NUCLEAR GENERATION SITE UNIT 1 COMPLETE REVISION EFFECTIVE DATE JUL 10 1985

ENGINEERING PROCEDURE SO1-V-2.15 REVISION SO PAGE 1 OF 1 TCN 5-20

PAGE 1 OF T18

IN-SERVICE TESTING OF VALVES PROGRAM

TABLE OF CONTENTS

SECT	TION		PAGE	•
1.0	OBJECTIVE		2	
2.0	REFERENCES		2	•
3.0	PREREQUISITES		2	
4.0	PRECAUTIONS		3	
5.0	CHECKLIST(S)		3	
6.0	PROCEDURE 6.1 Test Interval 6.2 Valve Category 6.3 Requirements 6.4 Corrective Measures 6.5 Exceptions 6.6 Instrumentation		3 3 4 13 14 15	
7.0	RECORDS	°	15	•
ΑΤΤΑ	ACHMENTS 1 Table Information and Explanation of Abbr 2 System Valve List 3 Cold Shutdown Valve Testing Justification 4 Computer Assisted Management of IST 5 Explanation of Valve Relief Requests	reviations n Table	16 23 101 115 117	Added



0181d.cln

8801120424 871228 PDR ADUCK 05000206 P PCR 2000206

QA PROGRAM AFFECTING

IN-SERVICE TESTING OF VALVES PROGRAM

REVISION 5

TCN 5-23

ENGINEERING PROCEDURE S01-V-2.15

PAGE 2 OF 118

of 2

REOR

1.0 OBJECTIVES

- 1.1 To define the requirements for in-service testing of ASME Code Class 1, 2 and 3 valves.
- 1.2 To meet the requirements of Reference 2.1.3 to the maximum extent practical.
- 1.3 To partially meet the requirements of the Technical Specifications, Section 4.7 (a complete description of organizational responsibilities to meet the requirements of Technical Specification 4.7 is provided in Reference 2.2.1).

2.0 REFERENCES

- 2.1 Licensing Commitments
 - 2.1.1 Code of Federal Regulations, Title 10, Part 50, Appexdix Jack
 - 2.1.2 Unit 1 Technical Specifications, Section 4.7
 - 2.1.3 American Society of Mechanical Engineers (ASME), Boiler and Q Pressure Vessel Code, Section XI, 1977 Edition, including Addenda through Winter 1979 1983
- 2.2 Site Order
 - 2.2.1 SO123-IN-1, In-Service Inspection Programs
- 2.3 Procedure
 - 2.3.1 SOI-V-1.12, Containment Penetration Leak Rate Testings
- 2.4 Operating Instructions
 - 2.4.1 SOI-12.4-2, Operations In-Service Valve Testing
 - 2.4.2 SOI-12.8-8, Refueling Interval In-Service Testing of Valves
 - 2.4.3 SO1-12.9-9, Safety Injection System Check Valve Tests

3.0 PREREOUISITES

- 3.1 Prior to use of an uncontrolled (pink) copy of this Site document, it is the user's responsibility to verify that the revision and any TCNs are current by utilizing one of the following methods:
 - 3.1.1 Check it against a controlled copy and any TCNs;

SO1-V-2,15

PAGE & OF LAS

2012

EUDRAED

- 3.1.2 Access an SCE Document Configuration System (SDCS) TSO terminal;
- 3.1.3 Contact CDM by telephone or through counter inquiry;
- 3.1.4 Obtain an uncontrolled (pink) copy of the Site document from CDM;
- 3.1.5 Reference a current (within one week) Destination Configuration Control Log and associated daily update.
- 3.2 The implementing Procedures and Operating Instructions shall be updated within one month after an approved revision of this Procedure is released. The Technical Division IST Coordinator shall provide Station Operations and Maintenance Managers with a copy of the approved revision to serve as notification of a revision.

4.0 PRECAUTIONS

- 4.1 The ASME Section XI test requirements (Reference 2.1.3) shall be met to the maximum extent practical. It is not the intent of this Procedure to test valves that may place the Plant in an unsafe condition. Care should be exercised to ensure that no test will be conducted that would violate Technical Specifications or other Plant operating contraints:
- 4.2 Special care must be exercised to ensure that the allowed test interval is not exceeded. For valves routinely tested at one (1) month or three (3) month intervals, a test interval extension is allowed. This extension shall not exceed twenty-five percent (25%) of the inspection interval and must not cause any three (3) consecutive surveillance intervals to exceed 3.25 times the specified surveillance interval.

