

==> V A L V E S

<==

PAGE 1 OF 5



PMMS ID: M2 02 STG MSC 2316  
OCAL ID: 2316  
OCAL SYS: 2316  
NPRDS: XX MISC  
BLDG: ROOM: MAIN STEAM SYSTEM  
ELEV: 0038 FT 06 IN GRID:  
EQUIP OUTAGE:  
TR NO:  
P.O. NO:  
MIB: MP2RF

WORK ORDER.: M2 02 07951  
PRIORITY....: 3  
AWO TYPE....: OT  
UNIT STATUS: U MODE: ZZ  
FREQUENCY...: 18M  
GRACE ENTRY: / /  
DESIRED CMP: 09 / 26 / 2003  
REQ CMP....: 10 / 27 / 2003  
PROJ REF....: 2R15  
SCHED REF...: 2R15  
PRINTED: 20030301 06:48:20.6

EQUIP DESC: MAIN STEAM SYSTEM - MISCELLANEOUS ITEM

PROBLEM DESC: SP 2730B REQUIRES TESTING OF MAIN STEAM SAFETY VALVES  
PRIOR TO 2R15.

SUSP. CAUSE:

ORIGINATOR: S MILLER DEPT: OPSE DATE: 06 / 05 / 2002 TR TAG HUNG: N

\*\*\*\*\*

CAT-1....: YES .....  
EEQ.....: R ..... FME.....: 5 .....  
.....  
..... ISI.....: YES .....  
.....  
..... SEISMIC: YES

PROCEDURES: SP2730B

CAUTIONS.....

CAUTION.....

NOTES

JOB TITLE: TEST MAIN STEAM SAFETY VALVES  
DESC: > SEE EXPANDED JOB DESCRIPTION <

TASK	DEPT	EST	WKR	EST	HR	TASK	DEPT	EST	WKR	EST	HR
1. TEST	VLVS	10	0080.0	4.			00	0000.0			
2. TEST	OPS	01	0002.0	5.			00	0000.0			
3. TEST	ENG	03	0012.0	6.			00	0000.0			

SUPERVISOR: U VALVES

JOB LEADER: \_\_\_\_\_

DEPT APPROVAL: *[Signature]*

DATE: 3/24/03 B/4

\*\*\*\*\*

OPS PRE-APPROVAL: *[Signature]* TIME: \_\_\_\_\_ DATE: 3/24/03

TRBLSHT/FABRICATE ONLY

TAG CLEARANCE: U.A LCO: \_\_\_\_\_ DURATION: \_\_\_\_\_ JUMPER: \_\_\_\_\_

OPS APPROVAL: *[Signature]* TIME: 1540 DATE: 3/24/03

PAGE 2 OF 5

WORK ORDER: M2 02 07951



TAGGING VERIFIED BY: MA

ACTUAL WORK / PARTS:

performed pre job brief and West Stress brief.  
Performed testing and adjustments on 2-MS-239, 2-MS-245, 2-MS-246,  
2-MS-247 and 2-MS-249 in accordance with SP 2730 B. No  
Parts used. Work complete. Will proceed with data/signature sheets in inspection  
Tab of Aro. Post Cal check sheets also in inspection. All checks set.

CAUSE/COMMENTS:

FAIL CODE:

PERFORMED

C. Kuo

BK Mining

BY:

J. Bell

6 NNS Contractors

M & TE:

QA

PER NO:

QA-2611E

QA-2611F

QA-2623I

QA-2623J

QA-5318A

QA-57116

CAL DUE:

4/15/04

4/15/04

10/3/04

10/3/04

4/1/04

4/5/04

SERIAL

QA-0816

QA-0313

QA-5383

QA-5384

cal due

4/1/04

4/5/04

4/5/04

12/26/03

WORK COMPLETE:

[Signature]

COMP DATE: 10/10/03

TR TAG REMOVED: N/A

RETURN CODE:

RELEASE CODE:

PMT BY MODE:

POST MAINTENANCE TESTING/FUNCTIONAL VERIFICATION  
METHOD/PROCEDURE

PMT RESULTS DATA

TESTING WILL BE PERFORMED AS SPECIFIED IN THE BODY OF  
THE WORK ORDER. NO ADDITIONAL PMT REQUIRED.

ACCEPT N/A  
CRITERIA:

PERFORMED BY:

N/A

DEPT:

DATE:

\_\_\_\_ / \_\_\_\_ / \_\_\_\_

SAT / UNSAT

PERFORMED BY:

DEPT:

DATE:

\_\_\_\_ / \_\_\_\_ / \_\_\_\_

SAT / UNSAT

WO REMOVED FROM  
TAG CLEARANCE BY:

N/A

DATE:

\_\_\_\_ / \_\_\_\_ / \_\_\_\_

TIME:

[Signature]

ACCEPTED BY OPS:

[Signature]

DATE:

10/10/03

PMMS REVIEW:

DATE:

05/20/04

## NUCLEAR INDICATORS:

CAT1.....: Y      EVALCD: 3039  
FPQA.....: N  
RWQA.....: N  
ATWS.....: N  
SBOQA.....: N      PEND:

SAFETY FUNCTION CODE: PASS

## SAFETY FUNCTION DESCRIPTION:

USED FOR MISCELLANEOUS SYSTEM MAINTENANCE

## PROGRAM INDICATORS:

APPEN J...: Y      HELB.....: Y      E/C: Y      FP.....: N  
APPEN R...: Y      ERDS.....: Y      IST: Y      MOV TEST...: Y      SEISMIC....: Y  
CHECK VLV: Y      HEAVY LOADS: N      SBO: Y      RG 1.97....: Y      SECTION XI: Y  
EEQ.....: R      LIFE....: 00000      SERVICE DATE: 00/00/0000      ZONE: -  
MNTC RULE: Y      MR CLASS: RS UA

REFUEL CODE: 2R152AXS316X00316X99

TASK	DEPT	# WKR	WKRHR
1. TEST	VLVS	<u>8</u>	<u>96</u>
2. TEST	OPS	<u>2</u>	<u>24</u>
3. TEST	ENG	<u>4</u>	<u>48</u>
4.		<u>      </u>	<u>      </u>
5.		<u>      </u>	<u>      </u>
6.		<u>      </u>	<u>      </u>

WORK ORDER NUMBER: M2 02 07951

PAGE 4 OF 5

LOCAL ID : 2316

JOB DESCRIPTION CONTINUED

=====

GENERAL SUMMARY: TEST MAIN STEAM SAFETY VALVES

REFERENCES:

DESIGN: NA

DRAWINGS: 25203-26002 SHT. 1 (P&ID)

PROCEDURES:

\*\*\* VERIFY CURRENT REVISIONS \*\*\*

\*\*\* CONTINUOUS USE PROCEDURE \*\*\*

SP 2730B: MAIN STEAM SAFETY VALVE TESTING/IPTE

SPECIAL NOTES AND PRECAUTIONS:

- REFER TO MP-19-SH-REF01S14 -  
EVALUATE AREA FOR POTENTIAL HEAT STRESS

JOB DESCRIPTION

NOTE: OBTAIN APPROVAL SIGNATURES REQUIRED IN SP2730B  
SECTION 4.4 PRIOR TO TESTING

- > PERFORM TEST OF MAIN STEAM SAFETY VALVE IN ACCORDANCE WITH  
SP 2730B AND FORM SP 2703-001. DOCUMENT AS-FOUND TESTING  
DATA AND ANY ADJUSTMENTS MADE BELOW:

VALVE ID#	AS FOUND (PSIG)	ADJUSTMENTS REQUIRED/COMMENTS
2-MS-239	<u>1026 psig</u>	<u>N/A seal lift = 1027.2 psig</u>
2-MS-240	<u>N/A</u>	
2-MS-241	<u>N/A</u>	
2-MS-242	<u>N/A</u>	
2-MS-243	<u>N/A</u>	
2-MS-244	<u>N/A</u>	
2-MS-245	<u>978.9 psig</u>	<u>adj. "no lift" pressure = 1009.1 / 1007.9 psig</u>

----- CONTINUED -----

WORK ORDER NUMBER: M2 02 07951

PAGE 5 OF 5

LOCAL ID : 2316

OB DESCRIPTION CONTINUED

2-MS-246	<u>960.3 psia</u>	<u>adj. air lift = 977.2 / 983.2 psia</u>
2-MS-247	<u>967.8 psia</u>	<u>adj. air lift = 993.9 / 989.9 psia</u>
2-MS-248	<u>N/A</u>	
2-MS-249	<u>995.2 psia</u>	<u>adj. air lift pressure = 992.8 / 994.1 psia</u>
2-MS-250	<u>N/A</u>	
2-MS-251	<u>N/A</u>	
2-MS-252	<u>N/A</u>	
2-MS-253	<u>N/A</u>	
2-MS-254	<u>N/A</u>	

05/05/99  
Approval Date

06/02/99  
Effective Date

### Heat Stress Evaluation

Work Document Number: M2-02-07951 Rev: 0

Work Activity Description: MSSV Test W. Pen General Area 38'6"

A heat stress evaluation to determine recommended stay time is required whenever: ambient temperature is greater than 95°F, or heat stress is a concern because of clothing requirements, job location, or physical difficulty. Site Safety and MP-05-SF-REF01s14 (Site Safety Manual section on Heat Stress Management) can provide additional guidance.

**Site Safety evaluation is required if ambient temperature exceeds 120°F**

1. Ambient Air Temperature: 105°F (Measured at actual job location)

Reason for Heat Stress Evaluation

(if temperature not greater than 95°F): \_\_\_\_\_

2. Activity Level: from Table 2 "Expected Metabolic Load for Selected Activities"

☒ Low

☐ Moderate

☐ High

3. Clothing:

☒ Work clothes

☐ Cotton coveralls

☐ Double cottons

☐ Cotton plus plastics

4. Recommended Stay Time: 60 minutes.

Reference Table 1 Recommended Stay Times Based on Clothing, Temperature, and Activity Level.

Site Safety evaluation required if extreme heat stress exposure indicated in Table 1.

5. Recovery Period: 15 minutes.

Recovery period should be approximately 25% of the actual stay time. However, longer recovery periods of 1 hour or more may be needed, particularly if actual work time equals or exceeds Recommended Stay Time.

Approved: D. Gorence

FLSJOB Leader, Names (print)

D. Gorence

Signature 10/17/03

FLS

Title

5529

phone

Site Safety Evaluation (if needed)

Reason for Site Safety Evaluation

☐ Ambient temperature exceeds 120°F or extreme heat stress hazard exists

☐ Other (describe): \_\_\_\_\_

Approved: \_\_\_\_\_

Site Safety, Name (print)

Signature

Title

phone

Distribution: Work Package (original); Post in work area; Supervisor, Site Safety

Form MP-19-SII-SAP01-3

Rev. 0

1 of 2

05 05 99

Approval Date

06/02/99

Effective Date

**Heat Stress Evaluation**Work Document Number: M2-02-07951 Rev: 0Work Activity Description: MSSV Test W. Pen Valve Platform

A heat stress evaluation to determine recommended stay time is required whenever: ambient temperature is greater than 95°F, or heat stress is a concern because of clothing requirements, job location, or physical difficulty. Site Safety and MP-05-SF-REF01s14 (Site Safety Manual section on Heat Stress Management) can provide additional guidance.

