

94 07849

ATTACHMENT 1
SURVEILLANCE TEST ROUTING SHEET
 (STRS)

STS STN NO: STS BG-210
 (CIRCLE ONE)

TITLE: CVCS INSERVICE CHECK VALVE TEST

REV. 12

**TEST FREQUENCY:

**DUE DATE/TIME:

**LATE DATE/TIME:

**T/S REQUIRED MODE:

**PROCEDURE REQUIRED MODE:

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MA 94-080

INITIATING DOCUMENT#(s)

**RESPONSIBLE GROUP:
 PRE-TEST COMMENTS

**SUPPORT GROUP(s):

**** OPTIONAL INFORMATION-NOT REQUIRED TO BE FILLED IN**

1) TEST PERFORMERS

SIG/DATE

Procedure verified to be the correct
 revision with all temporary changes
 attached and incorporated.

INT/DATE

2) PRE-TEST REVIEWS

SS/SO AUTH/NOTIF/NI
 (CIRCLE)

(AS APPLICABLE)

SIG/DATE/TIME

3) *TEST DEFICIENCY DESCRIPTION:

N/A

TP INT/DATE

DATE

4) *T/S FAILURE

YES / NO

(CIRCLE ONE)

S/S SIGNATURE

IF NO-JUSTIFICATION:

5) ACTION TAKEN

EOL #

WR#

*SECTIONS 3, 4 AND 5 ARE COMPLETED
 IF A TEST DEFICIENCY OCCURS,
 OTHERWISE MARK N/A

TEST SUSPENDED

YES / NO

(CIRCLE ONE)

SS SIGNATURE

DATE

6) POST TEST REVIEWS

TOTAL MAN HOURS:

TEST PERFORMER

SS/SO REVIEW/NOTIF

GROUP SUP.

SIG/

DATE

TIME

10-25-94

0032

10-25-94

0236

10-31-94

10-26-94

11-8-94

☒ COMPLETE

☐ PARTIAL

(GROUP SUP. CHECK ONE)

SC/SURV. TECHNICIAN

7) ADDITIONAL COMMENTS:

ADM 01-300

Rev. b

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9701290360 970122
 PDR ADOCK 05000482
 G PDR

ON THE SPOT CHANGE (OTSC)

OTSC Number: 94-0319

Current Revision Number: 12

Document Number: STS BG-210

Document Title: CVCS INTERVIEW CHECK VALVE TEST

Originator

STEVE ERNEST
Print Name

10/24/94

Date

Reason For Change: (Explain)

REVISE STEPS 7.11 AND 7.12 TO DELETE SECOND CHECKS ON EQUIPMENT
REMOVAL. REPLACE PAGE 27 WITH ATTACHED.
TEST EQUIPMENT IS NON-INTRUSIVE.

☐ Continued on attached

OTSC SCREENING

(A YES answer to any of the following questions indicates an OTSC can not be performed.)

1. Is this a change to the intent of the procedure as defined in the purpose or scope?
2. Will this change decrease or modify a hold point requirement or Quality inspection point?
3. Will the change result in a reduction of personnel or equipment safety?
4. Will the change involve a USQD?

☐ YES ☒ NO
☐ YES ☒ NO
☐ YES ☒ NO
☐ YES ☒ NO

☒ A marked up copy of the proposed change is attached.
☒ Regulatory Drawings and/or Evaluations (form KGF-115) has been completed and attached as required by KGP-1220.
 SCREENING AND EVALUATING CHANGES, TESTS, AND EXPERIMENTS.

APPROVAL FOR IMMEDIATE USE

Approved By:

Call Superintendent (for ACPs only)

Date

Approved By:

Steve Ernest
WCNOC Staff Member

Print Name

10/24/94
Date

Approved By:

Oakley A. Korbelic
Cognizant Supervisor*

Print Name

10/24/94
Date

* For Operations Department procedures, must hold a Senior Reactor Operator license per TS 6.8.3.

The remainder of this form shall be completed within 14 days as required by Technical Specification 6.8.3.

QUALIFIED REVIEW

Cross-Disciplinary Review Required By:

☐ Quality Assurance☐ Quality Control☐ Surveillance Coordinator☐ NONE REQUIRED☐ Other (Specify)

All cross-disciplinary reviews have been completed, reviewer comments have been resolved, and the recommended disposition of this OTSC has been identified in the FINAL APPROVAL section of this form.

Qualified Reviewer

Print Name

Date

FINAL APPROVAL

☐ Approved:☐ Disapproved, cancel, remove from OTSC file, and initiate PIR☐ Maintain in active OTSC file until incorporated into future revision.

Incorporated by DRR number: _____
 or OTSC number: _____

☐ Maintain in active OTSC file until specified date

This section for Administrative Control Procedures Only)

☐ Approved☐ Disapproved

PSRC Meeting No: _____

PSRC Chairmain (Initials)

Date

Vice-President Plant Operations

Date

Responsible Manager (For all OTSC except ACP's)

Date

OTSC 94-0319



SCREENING FOR LICENSING BASIS CHANGES

No. 59

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Revision: 12

Document Number: STS BG-210

Description of Proposed Change:

REVISE STEPS 7.11 AND 7.12 TO DELETE SECOND CHECKS ON
TEST EQUIPMENT REMOVAL STEPS.

Screening Questions: (Note: All questions must be answered except as provided in questions 1 and 2)

1. Has this change been previously approved for WCNOG by the NRC or covered by another Unreviewed Safety Question Determination (KGF-117)
- ☐ YES No further screening is required. Document # _____ Justify in "Clarification" Section if referencing a previously performed USQD, contact Licensing to update USQD log.

☒ NO

Note: If referencing another Unreviewed Safety Question Determination, ensure that it has been approved by the PSRC prior to implementing the change.

2. Would the change result in a revision to the Operating License including Appendices? (this includes the Technical Specifications)
- ☐ YES Change may NOT be implemented prior to approval of a License Amendment (Note: No further screening is required since NRC approval must be obtained prior to implementing the change.)

☒ NO

3. Would the change involve one or more of the following:
- a change to plant structures, systems, components or equipment as outlined, summarized or described in the USAR such that accomplishment of the change would make information in the USAR no longer true or accurate, or would violate a requirement stated in the USAR?
 - a change to procedures or administrative controls as outlined, summarized, or described in the USAR such that accomplishment of the change would make information in the USAR no longer true or accurate, or would violate a requirement stated in the USAR?
 - tests or experiments NOT described in the USAR?

☐ YES

A formal Unreviewed Safety Question Determination using KGF-117 must be completed prior to implementing the change.

☒ NO

Identify USAR sections considered in answering these questions.

