

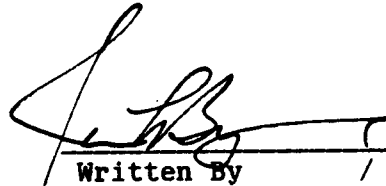
TEMPORARY PROCEDURE CHANGE FORM		T.P.C. No.: 84-32-TISI	
		DATE: 6-5-84	
Procedure No.	Revision No.	Check One:	
PT-10Y-K.5	"0"	Operations Procedure	Test Procedure ✓
Procedure Title: INSERVICE PRESSURE TEST, CONTAINMENT SPRAY PUMP 21 DISCHARGE HEADER PIPING			
Description of Change: CHANGED TEST PRESSURES PER ATTACHED PAGES.			
Reason For Change: 1.) TO CORRECT TEST PRESSURE BASED ON DESIGN SPECIFICATION OF LINE PRESSURE. (THIS LINE IS CLASS 301 INSTEAD OF CLASS 601) 2.) TO DEFINE OPERABILITY AND ACCEPTANCE CRITERIA AS REQUIRED BY ASME SECTION XI			
Temporary procedure changes which involve a change of intent require a pre-implementation SNSC review, <u>except</u> when continued or safe plant operation is in jeopardy. For these exceptions, C.O.E. concurrence is required.			
Change Of Intent	YES	NO X	C.O.E. Concurrence:
Initiator:	Title:	S.W.S. Approval:	Date:
DON SHERMAN	TEST ENG.	[Signature]	6/6/84
EXPIRATION DATE:			
Incorporate as Permanent Change	(YES)	NO	Section head Approval: John Quirk PER TELEPHONE 6-5-84 (TIME) 2330
S.N.S.C. Review	Signature: [Signature]	Meeting No: P38	Date: 6-8-84


INDIAN POINT STATION

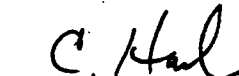
UNIT NO. 2

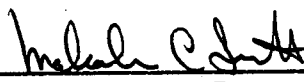
PT-10Y-K.5 Rev.0


INSERVICE PRESSURE TEST, CONTAINMENT SPRAY PUMP 21 DISCHARGE HEADER PIPING


 5-21-84
Written By / Date

 6/1/84
Reviewed By / Date

 6/1/84
Reviewed By / Date

 6/1/84
Concurrence By:
General Manager / Section Head

 835 6/1/84
SNSC Review / Date

 6/1/84
Approved By: / Date

TEST EQUIPMENT

1. Test Procedure Number and Title:

PT-10Y-K.5 INSERVICE PRESSURE TEST
CONTAINMENT SPARY PUMP 21 DISCHARGE
HEADER PIPING

2. Equipment Needed

[illegible]

T.P.C. 84-32-TIS11
G-5-84 D.N.2.

INSERVICE PRESSURE TEST

Portions of Containment Spray System

1.0 OBJECTIVE

To perform a pressure test on the portions of the following Containment Spray Line:

1. 51

2. 164

That will satisfy the Periodic Test Requirements of Reference 2.1, Article IWA-5000 and Article IWC-5000 for Quality Group B.

2.0 REFERENCES

2.1 ASME Boiler and Pressure Vessel Code, Section XI, 1974 Edition, inclusive of Summer '75 Addendum, with exceptions sited in Ref. 2.2 where 1980 Edition inclusive of Winter 1981 Addendum is applicable.