5.0 CHECKLIST(S)

- 5.1 None
- 6.0 PROCEDURE
 - 6.1 Test Interval

6.1.1

The value in-service testing program delineated herein covers a ten (10) year interval commencing on January 1, 1978 and terminating on January 1, 1988. 1988

REVISED



ENGINEERING PROCEDURE S01-V-2.15 REVISION 5 TCN 5-20

PAGE 4 OF 118

-OPERATIONS

CLARIFIE

- 6.0 <u>PROCEDURE</u> (Continued)
 - 6.2 Valve Category

.1

.3

6.2.1

Valves are categorized as follows:

- Category A valves for which seat leakage is limited to a specific maximum amount in the closed position for fulfillment of their function.
- Category B valves for which seat leakage in the closed . . 2 position is inconsequential for fulfillment of their function.
 - Category C valves which are self-actuating in response to some system characteristic, such as pressure (relief valves) or flow direction (check valves).
 - Category D valves which are actuated by an energy source capable of only one operation, such as rupture disks or explosive actuated valves.

NOTE:

Valves covered in this Procedure have been placed in one or more of these categories. When more than one distinguishing category characteristic is applicable, all requirements of each of the individual categories are applicable. Duplication or repetition of common testing requirements is not necessary.

6.3 Requirements

NOTES: 1.

Subsection IWV of Reference 2.1.3 defines the requirements for in-service testing of Code Class 1, \not and 3 valves. Test results are intended to verify valve operational readiness on a continuing basis. Maintenance shall have the responsibility for maintaining the surveillance schedule for all valves except those tested by Maintenance. The valves tested by Maintenance are; check valve tests specifically identified for disassembly by Attachment 2 and Safety/Relief valves.

2.

Attachment 2 itemizes all valves subject to the test requirements of this Procedure including the valve category and test mode.

ENGINEERING PROCEDURE S01-V-2.15 REVISION 5 TCN 5-20

PAGE 5 OF 118

6.0 PROCEDURE (Continued)

NOTES: (Continued)

.1

- Where alternate and additional testing requirements from 3. the Technical Specifications are used, they are described in Attachments 1 and 3.
- Category A and B Valves 6.3.1
 - Test Frequency: Category A and B valves shall be exercised at least once every (3) months with the exceptions defined. below and as noted in Attachment 3.
 - Selecting valves to test at cold shutdown intervals: For .1.1 each outage of greater than 48 hours, the IST Coordinator will provide two lists of valves to be tested prior to return to Mode 2 to Operations and Maintenance.

List #1: Valves which must be tested each outage (if it has been greater than 90 days since the last test).

List #2: Additional valves which must be tested for the specific outage.

- Operations and Maintenance will be required to conduct the .1.2 testing prior to Mode 2 and, within one week, provide the test results to the IST Coordinator.
- .1.3 The IST Coordinator will then review the test results and create a list (as in List #2, above) of the next set of valves requiring test. This will be based on four factors:
 - The importance to safety assigned each valve not .a. tested in the last 90 days.
 - b. The maintenance history (reliability) of each valve.
 - The time since each valve was'tested. C.
 - As a matter of policy, an initial requirement of 25% d., (minimum) of all cold shutdown valves will be tested each Mode 5 forced outage.

This new list will then be sent to Operations and Maintenance, as in 6.3.1.1.1 above, and the process repeated.





yord

Added



ENGINEERING PROCEDURE S01-V-2.15 REVISION 5 TCN 5-20

PAGE 6 OF 118

Added

6.0 PROCEDURE (Continued)

- Maintenance of the List 6.3.1.1.4
 - .1.4.1 The IST Coordinator will maintain a list of valves to be tested during the next outage of greater than 48 hours.
 - .1.4.2 This list will be documented on a memo to the Unit 1 Superintendent or his designee and a copy will be sent to CDM each time it is issued.
 - .2 Exercising Procedure
 - Valves shall be exercised to the position required to .2.1 fulfill their function unless such operation is not practical during Plant operation. If only limited operation is practical during Plant operation, the valve shall be part-stroke exercised during Plant operation and full-stroked during cold shutdown. Valves which cannot be exercised during normal Plant operation are specifically 👾 identified in Attachment 3 and shall be full-stroke exercised during cold shutdown or refueling.
 - In the case of frequent or extended cold shutdowns, these .2.2 valves need not be exercised more often than once every three (3) months.
 - The necessary valve stem or disk movement shall be .2.3 established by exercising the valve while observing either an appropriate indicator which signals the required change of valve stem, or disk position, or indirect evidence, such as changes in system pressure, flowrate or temperature which reflect stem or disk position.
 - Power Operated Valves .3
 - The limiting value of full-stroke time of each power .3.1 operated valve is specified, where applicable, in Attachment 2.
 - .3.2 The stroke time of all power-operated valves shall be measured to the nearest tenth second whenever such a valve is full-stroke tested.