Site Safety evaluation is required if ambient temperature exceeds 120°F

1. Ambient Air Temperature: 110°F (Measured at actual job location)

Reason for Heat Stress Evaluation

(if temperature not greater than 95°F): \_\_\_\_\_

2. Activity Level: from Table 2 "Expected Metabolic Load for Selected Activities"

☒ Low <sup>for Tle and HP sponsor</sup> ☒ Moderate ☐ High

3. Clothing:

☒ Work clothes ☐ Cotton coveralls ☐ Double cottons ☐ Cotton plus plastics

4. Recommended Stay Time: 20 <sup>160 for Low Activity</sup> minutes.

Reference Table 1 Recommended Stay Times Based on Clothing, Temperature, and Activity Level.

Site Safety evaluation required if extreme heat stress exposure indicated in Table 1.

5. Recovery Period: 10 <sup>15 for low activity</sup> minutes.

Recovery period should be approximately 25% of the actual stay time. However, longer recovery periods of 1 hour or more may be needed, particularly if actual work time equals or exceeds Recommended Stay Time.

Approved: D. Gorence

FLSJOB Leader, Names (print)

Signature

FLS

Title

5529

phone

**Site Safety Evaluation (if needed)**

Reason for Site Safety Evaluation

☐ Ambient temperature exceeds 120°F or extreme heat stress hazard exists

☐ Other (describe): \_\_\_\_\_

Approved: \_\_\_\_\_

Site Safety, Name (print)

Signature

Title

phone

Distribution: Work Package (original): Post in work area; Supervisor, Site Safety

Form MP-19-SH-SAP01-3

Rev. 0

1 of 2

05 05 99

Approval Date

06/02/99

Effective Date

**Heat Stress Evaluation**Work Document Number: M2-02-07951Rev: 0Work Activity Description: MSSV Test W. Pen MS Gage

A heat stress evaluation to determine recommended stay time is required whenever: ambient temperature is greater than 95°F, or heat stress is a concern because of clothing requirements, job location, or physical difficulty. Site Safety and MP-05-SF-REF01-14 (Site Safety Manual section on Heat Stress Management) can provide additional guidance.

**Site Safety evaluation is required if ambient temperature exceeds 120°F**

1. Ambient Air Temperature: 92°F (Measured at actual job location)

Reason for Heat Stress Evaluation

(if temperature not greater than 95°F): \_\_\_\_\_

- 2 Activity Level: from Table 2 "Expected Metabolic Load for Selected Activities"

☒ Low☐ Moderate☐ High

3. Clothing:

☒ Work clothes☐ Cotton coveralls☐ Double cottons☐ Cotton plus plastics

4. Recommended Stay Time: 90 minutes.

Reference Table 1 Recommended Stay Times Based on Clothing, Temperature, and Activity Level.

**Site Safety evaluation required if extreme heat stress exposure indicated in Table 1.**

5. Recovery Period: 25 minutes.

Recovery period should be approximately 25% of the actual stay time. However, longer recovery periods of 1 hour or more may be needed, particularly if actual work time equals or exceeds Recommended Stay Time.

Approved: D. Gorence

FLSJOB Leader, Names (print)

[Signature]  
Signature

FLS

Title

5529

phone

**Site Safety Evaluation (if needed)**

Reason for Site Safety Evaluation

☐ Ambient temperature exceeds 120°F or extreme heat stress hazard exists☐ Other (describe): \_\_\_\_\_

Approved: \_\_\_\_\_

Site Safety, Name (print)

Signature

Title

phone

Distribution: Work Package (original); Post in work area; Supervisor, Site Safety

Form MP-19-SH-SAP01-3

Rev. 0

1 of 2



05 05 99

Approval Date

06/02/99

Effective Date

**Heat Stress Evaluation**Work Document Number: M2-02-07951Rev: 0Work Activity Description: MSSV Test E. Pen MS Gage

A heat stress evaluation to determine recommended stay time is required whenever: ambient temperature is greater than 95°F, or heat stress is a concern because of clothing requirements, job location, or physical difficulty. Site Safety and MP-05-SF-REF01s14 (Site Safety Manual section on Heat Stress Management) can provide additional guidance.

**Site Safety evaluation is required if ambient temperature exceeds 120°F**

1. Ambient Air Temperature: 97°F (Measured at actual job location)

Reason for Heat Stress Evaluation

(if temperature not greater than 95°F): \_\_\_\_\_

2. Activity Level: from Table 2 "Expected Metabolic Load for Selected Activities"

☒ Low☐ Moderate☐ High

3. Clothing:

☒ Work clothes☐ Cotton coveralls☐ Double cottons☐ Cotton plus plastics

4. Recommended Stay Time: 90 minutes.

Reference Table 1 Recommended Stay Times Based on Clothing, Temperature, and Activity Level.

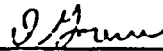
Site Safety evaluation required if extreme heat stress exposure indicated in Table 1.

5. Recovery Period: 25 minutes.

Recovery period should be approximately 25% of the actual stay time. However, longer recovery periods of 1 hour or more may be needed, particularly if actual work time equals or exceeds Recommended Stay Time.

Approved: D. Gorence

FLSJOB Leader, Names (print)

Signature 6/1/99

FLS

Title

5529

phone

**Site Safety Evaluation (if needed)**

Reason for Site Safety Evaluation

☐ Ambient temperature exceeds 120°F or extreme heat stress hazard exists☐ Other (describe): \_\_\_\_\_

Approved: \_\_\_\_\_

Site Safety, Name (print)

Signature

Title

phone

Distribution: Work Package (original); Post in work area; Supervisor, Site Safety

Form MP-19-SH-SAP01-3

Rev. 0

1 of 2

05/05/99

Approval Date

06/02/99

Effective Date

**Heat Stress Evaluation**Work Document Number: M2-02-07951Rev: 0Work Activity Description: MSSV Test E. Pen VLV Platform

A heat stress evaluation to determine recommended stay time is required whenever: ambient temperature is greater than 95°F, or heat stress is a concern because of clothing requirements, job location, or physical difficulty. Site Safety and MP-05-SF-REF01s14 (Site Safety Manual section on Heat Stress Management) can provide additional guidance.

**Site Safety evaluation is required if ambient temperature exceeds 120°F**

1. Ambient Air Temperature: 112°F (Measured at actual job location)

Reason for Heat Stress Evaluation

(if temperature not greater than 95°F): \_\_\_\_\_

2. Activity Level: from Table 2 "Expected Metabolic Load for Selected Activities"

☐ Low☒ Moderate☐ High

3. Clothing:

☒ Work clothes☐ Cotton coveralls☐ Double cottons☐ Cotton plus plastics

4. Recommended Stay Time: 20 minutes.

Reference Table 1 Recommended Stay Times Based on Clothing, Temperature, and Activity Level.

Site Safety evaluation required if extreme heat stress exposure indicated in Table 1.

5. Recovery Period: 10 minutes.

Recovery period should be approximately 25% of the actual stay time. However, longer recovery periods of 1 hour or more may be needed, particularly if actual work time equals or exceeds Recommended Stay Time.

Approved: D. Gorence

FLSJOB Leader, Names (print)

Signature *D. Gorence*

FLS

Title

5529

phone

**Site Safety Evaluation (if needed)**

Reason for Site Safety Evaluation

☐ Ambient temperature exceeds 120°F or extreme heat stress hazard exists☐ Other (describe): \_\_\_\_\_

Approved: \_\_\_\_\_

Site Safety, Name (print)

Signature

Title

phone

Distribution: Work Package (original); Post in work area; Supervisor, Site Safety

Form MP-19-SH-SAP01-3

Rev. 0

1 of 2

05 05 99

Approval Date

06/02/99

Effective Date

**Heat Stress Evaluation**Work Document Number: M2-02-07951 Rev: 0Work Activity Description: MSSV Test E. Pen Pump Platform

A heat stress evaluation to determine recommended stay time is required whenever: ambient temperature is greater than 95°F, or heat stress is a concern because of clothing requirements, job location, or physical difficulty. Site Safety and MP-05-SF-REF01s14 (Site Safety Manual section on Heat Stress Management) can provide additional guidance.

**Site Safety evaluation is required if ambient temperature exceeds 120°F**

1. Ambient Air Temperature: 101°F (Measured at actual job location)

Reason for Heat Stress Evaluation

(if temperature not greater than 95°F): \_\_\_\_\_

2. Activity Level: from Table 2 "Expected Metabolic Load for Selected Activities"

☒ Low☐ Moderate☐ High

3. Clothing:

☒ Work clothes☐ Cotton coveralls☐ Double cottons☐ Cotton plus plastics

4. Recommended Stay Time: 40 minutes.

Reference Table 1 Recommended Stay Times Based on Clothing, Temperature, and Activity Level.

**Site Safety evaluation required if extreme heat stress exposure indicated in Table 1.**

5. Recovery Period: 15 minutes.

Recovery period should be approximately 25% of the actual stay time. However, longer recovery periods of 1 hour or more may be needed, particularly if actual work time equals or exceeds Recommended Stay Time.

Approved: D. Gorence

FLSJOB Leader, Names (print)

Signature D. Gorence

FLS

Title

5529

phone

**Site Safety Evaluation (if needed)**

Reason for Site Safety Evaluation

☐ Ambient temperature exceeds 120°F or extreme heat stress hazard exists☐ Other (describe): \_\_\_\_\_

Approved: \_\_\_\_\_

Site Safety, Name (print)

Signature

Title

phone

Distribution: Work Package (original); Post in work area; Supervisor, Site Safety

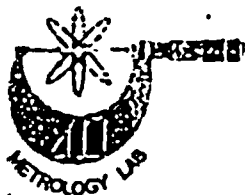
Form MP-19-SH-SAP01-3

Rev. 0

1 of 2

Attachment 1  
Calibration Check Data Sheet

Page 1 of 1



UUT ID #:

QA-5384

Date:

10/9/03

Cal Check Standard:

QA0188A

Performer Name:

Mr. M. B. B.

Function / Range	Cal Check Standard Setting or Reading	UUT Setting or Reading
800 PSIG	800.0 PSIG	800.0 PSIG
850 PSIG	850.0	850.0
900 PSIG	900.0	900.0

Remarks: Post Cal Check MSSV

Attachment 1  
Calibration Check Data Sheet  
Page 1 of 1



UUT ID #:

QA-5383

Date:

10/9/03

Cal Check Standard:

QA-0188A

Performer Name:

MR. M. B. B.

Function / Range	Cal Check Standard Setting or Reading	UUT Setting or Reading
800 PSIG	800.0	800.0
850 PSIG	850.0	849.0
900 PSIG	900.0	900.0

Remarks: Post Cal Check MSSV

Attachment 1  
Calibration Check Data Sheet

Page 1 of 1



UUT ID #:

QA-P6251

Date:

10/19/03

Cal Check Standard:

QA-0188A

Performer Name:

703 Mike Berg

Function / Range	Cal Check Standard Setting or Reading	UUT Setting or Reading
450 PSIG	450.0	450.0
500 PSIG	500.0	500.0
550 PSIG	550.0	550.0

Remarks: Post Cal Check MSSV

Attachment I  
Calibration Check Data Sheet

Page 1 of 1



UUT ID #:

QA-2625J

Date:

10/9/03

Cal Check Standard:

QA-0188A

Performer Name:

MS M. H. B. B.

Function / Range	Cal Check Standard Setting or Reading	UUT Setting or Reading
450 PSI	450.0 PSI	450.0 PSI
500	500.0	500.0
550	550.0	550.0

Remarks: Post Cal check. MSSV

Attachment 1  
Calibration Check Data Sheet

Page 1 of 1



UUT ID #:

GA-0313

Date:

10/9/03

Cal Check Standard:

GA-2188A GA-5818A

Performer Name:

MS. Mike Berg

Function / Range	Cal Check Standard Setting or Reading	UUT Setting or Reading
400 PSI	400.0 PSI	399.4 PSI
450	450.0	449.4
500	500.0	499.4

Remarks: Post cal check MSSI.