2.2 TAD-18, Inservice Pressure Test Program.

2.3 Inservice Inspection Flow Diagram A206744.

2.4 Hydrostatic Test Isometric Drawing GDM-1622, GDM-1623 .

2.5 Inservice Pressure Test Master Data Sheets.

2.6 QA 7101 Supplement 1, Qualifications and Certification of Visual Examination Personnel.

2.7 TAD-6, Calibration and Control of M&TE.

3.0 PRECAUTIONS AND LIMITATIONS

- 3.1 Connecting piping not within the test boundary or tested at a lower pressure shall be vented or protected from over pressurization caused by leaking boundary valves.
- 3.2 Test boundary piping shall be provided with relief valve protection to prevent over pressurization of the piping, etc. In no case shall this pressure exceed 106% of the test pressure.
- 3.3 Instrumentation within the pressure boundary must either have sufficient range to accept the test pressure or be isolated. If instrumentation is isolated and not disconnected, checks must be made during pressurization to ensure isolation valves are not leaking.
- 3.4 Personnel not required for testing shall be kept clear of the immediate test area. Non-test Personnel in the area should be made aware that testing is in progress by personnel performing the test.
- 3.5 Prior to connecting test equipment to any system, the test equipment shall be verified clean by visual examination of the test equipment connections. The examination shall be performed by the operator connecting the equipment.
- 3.6 The test medium shall be verified to be of a quality which is equal to or better than the system operating medium.
- 3.7 During the pressure testing of new welds, repairs and mechanical joints, the pipe area of this work shall be left uninsulated, unpainted and exposed for examination.
- 3.8 Valve packing may be adjusted as required to minimize leakage at pressure less than or equal to normal operating pressure. Pump packing may similarly be tightened to minimize leakage at pressures less than or equal to normal operating pressure. If excess packing leaks occur during the pressure test then the packing can be tightened only with permission of the Senior Watch Supervisor (SWS). To ensure proper component operation at normal pressure, the packing may be readjusted after the pressure test is complete.
- 3.9 LIMITING TEST PARAMETERS INCLUDE

3.9.1 Minimum plant conditions: Shutdown $\leq 350^{\circ}\text{F}$ or LCO prepared

3.9.2 Test Medium: Pure Water

3.9.3 Minimum Permissible Pressure (MPP): ⁴⁶²~~450~~ psig

3.9.4 Maximum Allowable Pressure (MAP): ⁴⁸⁵~~400~~ psig

3.9.5 Relief valve setting for hydrostatic test pressure protection: ⁴⁹⁰~~495~~ psig

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3.10 For tests involving extensive piping run or piping on different elevations, the Test Engineer shall establish reliable communications as necessary for the performance of the test.

3.11 Only Operators are allowed to change the position of a valve.

3.12 The pressurization source must be attended by an operator at all times during pressurization.

3.13 Examinations shall be performed by certified Level I or Level II Visual Examiners. The Test Engineer shall be a Level Two Visual Examiner. Certification shall be in accordance with reference 2.6

4.0 PREREQUISITES

4.1 Notify QA so that they will notify the Authorized Nuclear Inspector (ANI) of the test and provide sufficient notice for the inspector to witness, if he desires, any or all sections of this test. Record this notification on Data Sheet, Section 1.

4.2 Test pressure gauges shall be calibrated within two (2) weeks of the date that the test is performed in accordance with Reference 2.7. The gauges shall have a dial gauge graduated over a range of at least 1.5 times but not more than three (3) times the maximum allowable pressure (MAP). The test gauges shall provide results accurate to within 0.25% of full scale. Record M&TE No.'s on the Equipment List in the front of this procedure. Record on Data Sheet, Section 1 that a copy of the calibration data sheet is attached and that the gauges are calibrated within the last two (2) weeks.

- 4.3 Set hydrostatic testing relief valve pressure to 795 psig $\pm 0\%$, $\pm 1\%$ ($\leq 106\%$ of test pressure P_t). Verify set point by isolating pressure source from the piping to be tested and gradually raising the pressure to determine set point. Record pressure on Data Sheet, Section 1.

- 4.5 Request RWP to gain access to the following areas: PAB Piping Pen and the Containment Spray Pump Cell.

- 4.6 The operator shall visually examine the test equipment for cleanliness. If dirt is found, the equipment shall be cleaned. Record this examination and cleaning on Data Sheet, Section 1.

5.0 PROCEDURE

- 5.1 Obtain permission from the SWS to commence test. The SWS shall initial the data sheet indicating his permission is granted.

5.1.1 The SWS shall review the valve lineup in Data Sheet Section 2 using Figure 1 and Reference 2.3 as needed. If adjacent piping, not within the test boundary is not protected from over pressurization (that could be caused by this test and leaking boundary valves) he should add additional valves and valve positions to the valve line up Data Sheet, Section 2, to ensure that over pressurization does not occur. Also, add these valves to "as left" Conditions Sheet, Data Sheet Section 6. Record this review on Data Sheet, Section 1.