Sections Reviewed: 9.3.4, 9.3.4.2, 13.5

NOTE: If yes, evaluate need for a USAR Change Request in accordance with KGP-1225.

(REF. KGP-1220)



SCREENING FOR LICENSING BASIS CHANGES

(continued)

Document Number:

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4. Does the proposed change involve one or more of the following:

- a. a change in the rate, volume, concentration, composition or flow path of nonradiological liquid or gaseous effluents?
- b. a change in the volume, concentration or composition of nonradiological solid waste?
- c. an increase in the thermal power above the current licensed level and/or an alteration in the magnitudes of thermally affected effluents?
- d. a physical change in an area outside of the owner controlled area boundary which was not disturbed by previous construction?

☐ Yes An environmental impact determination must be completed by the Supv. Environmental Management using KGF-116 prior to implementing the change. ☒ No

5. Could the change potentially result in a revision to:

- a. the Security Plan,
- b. the Safeguards Contingency Plan, or
- c. the Guard Training and Qualification Plan?


☐ Yes An evaluation must be completed in accordance with 10CFR50.54(p) prior to implementing the change. This evaluation must be performed by the Manager Security or Manager NPE-Wichita using KGF-116. ☒ No

6. Could the change potentially result in a revision to the Operating Quality Assurance Program commitment described in Chapter 17 of the USAR? ☐ Yes An evaluation must be completed in accordance with 10CFR50.54(A)(3) by the Manager QA using KGF-116 prior to implementing the change.

☒ No

7. Could the change potentially result in a revision to the Fire Protection Program described in USAR Section 9.5 and Appendices? ☐ Yes An evaluation must be completed in accordance with license NPF-42 paragraph 2 c(5) by the Manager Operations or Manager System Engineering using KGF-116 prior to implementing the change.

☒ No

	SCREENING FOR LICENSING BASIS CHANGES (continued)	Document Number: <u>STS BG-210</u> No. 59 Page 3 of 3
8. Could the change potentially result in a revision to the Radiological Emergency Response Plan? <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 40%;"> <input type="checkbox"/> Yes An evaluation must be completed in accordance with 10CFR50.54(q) by the Manager Technical Services using KGF-116 prior to implementing the change. </div> <div style="width: 50%; text-align: right;"> <input checked="" type="checkbox"/> No </div> </div>		
9. Could the change potentially result in a revision to the Licensed Operator Requalification Program as described in USAR Section 13.2.1.2? <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 40%;"> <input type="checkbox"/> Yes An evaluation must be completed in accordance with 10CFR50.54(i-1) by the Manager Training using KGF-116 prior to implementing the change. </div> <div style="width: 50%; text-align: right;"> <input checked="" type="checkbox"/> No </div> </div>		
10a. Could the change potentially result in a change to an NRC commitment? <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 40%;"> <input type="checkbox"/> Yes An evaluation must be completed by the Manager Regulatory Services using Form KGF-116 prior to implementing the change. </div> <div style="width: 50%; text-align: right;"> <input checked="" type="checkbox"/> No </div> </div>		
10b. Could the Change potentially result in changing or nullifying an INPO commitment? <div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 40%;"> <input type="checkbox"/> Yes The basis for accepting the change will be provided below in the clarification section by the responsible manager. Coordinate with the Manager Plant Support to provide a basis for accepting the change to an INPO commitment. </div> <div style="width: 50%; text-align: right;"> <input checked="" type="checkbox"/> No </div> </div>		
Clarification: <u>NONE.</u>		
Disposition: Further Action Needed (Mark answer and explain below): <div style="display: flex; justify-content: center; align-items: center; margin-top: 10px;"> <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No </div>		
Prepared by: <u>Steve Emery</u>		Date: <u>10-24-94</u>
Approved by: <u>W. H. H. H. H.</u>		Date: <u>10-24-94</u>



SCREENING FOR LICENSING BASIS CHANGES

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Document Number: STS BG-210

Revision: 12

Description of Proposed Change:

Correct valve nomenclature for BG HV-8357A and B due to changes implemented by PMR-4394.

Screening Questions: (Note: All questions must be answered except as provided in questions 1 and 2)

1. Has this change been previously approved for WCNOG by the NRC or covered by another Unreviewed Safety Question Determination (KGF-117)

☐ YES

No further screening is required.

Document # _____

Justify in "Clarification" Section if referencing a previously performed USQD, contact Licensing to update USQD log.

☒ NO

Note: If referencing another Unreviewed Safety Question Determination, ensure that it has been approved by the PSRC prior to implementing the change.

2. Would the change result in a revision to the Operating License including Appendices? (this includes the Technical Specifications)

☐ YES

Change may NOT be implemented prior to approval of a License Amendment (Note: No further screening is required since NRC approval must be obtained prior to implementing the change.)

☒ NO

3. Would the change involve one or more of the following:

- a change to plant structures, systems, components or equipment as outlined, summarized or described in the USAR such that accomplishment of the change would make information in the USAR no longer true or accurate, or would violate a requirement stated in the USAR?
- a change to procedures or administrative controls as outlined, summarized, or described in the USAR such that accomplishment of the change would make information in the USAR no longer true or accurate, or would violate a requirement stated in the USAR?
- tests or experiments NOT described in the USAR?

☐ YES

A formal Unreviewed Safety Question Determination using KGF-117 must be completed prior to implementing the change.

☒ NO


Identify USAR sections considered in answering these questions.

Sections Reviewed: 9.3.4

NOTE: If yes, evaluate need for a USAR Change Request in accordance with KGP-1225.

(REF. KGP-1220)

OTSC 94-0302

	SCREENING FOR LICENSING BASIS CHANGES (continued)	Document Number: STS BG-210 12
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4. Does the proposed change involve one or more of the following:

- a. a change in the rate, volume, concentration, composition or flow path of nonradiological liquid or gaseous effluents?
- b. a change in the volume, concentration or composition of nonradiological solid waste?
- c. an increase in the thermal power above the current licensed level and/or an alteration in the magnitudes of thermally affected effluents?
- d. a physical change in an area outside of the owner controlled area boundary which was not disturbed by previous construction?

☐ Yes An environmental impact determination must be completed by the Supv. Environmental Management using KGF-116 prior to implementing the change. ☒ No

5. Could the change potentially result in a revision to:

- a. the Security Plan,
- b. the Safeguards Contingency Plan, or
- c. the Guard Training and Qualification Plan?