Attachment I  
Calibration Check Data Sheet  
Page 1 of 1



UUT ID #:

QA-5711G

Date:

10/9/03

Cal Check Standard:

QA-Q188A, QA-5818A

Performer Name:

MS. Mike R. R.

Function / Range	Cal Check Standard Setting or Reading	UUT Setting or Reading
400 PSI	400.0 PSI	399.7 PSI
450	450.0	449.7
500	500.0	499.7

Remarks: Past cal check miss.

2ms-239

<b>Form Approval</b>	
Approval Date <b>09/25/03</b>	Effective Date <b>10/02/03</b>

# *Surveillance Form*

<b>Generic Information</b>		
Form Title <b>Main Steam Safety Valve Testing</b>		Rev. No. <b>010-01</b>
Reference Procedure <b>SP 2730B</b>	Applicable Tech. Spec. <b>4.7.1.1</b>	Applicability (Tech. Spec.) <b>MODES 1, 2, and 3</b>
Frequency <b>See Note*</b>		
<p>This form is being used for the following:</p> <p> <input checked="" type="checkbox"/> Tech Spec Surveillance               <input type="checkbox"/> System Alignment               <input type="checkbox"/> Other: _____         </p> <p> <input type="checkbox"/> Maintenance Restoration (Retest)               <input type="checkbox"/> Non-Tech Spec Surveillance (PM)         </p>		

<b>Specific Information</b>		
AWO Number <b>M2-02-07951</b>	Late Date <b>N/A</b>	Schedule Start Date <b>10/9/03</b>
Performance Modes <b>1</b>	Prerequisites Completed (Initials) <b>MS</b>	Precautions Noted (Initials) <b>MS</b>
Test Authorized By <b>Handwritten Signature</b>	Date <b>10/09/03</b>	Partial Surveillance <input type="checkbox"/> Yes <input type="checkbox"/> No
Performed By <b>Handwritten Signature</b>	Date / Time <b>10/15 10/09/03</b>	
Accepted By <b>Handwritten Signature</b>	Date / Time <b>10/10/03 0740</b>	Acceptance Criteria Satisfied <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Approved By (Department Head or Designee) <b>Handwritten Signature</b>	Date <b>10/10/03</b>	
Shift Manager Notified of Failed Test <b>N/A</b>	Date	CR#:

<b>Surveillance Information</b>		
Test Equipment Type	QA Number	Cal Due Date
Hydroset	QA-2611 F	4/15/04
Hydroset Pressure Gauge (if applicable)	QA-2515A	4/1/04
Steam Header Pressure Gauge	QA-5383	4/5/04
Pyrometer	QA-6376	12/02/03
PTIR MICRALL	QA-5711G	7/5/04
Performance Verification Performed By <b>N/A</b>	Date <b>N/A</b>	

<b>Comments</b>
<p>*Note: Class 2 Main Steam Safety Valves: All valves shall be tested within each subsequent</p> <p>5 year period with a minimum of 20% of the valves tested within any 24 months. This 20% shall be</p> <p>previously untested valves, if they exist. (from ASME/ANSI OM-1987, Part 1, Section 1.3.3)</p>

### Test Information

Valve No. 2-MS- 237

Valve Serial No.: BN 4976

Valve inspection (circle result and describe discrepancy if any): SAT/UNSAT

- Leakage (check drip pan)
- Damaged parts
- Abnormal condition

Check ☒ below method used to verify valve set pressure:

"As Found"	<input checked="" type="checkbox"/> In-line test (hydraulic assist lift test)
	<input type="checkbox"/> Off-site test facility
"As Left"	<input checked="" type="checkbox"/> In-line test (hydraulic assist lift test)
	<input type="checkbox"/> Off-site test facility

If set pressure verified at off-site test facility, record:

Test Facility: N/A

PO number: N/A

Record Set Pressure:

"As Found" Set Pressure: 1025.7 <sup>1026</sup>

"As Left" Set Pressure: 1025.7 <sup>1026</sup>

"As Left" Set Pressure: 1027.2

Test was conducted in accordance with SP 2730B, "Main Steam Safety Valve Testing (IPTE)" and test results are accurate.

Test Engineer:

[Signature]

Date: 10/9/03

Management Test Lead:

[Signature]

Date: 10-9-03

### Acceptance Criteria

"As Found" – On first lift, valve opens at design lift setting ( $-3\%$ , to less than  $+3\%$ )

"As Left" – On last two consecutive lifts, valve opens at design lift setting ( $\pm 1\%$ ) (first lift may be included as one of the two consecutive lifts if first lift is within  $\pm 1\%$ ) [Ref. 6.4]

Valve Set Pressure Acceptance Criteria			
Valve ID#	"As Found" (psig)	Valve ID#	"As Left" (psig)
2-MS-239	1035 (1004 to 1065)	2-MS-239	1035 (1025 to 1045) $\pm 1\%$
2-MS-240	1030 (999 to 1060)	2-MS-240	1030 (1020 to 1040)
2-MS-241	1010 (980 to 1039)	2-MS-241	1010 (1000 to 1020)
2-MS-242	990 (960 to 1019)	2-MS-242	990 (980 to 999)
2-MS-243	1035 (1004 to 1065)	2-MS-243	1035 (1025 to 1045)
2-MS-244	1020 (990 to 1049)	2-MS-244	1020 (1010 to 1030)
2-MS-245	1000 (970 to 1029)	2-MS-245	1000 (990 to 1010)
2-MS-246	985 (956 to 1013)	2-MS-246	985 (975 to 994)
2-MS-247	985 (956 to 1013)	2-MS-247	985 (975 to 994)
2-MS-248	1035 (1004 to 1065)	2-MS-248	1035 (1025 to 1045)
2-MS-249	1000 (970 to 1029)	2-MS-249	1000 (990 to 1010)
2-MS-250	1030 (999 to 1060)	2-MS-250	1030 (1020 to 1040)
2-MS-251	1020 (990 to 1049)	2-MS-251	1020 (1010 to 1030)
2-MS-252	1010 (980 to 1039)	2-MS-252	1010 (1000 to 1020)
2-MS-253	1035 (1004 to 1065)	2-MS-253	1035 (1025 to 1045)
2-MS-254	990 (960 to 1019)	2-MS-254	990 (980 to 999)

Lift settings are from Tech. Spec. Table 4.7-1, Amend. #195, and have been converted in this table from psia to psig to prevent transposition errors during testing.

**Attachment 7**  
**Hydroset Correction Calculation**  
 (Sheet 1 of 1)

AWO#: M2-02-07951

Valve ID# 2-MS- 239

(Blank copies of Attachment 7, Sheet 1 may be reproduced as necessary)

Hydroset QA No. ( <u>2611 F</u> )	Hydroset Serial No. ( <u>3644E</u> ) <u>HS647</u>
$  \begin{array}{rcl}  \underline{1035} \text{ psig} & \text{MSSV Set Pressure (Step 4.2.3.a.)} & \\  - \underline{835} \text{ psig} & \text{Steam Header Pressure (Step 4.2.1)} & \\  \hline  = \underline{200} & \text{Hydroset Influence (Step 4.2.3.b.)} \div 0.312 = & \underline{641} \text{ Expected Hydroset Pressure (Step 4.2.3.c.)}  \end{array}  $	
$  \begin{array}{rcl}  \underline{640} \text{ psig} & \text{Required Pump Pressure from Hydroset Correction Chart (Step 4.2.3.d.1)} & \\  - \underline{641} \text{ psig} & \text{Applied Pump Pressure from Hydroset Correction Chart (Step 4.2.3.d.2)} & \\  \hline  = \underline{-1.0} \text{ psig} & \text{Hydroset Correction (Step 4.2.3.e.)} \times 0.312 = (+/-) & \underline{-3} \text{ Hydroset Influence (Step 4.2.3.f.)}  \end{array}  $	

Comments:

Hydroset Temp 111.6 °F

Level of Use  
Continuous

STOP

THINK

ACT

REVIEW

SP 2730B

Rev. 12

47 of 56

# Attachment 8

## Test Data Sheet Using Dresser Model 1566 Hydroset

(Sheet 1 of 1)

AWO#: M2-02-07951

Valve ID# 2-MS- 237

(Blank copies of Attachment 8, Sheet 1 may be reproduced as necessary)

Hydroset Correction calculation based on Header Pressure of ( <u>890</u> ) psig using Hydroset QA No. ( <u>261(F)</u> )									
Test Data						Valve Adjustments After Test			
Step 4.5.14.(d.1)	Step 4.2.3.(g.)	Step 4.5.14.(d.3)		Step 4.5.15.(c.2)	Step 4.5.15.(d.)	Step 4.5.18.(b.)	Step 4.5.19.(a.)		
Test No. & Time	Hydroset Correction	Steam Header Pressure (psig)	Hydroset Pressure (psig)	Hydroset Influence	Valve Set Pressure (psig)	No	Yes		
						Initial	Initial	CW or CCW	No. of Flats
1. <u>1210</u>	<u>- .3</u>	<u># 840835</u>	<u>613.3</u>	<u>191.3</u>	<u>1027.2</u>	<u>q1</u>			
2. <u>1215</u>	<u>- .3</u>	<u># 835</u>	<u>617.1</u>	<u>192.5</u>	<u>1027.2</u>	<u>q1</u>			
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									

### Notes:

\* Corrected for elevation

- Set Pressure = Steam Header Pressure + (Hydroset Pressure x 0.312) + Hydroset Correction
- Hydroset Influence = Hydroset Pressure (PSIG) x 0.312
- If Hydroset Pressure Gauge is graduated in Hydroset Influence, the Hydroset Pressure Column should be marked N/A.
- Hydroset Correction must be calculated from Correction Chart supplied with Hydroset Calibration Documentation. This calculation should be completed prior to performance of test. Hydroset Correction should be expressed as a (+) or (-) value in graduations of Hydroset Influence.
- Test valve minimum amount of times required to meet test objective, subsequent test data lines should be lined through.

Level of Use  
Continuous

STOP

THINK

ACT

REVIEW

SP 2730B

Rev. 12

48 of 56

2-MS-245

**Form Approval**

Approval Date

09/25/03

Effective Date

10/02/03

# Surveillance Form

**Generic Information**

Form Title

Main Steam Safety Valve Testing

Rev. No.

010-01

Reference Procedure

SP 2730B

Applicable Tech. Spec.

4.7.1.1

Applicability (Tech. Spec.)