- 5.2 Inform the Senior Reactor Operator (SRO) that the test is going to be performed. The SRO shall initial the Data Sheet, Section 1 indicating that he has been informed. The SRO is to be informed when the test is completed. The SRO shall sign and date under Data Sheet, Section 8 indicating that he has been informed of the completion of this test.

- 5.3 Install hydrostatic test rig including test medium, source, pump test gauge, drain and relief valve at Valve S-7 record completion on Data Sheet, Section 1. See Figure 1 for location.

- 5.4 Perform the valve lineup in the Data Sheet, Section 2.

5.5 The certified Level I or Level II Visual Examiner(s) shall walk down system to be tested (using Figure 1 for guidance) and identify any standing water that exists prior to pressurizing the tested pipe sections in step 5.8. Record findings on Data Sheet, Section 3 if no findings, write none and sign.

5.6 Fill or verify system filled and vented as follows:

5.6.1 Fill the test boundary by opening valves 866A and S-7.

5.6.2 Vent the system through the hydrostatic test rig. (Collect any contaminated water as directed by the H.P.).

5.6.3 When a steady stream of water issues from the vent, close the vent on the hydrostatic test rig.

5.6.4 Close valve 866A

5.6.5 Record on Data Sheet, Section 1, that the system has been filled or verified filled and vented.

5.6.6 Remove from piping and surrounding area any water accumulated caused by venting.

5.7 Record temperature of piping at any location within the test boundary using a contact thermometer. Record temperature on Data Sheet, Section 1.

CAUTION

The hydrostatic test rig shall be attended by an operator at all times during pressurization.

5.8 Open, or verify open, valve S-7 and pressurize this system to at least MPP not to exceed MAP (on both test gauges). Record pressure and time it was reached on Data Sheet, Section 1..

462
MPP is ~~450~~ psig
485
MAP is ~~400~~ psig

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- 5.9 Maintain pressure band in step 5.8 for required hold period of 4 hours (10 minutes for non-insulated and exposed lines) and for the duration of the visual examination. (Use reference 2.4 to assist in locating insulated portions of piping.)

5.9.1 After the required hold period, the Level I or Level II Visual Examiner shall examine all piping and components within the test boundary as follows:

NOTE: EXAMINATION PER REFERENCE 2.1

- (a) The examination, which may be conducted without the removal of insulation, shall be performed by inspecting (1) the exposed surfaces of joints in component insulation to locate evidence of leakage and (2) the floor areas (or equipment) directly underneath components.
- (b) Examination of insulation joints along vertical surfaces of vessels, walls, and piping need not be performed, provided the lowest terminal ends of vertical surfaces are examined, and the insulation design is such that any leakages originating along the vertical surfaces can accumulate and leak from the insulation joint at the lowest elevation.
- (c) Examination of insulation joints along horizontal surfaces of components shall be conducted at each insulation joint except where accessibility is limited by structural members or other components. In the latter cases, either the insulation shall be removed to permit component examination, or provisions shall be included to channel potential leakages to areas accessible for examination.
- (d) At locations where leakages are normally expected and collected (e.g., valve stems, pump seals), the examination shall verify that the leakage collection system is operative.

5.9.2 Record test pressure and time that the examination begins on Data Sheet, Section 1.

5.9.3 Record that each pipe section or component observed and listed in Data Sheet, Section 4 was "SAT" or "USAT" using a X in the appropriate column. Record on Data Sheet, Section 4 if the pipe being inspected is or is not insulated.

- a. "SAT" indicates that there was no sign of test medium leakage including valve and pumps packing leakage.

- b. "USAT" indicates there were signs of leakage All items checked "USAT" must be explained in Data Sheet, Section 5 as to the most probable source of leakage. An MWR should be initiated for each USAT item. Record MWR Number in Data Sheet, Section 5.

