubar accuracy is within the limits of ASME Section XI, Table IWP-4110-1. No NRC approval required.	Page 10
Change the test interval for the Residual Heat Removal Pumps to semi-annual. (Approved Pump Relief Request Number 11 per ST-AE-HL-93719)	Page 13
Add Pump Relief Request Number 9 which was submitted (no approval required) to provide consistency in the IST Plan. All other pumps utilizing a fixed resistance flow path have approved relief requests allowing this alternate testing. This test method has been approved for other pumps in the IST Plan and is in compliance with OM-6, Part 5.2.c.	Page 20
Delete Pump Relief Request Number 10. Inplace calibration has been performed on the ECW annubars, therefore STP is in compliance with the testing requirements of IWP-4110-1. No NRC approval required.	Page 21
Add Pump Relief Request Number 11 concerning the change of test frequency from 3 to 6 months for the Residual Heat Removal Pumps. (Approved by NRC per ST-AE-HL-93719)	Page 21a
Add Pump Relief Request Number 12 concerning the change of test frequency from 3 to 6 months for the Containment Spray Pumps. (Approved by NRC per ST-AE-HL-93719)	Page 21a

Supplement 1 to Revision 6 of the
Unit 1 Pump and Valve Inservice Test Plan

<u>Change Description</u>	<u>Affected Pages</u>
Clarify that the valve stroke time acceptance criteria are included for information only and will be removed in the next plan revision. The basis document for the valve stroke time acceptance criteria are the stroke time calculations performed in accordance with OPGP03-ZE-0002. These acceptance criteria are then incorporated into the individual Valve Operability Tests. No NRC approval required.	Page 26
Change the size of the FWIV Bypass Valves from 3" to the correct value of 2"	Page 63
Change the valve designators for the Inboard and Outboard Reactor Head Vent Valves from "FV" to the correct designator of "HV"	Page 76
Change the exercising of the Residual Heat Removal Pump Discharge Check Valves to semi-annual. (Approved Valve Relief Request Number 54 per ST-AE-HL-93719) Delete reference to Valve Relief Request Number 31.	Page 79
Change the exercising of the Residual Heat Removal Discharge Recirculation Check Valves to semi-annual. (Approved Valve Relief Request Number 54 ST-AE-HL-93719)	Page 80
Change test requirements to verify operability of Reactor Makeup Discharge Check valves RM-0003 and RM-0010. The valves will be verified operable by disassembly and inspection of one check valve each refueling outage. This change is due to a modification that was installed which makes an exercise test for operability impractical. These valves are added to Valve Relief Request Number 52. The change is required due to a modification to the RM system. This testing is in accordance with the requirements of Generic Letter 89-04, Position 2. No NRC approval required.	Page 84

Supplement 1 to Revision 6 of the
Unit 1 Pump and Valve Inservice Test Plan

<u>Change Description</u>	<u>Affected Pages</u>
Change test requirement to that specified in Revision 5 to the Unit 1 IST Plan for Accumulator Discharge Isolation Valves, Accumulator Vent Valves, Accumulator Vent Backup Valve, and Accumulator Vent Header Bleed Valve to be tested during Cold Shutdown. Add reference to Valve Relief Request Number 2 for the Accumulator Discharge Isolation Valves. No NRC approval required.	Page 95
Indicate that Valve Relief Request Number 49 was not used.	Page 118
Valve Relief Request Number 51 was submitted in Revision 6 for information (no approval required) to provide consistency in the IST Plan. All other check valves in the Plan, in which full flow testing cannot be performed, have approved relief requests to perform this alternate testing. This testing is in accordance with the requirements of Generic Letter 89-04, Position 2. Correct valve number "CC-0377" to read "CC-0327".	Page 119
Valve Relief Request Number 52 was submitted in Revision 6 for information (no approval required) to provide consistency in the IST Plan. The Component Cooling Water System Isolation valves are cylinder actuated valves and function as check valves to shut off the process flow as the process line pressure approaches a pre-set value. Since these valves function as check valves, this relief request is included to provide consistency in the IST Plan. All other check valves in the Plan, in which full flow testing cannot be performed, have approved relief requests to perform this alternate testing. This testing is in accordance with the requirements of Generic Letter 89-04, Position 2.	Page 120