MODES 1, 2, and 3

Frequency

See Note\*

This form is being used for the following:

☒ Tech Spec Surveillance☐ System Alignment☐ Other: \_\_\_\_\_☐ Maintenance Restoration (Retest)☐ Non-Tech Spec Surveillance (PM)**Specific Information**

AWO Number

M2-02-07951

Late Date

N/A

Schedule Start Date

10/9/03

Performance Modes

1

Prerequisites Completed (Initials)

B

Precautions Noted (Initials)

M

Test Authorized By

[Signature]

Date

10-09-03

Partial Surveillance

☐ Yes☐ No

Performed By

[Signature]

Date / Time

10/0/03 1025

Accepted By

[Signature]

Date / Time

14/10/03 0740

Acceptance Criteria Satisfied

☒ Yes☐ No

Approved By (Department Head or Designee)

[Signature]

Date

10/10/03

Shift Manager Notified of Failed Test

N/A

Date

N/A

CR#:

N/A

**Surveillance Information**

Test Equipment Type	QA Number	Cal Due Date
Hydroset	QA-2511 F	4/15/04
Hydroset Pressure Gauge (if applicable)	QA-5318 A	4/1/04
Steam Header Pressure Gauge	QA-5383	4/5/04
Pyrometer	QA-6376	12/26/03
PTFE monitoring	QA-5711 G	4/5/04
Performance Verification Performed By	Date	
N/A	N/A	

**Comments**

\*Note: Class 2 Main Steam Safety Valves: All valves shall be tested within each subsequent

5 year period with a minimum of 20% of the valves tested within any 24 months. This 20% shall be previously untested valves, if they exist. (from ASME/ANSI OM-1987, Part 1, Section 1.3.3)

SP 2730B-001

Rev. 010-01

Page 1 of 3

### Test Information

Valve No. 2-MS- 245 Valve Serial No.: BN 4966

Valve inspection (circle result and describe discrepancy if any): SAT / UNSAT

- Leakage (check drip pan)
- Damaged parts
- Abnormal condition

Check ☒ below method used to verify valve set pressure:

"As Found"	<input checked="" type="checkbox"/>	In-line test (hydraulic assist lift test)
	<input type="checkbox"/>	Off-site test facility
"As Left"	<input checked="" type="checkbox"/>	In-line test (hydraulic assist lift test)
	<input type="checkbox"/>	Off-site test facility

If set pressure verified at off-site test facility, record: Test Facility: N/A  
PO number: N/A

Record Set Pressure: "As Found" Set Pressure: 978.9  
"As Left" Set Pressure: 1009.1  
"As Left" Set Pressure: 1007.9

Test was conducted in accordance with SP 2730B, "Main Steam Safety Valve Testing (IPTE)" and test results are accurate.

Test Engineer: [Signature] Date: 10/9/03

Management Test Lead: [Signature] Date: 10-9-03



### Acceptance Criteria

"As Found" – On first lift, valve opens at design lift setting ( $-3\%$ , to less than  $+3\%$ )

"As Left" – On last two consecutive lifts, valve opens at design lift setting ( $\pm 1\%$ ) (first lift may be included as one of the two consecutive lifts if first lift is within  $\pm 1\%$ ) [Ref. 6.4]

Valve Set Pressure Acceptance Criteria			
Valve ID#	"As Found" (psig)	Valve ID#	"As Left" (psig)
2-MS-239	1035 (1004 to 1065)	2-MS-239	1035 (1025 to 1045)
2-MS-240	1030 (999 to 1060)	2-MS-240	1030 (1020 to 1040)
2-MS-241	1010 (980 to 1039)	2-MS-241	1010 (1000 to 1020)
2-MS-242	990 (960 to 1019)	2-MS-242	990 (980 to 999)
2-MS-243	1035 (1004 to 1065)	2-MS-243	1035 (1025 to 1045)
2-MS-244	1020 (990 to 1049)	2-MS-244	1020 (1010 to 1030)
2-MS-245	1000 (970 to 1029)	2-MS-245	1000 (990 to 1010)
2-MS-246	985 (956 to 1013)	2-MS-246	985 (975 to 994)
2-MS-247	985 (956 to 1013)	2-MS-247	985 (975 to 994)
2-MS-248	1035 (1004 to 1065)	2-MS-248	1035 (1025 to 1045)
2-MS-249	1000 (970 to 1029)	2-MS-249	1000 (990 to 1010)
2-MS-250	1030 (999 to 1060)	2-MS-250	1030 (1020 to 1040)
2-MS-251	1020 (990 to 1049)	2-MS-251	1020 (1010 to 1030)
2-MS-252	1010 (980 to 1039)	2-MS-252	1010 (1000 to 1020)
2-MS-253	1035 (1004 to 1065)	2-MS-253	1035 (1025 to 1045)
2-MS-254	990 (960 to 1019)	2-MS-254	990 (980 to 999)

Lift settings are from Tech. Spec. Table 4.7-1, Amend. #195, and have been converted in this table from psia to psig to prevent transposition errors during testing.

**Attachment 7**  
**Hydroset Correction Calculation**  
 (Sheet 1 of 1)

AWO#: M2-02-07951

Valve ID# 2-MS- 245

(Blank copies of Attachment 7, Sheet 1 may be reproduced as necessary)

Hydroset QA No. ( 2611 F )

Hydroset Serial No. ( HS-547 )

1000 psig MSSV Set Pressure (Step 4.2.3.a.)  
 - 940 psig Steam Header Pressure (Step 4.2.1)  
 = 160 Hydroset Influence (Step 4.2.3.b.)  $\div 0.312 =$  512.8  
 Expected Hydroset Pressure (Step 4.2.3.c.)

515 psig Required Pump Pressure from Hydroset Correction Chart (Step 4.2.3.d.1)  
 - 512 psig Applied Pump Pressure from Hydroset Correction Chart (Step 4.2.3.d.2)  
 = -2 psig Hydroset Correction (Step 4.2.3.e.)  $\times 0.312 =$  -0.624  
 Hydroset Influence (Step 4.2.3.f.)

Comments:

7.1      17.1  
497      507  
512  
527      517

Value "popped" rather than  
 simulated

Hydroset Temp. 108°F      1st      10.4  
 Hydroset Temp. 109.7°F      2nd      10.4  
                                  0.5 °K      3rd      10.4  
                                  112.8°F      4th      10.4  
                                  110.1      5th      10.4

Level of Use  
 Continuous

STOP

THINK

ACT

REVIEW

SP 2730B

Rev. 12

47 of 56

# Attachment 8

## Test Data Sheet Using Dresser Model 1566 Hydroset

(Sheet 1 of 1)

AWO#: M2-02-07951

Valve ID# 2-MS- 245

(Blank copies of Attachment 8, Sheet 1 may be reproduced as necessary)

Hydroset Correction calculation based on Header Pressure of ( 840 ) psig using Hydroset QA No. ( 86111 )

Test Data						Valve Adjustments After Test			
Step 4.5.14.(d.1)	Step 4.2.3.(g.)	Step 4.5.14.(d.3)		Step 4.5.15.(c.2)	Step 4.5.15.(d.)	Step 4.5.18.(b.)	Step 4.5.19.(a.)		
Test No. & Time	Hydroset Correction	Steam Header Pressure (psig)	Hydroset Pressure (psig)	Hydroset Influence	Valve Set Pressure (psig)	No	Yes		
						Initial	Initial	CW or CCW	No. of Flats
1. 0934	- .6	835 +	463	144.5	978.2	IN	to 1.141	CW	
2. 0947	- .6	835 +	460	143.5	977.8		to 1.141	CW	3
3. 1009	- .6	835 +	591	181.3	1015.7	OUT	to 1.141		
4. 1015	- .6	835 +	565	176.3	1010.7	CW			
5. 1020	- .6	835 +	560	171.7	1009.12	IN			
6. 1025	- .6	835 +	556	173.5	1007.9	IN			
7.									
8.									
9.									
10.									
11.									
12.									

### Notes:

1. Set Pressure = Steam Header Pressure + (Hydroset Pressure x 0.312) + Hydroset Correction
2. Hydroset Influence = Hydroset Pressure (PSIG) x 0.312
3. If Hydroset Pressure Gauge is graduated in Hydroset Influence, the Hydroset Pressure Column should be marked N/A.
4. Hydroset Correction must be calculated from Correction Chart supplied with Hydroset Calibration Documentation. This calculation should be completed prior to performance of test. Hydroset Correction should be expressed as a (+) or (-) value in graduations of Hydroset Influence.
5. Test valve minimum amount of times required to meet test objective, subsequent test data lines should be lined through.

Level of Use  
Continuous

\* corrected for elevation difference

STOP

THINK

ACT

REVIEW

SP 2730B

Rev. 12

48 of 56

2-MS-246

**Form Approval**

Approval Date

09/25/03

Effective Date

10/02/03

# Surveillance Form

**Generic Information**

Form Title

Main Steam Safety Valve Testing

Rev. No.

010-01

Reference Procedure

SP 2730B

Applicable Tech. Spec.

4.7.1.1

Applicability (Tech. Spec.)

MODES 1, 2, and 3

Frequency

See Note\*

This form is being used for the following:

☒ Tech Spec Surveillance☐ System Alignment☐ Other: \_\_\_\_\_☐ Maintenance Restoration (Retest)☐ Non-Tech Spec Surveillance (PM)**Specific Information**

AWO Number

M2-02-07951

Late Date

N/A

Schedule Start Date

10/9/03

Performance Modes

1.

Prerequisites Completed (Initials)

M

Precautions Noted (Initials)

M

Test Authorized By

H. C. S. S.

Date

10-09-03

Partial Surveillance

☐ Yes☐ No

Performed By

E. J. S. S.

Date / Time

10/9/03 1157

Accepted By

J. P. S. S.

Date / Time

10/10/03 0740

Acceptance Criteria Satisfied

☒ Yes☐ No

Approved By (Department Head or Designee)

J. P. S. S.

Date

10/10/03

Shift Manager Notified of Failed Test

N/A

Date

N/A

CR#:

N/A

**Surveillance Information**

Test Equipment Type	QA Number	Cal Due Date
Hydroset	QA- 2611 F	4/15/04
Hydroset Pressure Gauge (if applicable)	QA- 5518 A	4/15/04
Steam Header Pressure Gauge	QA- 5333	4/15/04
Pyrometer	QA- 6376	12/06/03
Performance Verification Performed By	QA 5711G	4/15/04
		Date
		N/A

**Comments**

\*Note: Class 2 Main Steam Safety Valves: All valves shall be tested within each subsequent

5 year period with a minimum of 20% of the valves tested within any 24 months. This 20% shall be previously untested valves, if they exist. (from ASME/ANSI OM-1987, Part 1, Section 1.3.3)

SP 2730B-001

Rev. 010-01

Page 1 of 3

### Test Information

Valve No. 2-MS- 246

Valve Serial No.: BSO 6257

Valve inspection (circle result and describe discrepancy if any): SAT / UNSAT

- Leakage (check drip pan)
- Damaged parts
- Abnormal condition

Check ☒ below method used to verify valve set pressure:

"As Found"	<input checked="" type="checkbox"/> In-line test (hydraulic assist lift test)
	<input type="checkbox"/> Off-site test facility
"As Left"	<input checked="" type="checkbox"/> In-line test (hydraulic assist lift test)
	<input type="checkbox"/> Off-site test facility

If set pressure verified at off-site test facility, record:

Test Facility: N/A

PO number: N/A

Record Set Pressure:

"As Found" Set Pressure: 960.3 PSIG

"As Left" Set Pressure: 972.2 PSIG

"As Left" Set Pressure: 983.2 PSIG

Test was conducted in accordance with SP 2730B, "Main Steam Safety Valve Testing (IPTE)" and test results are accurate.