☐ Yes An evaluation must be completed in accordance with 10CFR50.54(p) prior to implementing the change. This evaluation must be performed by the Manager Security or Manager NPE-Wichita using KGF-116. ☒ No

6. Could the change potentially result in a revision to the Operating Quality Assurance Program commitment described in Chapter 17 of the USAR? ☐ Yes An evaluation must be completed in accordance with 10CFR50.54(A)(3) by the Manager QA using KGF-116 prior to implementing the change. ☒ No

7. Could the change potentially result in a revision to the Fire Protection Program described in USAR Section 9.5 and Appendices? ☐ Yes An evaluation must be completed in accordance with license NPF-42 paragraph 2.c(5) by the Manager Operations or Manager System Engineering using KGF-116 prior to implementing the change. ☒ No

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SCREENING FOR LICENSING BASIS CHANGES
(continued)

8. Could the change potentially result in a revision to the Radiological Emergency Response Plan?

☐ Yes

An evaluation must be completed in accordance with 10CFR50.54(q) by the Manager Technical Services using KGF-116 prior to implementing the change.

☒ No

9. Could the change potentially result in a revision to the Licensed Operator Requalification Program as described in USAR Section 13.2.1.2?

☐ Yes

An evaluation must be completed in accordance with 10CFR50.54(i-1) by the Manager Training using KGF-116 prior to implementing the change.

☒ No

10a. Could the change potentially result in a change to an NRC commitment?

☐ Yes

An evaluation must be completed by the Manager Regulatory Services using Form KGF-116 prior to implementing the change.

☒ No

10b. Could the Change potentially result in changing or nullifying an INPO commitment?

☐ Yes

The basis for accepting the change will be provided below in the clarification section by the responsible manager. Coordinate with the Manager Plant Support to provide a basis for accepting the change to an INPO commitment.

☒ No

Clarification:

Disposition: Further Action Needed (Mark answer and explain below):

All questions answered no.

☐ Yes☒ No

Prepared by:

Date:

10/24/94

Approved by:

Date:

10/24/94

WOLF CREEK NUCLEAR OPERATING CORPORATION
WOLF CREEK GENERATING STATION

CVCS INSERVICE CHECK VALVE TEST

Rev. h

STS BG-210

Revision 12

Classification: Minor

<u>Patrick D. Wagner</u>	<u>7-14-94</u>
PREPARED BY	DATE
<u>[Signature]</u>	<u>7-15-94</u>
INDEPENDENT REVIEW	DATE
<u>R. Scott [Signature]</u>	<u>7-18-94</u>
COGNIZANT GROUP SUPERVISOR	DATE
<u>Kevin Scherch</u>	<u>7-18-94</u>
PSRC SUBCOMMITTEE CHAIRMAN APPROVAL	DATE
<u>N/A</u>	<u>DATE</u>
PSRC APPROVAL RECOMMENDATION (Revision 0 only)	
<u>N/A</u>	
VICE PRESIDENT PLANT OPERATIONS APPROVAL (As required)	
<u>N/A</u>	
QUALITY REVIEWER (As required)	DATE

DC12

7-18-94

IMAGED

1.0 PURPOSE

- 1.1 The purpose of this surveillance is to demonstrate Chemical and Volume Control System check valve operability.
- 1.2 This surveillance will perform exercise open and exercise close testing as required by ASME/ANSI OMA-1988, Part 10.
- 1.3 This procedure satisfies Chemical and Volume Control check valve operability surveillance requirements of Technical Specification 4.0.5.

2.0 DISCUSSION

2.1 Scope

- 2.1.1 Check valves will be demonstrated operable by verifying disk travels to safety function position.

2.2 Precautions, Limitations And Acceptance Criteria

2.2.1 Precautions

- 2.2.1.1 If testing is to be performed during Modes 4, 5 or 6 refer to Technical Specification 3.1.2.3 for CCP Operability Requirements.
- 2.2.1.2 Centrifugal Charging Pump "A" should not be operated for greater than 30 minutes at less than 175 gpm total flow (including 60 gpm recirc.) due to low flow cavitation considerations. **IF** PBG05A is operated at less than 175 gpm, **THEN** complete Attachment 1 of Standing Orders and Special Orders, Minimum Flow Requirements Within Regions of Low Flow Cavitation Pump Operations.
- [3.11]

- 2.2.1.3 [3.11] Centrifugal Charging Pump "B" should not be operated for greater than 30 minutes at less than 173 gpm total flow (including 60 gpm recirc.) due to low flow cavitation considerations. ~~IF~~ PBG05B is operated at less than 173 gpm, ~~THEN~~ complete Attachment 1 of Standing Orders and Special Orders, Minimum Flow Requirements Within Regions of Low Flow Cavitation Pump Operations.
- 2.2.1.4 When shifting between centrifugal charging pumps, refer to SYS BG-201, "Switching between Positive Displacement and Centrifugal Charging Pumps".
- 2.2.2 Limitations
- 2.2.2.1 Report any irregularities or component malfunctions to SS/SO immediately.
- 2.2.2.2 Check valve exercise testing ~~is~~ required to be performed quarterly.
- 2.2.2.3 Testing of Alternate Charging Line Check Valves shall be done only in Modes 5 or 6. See the caution prior to Step 6.1.28. The balance of test is not mode dependent.
- 2.2.2.4 Flanges when removed, will be identified and secured in immediate area.
- 2.2.2.5 Use of separate gauges for Steps 6.1.4 and 6.1.56 will expedite performance of procedure.

2.2.3 Acceptance Criteria

- 2.2.3.1 Check valve exercise open testing is performed by verifying check valve disk will travel to open position by passing maximum required accident condition flow. Check valve partial exercise open testing is performed by verifying valve will permit flow in the proper direction. Check valve exercise closed testing is performed by verifying valve disk will travel promptly to its seat on cessation or reversal of flow. IF required change of valve disk position is not obtained, THEN valve shall be declared inoperable and corrective action shall be initiated using ADM 01-057, "Work Request" and ADM 02-024, "Technical Specification Operability".

3.0 REFERENCES

- 3.1 ADM 01-300, "Surveillance Testing"
- 3.2 ADM 05-200, "ASME Code Testing Of Pumps And Valves"
- 3.3 ADM 01-057, "Work Request"
- 3.4 ADM 02-024, "Technical Specification Operability"
- 3.5 PIR TS 92-0490
- 3.6 PIR TS 92-0493
- 3.7 PIR TS 92-0491
- 3.8 PIR TS 92-0485
- 3.9 PDR TS 91-0238
- 3.10 PIR OP 92-0320

- 3.11 IE Bulletin 88-04, "Low Flow Cavitation"
- 3.12 ITIP 1349, Westinghouse Infogram:
Switchover of CVCS Flow to Alternate
Charging Path
- 3.13 ASME/ANSI OMA-1988, Part 10, "Inservice
Testing Of Valves In Light Water Reactor
Power Plants"
- 3.14 WCOP-02, "Inservice Testing Program For
Pumps And Valves"
- 3.15 Generic Letter 89-04, "Guidance On
Developing Acceptable Inservice Testing
Programs"
- 3.16 PIR OP 92-462

4.0 TEST EQUIPMENT

NOTE: If equivalent test equipment is
used, justification shall be
provided in "Comments" section of
procedure and accuracies noted.