Supplement 1 to Revision 6 of the
Unit 1 Pump and Valve Inservice Test Plan

<u>Change Description</u>	<u>Affected Pages</u>
Valve Relief Request Number 53 was submitted in Revision 6 for information (no approval required) to provide consistency in the IST Plan. All other check valves in the Plan which can not be tested in accordance with the requirements of Section XI have approved relief requests to perform alternate testing. This testing is in accordance with the requirements of Generic Letter 89-04, Position 2.	Page 120
Add Valve Relief Request Number 54 for testing of check valves in the Residual Heat Removal System in conjunction with the RHR Pumps on a semi-annual basis. (Approved per ST-AE-HL-93719)	Page 121
Add Cold Shutdown Justifications CSJ-2 for the Cold Shutdown testing of the Accumulator Vent Valves.	Page 121a
Add Cold Shutdown Justification CSJ-3 for the Cold Shutdown testing of the Accumulator Discharge Isolation Valves.	Page 121b

Notes:

1. Valve Relief Request Number 51 was previously used for another request for relief but it was determined to not be required by the NRC (per ST-AE-HL-93298). Valve Relief Request Number 51 was reused as described in Revision 6 of this Plan.
2. The procedures for the Reactor Makeup Pumps will be approved and performed within 90 days of the issuance of this letter. All other components will be tested during the next performance of their individual Inservice Test procedures.

Supplement 1 to Revision 4 of the
Unit 2 Pump and Valve Inservice Test Plan

<u>Change Description</u>	<u>Affected Pages</u>
Change the test interval for the Containment Spray Pumps to semi-annual. (Approved Pump Relief Request Number 11 per ST-AE-HL-93719)	Page 7
Delete reference to Pump Relief Request Number 9 concerning essential cooling water pump flow rate. Inplace calibration of the ECW annubars has been completed. The annubar accuracy is now within the limits of Table IWP-4110-1. No NRC approval required.	Page 10
Change the test interval for the Residual Heat Removal Pumps to semi-annual. (Approved Pump Relief Request Number 10 per ST-AE-HL-93719)	Page 13
Pump Relief Request Number 8 was submitted in Revision 4 for information (no approval required) to provide consistency in the IST Plan. All other pumps utilizing a fixed resistance flow path have approved relief requests allowing this alternate testing. This test method has been approved for other pumps in the IST Plan and is in compliance with OM-6 Part 5.2.c.	Page 20
Delete Pump Relief Request Number 9. Inplace calibration has been performed on the ECW annubars, therefore STP is in compliance with the testing requirements of IWP-4110-1. No NRC approval required.	Page 21
Add Pump Relief Request Number 10 concerning the change of test frequency from 3 to 6 months for the Residual Heat Removal Pumps. (Approved by NRC per ST-AE-HL-93719)	Page 21a
Add Pump Relief Request Number 11 concerning the change of test frequency from 3 to 6 months for the Containment Spray Pumps. (Approved by NRC per ST-AE-HL-93719)	Page 21a

Supplement 1 to Revision 4 of the
Unit 2 Pump and Valve Inservice Test Plan

<u>Change Description</u>	<u>Affected Pages</u>
Clarify that the valve stroke acceptance criteria are included for information only and will be removed in the next plan revision. The basis document for the valve stroke time acceptance criteria are the stroke time calculations performed in accordance with OPGP03-ZE-0002. These acceptance criteria are then incorporated into the individual Valve Operability Tests. No NRC approval required.	Page 26
Change the size of the FWIV Bypass Valves from 3" to the correct value of 2"	Page 63
Change the valve designators for the Inboard and Outboard Reactor Head Vent Valve from "FV" to the correct designator of "HV"	Page 76
Change the exercising of the Residual Heat Removal Discharge Check Valves to semi-annual. (Approved Valve Relief Request 50 per ST-AE-HL-93719) Delete reference to Valve Relief Request Number 28.	Page 79
Change the exercising of the Residual Heat Removal Discharge Recirculation Check Valves to semi-annual. (Approved Valve Relief Request Number 50 per ST-AE-HL-93719)	Page 80
Change test requirements to verify operability of Reactor Makeup Discharge Check valves RM-0003 and RM-0010. These valves will be verified operable by disassembly and inspection of one check valve each refueling outage. This change is due to a modification that was installed which makes an exercise test for operability impractical. These valves are added to Valve Relief Request Number 47. The change is required due to a modification to the RM system. This testing is in accordance with the requirements of Generic Letter 89-04, Position 2. No NRC approval required.	Page 84