Test Engineer:

E. J. Bullock

Date: 4/9/03

Management Test Lead:

[Signature]

Date: 10-9-03

### Acceptance Criteria

"As Found" – On first lift, valve opens at design lift setting ( $-3\%$ , to less than  $+3\%$ )

"As Left" – On last two consecutive lifts, valve opens at design lift setting ( $\pm 1\%$ ) (first lift may be included as one of the two consecutive lifts if first lift is within  $\pm 1\%$ ) [Ref. 6.4]

Valve Set Pressure Acceptance Criteria			
Valve ID#	"As Found" (psig)	Valve ID#	"As Left" (psig)
2-MS-239	1035 (1004 to 1065)	2-MS-239	1035 (1025 to 1045)
2-MS-240	1030 (999 to 1060)	2-MS-240	1030 (1020 to 1040)
2-MS-241	1010 (980 to 1039)	2-MS-241	1010 (1000 to 1020)
2-MS-242	990 (960 to 1019)	2-MS-242	990 (980 to 999)
2-MS-243	1035 (1004 to 1065)	2-MS-243	1035 (1025 to 1045)
2-MS-244	1020 (990 to 1049)	2-MS-244	1020 (1010 to 1030)
2-MS-245	1000 (970 to 1029)	2-MS-245	1000 (990 to 1010)
2-MS-246	985 (956 to 1013)	2-MS-246	985 (975 to 994)
2-MS-247	985 (956 to 1013)	2-MS-247	985 (975 to 994)
2-MS-248	1035 (1004 to 1065)	2-MS-248	1035 (1025 to 1045)
2-MS-249	1000 (970 to 1029)	2-MS-249	1000 (990 to 1010)
2-MS-250	1030 (999 to 1060)	2-MS-250	1030 (1020 to 1040)
2-MS-251	1020 (990 to 1049)	2-MS-251	1020 (1010 to 1030)
2-MS-252	1010 (980 to 1039)	2-MS-252	1010 (1000 to 1020)
2-MS-253	1035 (1004 to 1065)	2-MS-253	1035 (1025 to 1045)
2-MS-254	990 (960 to 1019)	2-MS-254	990 (980 to 999)

Lift settings are from Tech. Spec. Table 4.7-1, Amend. #195, and have been converted in this table from psia to psig to prevent transposition errors during testing.

**Attachment 7**  
**Hydroset Correction Calculation**  
 (Sheet 1 of 1)

AWO#: M2-02-07951

Valve ID# 2-MS- 246

(Blank copies of Attachment 7, Sheet 1 may be reproduced as necessary)

Hydroset QA No. ( 2611F )

Hydroset Serial No. ( 45547 )

<u>985</u> psig MSSV Set Pressure (Step 4.2.3.a.) - <u>134</u> psig Steam Header Pressure (Step 4.2.1) = <u>851</u> Hydroset Influence (Step 4.2.3.b.) $\div$ 0.312 =	<u>484</u> Expected Hydroset Pressure (Step 4.2.3.c.)
<u>485</u> psig Required Pump Pressure from Hydroset Correction Chart (Step 4.2.3.d.1) - <u>997</u> psig Applied Pump Pressure from Hydroset Correction Chart (Step 4.2.3.d.2) = <u>-2</u> psig Hydroset Correction (Step 4.2.3.e.) $\times$ 0.312 = (+/-) <u>-0.6</u>	<u>-0.6</u> Hydroset Influence (Step 4.2.3.f.)

Comments:

498  
470

115.3

Hydroset temp 113.7°F

Level of Use  
Continuous

STOP

THINK

ACT

REVIEW

SP 2730B  
 Rev. 12  
 47 of 56

# **Attachment 8** **Test Data Sheet Using Dresser Model 1566 Hydroset**

(Sheet 1 of 1)

AWO#: M2-02-07951

Valve ID# 2-MS- 246

(Blank copies of Attachment 8, Sheet 1 may be reproduced as necessary)

Hydroset Correction calculation based on Header Pressure of ( <u>840</u> ) psig using Hydroset QA No. ( <u>2611F</u> )									
Test Data						Valve Adjustments After Test			
Step 4.5.14.(d.1)	Step 4.2.3.(g.)	Step 4.5.14.(d.3)		Step 4.5.15.(c.2)	Step 4.5.15.(d.)	Step 4.5.18.(b.)	Step 4.5.19.(a.)		
Test No. & Time	Hydroset Correction	Steam Header Pressure (psig)	Hydroset Pressure (psig)	Hydroset Influence	Valve Set Pressure (psig)	No	Yes		
						Initial	Initial	CW or CCW	No. of Flats
1. 1048	- .5	* 834	407.03	126.9	960.3		TRI	CW	3
2. 1116	- .5	* 834	448.58	139.9	976.3	973.3	TRI	CW	1
3. 1131	- .6	* 834	467.0	145.7	979.1	980.3			
4. 1149	- .6	* 834	477.1	156.3	969.7				
5. 1149	- .6	* 834	461	143.8	977.2	983			
6. 1154	- .6	* 834	480	149.8	983.2	983			
7.									
8.									
9.									
10.									
11.									
12.									

Notes: \* STEAM INFLUENCE CORRECTED FOR MISCUT OF INSTRUMENT

- Set Pressure = Steam Header Pressure + (Hydroset Pressure x 0.312) + Hydroset Correction
- Hydroset Influence = Hydroset Pressure (PSIG) x 0.312
- If Hydroset Pressure Gauge is graduated in Hydroset Influence, the Hydroset Pressure Column should be marked N/A.
- Hydroset Correction must be calculated from Correction Chart supplied with Hydroset Calibration Documentation. This calculation should be completed prior to performance of test. Hydroset Correction should be expressed as a (+) or (-) value in graduations of Hydroset Influence.
- Test valve minimum amount of times required to meet test objective, subsequent test data lines should be lined through.

Level of Use  
Continuous

STOP

THINK

ACT

REVIEW

SP 2730B

Rev. 12

48 of 56



<b>Form Approval</b>	
Approval Date <b>09/25/03</b>	Effective Date <b>10/02/03</b>

<b>Generic Information</b>			
Form Title <b>Main Steam Safety Valve Testing</b>			Rev. No. <b>010-01</b>
Reference Procedure <b>SP 2730B</b>	Applicable Tech. Spec. <b>4.7.1.1</b>	Applicability (Tech. Spec.) <b>MODES 1, 2, and 3</b>	Frequency <b>See Note*</b>
This form is being used for the following:			
<input checked="" type="checkbox"/> Tech Spec Surveillance	<input type="checkbox"/> System Alignment	<input type="checkbox"/> Other: _____	
<input type="checkbox"/> Maintenance Restoration (Retest)	<input type="checkbox"/> Non-Tech Spec Surveillance (PM)	_____	
_____			

Specific Information		
AWO Number <b>112-02-07951</b>	Late Date <b>N/A</b>	Schedule Start Date <b>10/9/03</b>
Performance Modes <b>1</b>	Prerequisites Completed (Initials) <b>GM</b>	Precautions Noted (Initials) <b>ny</b>
Test Authorized By <b>[Signature]</b>		Partial Surveillance <input type="checkbox"/> Yes <input type="checkbox"/> No  Acceptance Criteria Satisfied <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Performed By <b>[Signature]</b> <b>isden</b>		
Accepted By <b>[Signature]</b>		
Approved By (Department Head or Designee) <b>[Signature]</b>		Date <b>10/10/03</b>
Shift Manager Notified of Failed Test <b>N/A</b>		Date <b>10/10/03</b>

Surveillance Information		
Test Equipment Type	QA Number	Cal Due Date
Hydroset	QA-2611.F	4/15/05
Hydroset Pressure Gauge (if applicable)	QA-5818A	4/5/04
Steam Header Pressure Gauge	QA-5384	4/5/04
Pyrometer	QA-6316	12/6/03
PTC CA-1504A	QA 0516	4/1/04
Performance Verification Performed By	Date	
N/A	N/A	

Comments
<p><u>*Note: Class 2 Main Steam Safety Valves: All valves shall be tested within each subsequent 5 year period with a minimum of 20% of the valves tested within any 24 months. This 20% shall be previously untested valves, if they exist. (from ASME/ANSI OM – 1987, Part 1, Section 1.3.3)</u></p>

Test Information	
Valve No. 2-MS- <u>247</u>	Valve Serial No.: <u>BN 4961</u>
Valve inspection (circle result and describe discrepancy if any): <u>SAT</u> UNSAT	
<ul style="list-style-type: none"> <li>• Leakage (check drip pan)</li> <li>• Damaged parts</li> <li>• Abnormal condition</li> </ul>	
Check <input checked="" type="checkbox"/> below method used to verify valve set pressure:	
"As Found"	<input checked="" type="checkbox"/> In-line test (hydraulic assist lift test)
	<input type="checkbox"/> Off-site test facility
"As Left"	<input checked="" type="checkbox"/> In-line test (hydraulic assist lift test)
	<input type="checkbox"/> Off-site test facility
If set pressure verified at off-site test facility, record: Test Facility: <u>N/A</u>	
PO number: <u>N/A</u>	
Record Set Pressure:	
"As Found" Set Pressure: <u>967.8</u>	
"As Left" Set Pressure: <u>993.9</u>	
"As Left" Set Pressure: <u>989.9</u>	

Test was conducted in accordance with SP 2730B, "Main Steam Safety Valve Testing (IPTE)" and test results are accurate.

Test Engineer: E. J. Had Date: 10/2/03

Management Test Lead: [Signature] Date: 10-9-03

### Acceptance Criteria

"As Found" – On first lift, valve opens at design lift setting ( $-3\%$ , to less than  $+3\%$ )

"As Left" – On last two consecutive lifts, valve opens at design lift setting ( $\pm 1\%$ ) (first lift may be included as one of the two consecutive lifts if first lift is within  $\pm 1\%$ ) [♣Ref. 6.4]

Valve Set Pressure Acceptance Criteria			
Valve ID#	"As Found" (psig)	Valve ID#	"As Left" (psig)
2-MS-239	1035 (1004 to 1065)	2-MS-239	1035 (1025 to 1045)
2-MS-240	1030 (999 to 1060)	2-MS-240	1030 (1020 to 1040)
2-MS-241	1010 (980 to 1039)	2-MS-241	1010 (1000 to 1020)
2-MS-242	990 (960 to 1019)	2-MS-242	990 (980 to 999)
2-MS-243	1035 (1004 to 1065)	2-MS-243	1035 (1025 to 1045)
2-MS-244	1020 (990 to 1049)	2-MS-244	1020 (1010 to 1030)
2-MS-245	1000 (970 to 1029)	2-MS-245	1000 (990 to 1010)
2-MS-246	985 (956 to 1013)	2-MS-246	985 (975 to 994)
2-MS-247	985 (956 to 1013)	2-MS-247	985 (975 to 994)
2-MS-248	1035 (1004 to 1065)	2-MS-248	1035 (1025 to 1045)
2-MS-249	1000 (970 to 1029)	2-MS-249	1000 (990 to 1010)
2-MS-250	1030 (999 to 1060)	2-MS-250	1030 (1020 to 1040)
2-MS-251	1020 (990 to 1049)	2-MS-251	1020 (1010 to 1030)
2-MS-252	1010 (980 to 1039)	2-MS-252	1010 (1000 to 1020)
2-MS-253	1035 (1004 to 1065)	2-MS-253	1035 (1025 to 1045)
2-MS-254	990 (960 to 1019)	2-MS-254	990 (980 to 999)

Lift settings are from Tech. Spec. Table 4.7-1, Amend. #195, and have been converted in this table from psia to psig to prevent transposition errors during testing.