PAGE 7 OF 118

LARIFIED

6.0 <u>PROCEDURE</u>. (Continued)

6.3.1.3.3

If an increase in stroke time of 25% or more from the previous test for valves with stroke times greater than ten seconds or 50% or more for valves with stroke times less than or equal to ten seconds is observed, test frequency shall be increased to once each month until corrective action is taken at which time the original test frequency shall be resumed.

Valves tested only at cold shutdown or refueling, which exhibit an increase in stroke time as specified above, need not be tested more frequently than once a month.

NOTE: To avoid a monthly shutdown for these tests, corrective action should be taken as soon as possible.

Once corrective action is taken, the monthly test frequency is no longer required and the original test frequency may be resumed. In any case, any abnormality or erratic action shall be reported.

3.4 Fast Acting Valves

3.4.1 Valves with stroke times of 2 seconds or less that exhibit an increase in stroke time of 50% or more need not have the test frequency increased. However, if a Fast Acting Valve stroke time does exceed its maximum stroke time value. it will be declared inoperable.

.3.5 Valves in Regular Use

.3.5.1 Valves which operate in the course of Plant operation at a frequency which would satisfy the exercising requirements of this Procedure need not be additionally exercised provided the observations otherwise required for testing are made and analyzed during such operation and recorded in the Plant record at intervals no greater than three (3) months.

.3.6 Valves in Systems Out Of Service

.3.6.1 If valves are in a system that is out of service, exercising is not required for such valves except within 30 days prior to the return of the system to service.

PAGE 8 OF 118

6.0 PROCEDURE (Continued)

6.3.1.3.7 Fail-Safe Valves

- .3.7.1 Valves with fail-safe actuators shall be tested by observing the operations of the valves upon loss of actuator power. If these valves cannot be tested once every three (3) months, they shall be tested during each cold shutdown. In case of frequent or extended cold shutdowns, these valves need not be tested more often than every three (3) months.
- 6.3.2 Category C Valves

.1

Safety and Relief Valve Tests

- Test Frequency: Safety and relief valves shall be tested .1.1 with the following frequencies:
- .1.1.1 There are fourteen (14) safety and relief valves which require testing in accordance with Reference 2.1.3. IWV-3510. For refueling intervals of 18 months, a minimum of five (5) valves will be tested at each refueling. All valves will be tested in a period of not more than five (5) years.
- .1.1.2 There are two (2) pressurizer relief valves. These will be tested at each refueling shutdown in accordance with Technical Specification 4.1.2.
- .1.1.3 There are ten (10) main steam safety valves. These will be tested at each refueling shutdown in accordance with Technical Specification 4.1.2.
- .1.1.4 The scheduling and bookkeeping required for these tests shall be the responsibility of Maintenance.
- .1.2 Testing Procedure
- .1.2.1 Safety and relief valve setpoints will be tested in accordance with ASME Performance Test Code 25.3-1976. Bench testing with suitable hydraulic or pneumatic equipment or testing in place with hydraulic or pneumatic assist equipment may be used. Valves so tested are not required to be additionally leak tested in accordance with Reference 2.1.3 IWV-3420.
- .1.3 Additional Tests
- .1.3.1 If any value in a system fails to function properly during a regular test, additional valves in the system shall be tested as determined by the requirements of Reference 2.1.3, IWV-3513. If any of these additional valves fail to function properly on test, all valves in this category in the system shall be tested.