Supplement 1 to Revision 4 of the
Unit 2 Pump and Valve Inservice Test Plan

<u>Change Description</u>	<u>Affected Pages</u>
Change test requirement to that specified in Revision 3 to the Unit 2 IST Plan for Accumulator Discharge Isolation Valves, Accumulator Vent Valves, Accumulator Vent Backup Valve, and Accumulator Vent Header Bleed Valve to be tested during Cold Shutdown. Add reference to Valve Relief Request Number 2 for the Accumulator Discharge Isolation Valves. No NRC approval required.	Page 95
Valve Relief Request Number 47 was submitted in Revision 4 for information (no approval required) to provide consistency in the IST Plan. All other check valves in the Plan, in which full flow testing cannot be performed, have approved Relief Requests to perform this alternate testing. This testing is in accordance with the requirements of Generic Letter 89-04, Position 2. Correct valve number "CC-0377 to read "CC-0327".	Page 118
Valve Relief Request Number 48 was submitted in Revision 4 for information (no approval necessary) to provide consistency in the IST Plan. The Component Cooling Water System Isolation valves are cylinder actuated valves and function as check valves to shut off the process flow as the process line pressure approaches a pre-set value. Since the valves function as check valves, this relief request is included to provide consistency in the IST Plan. All other check valves in the Plan, in which full flow testing cannot be performed, have approved Relief Requests to perform this alternate testing. This testing is in accordance with the requirements of Generic Letter 89-04, Position 2.	Page 119
Valve Relief Request Number 49 was submitted in Revision 4 for information (no approval required) to provide consistency in the IST Plan. All other check valves in the Plan which can not be tested in accordance with the requirements of Section XI have approved Relief Requests to perform alternate testing. This testing is in accordance with the requirements of Generic Letter 89-04, Position 2.	Page 119

Supplement 1 to Revision 4 of the
Unit 2 Pump and Valve Inservice Test Plan

Add Valve Relief Request Number 50 for testing of check valves in the Residual Heat Removal System in conjunction with the RHR Pumps on a semi-annual basis. (Approved per ST-AE-HL-93719)	Page 120
Add Cold Shutdown Justifications CSJ-2 for the Cold Shutdown testing of the Accumulator Vent Valves.	Page 120a
Add Cold Shutdown Justification CSJ-3 for the Cold Shutdown testing of the Accumulator Discharge Isolation Valves.	Page 120b

Note:

1. The procedures for the Reactor Makeup Pumps will be approved and performed within 90 days of the issuance of this letter. All other components will be tested during the next performance of their individual Inservice Test procedures

Rev. 6, Supp 1

Unit 1 Pump and Valve
Inservice Test Plan

CSJ-2 (Cold Shutdown Justification)

Applicable Valves: PV-3928, PV-3929, PV-3930, HV-0899, and HCV-0900

System: Safety Injection System

Test Requirement

Valves that can not be full stroke exercised during plant operation shall be full-stroke exercised during cold shutdown.

Basis for Deferring Testing

Testing these valves at power will place the plant at risk due to the possibility of the valves failing to close. Since no manual valve exists on any one accumulator nitrogen charging line or on the common vent line, if one of the accumulator vent valves fails to reseal after stroking, that accumulator may be de-pressurized during the performance of subsequent valve stroking. In addition, since there is a common vent header, the lack of isolation could affect more than one train if operator action or valve malfunction occurred following the first valve failure and prior to achieving cold shutdown. Depressurization of one of the accumulators while in Modes 1, 2, or 3 above 1000 psig would cause the plant to enter a twelve hour limiting condition for operation and subsequent shutdown since it could require 6-24 hours to bring the pressure in the accumulator back into specifications. This is due to the small line for nitrogen supply (1") and the limited flow allowed by the target rock valves.