NOTE: All readings may be taken using only
one gauge. However, it is more
expedient to use two gauges. If
only one gauge is used then N/A 4.2.

- 4.1 0-3000 psig test gauge \pm .025% full scale
accuracy with bleed valve (see Figure 1).

Gauge Number: WC 15379
Gauge Cal. due date: 3/29/95

INIT/DATE

- 4.2 0-3000 psig test gauge $\pm 0.025\%$ full scale accuracy with bleed valve (see Figure 1).

Gauge Number: 15378
Gauge Cal. due date: 10-28-94

- 4.3 Non-intrusive check valve monitoring device.

WC Number: Y SEE COMMENT SHEET
Cal. due date: Y

5.0 PREREQUISITES

- 5.1 Consult with SS/SO and review following required prerequisites prior to performance of surveillance:

[Signature]
SS/SO

[Signature]
PERFORMER

- 5.2 PBG05A, Centrifugal Charging Pump 'A', and PBG05B, Centrifugal Charging Pump 'B' are operable and aligned for NORMAL operation in accordance with SYS BG-120 if in Modes 1, 2 or 3.

N/A initiator
☐

- 5.3 If Section 6.1 is to be done first, PBG05A is supplying RCS Charging and RCP Seal Water as necessary.

☒

- 5.4 If Section 6.2 is to be done first, PB005B is supplying RCS Charging and RCP Seal Water as necessary.

N/A initiator
☐

- 5.5 Required Precautions, Limitations and Acceptance Criteria have been reviewed.

[Signature] 11/24/94

INIT/DATE

6.0

PROCEDURE

6.1

Charging System Check Valve Testing With
CCP "A" Running

NOTE: Section 6.1 will exercise test
following check valves:

<u>STROKE</u> <u>DIRECTION</u>	<u>VALVE TEST</u>	<u>VALVE DESCRIPTION</u>
OPEN	CVT-O BG8481A	PBG05A DISCH CK
CLOSE	CVT-C BGV0589	CCP "B" DISCH CK TO SEAL WTR INJ FILTERS
OPEN	CVT-O BGV0590	CCP "A" DISCH CK TO SEAL WTR INJ FILTER
OPEN	CVT-O BGV0591	CHARGING TO SEAL INJ FILTERS CK
CLOSE	CVT-C BG8497	PDP DISCH TO CHG HDR
OPEN	CVT-O BBV0118	RCP PBB01A LABYRINTH SEALS CHG HDR CK
OPEN	CVT-O BBV0120	RCP PBB01A LABYRINTH SEALS CHG HDR CK
OPEN	CVT-O BBV0121	RCP PBB01A LABYRINTH SEALS CHG HDR CK
OPEN	CVT-O BBV0148	RCP PBB01B LABYRINTH SEALS CHG HDR CK
OPEN	CVT-O BBV0150	RCP PBB01B LABYRINTH SEALS CHG HDR CK
OPEN	CVT-O BBV0151	RCP PBB01B LABYRINTH SEALS CHG HDR CK
OPEN	CVT-O BBV0178	RCP PBB01C LABYRINTH SEALS CHG HDR CK
OPEN	CVT-O BBV0180	RCP PBB01C LABYRINTH SEALS CHG HDR CK
OPEN	CVT-O BBV0181	RCP PBB01C LABYRINTH SEALS CHG HDR CK
OPEN	CVT-O BBV0208	RCP PBB01D LABYRINTH SEALS CHG HDR CK
OPEN	CVT-O BBV0210	RCP PBB01D LABYRINTH SEALS CHG HDR CK
OPEN	CVT-O BBV0211	RCP PBB01D LABYRINTH SEALS CHG HDR CK
CLOSE	CVT-C BB8379A	CVCS ALT CHG DWNSTRM CK
CLOSE	CVT-C BB8379B	CVCS ALT CHG UPSTRM CK
CLOSE	CVT-C BB8378A	CVCS NORM CHG DWNSTRM CK
CLOSE	CVT-C BB8378B	CVCS NORM CHG UPSTRM CK

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- | | | <u>INIT/DATE</u> |
|---------|---|-------------------------------------|
| 6.1.1 | If in Modes 5 or 6, perform steps 6.1.1.1 and 6.1.1.2, otherwise N/A steps 6.1.1.1 and 6.1.1.2. | <input checked="" type="checkbox"/> |
| 6.1.1.1 | Install non-intrusive check valve test equipment on BB-8378A, CVCS Normal Charging to Loop 1 Check Valve. | <input checked="" type="checkbox"/> |
| 6.1.1.2 | Install non-intrusive check valve test equipment on BB-8378B, CVCS Normal Charging to Loop 1 Check Valve. | <input checked="" type="checkbox"/> |
| 6.1.2 | At panel RL001, verify PBG05B, Centrifugal Charging Pump 'B', is not running by observing green indicating light is illuminated for handswitch BG HIS-2A. | <input checked="" type="checkbox"/> |
| 6.1.3 | If in Modes 4, 5 or 6, at panel RL001, verify BG HIS-2A is in PULL-TO-LOCK. (If not in Mode 4, 5 or 6 N/A this step). | <input checked="" type="checkbox"/> |
| | NOTE: Place gauge so that it can be read while operating EM-V151. | |
| 6.1.4 | Install 0-3000 psig test gauge at test connection downstream of EM-V143, BIT Bypass Line Test Connection Iso. | <input checked="" type="checkbox"/> |
| 6.1.5 | Open EM-V087, BIT Bypass Line Test Connection Iso. | <input checked="" type="checkbox"/> |
| 6.1.6 | Open EM-V143, BIT Bypass Line Test Connection Iso. | <input checked="" type="checkbox"/> |
| 6.1.7 | Verify locked open BG-8483A, PBG05A Discharge Header FCV-121 Inlet Iso. | <input checked="" type="checkbox"/> |
| 6.1.8 | Unlock and close BG-8483C, PGB05B Discharge Header FCV-121 Inlet Iso. | <input checked="" type="checkbox"/> |
| 6.1.9 | Open BG-V090, BG PI-118 Iso. | <input checked="" type="checkbox"/> |