ENGINEERING	PROCEDURE	S01-1	V-2.1	5
REVISION 5		PAGE	9 OF	118
TCN 5-20	•		·	

Jed

6.0 **PROCEDURE** (Continued)

6.3.2.1.3.2 Results shall be reported to the IST Coordinator within a Added week of test completion.

- .2 Check Valve Tests
- .2.1 Test Frequency
- .2.1.1 Check valves shall be exercised at least once every three (3) months, with the exceptions defined in step 6.3.2.2.2 and itemized in Attachment 3. The scheduling of the tests depends on what Mode the system has to be in for testing the check valves.
- .2.1.2 The scheduling (except as provided for in 6.3.2.2.1.3) and bookkeeping required for these tests will be the responsibility of Operations. To determine the operational mode required for valve testing, refer to Attachment 3 and References 2.4.1 and 2.4.2.
- .3 Selecting Valves to Test at Cold Shutdown Intervals:
- .3.1 Check valves tested at Cold Shutdown intervals shall be tested when and as directed by the IST Coordinator in the Technical Division.
- .3.2 For each outage of greater than 48 hours, the IST Coordinator will provide two lists of valves to be tested prior to returning to Mode 2 to Operations and Maintenance.

List #1:

Valves which must be tested each outage (if it has been greater than 90 days since last test).

List #2:

Additional valves which must be tested for the specific outage.

- .3.3 Operations and Maintenance will be required to conduct the testing prior to Mode 2 and, within one week, provide the test results to the IST Coordinator.
- .3.4 The IST Coordinator will then review the test results and create a list (as in List #2 above) of the next set of valves requiring test. This will be based on four factors:
 - a. The importance to safety assigned each valve not tested in the last 90 days, and
 - b. The maintenance history (reliability) of each valve.

PAGE 10 OF 118

6.0 PROCEDURE (Continued)

(Continued) 6.3.2.3.4

The time since each valve was tested. с.

- As a matter of policy, an initial requirement of 25% d. (minimum) of all cold shutdown valves will be tested each Mode 5 forced outage.
- Maintenance of the Test List .3.5
- .3.5.1 The IST Coordinator will maintain a list of valves to be tested during the next outage of greater than 48 hours.
- .3.5.2 This list will be documented on a memo to the Unit 1 Superintendent or his designee and a copy will be sent to CDM each time it is revised.
- **Exercising Procedure** .4 -
- Check valves shall be exercised to the position required to .4.1 fulfill their function unless such operation is not practical during Plant operation. Normally closed check valves which cannot be operated during normal Plant operation are identified in Attachment 3 and shall be exercised during cold shutdown or refuelings. In case of frequent cold shutdowns, these check valves need not be exercised more often than once every three (3) months.
- Normally Open Valves: valves normally open during Plant .4.2 operation, whose function is to prevent reverse flow, shall be tested in a manner which proves that the disk travels to the seat promptly on cessation or reversal of flow. Confirmation that the disk is on its seat shall be by visual observation, by observation of appropriate pressure indications in the system, or by other positive means.
- Normally Closed Valves: valves normally closed during .4.3 Plant operation, whose function is to open on reversal of pressure differential, shall be tested by proving that the disk moves promptly away from the seat when the closing pressure differential is removed and flow through the valve is initiated or a mechanical opening force is applied to the disk.

PAGE 11 OF 118

6.0 PROCEDURE (Continued)

.1

.2

.3

Confirmation that the disk moves away from the seat shall 6.3.2.4.4 be by visual observation, by observation of substantially free flow through the valve as indicated by appropriate pressure indications in the system or by other positive means. This test may be made with or without flow through the valve.

- Category D Valves: There are no Category D Class 1, 2 or 3 6.3.3 valves.
- Containment Isolation Valves Requiring Seat Leak Tests 6.3.4

NOTE: These valves are identified in Attachment 3 and shall be tested in accordance with 10CFR50, Appendix J rules, at the frequency specified in Reference 2.1.2.

These valves are containment isolation valves and will be tested with a pressure differential in the same direction as when the valve is performing its safety function unless it can be determined that the results from the tests for a pressure applied in a different direction will provide equivalent or more conservative results.

The acceptance criterion (permissible leak rate, "PLR" for each valve tested under Appendix J can be determined by taking the "0.6. La" of Engineering Procedure SO1-V-1.12, "Containment Penetration Leak Rate Testing", paragraph 6.2.1. and substracting the leak rates of all valves in the Appendix J Program except the valve under test. These are available from the records of Engineering Procedure S0123-V-3.13, "Local Leak Rate Test Program", Attachment 2, "LLRT User Manual". the result is the acceptance criterion (PLR) or the valve under test.