5.10 Upon completion of the examination, depressurize the test boundary, close valve S-7 and restore system as follows:

- 5.10.1 Remove hydrostatic test equipment. Record this Step in Data Sheet, Section 1. Double verification required.
- 5.10.2 Restore tested system to "As Left" condition as authorized by the SWS on Data Sheet, Section 6. This Data Sheet indicates a suggested valve line-up that the SWS must authorize by signing Data Sheet, Section 6, prior to performing. The SWS may modify the valve line-up using a pen and ink change prior to authorization. Double Verification Required.
- 5.10.3 Technicians shall perform a calibration check on the pressure test gauges in accordance with Reference 2.7. Record that the calibration data sheet are attached to this procedure on Data Sheet, Section 1.
 - a. Test Engineer shall review the recalibration date ensure that at least one gauge has maintained an accuracy of within 0.25% of full scale. Record findings on Data Sheet, Section I.
 - b. If neither gauge is within 0.25% of full scale and if one gauge error was such that the test pressure as read on this gauge was greater than the actual MPP, then continue to step 5.10.2. Otherwise repeat this test beginning with step 4.2

(1) use new data sheets if the test is to be repeated.

(2) record this evaluation on Data Sheet, Section 1

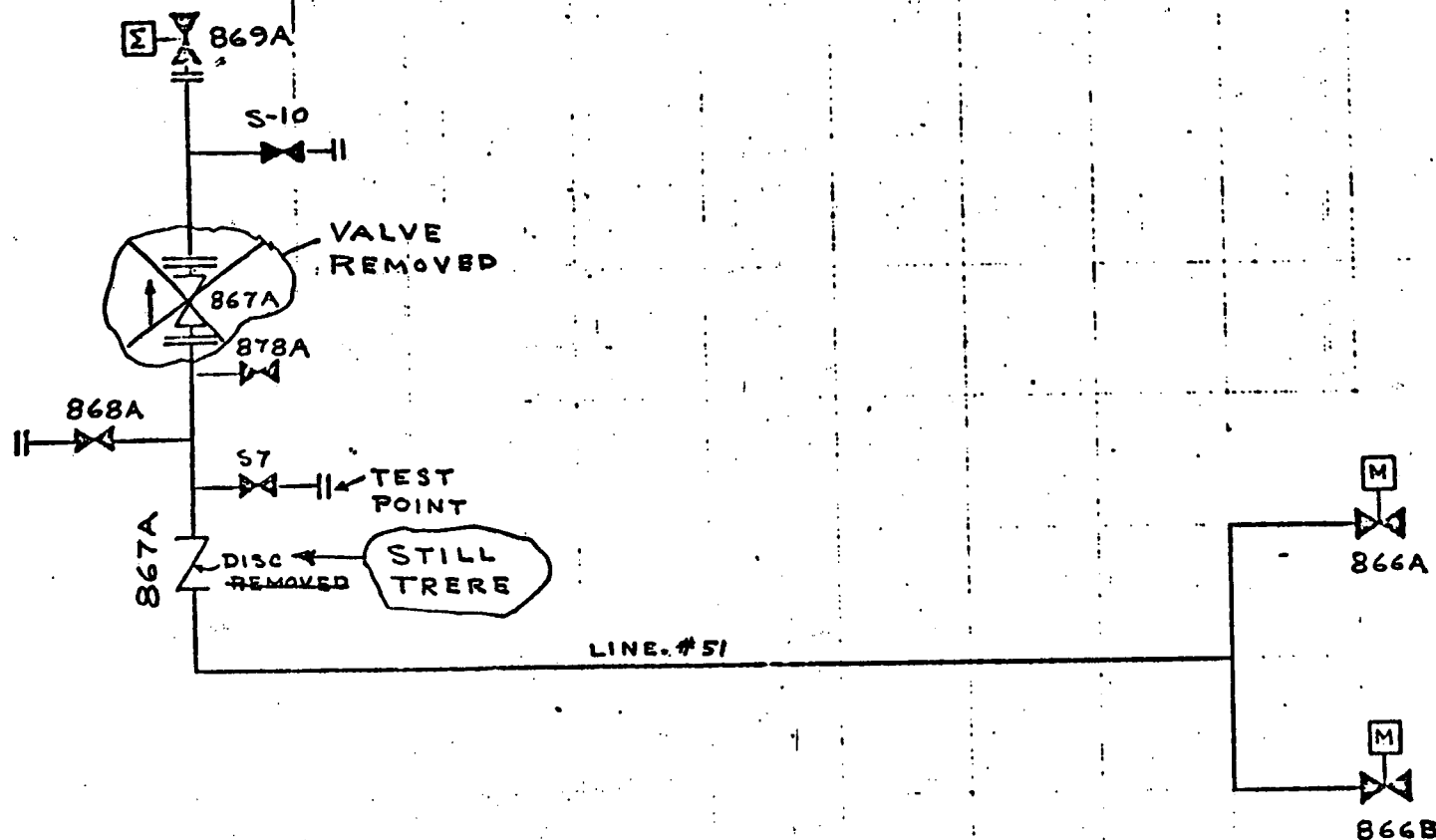
6.0 Test Review

- 6.1 All test personnel including operators, technicians and examiners may include in Data Sheet, Section 7 any pertinent comments that have not been made previously.