PTC EAST PRC  
QA 0816  
4/10/04

MYD GAGE EP  
2625 J

10/3/04

**Attachment 7**  
**Hydroset Correction Calculation**  
 (Sheet 1 of 1)

AWO#: M2-02-07951

Valve ID# 2-MS-247

(Blank copies of Attachment 7, Sheet 1 may be reproduced as necessary)

Hydroset OA No. ( 2611E )

Hydroset Serial No. ( )

<u>985</u> psig	MSSV Set Pressure (Step 4.2.3.a.)	
- <u>839</u> psig	Steam Header Pressure (Step 4.2.1)	
= <u>146</u>	Hydroset Influence (Step 4.2.3.b.) $\div$ 0.312 =	<u>467.9</u>
		Expected Hydroset Pressure (Step 4.2.3.c.)
<u>470</u> psig	Required Pump Pressure from Hydroset Correction Chart (Step 4.2.3.d.1)	
- <u>474</u> psig	Applied Pump Pressure from Hydroset Correction Chart (Step 4.2.3.d.2)	
= <u>-4</u> psig	Hydroset Correction (Step 4.2.3.e.) $\times$ 0.312 = (+/-)	<u>-1.2</u>
		Hydroset Influence (Step 4.2.3.f.)

Comments:

1st Test      117°F on hydroset  
114°F

Level of Use  
 Continuous

STOP

THINK

ACT

REVIEW

SP 2730B

Rev. 12

47 of 56

# **Attachment 8** **Test Data Sheet Using Dresser Model 1566 Hydroset**

(Sheet 1 of 1)

AWO#: M2-02-07951

Valve ID# 2-MS- 247

(Blank copies of Attachment 8, Sheet 1 may be reproduced as necessary)

Hydroset Correction calculation based on Header Pressure of ( <u>840</u> ) psig using Hydroset QA No. ( <u>261 F</u> )									
Test Data						Valve Adjustments After Test			
Step 4.5.14.(d.1)	Step 4.2.3.(g.)	Step 4.5.14.(d.3)		Step 4.5.15.(c.2)	Step 4.5.15.(d.)	Step 4.5.18.(b.)	Step 4.5.19.(a.)		
Test No. & Time	Hydroset Correction	Steam Header Pressure (psig)	Hydroset Pressure (psig)	Hydroset Influence	Valve Set Pressure (psig)	No	Yes		
						Initial	Initial	CW or CCW	No. of Flats
1. 1318	-1.2	841*	410.22	127.7	967.8		TRI	CW	2
2. 1348	-1.2	839*	413.28	128.9	966.7		W	CW	2
3. 1408	-1.2	841*	493.8	154.1	993.9	TRI			
4. 1714	-1.2	841*	481.2	150.1	989.9	TRI			
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									

Notes: \* CORRECTION FOR LOW KAPUSING

- Set Pressure = Steam Header Pressure + (Hydroset Pressure x 0.312) + Hydroset Correction
- Hydroset Influence = Hydroset Pressure (PSIG) x 0.312
- If Hydroset Pressure Gauge is graduated in Hydroset Influence, the Hydroset Pressure Column should be marked N/A.
- Hydroset Correction must be calculated from Correction Chart supplied with Hydroset Calibration Documentation. This calculation should be completed prior to performance of test. Hydroset Correction should be expressed as a (+) or (-) value in graduations of Hydroset Influence.
- Test valve minimum amount of times required to meet test objective, subsequent test data lines should be lined through.

Level of Use  
Continuous



SP 2730B  
Rev. 12  
48 of 56

2ms-249

**Form Approval**

Approval Date

09/25/03

Effective Date

10/02/03

# Surveillance Form

**Generic Information**

Form Title

Main Steam Safety Valve Testing

Rev. No.

010-01

Reference Procedure

SP 2730B

Applicable Tech. Spec.

4.7.1.1

Applicability (Tech. Spec.)

MODES 1, 2, and 3

Frequency

See Note\*

This form is being used for the following:



Tech Spec Surveillance



System Alignment



Other: \_\_\_\_\_

Maintenance Restoration  
(Retest)Non-Tech Spec  
Surveillance (PM)**Specific Information**

AWO Number

M2-02-07951

Late Date

N/A

Schedule Start Date

10/9/03

Performance Modes

1

Prerequisites Completed (Initials)

MS

Precautions Noted (Initials)

MS

Test Authorized By

H. C. [Signature]

Date

10/09/03

Partial Surveillance



Yes



No

Performed By

[Signature]

Date / Time

10/9/03 1509

Accepted By

[Signature]

Date / Time

10/10/03 0740

Acceptance Criteria  
Satisfied

Yes



No

Approved By (Department Head or Designee)

[Signature]

Date

11/10/03

Shift Manager/Notified of Failed Test

N/A

Date

N/A

CR#:

N/A

**Surveillance Information**

Test Equipment Type	QA Number	Cal Due Date
Hydroset	QA- 2611 F	9/5/04
Hydroset Pressure Gauge (if applicable)	QA- 5384	4/5/04
Steam Header Pressure Gauge	QA- 5384	4/5/04
Pyrometer	QA- 6376	12/26/03
PTE Calibrator	QA- 08:6	4/1/04
Performance Verification Performed By		Date
N/A		N/A

**Comments**

\*Note: Class 2 Main Steam Safety Valves: All valves shall be tested within each subsequent

5 year period with a minimum of 20% of the valves tested within any 24 months. This 20% shall be

previously untested valves, if they exist. (from ASME/ANSI OM-1987, Part 1, Section 1.3.3)

SP 2730B-001

Rev. 010-01

Page 1 of 3

### Test Information

Valve No. 2-MS- 249 Valve Serial No.: BN 4965

Valve inspection (circle result and describe discrepancy if any): SAT / UNSAT

- Leakage (check drip pan)
- Damaged parts
- Abnormal condition

Check ☒ below method used to verify valve set pressure:

"As Found"	<input checked="" type="checkbox"/>	In-line test (hydraulic assist lift test)
	<input type="checkbox"/>	Off-site test facility
"As Left"	<input checked="" type="checkbox"/>	In-line test (hydraulic assist lift test)
	<input type="checkbox"/>	Off-site test facility

If set pressure verified at off-site test facility, record: Test Facility: N/A  
PO number: N/A

Record Set Pressure: "As Found" Set Pressure: 995.2  
"As Left" Set Pressure: 992.8  
"As Left" Set Pressure: 994.1

Test was conducted in accordance with SP 2730B, "Main Steam Safety Valve Testing (IPTE)" and test results are accurate.

Test Engineer: [Signature] Date: 10/9/03

Management Test Lead: [Signature] Date: 10-9-03



### Acceptance Criteria

"As Found" – On first lift, valve opens at design lift setting ( $-3\%$ , to less than  $+3\%$ )

"As Left" – On last two consecutive lifts, valve opens at design lift setting ( $\pm 1\%$ ) (first lift may be included as one of the two consecutive lifts if first lift is within  $\pm 1\%$ ) [✱Ref. 6.4]

Valve Set Pressure Acceptance Criteria			
Valve ID#	"As Found" (psig)	Valve ID#	"As Left" (psig)
2-MS-239	1035 (1004 to 1065)	2-MS-239	1035 (1025 to 1045)
2-MS-240	1030 (999 to 1060)	2-MS-240	1030 (1020 to 1040)
2-MS-241	1010 (980 to 1039)	2-MS-241	1010 (1000 to 1020)
2-MS-242	990 (960 to 1019)	2-MS-242	990 (980 to 999)
2-MS-243	1035 (1004 to 1065)	2-MS-243	1035 (1025 to 1045)
2-MS-244	1020 (990 to 1049)	2-MS-244	1020 (1010 to 1030)
2-MS-245	1000 (970 to 1029)	2-MS-245	1000 (990 to 1010)
2-MS-246	985 (956 to 1013)	2-MS-246	985 (975 to 994)
2-MS-247	985 (956 to 1013)	2-MS-247	985 (975 to 994)
2-MS-248	1035 (1004 to 1065)	2-MS-248	1035 (1025 to 1045)
2-MS-249	1000 (970 to 1029)	2-MS-249	1000 (990 to 1010)
2-MS-250	1030 (999 to 1060)	2-MS-250	1030 (1020 to 1040)
2-MS-251	1020 (990 to 1049)	2-MS-251	1020 (1010 to 1030)
2-MS-252	1010 (980 to 1039)	2-MS-252	1010 (1000 to 1020)
2-MS-253	1035 (1004 to 1065)	2-MS-253	1035 (1025 to 1045)
2-MS-254	990 (960 to 1019)	2-MS-254	990 (980 to 999)

Lift settings are from Tech. Spec. Table 4.7-1, Amend. #195, and have been converted in this table from psia to psig to prevent transposition errors during testing.

**Attachment 7**  
**Hydroset Correction Calculation**  
 (Sheet 1 of 1)

AWO#: M2-02-07951

Valve ID# 2-MS- 249

(Blank copies of Attachment 7, Sheet 1 may be reproduced as necessary)

Hydroset QA No. ( <u>2611K</u> )	Hydroset Serial No. (                      )
<u>1000</u> psig MSSV Set Pressure (Step 4.2.3.a.) - <u>840</u> psig Steam Header Pressure (Step 4.2.1) = <u>160</u> Hydroset Influence (Step 4.2.3.b.) $\div$ 0.312 = <u>512</u> <div style="text-align: right;">Expected Hydroset Pressure (Step 4.2.3.c.)</div>	
<u>512</u> psig Required Pump Pressure from Hydroset Correction Chart (Step 4.2.3.d.1) - <u>514</u> psig Applied Pump Pressure from Hydroset Correction Chart (Step 4.2.3.d.2) = <u>-4</u> psig Hydroset Correction (Step 4.2.3.e.) $\times$ 0.312 = (+/-) <u>-1.2</u> <div style="text-align: right;">Hydroset Influence (Step 4.2.3.f.)</div>	

Comments: 2nd 11ft 116.7 at Hydroset

113 350  
114.6 °F 11ft 47.5 +3% 116.7 EX

512      518

420 500

Level of Use  
Continuous

STOP

THINK

ACT

REVIEW

SP 2730B  
 Rev. 12  
 47 of 56

**Attachment 8**  
**Test Data Sheet Using Dresser Model 1566 Hydroset**

(Sheet 1 of 1)

AWO#: M12-02-07951

Valve ID# 2-MS- 249

(Blank copies of Attachment 8, Sheet 1 may be reproduced as necessary)

Hydroset Correction calculation based on Header Pressure of ( 840 ) psig using Hydroset QA No. ( 2611E )

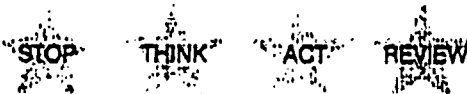
Test Data						Valve Adjustments After Test			
Step 4.5.14.(d.1)	Step 4.2.3.(g.)	Step 4.5.14.(d.3)		Step 4.5.15.(c.2)	Step 4.5.15.(d.)	Step 4.5.18.(b.)	Step 4.5.19.(a.)		
Test No. & Time	Hydroset Correction	Steam Header Pressure (psig)	Hydroset Pressure (psig)	Hydroset Influence	Valve Set Pressure (psig)	No	Yes		
						Initial	Initial	CW or CCW	No. of Flats
1. <u>1438</u>	<u>-1.2</u>	<u>839*</u>	<u>504.4</u>	<u>157.4</u>	<u>995.2</u>	<u>TRI</u>			
2. <u>1445</u>	<u>-1.2</u>	<u>839*</u>	<u>460.98</u>	<u>143.8</u>	<u>981.6</u>		<u>TRI</u>	<u>3CW</u>	<u>3</u>
3. <u>1503</u>	<u>-1.2</u>	<u>840*</u>	<u>493.72</u>	<u>154.0</u>	<u>992.8</u>	<u>TRI</u>			
4. <u>1509</u>	<u>-1.2</u>	<u>840*</u>	<u>491.88</u>	<u>155.3</u>	<u>994.1</u>	<u>TRI</u>			
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									

**Notes:**

\* CALC ULTIMATE FOR REACTION

- Set Pressure = Steam Header Pressure + (Hydroset Pressure x 0.312) + Hydroset Correction
- Hydroset Influence = Hydroset Pressure (PSIG) x 0.312
- If Hydroset Pressure Gauge is graduated in Hydroset Influence, the Hydroset Pressure Column should be marked N/A.
- Hydroset Correction must be calculated from Correction Chart supplied with Hydroset Calibration Documentation. This calculation should be completed prior to performance of test. Hydroset Correction should be expressed as a (+) or (-) value in graduations of Hydroset Influence.
- Test valve minimum amount of times required to meet test objective, subsequent test data lines should be lined through.