		<u>INIT/DATE</u>
6.1.10	Unlock and open EM-V247, CCP "B" BIT 1" Bypass Line Iso.	<input checked="" type="checkbox"/>
6.1.11	Open or verify open EM-V120, SI Test Header to RHUT Iso.	<input checked="" type="checkbox"/>
6.1.12	Close or verify closed BN-V004, SI Test Header to RWST Iso.	<input checked="" type="checkbox"/>
6.1.13	At panel RL017, open EM HV-8964, SI System Test Line Outside Containment Iso., using handswitch EM HIS-8964.	<input checked="" type="checkbox"/>
6.1.14	At panel RL017, open EM HV-8871, SI System Test Line Inside Containment Iso., using handswitch EM HIS-8871.	<input checked="" type="checkbox"/>
6.1.15	At panel RL018, open EM HV-8843, Boron ^o Injection Upstream Test Line Iso., using handswitch EM HIS-8843.	<input checked="" type="checkbox"/>
6.1.16	Unlock and open EM-V151, BIT Bypass Iso., to bleed off pressure.	<input checked="" type="checkbox"/>
6.1.17	Close EM-V151, BIT Bypass Iso.	<input checked="" type="checkbox"/>
6.1.18	At panel RL001, open or verify open BG HV-8146, Regenerative HX to RCS Loop 1 Cold Leg Iso., using handswitch BG HIS-8146.	<input checked="" type="checkbox"/>
6.1.19	At panel RL001, close or verify closed BG HV-8147, Regenerative HX to RCS Loop 4 Cold Leg Iso., using handswitch BG HIS-8147.	<input checked="" type="checkbox"/>

INIT/DATE

- 6.1.20 Record seal water injection flow in table below as indicated on BG FI-215A, located on RL001, and verify required indication by circling either SAT or UNSAT.

JA 1/10/94

BG-V591 Exercise Open Acceptance Criteria			
REFERENCE PARAMETER INDICATION	ACTUAL REFERENCE PARAMETER INDICATION	ACCEPTANCE CRITERIA	(circle one)
BG FI-215A	<i>37</i>	≥24 GPM	<input checked="" type="radio"/> SAT <input type="radio"/> UNSAT

- 6.1.21 Record RCP 'A' seal water injection flow as indicated by Computer Point BGF0145A or BG FR-157, in table below and verify required indication by circling either SAT or UNSAT.

JA 1/10/94

BB-V118, BB-V120 and BB-V121 Exercise Open Acceptance Criteria			
REFERENCE PARAMETER INDICATION (Circle Indication used)	ACTUAL REFERENCE PARAMETER INDICATION	ACCEPTANCE CRITERIA	(circle one)
BG FR-157 or BGF0145A	<i>7.95</i>	≥6 GPM	<input checked="" type="radio"/> SAT <input type="radio"/> UNSAT

- 6.1.22 Record RCP 'B' seal water injection flow as indicated by Computer Point BGF0144A or BG FR-156, in table below and verify required indication by circling either SAT or UNSAT.

JA 1/10/94

BB-V148, BB-V150 and BB-V151 Exercise Open Acceptance Criteria			
REFERENCE PARAMETER INDICATION (Circle Indication used)	ACTUAL REFERENCE PARAMETER INDICATION	ACCEPTANCE CRITERIA	(circle one)
BG FR-156 or BGF0144A	<i>11.88</i>	≥6 GPM	<input checked="" type="radio"/> SAT <input type="radio"/> UNSAT

INIT/DATE

6.1.23

Record RCP 'C' seal water injection flow as indicated by Computer Point BGE0143A or BG FR-155, in table below and verify required indication by circling either SAT or UNSAT.

TA 1/14/94

BB-V178, BB-V180 and BB-V181 Exercise Open Acceptance Criteria			
REFERENCE PARAMETER INDICATION (Circle Indication used)	ACTUAL REFERENCE PARAMETER INDICATION	ACCEPTANCE CRITERIA	(circle one)
BG FR-155 or BGF0143A	7.67	≥ 6 GPM	<input checked="" type="radio"/> SAT <input type="radio"/> UNSAT

6.1.24

Record RCP 'D' seal water injection flow as indicated by Computer Point BGF0142A or BG FR-154, in table below and verify required indication by circling either SAT or UNSAT.

TA 1/14/94

BB-V208, BB-V210 and BB-V211 Exercise Open Acceptance Criteria			
REFERENCE PARAMETER INDICATION (Circle Indication used)	ACTUAL REFERENCE PARAMETER INDICATION	ACCEPTANCE CRITERIA	(circle one)
BG FR-154 or BGF0142A	12.91	≥ 6 GPM	<input checked="" type="radio"/> SAT <input type="radio"/> UNSAT

6.1.25

Maximize charging and letdown to 120 gpm.



6.1.26

Record charging flow in table below as indicated by BG FI-121A, located on panel RL002, and verify required indication by circling either SAT or UNSAT.

TA 1/14/94

BG-8481A Exercise Open Acceptance Criteria			
REFERENCE PARAMETER INDICATION	ACTUAL REFERENCE PARAMETER INDICATION	ACCEPTANCE CRITERIA	(circle one)
BG FI-121A	122	> 120 GPM	<input checked="" type="radio"/> SAT <input type="radio"/> UNSAT

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INIT/DATE

CAUTION: Due to thermal cycling of the alternate charging line nozzle and piping, testing of the alternate charging check valves in steps 6.1.27 through 6.1.38 shall only be performed during Modes 5 or 6. Otherwise, N/A steps 6.1.27 through 6.1.37.

6.1.27 With the plant in Mode 5 or 6, shift RC'S Charging from normal to alternate flow path by performing the following:

6.1.27.1 At panel RL001, open BG HV-8147, using handswitch BG HIS-8147. ☒

6.1.27.2 At panel RL001, close BG HV-8146, using handswitch BG HIS-8146. ☒

6.1.27.3 Stabilize charging flow at 120 gpm as indicated by BG FI-121A. ☒

6.1.28 Record test results for BB-8378A in table below and verify required indication by circling either SAT or UNSAT. *TH 11024.94*

BB-8378A Exercise Closed Acceptance Criteria			
REFERENCE PARAMETER INDICATION	ACTUAL REFERENCE PARAMETER INDICATION	ACCEPTANCE CRITERIA	(circle one)
Non-intrusive check valve test equipment	disk moved to closed position	disk moved to closed position	<input checked="" type="radio"/> SAT <input type="radio"/> UNSAT

6.1.29 Record test results for BB-8378B in table below and verify required indication by circling either SAT or UNSAT. *TH 11024.94*