6.2 The Test Engineer (A certified Level II Visual Examiner shall review Data Sheet, Section 4 for unsatisfactory ("USAT") conditions and record his findings on Data Sheet, Section 8.

6.2.1 Notify the SWS of any unsatisfactory ("USAT") conditions listed in Data Sheet, Section 4, if any. Record the name of the SWS notified in Data Sheet, Section 8.

6.2.2 Notify the SRO that this test is completed. The SRO shall record this notification on Data Sheet, Section 8.



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MIN. TEST PRESSURE 750 462 PSIG
 MAX. ALLOW PRESSURE 780 485 PSIG
 TEST RELIEF VALVE SET 725 PSIG
 TEST GAGE RANGE 0-1125-2250 PSIG
 693-1386

QUALITY GROUP B
 CLASS II
 SPEC 301
 REF. ISOMETRIC GDM-1622 GDM 1623
 REF. DWG. A206744-3

INSERVICE
 PRESSURE
 TEST
 PROCEDURE No. PT-10Y-K.5
 FIGURE No. 1

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PROCEDURE STEP4.1. ANI notified of test

Test Engineer and Date..... /

Name of ANI Contacted/ANI company..... /

Will ANI witness test - Yes/No..... /

4.2. Test Gauges are Calibrated and Calibration Data Sheets are AttachedGauge A

Test Engineer Signature/Date..... /

Gauge B

Test Engineer Signature/Date..... /

4.3. Record hydro pump set pressure of relief valve (490 psig +0%, -1%)

Pressure..... psig

Signature/Date..... /

4.6. Test equipment cleanliness examination and cleaning

Cleanliness Examiner/Date..... /

Did equipment require cleaning Yes/No..... /

5.1. SWS permission to test

SWS Signature..... /

5.1.1. SWS review of valve line-up

Have additional valves and valve positions been added to the Valve Line-up, Data Sheet, Section 2 and "As Left" Condition Data Sheet, Section 6 ?.....(circle one) YES NO

SWS/Date..... /

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15.2 SRO informed of test

Signature/Date..... /

5.3 Install hydrostatic test rig

Signature/Date..... /

5.6.5 Fill system or verify filled and vented

Signature/Date..... /

5.7 Measure test pipe temperature

Temperature.....

Signature/Date..... /

5.8 Pressurize system to greater than MPP (⁴⁶²>750 psig, ⁴⁸⁵<788 psig)

Pressure.....

Time.....

Signature/Date..... /

5.9.2 Record pressure and time that examination begins

Pressure/Time..... /

Signature/Date..... /

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5.10.1 Hydrostatic test equipment removed (Double Verification Required)

Signature/Date..... /

Signature/Date..... /

5.10.3 Test Gauges Recalibrated and Calibration Data Sheet is Attached

Gauge A

Test Engineer Signature/Date..... /

Gauge B

Test Engineers Signature/Date..... /

5.10.3 Test Engineer review recalibration data

a. Is at least one of the test gauges reading
within 0.25% of full scale(circle one) YES NO

b. If NO, is gauge error on either gauge such that
the test pressure as read on this gauge was
greater than the actual MPP?.....(circle one) YES NO

c. If NO, then collect new data sheets for the
re-test

Test Engineer/Date..... /

INITIAL VALVE LINEUP
(SEE FIGURE 1 FOR LOCATION)
(PROCEDURE PARAGRAPH 5.4)

LINE NO.	VALVE NO.	DESIRED POSITION	INITIALS	DATE
164	878A	CLOSED		
51	866B	CLOSED		
	866A	CLOSED		
	868A	CLOSED		
	869A	CLOSED		
	S7	CLOSED		
	S10	CLOSED		