Level of Use  
Continuous



SP 2730B  
Rev. 12  
48 of 56

#### 4.4 Establishing Initial Conditions for IPTE

Management  
Test Lead and  
Test Engineer

##### 4.4.1 PERFORM briefing as follows:

- a. ENSURE all personnel involved in test, including SM and operating shift personnel, attend pre-evolution brief.
- b. Refer To Attachment 6, "Minimum Briefing Requirements Checklist" and CONDUCT pre-evolution brief.
- c. IF test spans shifts or test personnel change, DETERMINE if briefing needs to be repeated for personnel *not* attending initial briefing.
- d. IF repeat briefing are required, PERFORM the following:
  - 1) ENSURE Management Test Lead or Test Engineer that leads briefing has either:
    - Attended the initial briefing
    - Received turnover from Management Test Lead
  - 2) Refer To step 4.4.1.(b.) and CONDUCT pre-evolution brief for personnel *not* attending initial briefing.

Management  
Test Lead and  
Test Engineer

##### 4.4.2 ENSURE prerequisites are completed and precautions have been noted and DOCUMENT completion below:

Test Engineer: E. J. Bush Date: 10/9/03

Management Test Lead: [Signature] Date: 10-9-03

##### 4.4.3 OBTAIN the following approvals to perform evolution:

###### Approval to Perform Evolution

Director of O&M or MTL: [Signature] Date: 10-9-03

Operations Dept. Manager: [Signature] for W. Hoffman per telecon Date: 10-9-03

On-duty Shift Manager: [Signature] Date: 10-9-03

Level of Use  
Continuous

STOP THINK ACT REVIEW

SP 2730B

Rev. 12

16 of 56

**Attachment 6**  
**Minimum Briefing Requirements**  
(Sheet 4 of 4)

AWO#: M2-02-07951

Date/Time: 10-9-03 / 0800

**CHECKLIST**

Check (✓)		Management Test Lead Items
✓	✓	Management expectations
✓	✓	Need to exercise caution and conservatism
✓	✓	Need to maintain a high margin of safety (placing and performing actions "right the first time" over urgency to complete the procedure or evolution quickly)
✓	✓	Need to maintain open and clear communications
✓	✓	Command and control issues
✓	✓	Overall test performance
✓	✓	Lessons learned from industry operating experience
✓	✓	Personnel responsibilities and authorities, especially if those responsibilities are different from normal
✓	✓	When and how to terminate the procedure or evolution if any of the termination criteria are met
✓	✓	Discussion to ensure personnel know and understand what is expected of them. All personnel involved in evolution, including SM and operating shift personnel, shall attend briefings. Repeat briefings may be conducted
Check (✓)		Test Engineer Items
✓	✓	Current plant status and system alignment
✓	✓	Overall effect on plant systems and expected alarms
✓	✓	Prerequisites and initial conditions
✓	✓	Procedure limits and precautions
✓	✓	Potential risks and consequences
✓	✓	Contingency plans to mitigate any potential problems
✓	✓	Differences between test and normal operating procedure and practices
✓	✓	Termination criteria and contingency plans
✓	✓	When and how to terminate the procedure or evolution if any of the termination criteria are met
✓	✓	Expected test duration
✓	✓	Technical Specification limitations, deviations from normal plant parameters, setpoints, and limits
✓	✓	Test equipment
✓	✓	Communication methods
✓	✓	Restoration steps

Level of Use  
Continuous

STOP THINK ACT REVIEW

SP 2730B  
Rev. 12  
46 of 56

10/09/2003

Page 1

## 10/09/2003

Page 1

**Attachment 10**  
**Temporary Modification Log**  
 (Sheet 1 of 4)

AWO#: M2-02-07951

(Blank copies of Attachment 10, Sheet 1 may be reproduced as necessary)

**Test Instruments**

Valve ID#	Test Instrument Installed		Test Instrument Removed	
	Installed by:	Verified by:	Removed by:	Verified by:
PT4223	SAB	IRP	RP	SAB
PT4224	SAB	RP	RP	SAB

**COMMENTS:**

---

---

---

---

---

---

---

---

---

---

Page \_\_\_\_ of \_\_\_\_

Level of Use  
 Continuous

STOP      THINK      ACT      REVIEW

SP 2730B  
 Rev. 12  
 50 of 56



**Attachment 10**  
**Temporary Modification Log**  
 (Sheet 2 of 4)

AWO#: 42-02-02951

(Blank copies of Attachment 10, Sheet 2 may be reproduced as necessary)  
**Hydroset**

Valve ID#	Hydroset Installed		Hydroset Removed	
	Installed by:	Verified by:	Removed by:	Verified by:
2-MS-245	CA Lion	Charles Taylor	CA Lion	Charles Taylor
2-MS-246	CA Lion	Charles Taylor	Joe Ball	Mark Casterl
2-MS-239	Joe Ball	Robert R.	Joe Ball	R. M. Thir
2-MS-247	CA Lion	Charles Taylor	Brian Cell	P. R. Rant
2 MS-247	CA Lion	Charles Taylor	P. R. Rant	Steven M. Kinney

Page \_\_\_\_ of \_\_\_\_

Level of Use  
Continuous

STOP      THINK      ACT      REVIEW

SP 2730B  
 Rev. 12  
 51 of 56

**Attachment 10**  
**Temporary Modification Log**  
 (Sheet 3 of 4)

AWO#: 022-02-02957

(Blank copies of Attachment 10, Sheet 3 may be reproduced as necessary)

**Spring Compression Tool**

Valve ID#	Spring Compression Tool Installed		Spring Compression Tool Removed	
	Installed by:	Verified by:	Removed by:	Verified by:
2-45-245	RAY RIOS	Mark Casteel	Joe Ball	RAY RIOS
2-MS-246	Joe Ball	Mark Casteel	Bruce Kinney	Alan Amsol
2-MS-247	Joe Ball	Mark Casteel	Ben Call	P. Navant
2-MS-249	Joe Ball	Mark Casteel	P. Navant	Bruce Kinney

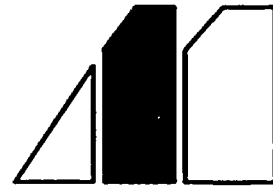
Page \_\_\_\_ of \_\_\_\_

Level of Use  
Continuous

STOP      THINK      ACT      REVIEW

SP 2730B  
Rev. 12  
52 of 56

**MILLSTONE NUCLEAR POWER STATION  
SURVEILLANCE PROCEDURE**



**Main Steam Safety Valve Testing (IPTE)**

**SP 2730B**

**Rev. 12**

**NOTE**

**STOP** The following subsections in this procedure are **Continuous Level of Use** and may be used at Level of Use frame 1000s: **THINK** **AS** **REVIEW**

- Subsection 4.1: **Information**
- Subsection 4.2, 4.3, and 4.6: **General**

Approval Date: 9/25/03

Effective Date: 10/02/03

Level of Use  
**Continuous**

5-5-99

Approval Date

6-2-99

Effective Date

### PPE Exemption

Work Document Number: 11202-07951

Rev: \_\_\_\_\_

Describe specific job/task and Safety

Hazard(s) for which PPE exemption(s) desired: \_\_\_\_\_

#### PPE Exemption Requested (select all that apply):

☒ **Hard Hat** - Potential of injury to head from falling objects or bumping into objects **must not exist**, and all of the following conditions are required:

✓ No exposed electrical work in progress for the duration of the exemption.

✓ No overhead crane work performed for the duration of the exemption.

✓ No overhead work will be performed for duration of exemption, OR

Alternate protection is provided to prevent contact with falling objects, as described below:

Reason for exemption / alternate protection in place: headsets required

Exemption Start Date: 10/9/03

End Date: 10/10/03

Approved: Don Gorence

FLS/Job Leader, Name (print)

Kelly Kelly

Signature

Supv

Title

5529

phone

☐ **Safety Glasses**

Reason for exemption / alternate protection in place: \_\_\_\_\_

Requested: \_\_\_\_\_

FLS/Job Leader, Name (print)

Signature

Title

phone

Exemption Start Date: \_\_\_\_\_

End Date: \_\_\_\_\_

Approved: \_\_\_\_\_

Site Safety, Name (print)

Signature

Title

date

☐ **Other - describe:** \_\_\_\_\_

Reason for exemption / alternate protection in place: \_\_\_\_\_

Requested: Don Gorence

FLS/Job Leader, Name (print)

Kelly Kelly

Signature

Title

5529

phone

Exemption Start Date: 10/9/03

End Date: 10/10/03

Approved: Don Gorence

Site Safety, Name (print)

Signature

Title

date

Distribution: Work Package (original); Post in work area; Supervisor, Site Safety

Form MP-19-SH-SAP01-2

Rev. 0

1 of 1

# Attachment 1 Pre-Job Brief Checklist

(Sheet 1 of 2)

AWO NO. M2 02 07951	Planner Bill Hughes	Date: 03/01/2003
Team Lead: Gorence/Kellogg		
Job Leader: D (Gorence)		

During Pre-Job Brief, discuss Mandatory Review Items and all other checked items.

Initials	MANDATORY REVIEW ITEMS -Required for each Pre-Job Brief
JK	* Proper authorization to begin work
JK	* Review the job description, its evolution and objectives
JK	* Review job hazard assessment form (MP-19-SH-SAP01-001)
JK	* Describe equipment and plant response to be expected while performing work (potential plant impact)
JK	* Assign Lead and individual responsibilities, and verify assignees have sufficient and current qualifications.
N/A	* Review safety tagout
JK	* Identify notifications or permission required (Operations, Supporting Departments, etc. ; stick welding may cause smoke detectors to alarm; call control room prior to start of job)
JK	* QA / ANI hold points
JK	* Protective clothing (PPE)
JK	* Overview past experiences on similar jobs
JK	* Review OE included in packages
JK	* Confirm procedure revision and change numbers
JK	* Address worker concerns / questions - specify
JK	* Address QA material storage (if QA Material used)
JK	* Review ATT.4 "Vendor/Contractor Responsibilities" as appropriate

Planner	TL	High Risk Activities
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
		* Summarize Critical Steps (state of the plant, system or component depends solely on the individual worker, consequences of error is intolerable)
		* Anticipate traps (Error Likely Situations)
		* Evaluate Consequences (If Error Realized)
		* Evaluate Defenses (To Prevent Both Potential Errors and Events)

Planner	TL	ALARA
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
		* RWP Requirements / ALARA / Changing Conditions
		* Radiation Precautions

### Attachment 3 Post-Job Brief Checklist

(Sheet 1 of 2)

AWO NO. <div style="text-align: center;">M2 02 07951</div>	Equipment I.D. No. <div style="text-align: center;">2316</div>	Date: <div style="text-align: center;">03/01/2003</div>
---	---	--