BB-8378B Exercise Closed Acceptance Criteria			
REFERENCE PARAMETER INDICATION	ACTUAL REFERENCE PARAMETER INDICATION	ACCEPTANCE CRITERIA	(circle one)
Non-intrusive check valve test equipment	disk moved to closed position	disk moved to closed position	<input checked="" type="radio"/> SAT <input type="radio"/> UNSAT

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- 6.1.30 Remove non-intrusive check valve test equipment from BG-8378A. ☒
- 6.1.31 Remove non-intrusive check valve test equipment from BG-8378B. ☒
- 6.1.32 Install non-intrusive check valve test equipment on BG-8379A. ☒
- 6.1.33 Install non-intrusive check valve test equipment on BG-8379B. ☒
- 6.1.34 Shift RCS charging from alternate to normal flow path by performing the following:
- 6.1.34.1 At panel RL001, open BG HV-8146 using handswitch BG HIS-8146. ☒
- 6.1.34.2 At panel RL001, close BG HV-8147 using handswitch BG HIS-8147. ☒
- 6.1.35 Stabilize RCS charging flow at 120 gpm. ☒
- 6.1.36 Record test results for BB-8379A in table below and verify required indication by circling either SAT or UNSAT.

10 / 10-24-94

BB-8379A Exercise Closed Acceptance Criteria			
REFERENCE PARAMETER INDICATION	ACTUAL REFERENCE PARAMETER INDICATION	ACCEPTANCE CRITERIA	(circle one)
Non-intrusive check valve test equipment	disk moved to closed position	disk moved to closed position	<u>SAT</u> UNSAT

INIT/DATE

- 6.1.37 Record test results by BB-8379B in table below and verify required indication by circling either SAT or UNSAT.

10 / 10-27-87

BB-8379B Exercise Closed Acceptance Criteria			
REFERENCE PARAMETER INDICATION	ACTUAL REFERENCE PARAMETER INDICATION	ACCEPTANCE CRITERIA	(circle one)
Non-intrusive check valve test equipment	disk moved to closed position	disk moved to closed position	<input checked="" type="radio"/> SAT <input type="radio"/> UNSAT

CAUTION: If charging flow drops to
<60 gpm, immediately open CCP "A"
Mini-Recirc Flow Valve
BG HV-8110.

- 6.1.38 At panel RL001, close BG HV-8110, using
handswitch BG HIS-8110.



CAUTION: In step 6.1.39 RCP seal injection
[3.10] flow will bypass BG FI-121. When
determining if letdown and
charging are balanced, it will be
necessary to add BG FI-121A and
BG FI-215A to calculate total
charging flow. When performing
this procedure during solid plant
operations where charging and
letdown are manually controlled,
RCS pressure should be closely
monitored during the performance
of this step to ensure that total
charging flow (BG FI-121A plus
BG FI-215A) and letdown remain
balanced at approximately
120 gpm.

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6.1.39 Unlock and close BG-V100, Charging Pump Discharge Header to Seal Injection Iso., while simultaneously opening BG HV-8357A, CCP "A" Discharge to Seal Water Injection Filter Iso. using hand controller switch BG ~~HV~~-8357A on panel RL001, to obtain a flow of approximately 32 gpm as indicated by BG FI-215A. ☒

6.1.40 At panel RL001, using hand controller switch BG ~~HV~~-8357B, crack open BG HV-8357B, CCP "B" Discharge to Seal Water Injection Iso. ☒

6.1.41 Record seal water injection flow in table below as indicated by BG FI-215A, located on RL001, and verify required indication by circling either SAT or UNSAT. *9-16-94*

BG-V590 Exercise Open Acceptance Criteria			
REFERENCE PARAMETER INDICATION	ACTUAL REFERENCE PARAMETER INDICATION	ACCEPTANCE CRITERIA	(circle one)
BG FI-215A	32	≥ 24 GPM	<u>SAT</u> UNSAT

6.1.42 Record PBG05A discharge pressure as indicated by BG PI-118.

BG PI-118 2630 PSIG ☒

6.1.43 Determine the differential pressure across BG-V589 as follows:

6.1.43.1 IF pressure indicated by the test gauge at EM-V143 is <2000 psig, THEN record indicated pressure below and mark steps 6.1.43.2 and 6.1.43.3 N/A. IF pressure is >2000 psig, THEN mark this step N/A and perform steps 6.1.43.2 and 6.1.43.3.

EM-V143 Test gauge pressure 165 PSIG ☒

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- 6.1.43.2 Open EM-V151, BIT bypass iso., until the pressure stabilizes and record indicated pressure below. Mark this step N/A if not performed.

EM-V143 test gauge pressure with
EM-V151 open _____ PSIG

☒ N/A

- 6.1.43.3 Close EM-V151, BIT bypass Iso.

☒ N/A

- 6.1.44 Calculate differential pressure across BG-V589.

(BG PI-118) 2430 - (EM-V143 temp gauge) 165 = 2465 ΔP

☒

- 6.1.45 Record the differential pressure across BG-V589 in table below and verify required indication by circling either SAT or UNSAT.

10-24-94

BG-V589 Exercise Close Acceptance Criteria			
REFERENCE PARAMETER INDICATION	ACTUAL REFERENCE PARAMETER INDICATION	ACCEPTANCE CRITERIA	(circle one)
BG PI-118 MINUS EM V143 TEMP GAUGE	<u>2465</u>	ΔP ≥ 50 PSID	<u>SAT</u> UNSAT

- 6.1.46 At panel RL001, close BG HV-8357B using hand controller BG Hei 8357B.

Switch H15

10-24-94
1st
10-24-94
2nd

INIT/DATE

6.1.47 Open BG-V100 while simultaneously closing BG HV-8357A, using hand ~~controller~~ switch HIS BG ~~HIS~~-8357A (at RL001) to maintain RCP seal flow >32 gpm as indicated by BG FI-215A.



6.1.48 At panel RL001, open BG HV-8110 using handswitch BG HIS-8110.

2 / 10-24-94
1st
2 / 10-24-94
2nd

6.1.49 Open and lock BG-V100, Charging Pump Disch HDR to Seal Wtr Injection Filters Iso.

2 / 10-24-94
1st
2 / 10-24-94
2nd

6.1.50 At panel RL001, close BG HV-8357A using hand ~~controller~~ switch BG ~~HIS~~ HIS-8357A.

2 / 10-24-94
1st
2 / 10-24-94
2nd

6.1.51 Close and lock EM-V247, CCP B BIT 1" Bypass Line Iso.

2 / 10-24-94
1st
2 / 10-24-94
2nd

6.1.52 At panel RL001, close or verify closed BG HV-8109, PDF Recirc Iso, using handswitch BG HIS-8109.

6.1.53 Remove blind flange and install a 0-3000 psig test gauge with bleed valve (shown in Figure 1) at PP and flush connection downstream of BG-V013, PDCP Discharge PP/Flush Connection.