Alternate Test Frequency

These valves will be exercised (full-stroke) each cold shutdown not to exceed once every three (3) months.

Rev. 6, Supp 1

Unit 1 Pump and Valve
Inservice Test Plan

CSJ-3 (Cold Shutdown Justification)

Applicable Valves: MOV-0039A, MOV-0039B, and MOV-0039C

System: Safety Injection System

Test Requirement

Valves that can not be full stroke exercised during plant operation shall be full-stroke exercised during cold shutdown.

Basis for Deferring Testing

Testing these valves at power will place the plant at risk due to the possibility of the valves failing to re-open following valve stroke timing. These motor operated accumulator isolation valves are required by Technical Specifications to be in the open position with power removed from their operator during modes 1, 2, and 3 with pressurizer pressure above 1000 psig. Stroke time testing of these valves will require that the breakers be re-energized to provide power to the motor operators. Failure of the breaker to function following stroke testing or the valve to re-open following the stroke to the closed direction would render the associated accumulator inoperable and place the plant in a 12 hour Limiting Condition for Operation. Since these valves are not operated for any other testing at power, no high differential pressure or temperature gradient should exist, therefore, no failure due to pressure locking or thermal binding is expected. The trending of the valve performance on a cold shutdown frequency will be sufficient to ensure that any valve degradation will be detected.

Alternate Test Frequency

These valves will be exercised (full-stroke) each cold shutdown not to exceed once every three (3) months.

Rev. 4, Supp 1

Unit 2 Pump and Valve
Inservice Test Plan

CSJ-2 (Cold Shutdown Justification)

Applicable Valves: PV-3928, PV-3929, PV-3930, HV-0899, and HCV-0900

System: Safety Injection System

Test Requirement

Valves that can not be full stroke exercised during plant operation shall be full-stroke exercised during cold shutdown.

Basis for Deferring Testing

Testing these valves at power will place the plant at risk due to the possibility of the valves failing to close. Since no manual valve exists on any one accumulator nitrogen charging line or on the common vent line, if one of the accumulator vent valves fails to reseat after stroking, that accumulator may be de-pressurized during the performance of subsequent valve stroking. In addition, since there is a common vent header, the lack of isolation could affect more than one train if operator action or valve malfunction occurred following the first valve failure and prior to achieving cold shutdown. Depressurization of one of the accumulators while in Modes 1, 2, or 3 above 1000 psig would cause the plant to enter a twelve hour limiting condition for operation and subsequent shutdown since it could require 6-24 hours to bring the pressure in the accumulator back into specifications. This is due to the small line for nitrogen supply (1") and the limited flow allowed by the target rock valves.

Alternate Test Frequency

These valves will be exercised (full-stroke) each cold shutdown not to exceed once every three (3) months.

Rev. 4, Supp 1

Unit 2 Pump and Valve
Inservice Test Plan

CSJ-3 (Cold Shutdown Justification)

Applicable Valves: MOV-0039A, MOV-0039B, and MOV-0039C

System: Safety Injection System

Test Requirement

Valves that can not be full stroke exercised during plant operation shall be full-stroke exercised during cold shutdown.

Basis for Deferring Testing

Testing these valves at power will place the plant at risk due to the possibility of the valves failing to re-open following valve stroke timing. These motor operated accumulator isolation valves are required by Technical Specifications to be in the open position with power removed from their operator during modes 1, 2, and 3 with pressurizer pressure above 1000 psig. Stroke time testing of these valves will require that the breakers be re-energized to provide power to the motor operators. Failure of the breaker to function following stroke testing or the valve to re-open following the stroke to the closed direction would render the associated accumulator inoperable and place the plant in a 12 hour Limiting Condition for Operation. Since these valves are not operated for any other testing at power, no high differential pressure or temperature gradient should exist, therefore, no failure due to pressure locking or thermal binding is expected. The trending of the valve performance on a cold shutdown frequency will be sufficient to ensure that any valve degradation will be detected.

Alternate Test Frequency

These valves will be exercised (full-stroke) each cold shutdown not to exceed once every three (3) months.