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"AS FOUND" CONDITIONS
(PROCEDURE PARAGRAPH 5.5)

LINE NUMBER/COMPONENT	INITIAL CONDITIONS /REMARKS/SIGNATURE
LINE 164 FROM LINE 51 TO VALVE 878A	
VALVE 878A	
LINE 51 FROM VALVES 866A AND 866B TO	
VALVE 869A	
VALVE 866A	
VALVE 867A	
VALVE 868A	
VALVE 869A	
VALVE 866B	
VALVE S7	
VALVE S10	

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TEST EXAMINATION RECORD SHEET
(SEE FIGURE 1 FOR LOCATION)
(PROCEDURE PARAGRAPH 5.9.3.)

LINE/COMPONENT INSPECTED

	ES		FL		SA		EC		INSUL	INIT-
	SAT	USAT	SAT	USAT	SAT	USAT	SAT	USAT	Y/N	IALS
LINE 164 FROM LINE 51 TO VALVE 878A										
VALVE 878A										
LINE 51 FROM VALVES 866A AND 866B										
TO VALVE 869A										
VALVE 866A										
VALVE 867A										
VALVE 868A										
VALVE 869A										
VALVE 866B										
VALVE S7										
VALVE S10										

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ES - Exposed Surfaces
FL - Floor Area
SA - Surrounding Area
EC - Equipment & Components

LEAKAGE COMMENT
(PROCEDURE PARAGRAPH 5.9.3.b)

LINE / COMPONENT

PROBABLE SOURCE

INITIALS

MWR NO.

"AS LEFT CONDITIONS" SHEET
(SEE FIGURE 1 FOR LOCATION)
(PROCEDURE PARAGRAPH 5.10.3)

LINE NO.	VALVE NO.	POSITION	INITIALS	INITIALS	DATE
164	878A	CLOSED			
51	86CB	CLOSED			
	866A	CLOSED			
	868A	CLOSED			
	869A	CLOSED			
	S7	CLOSED			
	S10	O C			

CHANGE TO
O C
FOR ALL VALVES

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SWS reviewed and authorized "As Left Condition" valve line-up

SWS Signature/Date.....

COMMENTS

SIGNATURE

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TEST RESULTS SHEET
(PROCEDURE PARAGRAPH 6.2)

Based on the values in Data Sheet Section 4, circle the appropriate Actual Response in the Table below.

Criteria	REQUIRED	ACTUAL
Were there any USAT conditions in Data Sheet, Section 4.	NO	YES NO

Any required Valve in the Table above that is not found satisfactory shall be brought to the attention of the duty Senior Watch Supervisor immediately. Record below the SWS that was notified.

Name of SWS Notified.....

Test Visually Examined by Certified Level I or Level II Visual Examiner

Signature / Date..... /

SRO Informed of Completion

Signature/Date..... /

Inservice Pressure Test Project Manager

The test is complete and the Test Results Section is completed accurately. If any error was found in the Test Results Section that would cause a Required Valve not to be satisfied, the SWS shall be notified immediately.

Inservice Pressure Test Project Manager

Signature / Date..... /

EQUIPMENT OPERABILITY AND ACCEPTANCE CRITERIA

The test piping shall be considered operable if there is no leakage observed

OR MECHANICAL JOINTS

NOTE: Leakage from a valve or pump packing gland may be accepted provided it is not excessive in the judgment of the SWS.

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The following is to be completed by the Senior Watch Supervisor:

Based on a review of the Test Results, are the
Operability Criteria satisfied? (circle one)..... YES NO

If the Operability Criteria are not satisfied:

A) Take the required Technical Specification action.

B) An SOR Shall be prepared.....SOR# _____

Comments: _____

SWS Signature/Date..... / _____

If Operability Criteria are not satisfied, COE Review required.

Signature/Date..... / _____

*RETURN COMPLETED TEST TO THE TEST ENGINEER.

Overall Acceptance Criteria

- A) The Overall Acceptance Criteria is met if there is no leakage or the leakage observed is accepted by the SWS.
- B) Based on review has the Overall Acceptance Criteria been met? (circle one)..... YES NO
- C) If NO is circled, list corrective action taken.

D) Comments :

Test and Performance Engineer (Certified Level III Visual Examiner)

Signature / Date..... /