PLR (for the valve of interest) = 0.6 La - S

NOTE: Where a question of the acceptability of the valve leak rate measurement may exist, the allowable leakage can be calculated using the rules of Reference 2.1.3, Subarticle IWV-3423(e).

Leakage Rate Analysis: leakage rate measurements will be compared with the permissible leakage rates specified by SO1-V-1.12.

Test Medium: the test medium used for the leak rate tests will be specified in SO1-V-1.12 for the various valve tests.



CLARIFIED 028 CYPANDED

PAGE 12 OF 118

6.0 **PROCEDURE** (Continued)

6.3.5

.1

Reactor Coolant System Pressure Isolation Valves Requiring Seat Leak Tests

These valves are identified in Attachment 3 and NOTE: shall be tested in accordance to References 2.1.2 and 2.1.3.

These valves are reactor coolant system pressure isolation valves and will be tested with the pressure differential in the same direction as when the valve is performing its function, with the following exception:

- Leakage tests involving pressure differentials lower than .1.1 function pressure differentials are permitted in those types of valves in which service pressure will tend to diminish the overall leakage channel opening, as by pressing the disk into or onto the seat with greater force. Gate valves, check valves and globe-type valves having function pressure differential applied over the seat are examples of valve applications satisfying this requirement. When leakage tests are made in such cases using pressures lower than function maximum pressure differential, the observed leakage shall be adjusted to function maximum pressure differential value. This adjustment shall be made by calculation appropriate to the test media and the ratio between the test and function pressure differential, assuming leakage to be directly proportional to the pressure differential to the one-half power.
- .2

Leakage Rate Analysis: leakage rate measurements shall be compared with previous measurements and with the permissible leakage rates specified in the Technical Specifications.

Test Medium: the test medium used for the leak rate tests

.3

Valve Repair, Replacement and Maintenance

will be specified in SO1-12.9-9.

.1

6.3.6

After a valve or its control system has either been replaced, repaired or has undergone maintenance that could affect its performance and prior to the time it is returned to service, it shall be tested as necessary to demonstrate that the performance parameters which could be affected by the replacement, repair or maintenance are within acceptable limits. Adjustment of stem packing, removal of the bonnet, stem assembly or actuator or disconnection of hydraulic or electrical lines are examples of maintenance that could affect valve performance parameters.

ENGINEERING PROCEDURE S01-V-2.15 **REVISION 5** TCN 5-20

PAGE 13 OF 118

6.0 <u>PROCEDURE</u> (Continued)

Check of Valve Position Indicator 6.3.7

> All valves with remote position indicators shall be visually observed at least every two (2) years to confirm that remote valve indications accurately reflect valve operation.

6.4 <u>Corrective Measures</u>

.1

Category A and B Valves 6.4.1

> If a valve fails to exhibit the required change of valve stem or disk position, notify the Shift Superintendent immediately. The valve shall be declared inoperative immediately and an investigative Maintenance Order shall be initiated to determine corrective action.

It will be the Shift Superintendent's NOTE: responsibility to determine the Technical Specification requirements for operability of the affected system.

When corrective action is required as a result of tests made during cold shutdown, the condition shall be corrected before startup. A retest showing acceptable operation shall be run following any required corrective action before the valve is returned to service.

6.4.2

.1

.2

.2

Category C Valves

Safety and relief valves failing to function properly during testing shall be repaired or replaced and shall successfully pass a retest before being returned to service.

- If a check valve fails to exhibit the required change of disk position, notify the Shift Superintendent immediately. The valve shall be declared inoperative immediately and an investigative Maintenance Order shall be initiated to determine corrective action.
- .3 -

When corrective action is required as a result of tests made during cold shutdown, the condition shall be corrected before startup. A retest showing acceptable performance shall be run following any required corrective action before the valve is returned to service.

NOTE: It will be the Shift Superintendent's responsibility to determine the Technical Specification requirements for operability of the affected system.

ENGINEERING PROCEDURE SO1-V-2.15 **REVISION 5** TCN S

PAGE 14 OF 118

6.0 PROCEDURE (Continued)

6.4.3

-1

.1

.2

Containment Isolation Valves Requiring Seat Leak Tests

Containment isolation valves with leakage rates exceeding the permissible leakage rates specified in the Technical Sspecifications shall be evaluated in accordance with SO1-V-1.12.