INIT/DATE

6.1.54 Open BG-V013, PDCP Discharge PP/Flush Conn.



6.1.55 Open bleed valve on test gauge assembly installed downstream of BG-V013 to bleed off pressure.



6.1.56 Close bleed valve on test gauge assembly.



6.1.57 Maximize charging and letdown to 120 gpm.



6.1.58 Record PBG05A discharge pressure as indicated on BG PI-118.

BG PI-118 2550 psig



6.1.59 Record pressure indicated by temporary test pressure gauge installed at BG-V013:

BG-V013 test pressure gauge 40 psig



6.1.60 Close BG-V013, PDCP Disch PP/Flush Conn.

DN 10-24-94
1st
DN 1/2-24-94
2nd

6.1.61 Determine differential pressure across BG-8497.

(BG PI-118) 2550 - (BG-V013 temp gauge) 40 = 2510 ΔP



INIT/DATE

- 6.1.62 Record differential pressure across BG-8497 in table below and verify required indication by circling either SAT or UNSAT.

10-24-94

BG-8497 Exercise Close Acceptance Criteria			
REFERENCE PARAMETER INDICATION	ACTUAL REFERENCE PARAMETER INDICATION	ACCEPTANCE CRITERIA	(circle one)
BG PI-118 MINUS BG V013 TEMP GAUGE	2514	ΔP ≥ 50 PSID	<input checked="" type="radio"/> SAT <input type="radio"/> UNSAT

- 6.1.63 Remove 0-3000 psig test gauge installed at BG-V013.



- 6.1.64 Install blind flange downstream of BG-V013, PDCP Disch PP/Flush Conn..

10-24-94
1st
10-24-94
2nd

- 6.1.65 Record lot number of gasket installed in 6.1.64.

Gasket lot no. 136158



- 6.1.66 IF train "B" is to be tested, THEN shift from PBG05A to PBG05B in accordance with SYS BG-201. IF testing on RCS charging is to be terminated, THEN reduce charging flow to normal as necessary for plant conditions, align charging as directed by the Shift Supervisor in accordance with SYS BG-201, and proceed to Restoration Section 7.0.



INIT/DATE

6.2

Charging System Check Valve Testing With
CCP "B" RUNNING

NOTE: Section 6.2 will exercise test
following check valves:

STROKE

<u>DIRECTION</u>	<u>VALVE TEST</u>	<u>VALVE DESCRIPTION</u>
OPEN	CVT-O BG-8481B	PBG05B DISCH CK
OPEN	CVT-O BG-V589	CCP "B" DISCH CK TO SEAL WTR INJ FILTERS
CLOSED	CVT-C BG-V590	CCP "A" DISCH CK TO SEAL WTR INJ FILTERS

6.2.1 At panel RL001, verify PBG05A, Centrifugal
Charging Pump 'A', is not running by
observing green indicating light is
illuminated for handswitch BG HIS-1A. ☒

6.2.2 If in Mode 4, 5 or 6, at panel RL001,
verify BG HIS-1A is in PULL-TO-LOCK. ☒

NOTE: Place gauge so that it can be read
while operating EM-V151.

6.2.3 Install 0-3000 psig test gauge at test
connection downstream of EM-V143, BIT
Bypass Line Test Connection Iso. ☒

6.2.4 Open EM-V087, BIT Bypass Line Test
Connection Iso. ☒

		<u>INIT/DATE</u>
6.2.5	Open EM-V143, BIT Bypass Line Test Connection Iso.	<input checked="" type="checkbox"/>
6.2.6	Verify locked open BG-8483C, PGB05B Discharge Header FCV-121 Inlet Iso.	<input checked="" type="checkbox"/>
6.2.7	Unlock and close BG-8483A, PGB05A Discharge Header FCV-121 Inlet Iso.	<input checked="" type="checkbox"/>
6.2.8	Open BG-V094, BG PI-119 Iso.	<input checked="" type="checkbox"/>
6.2.9	Unlock and open EM-V246, CCP "A" BIT 1" Bypass Line Iso.	<input checked="" type="checkbox"/>
6.2.10	Open or verify open EM-V120, SI Test Header to RHUT Iso.	<input checked="" type="checkbox"/>
6.2.11	Close or verify closed BN-V004, SI Test Header to RWST Iso.	<input checked="" type="checkbox"/>
6.2.12	At panel RL017, open EM HV-8964, SI System Test Line Outside Containment Iso., using handswitch EM HIS-8964.	<input checked="" type="checkbox"/>
6.2.13	At panel RL017, open EM HV-8871, SI System Test Line Inside Containment Iso., using handswitch EM HIS-8871.	<input checked="" type="checkbox"/>

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- 6.2.14 At panel RL018, open EM HV-8843, Boron Injection Upstream Test Line Iso., using handswitch EM HIS-8843. ☒
- 6.2.15 Unlock and open EM-V151, BIT Bypass Iso., to bleed off pressure. ☒
- 6.2.16 Close EM-V151, BIT Bypass Iso. ☒
- 6.2.17 Maximize charging and letdown to 120 gpm. ☒
- 6.2.18 Record charging flow in table below as indicated by BG FI-121A, located on RL001, and verify required indication by circling either SAT or UNSAT.

2/10/94

BG-8481B Exercise Open Acceptance Criteria			
REFERENCE PARAMETER INDICATION	ACTUAL REFERENCE PARAMETER INDICATION	ACCEPTANCE CRITERIA	(circle one)
BG FI-121A	120	≥ 120 GPM	SAT UNSAT

CAUTION: If charging flow drops <60 gpm, immediately open BG HV-8111.

- 6.2.19 At panel RL001, close BG HV-8111, CCP "B" mini-flow valve, using handswitch BG HIS-8111. ☒

INIT/DATE

CAUTION: In step 6.2.20, RCP seal
[3.10] injection flow will bypass
BG FE-121. When determining if
letdown and charging are
balanced, it will be necessary to
add BG FI-121A and BG FI-215A to
calculate total charging flow.
When performing this procedure
during solid plant operations
where charging and letdown are
manually controlled, RCS pressure
should be closely monitored
during the performance of this
step to ensure that total
charging flow (BG FI-121A plus
BG FI-215A) and letdown remain
balanced at approximately
120 gpm.