FLS: Gorence/Kellogg		
Job Leader: <i>V. Gorence</i>		

	Checklist
✓	Was task accomplished with the expected results? <i>yes - found values initial lift on low side.</i>
✓	Is this the way the job should be performed in the future? <i>Look into possible <sup>with</sup> new technology (Equipment/units) possible ms person Xmitter upgrade to QH/cable upgrs -</i>
	Were the procedures accurate/adequate? <i>MATE identify which modules installed in which computer. No written to perform only 1 side at a time as needed.</i>
	Was the job description correct for the work being performed? <i>YFS</i>
	Were resources and information sufficient? <i>YFS</i>
	Was the training for the job appropriate and effective? <i>need to make better mock-up</i>
	Were planning and scheduling organized to reduce potential for human error? <i>YFS</i>
	Were work processes effective and supportive? <i>WARR HOUSE SUPPORT FOR TRAINING WAS INADEQUATE</i>

# **Attachment 3** **Post-Job Brief Checklist**

(Sheet 2 of 2)

M2 02 07951

2316

✓	<b>Comments</b>
	Did Supervision provide the needed support and appropriate guidance?
	YES
	Is Supervision aware of conditions (performance traps) that, if not corrected, could lead to human error next time task is performed.
	RIGHTING PLAN DRAFTED
	Is there any way this job could have been done better?
	YES NO
	Was a work planning feedback report filled out?
	NO
	Discuss any lessons learned required changes to procedure, AWO, work practices, etc.
	YES NONE
	Record material and spare parts used with stock codes.
	N/A
	Is job site cleaned and in better condition than "As Found"? (i.e., TR Tags removed)
	YES
	Are tools, equipment and spare parts returned to proper storage location?
	YES
	OTHER CONCERNS, QUESTIONS - (specify below)

08/17/01  
Approval Date

08/31/01  
Effective Date

Job Hazard Assessment, Part A: Hazard Control Worksheet

Page \_\_\_ of \_\_\_

Work Document Numbers

M2 02 07951

Work Description / Task Description

TEST MAIN STEAM SAFETY VALVES

For the work/task described above (check one):

- 1 Job hazard items checked "yes" in Part B "Hazard Identification Checklist" are sufficiently controlled by skill of the craft training and qualifications, Basis PPE or other protective measures currently in place (i.e., guardrails, barriers, etc.), and work does not present any lead, asbestos, Heat Stress, or tools not commonly used. No additional protection is prescribed.
2. ☒ Additional job hazard protection warranted (described below).
3. ☐ No workplace Safety Hazards identified.

Chst Item	Describe Safety Hazards Identified	Hazard Control - Describe how safety hazards will be controlled (Engineering Controls, Administrative Controls, Training/Q List, PPE, Acceptable Risk)
3a	HOT ENVIRONMENT	HEAT STRESS EVALUATION PER MP-19-SH-REF01514 HEAT STRESS MANAGEMENT (10/1/03 preliminary temperature reading 112° @ 0800) Do not leave hydrosset on valve with no attendant

Information below not required provided results of Job Hazard Assessment are documented in AWO system.

Prepared by: Bill Hughes

Print Name

Planne

Title

4848

Phone

03/01/2003

Date

Approved:

Gorence/Kellogg

Supervision, Print Name

*[Signature]*

Sign Name

FLS

Title

3/4/03

Date



# **Job Hazard Assessment, Part B: Hazard Identification Checklist**

(Complete one checklist for each work or task, as applicable)

Checklist Questions: Use the following questions to review work activity and identify Safety Hazards associated with specific work/work phase.	YES	NO	* SSM Section(s)
1. Does the job expose personnel to, or will personnel work with, hazardous or potentially hazardous materials, energy or conditions, such as:			
a. Asbestos containing materials (floor tiles, insulation, adhesives, etc.) ?	<input type="checkbox"/>	<input type="checkbox"/>	1, 24, 26, 27
b. Lead containing materials (lead not encased) ?	<input type="checkbox"/>	<input type="checkbox"/>	2, 17, 26, 27
c. Paint removal (requires testing for lead; may require testing for PCB's) ?	<input type="checkbox"/>	<input type="checkbox"/>	13, 17, 24, 27
d. Chemicals (corrosive, reactive, solid, liquid, gaseous, paint, solvent, etc.) ?	<input type="checkbox"/>	<input type="checkbox"/>	2, 24, 26
e. Cryogenic fluids (liquid nitrogen, super-cooled gases, etc.) ?	<input type="checkbox"/>	<input type="checkbox"/>	5, 24, 26, 27
f. Non-ionizing radiation or intense light sources (lasers, laser light, weld arcs, ultraviolet/infrared sources, etc.) ?	<input type="checkbox"/>	<input type="checkbox"/>	16, 24, 26, 29
g. Hot materials, open flame (soldering, brazing, welding, cutting, burning) ?	<input type="checkbox"/>	<input type="checkbox"/>	24, 29
h. Electrical systems (AC or DC, power, instrumentation) ?	<input type="checkbox"/>	<input type="checkbox"/>	6, 24
i. Hazardous energy control, lockout, tagout ?	<input type="checkbox"/>	<input type="checkbox"/>	12, 26
j. Water, steam, air, hydraulic or pneumatic systems, residual pressure, temporary lines, HELB ?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	12, 13, 24
k. Slips, trips, and falls; existing or caused by work (loose, slippery or wet surfaces; removal of flooring, decking, grating safety railing) ?	<input type="checkbox"/>	<input type="checkbox"/>	26, 28
l. Explosion or fire potential (hydrogen, volatile or flammable materials) ?	<input type="checkbox"/>	<input type="checkbox"/>	13, 24, 26, 27
m. Ionizing radiation (x-rays, other)?	<input type="checkbox"/>	<input type="checkbox"/>	(note HP)
n. Loud noises, possible hearing damage?	<input type="checkbox"/>	<input type="checkbox"/>	22, 24, 26
o. On or near bodies of water (drowning hazard) ?	<input type="checkbox"/>	<input type="checkbox"/>	8, 24
p. Underwater or diving operations?	<input type="checkbox"/>	<input type="checkbox"/>	24 (note a)
q. Demolition, dismantling, or removing any load bearing structure?	<input type="checkbox"/>	<input type="checkbox"/>	1, 26, 24
Other potentially hazardous materials (e.g.: non-asbestos insulation, high dust levels, etc.) ? Describe:	<input type="checkbox"/>	<input type="checkbox"/>	
2. Does the job utilize, or will personnel work with tools or equipment, such as:			
a. Hand or portable power tools?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10, 24
b. Machinery, machine tools, machine guarding, hazardous equipment?	<input type="checkbox"/>	<input type="checkbox"/>	18, 24
c. Aerial lifts (powered platforms, man-lifts, etc.) ?	<input type="checkbox"/>	<input type="checkbox"/>	23, 8
d. Scaffolding?	<input type="checkbox"/>	<input type="checkbox"/>	25, 8
e. Ladders?	<input type="checkbox"/>	<input type="checkbox"/>	15, 8
f. Rigging and hoisting (cranes, hoists, suspended loads)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	4
g. Personal fall protection (above water or >6 feet above work surface)?	<input type="checkbox"/>	<input type="checkbox"/>	8
h. Safety Barriers or Barricades?	<input type="checkbox"/>	<input type="checkbox"/>	26
i. Lift trucks, fork trucks?	<input type="checkbox"/>	<input type="checkbox"/>	9
j. Motorized transportation (cars, trucks, scooters) ?	<input type="checkbox"/>	<input type="checkbox"/>	21
k. Welding, brazing, or soldering equipment?	<input type="checkbox"/>	<input type="checkbox"/>	24, 27, 29
l. Instruments, testing devices (electrical, pneumatic, hydraulic), lasers?	<input type="checkbox"/>	<input type="checkbox"/>	6, 10, 12, 16
m. PCs, rubber gloves on/near machinery or hazardous equipment?	<input type="checkbox"/>	<input type="checkbox"/>	18, 24 (b)
n. Compressed air, air receivers, compressed gas cylinders ?	<input type="checkbox"/>	<input type="checkbox"/>	4, 13
o. Pressure washing (high pressure, ultra-high pressure, water laser)?	<input type="checkbox"/>	<input type="checkbox"/>	n/a
Other (describe)			

# **Job Hazard Assessment, Part B: Hazard Identification Checklist**

(Complete one checklist for each work or task, as applicable)

Checklist Questions: Use the following questions to review work activity and identify Safety Hazards associated with specific work/work phase.	YES	NO	* SSM Section(s)
3. Does the job expose personnel to, or have them work in, environmental extremes, such as:			
a. Hot or humid environments (>95°F)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	14
b. Cold environments (temperatures/wind-chill < 20°F)?	<input type="checkbox"/>	<input type="checkbox"/>	n/a
Other (describe):	<input type="checkbox"/>	<input type="checkbox"/>	
4. Does the work expose personnel to, or have them work within, enclosed areas or areas that are physically, physiologically, or psychology restrictive, such as:			3 (WC 4)
a. Confined spaces (manholes, vaults, and other areas where oxygen deficiency or fume accumulation is possible)?	<input type="checkbox"/>	<input type="checkbox"/>	3, 27
b. Materials utilized where additional ventilation may be required to maintain a safe atmosphere? (Consider recognized noxious or toxic agents, as well as materials not normally considered hazardous, such as paint strippers and cleaning agents, where fumes could accumulate.)	<input type="checkbox"/>	<input type="checkbox"/>	27
c. Rooms or enclosed areas not normally occupied or poorly ventilated? (May become oxygen deficient or accumulate hazardous fumes).	<input type="checkbox"/>	<input type="checkbox"/>	27
d. Multiple work crews in a limited work area? (Supervision must coordinate efforts to assure safety of all personnel performing work.)	<input type="checkbox"/>	<input type="checkbox"/>	3, 27
e. Manholes (are classified as confined spaces)?	<input type="checkbox"/>	<input type="checkbox"/>	3, 19, 26, 27
f. Excavations, such as trenches, holes, and tunnels?	<input type="checkbox"/>	<input type="checkbox"/>	3, 7, 26, 27
g. IDLH atmosphere (low oxygen levels, toxic gas)?	<input type="checkbox"/>	<input type="checkbox"/>	3
Other (describe):			
5. Will personnel require Personal Protective Equipment (PPE) for: (b)			
a. Eye and face protection? (safety glasses, face or welding shields, goggles) heat, chemicals, dust, intense light, electric flash, chips, grit)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	24
b. Foot, metatarsal protection?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	24
c. Hand protection? (chemicals, cuts, abrasions, heat, cold, burns, electrical)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	24
d. Head protection? (hard hat, other)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	24
e. Hearing protection?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	22, 24
f. Body protection? (shin guards, coveralls, PFDs, electric current)	<input type="checkbox"/>	<input type="checkbox"/>	24
g. Respiratory Protection? (fumes, dust, reactive chemicals, O2 deprivation)	<input type="checkbox"/>	<input type="checkbox"/>	(HP)
Other (describe):	<input type="checkbox"/>	<input type="checkbox"/>	
5. Other issues (describe):			

(HP) Controlled by Health Physics, MP-19-SH-SAP05 "Respiratory Protection" program.

(a) Controlled by common maintenance procedure C MP 701B "Safety Review of Commercial Diving"

(b) Radiological Protective Clothing (PCs) controlled by Health Physics.

\* Primary SSM section(s) for hazard topic shown in bold.

MP-19-SH-SAP01-001

Rev 001-01

Page 3 of 5



# START OF RECORD

SUBJECT

---

---

---

---