- 6.2.20 Unlock and close BG-V100, Charging Pump
Discharge Header to Seal Injection Iso.,
while simultaneously opening BG HV-8357B,
using handswitch BG HIS-8357B located on
panel RL001, to obtain a flow of
approximately 32 gpm as indicated by
BG FI-215A. ☒
- 6.2.21 At panel RL001, using BG HIS-8357A, crack
open BG HV-8357A, CCP "A" Discharge to Seal
Water Injection Filter Iso. ☒

INIT/DATE

- 6.2.22 Record seal water injection flow in table below as indicated by BG FI-215A, located on RL001, and verify required indication by circling either are SAT or UNSAT.

10-27-94

BG-V589 Exercise Open Acceptance Criteria			
REFERENCE PARAMETER INDICATION	ACTUAL REFERENCE PARAMETER INDICATION	ACCEPTANCE CRITERIA	(circle one)
BG FI-215A	32	≥24 GPM	<input checked="" type="radio"/> SAT <input type="radio"/> UNSAT

- 6.2.23 Record PBG05B discharge pressure as indicated by BG PI-119.

BG PI-119 262A PSIG



- 6.2.24 Determine the pressure upstream of BG-V590 as follows:

- 6.2.24.1 IF pressure indicated by test gauge at EM-V143 is <2000 psig, THEN record indicated pressure below and mark steps 6.2.24.2 and 6.2.24.3 N/A. If pressure is >2000 psig, mark this step N/A and perform steps 6.2.24.2 and 6.2.24.3.

EM-V143 Test gauge pressure 400 PSIG



- 6.2.24.2 Open EM-V151, BIT bypass iso., until the pressure stabilizes and record indicated pressure below. Mark this step N/A if not performed.

EM-V143 test gauge pressure with
EM-V151 open _____ PSIG



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6.2.24.3 Close EM-V151, BIT Bypass Iso. ☒

6.2.25 Calculate differential pressure across BG-V590.

(BG PI-119) 2420 - (EM-V143 temp gauge) 400 = 2220 ΔP ☒

6.2.26 Record the differential pressure across BG-V590 in table below and verify required indication by circling either SAT or UNSAT. 7/10.24.94

BG-V590 Exercise Close Acceptance Criteria			
REFERENCE PARAMETER INDICATION	ACTUAL REFERENCE PARAMETER INDICATION	ACCEPTANCE CRITERIA	(circle one)
BG PI-119 MINUS EM V143 TEMP GAUGE	<u>2220</u>	ΔP ≥ 50 PSID	<u>SAT</u> UNSAT

6.2.27 At panel RL001, close BG HV-8357A using hand controller BG HIS 8357A. 7/10.24.94
Switch HIS

7/10.24.94
1st
9/10.24.94
2nd

6.2.28 At panel RL001, open BG-V100 while simultaneously closing BG HV-8357B, using hand controller BG HIS 8357B to maintain HIS RCP seal flow >32 gpm as indicated by BG FI-215A. ☒
Switch

6.2.29 At panel RL001, open BG HV-8111 using handswitch BG HIS-8111.

7/10.24.94
1st
9/10.24.94
2nd

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6.2.30 Open and lock BG-V100, Charging Pump Disch
HDR To Seal Wtr Injection Filters Iso.

[Signature] 10-24-94
1st
[Signature] 10-24-94
2nd

6.2.31 At panel RL001, close BG HV-8357B using
hand ~~controller~~ BG/HCI-8357B.

switch

HIS

[Signature] 10-24-94
1st
[Signature] 10-24-94
2nd

6.2.32 Close and lock EM-V246, CCP A BIT 1" Bypass
Line Iso.

[Signature] 10-24-94
1st
[Signature] 10-24-94
2nd

6.2.33 IF train "A" is to be tested, THEN shift
from PBG05B to PBG05A in accordance with
SYS BG-201. IF testing on RCS charging is
to be terminated, THEN reduce charging flow
to normal as necessary for plant
conditions, align charging as directed by
the Shift Supervisor in accordance with
SYS BG-201, and proceed to Restoration
Section 7.0.

☒

7.0 RESTORATION

7.1 Close and lock EM-V151, BIT Bypass Iso.

[Signature] 10-24-94
1st
[Signature] 10-24-94
2nd

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		INIT/DATE
7.2	Close EM-V143, BIT Bypass Line Test Conn.	<i>DN</i> 10-24-94 1st <i>DN</i> 10-24-94 2nd
7.3	Close EM-V087, BIT Bypass Line Test Connection Iso.	<i>DN</i> 10-24-94 1st <i>DN</i> 10-24-94 2nd
7.4	Remove 0-3000 psig test gauge from test connection EM-V143.	[
7.5	Replace cap downstream of EM-V143, BIT Bypass Line Test Connection.	<i>DN</i> 10-24-94 1st <i>DN</i> 11/25/94 2nd
7.6	Open EM-V120, SI Test Header to RHUT Iso.	<i>DN</i> 10-24-94 1st <i>DN</i> 10-24-94 2nd
7.7	Close BN-V004, SI Test Header to RWST Iso.	<i>DN</i> 10-24-94 1st <i>DN</i> 10-24-94 2nd
7.8	At panel RL018, close EM HV-8843, Boron Injection Upstream Test Line Iso, using handswitch EM HIS-8843.	<i>DN</i> 10-24-94 1st <i>DN</i> 10-24-94 2nd

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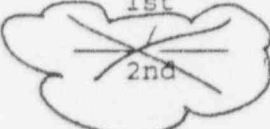
7.9 At panel RL017, close EM HV-8871, SI System
Test Line Inside Containment Iso, using
handswitch EM HIS-8871.

~~J~~ / 10-24-94
1st
J / 10-24-94
2nd


7.10 At panel RL017, close EM HV-8964, SI System
Test Line Outside Containment Iso, using
handswitch EM HIS-8964.

~~J~~ / 10-24-94
1st
J / 10-24-94
2nd

7.11 Remove non-intrusive check valve test
equipment from BB-8379A, CVCS Alt Chg
Downstream CK Valve.

~~J~~ / 10/24/94
1st

2nd

7.12 Remove non-intrusive check valve test
equipment from BB-8379B, CVCS Alt Chg
Upstream CK Valve.

~~J~~ / 10/24/94
1st

2nd

7.13 Verify affected system and/or components
have been aligned and/or returned to
service per SS/SO's direction.

J / 10-24-94

COMMENTS:

Non-Intrusive Test Equipment is NOT INCLUDED IN WCNOC
MATE PROGRAM. HOWEVER, EQUIPMENT HAS BEEN CALIBRATED PER
VENDOR, LIBERTY TECH, #Q1014 CAL'D ON 9/1/94 DUE 3/1/95. THIS
WAS OK'ED PRIOR TO TESTING WITH QUALITY CONTROL ~~DB~~ 10/24/94

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