6.4.4

Reactor Coolant System Pressure Isolation Valves Requiring Seat Leak Tests

Reactor coolant system pressure isolation valves with leakage rates exceeding the permissible leakage rates specified in the Technical Specifications will be replaced. or repaired.

For 6 inch nominal pipe size valves and larger, if a leakage rate exceeds the rate determined by the previous test by an amount that reduces the margin between the measured leakage rate and the maximum permissible rate by 50% or greater, the test frequency shall be doubled. The test will be scheduled to coincide with a cold shutdown until corrective action is taken at which time the original test frequency will be resumed.

6.5 Exceptions

6.5.1

.1

.2

.3

Any valve which when exercised (cycled) could put the Plant in an unsafe condition should not be tested. Examples of the types of valves that are excluded from exercising (cycling) tests during Plant operation are:

Valves whose failure in a nonconservative position during the cycling test would cause a loss of system function.

Valves whose failure to close during a cycling test would result in a loss of Containment integrity.

Valves which, when cycled, could subject a system to pressures in excess of their design pressures.

NOTE:

Valves which fall into the above classifications are identified in Attachment 3 and shall be cycled, as practicable, at each cold shutdown or refueling but not more often than once every three (3) months.

PAGE 15 OF 118

6.0 **PROCEDURE** (Continued)

6.6 Instrumentation

Instrumentation used shall meet the requirements of 6.6.1 Reference 2.1.3 to the maximum extent practical. Instruments together with their transmitters where used shall be calibrated in accordance with the governing Maintenance Procedures.

6.7 Computer Assisted Management of IST is described in Attachment 4. [AddEd

7.0 RECORDS

- 7.1 Records pertaining to in-service testing of valves shall be maintained in accordance with Reference 2.1.3, Article IWV-6000. Operations and Maintenance shall maintain these records for valves delineated by Section 6.3. The records shall include, as a minimum, the following:
 - A summary listing consisting of a schedule check-off list 7.1.1 for valve testing and bookkeeping processes.
 - Records of tests and examinations. 7.1.2
 - Preservice tests results and Manufacturer's functional test 7.1.3 results.
- 7.2 Records of tests and examinations shall be provided to the Technical Division IST Coordinator within one week of completion of the test or examination (copy) and to CDM (original) as soon as possible thereafter by Operations and Maintenance.





0181d.cln

ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 1

TCN 5-20

SO1-V-2.15 PAGE 16 OF 118

TABLE INFORMATION AND EXPLANATION OF ABBREVIATIONS

PAGE

Reactor Coolant System	••
Peactor Coolant Gas Vent	••
Chamical and Volume Control System.	• •
Light La and Volume Concret System.	
Auxillary Cooling System	••
Residual Heat Removal	• • .
Safety Injection System	••
Reactor Cycle Sampling System	••
Radioactive Waste Disposal System	••
Steam	• •
Salt Water Cooling System	••
Miscellaneous Water System	
Chamical Feed	
Chemical Federation System	
reedwater and condensate system	•••
Lompressed Air	••
Air Conditioning	•••
Turbine Cycle Sampling System	• •
Post-Accident Containment Hydrogen Monitoring	• •
Nitrogen System	
Diesel Fuel Oil-Storage and Supply (Diesel Unit 1)	•••
Diesel Generator Cooling Water System (Diesel Unit 1)	
Discal Stanting Air System (Discal Unit 1)	
Diesel Starting Air System (Diesel onic 1)	••
Diesei Fuel U11-Storage and Supply (Diesei Unit 2)	· • •
Diesel Generator Cooling Water System (Diesel Unit 2)	••.
Diesel Starting Air System (Diesel Unit 2)	• •
Auxiliary Feedwater System	••
High Radiation Sampling System	•••

- A. <u>Valve Number</u>: lists the valve identification number as shown on the P&ID.
- B. <u>P&ID and Coordinates</u>: References the P&ID and the coordinates on which the valve appears.
- C. <u>Class</u>: is the ASME classification of the valves.
- D. <u>Valve Category</u>: indicates the category assigned to the valve based on the definitions of Reference 2.1.3, IWV-2000. Where a valve is normally exempt from the testing per Reference 2.1.3, IWV-1200, and is in the direct flow path of the system, this valve is categorized B passive.
- E. <u>Valve size</u>: lists the nominal pipe size of the valve in inches.

ATTACHMENT 1

PAGE 1 OF 7

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 17 OF 118 ATTACHMENT 1 TCN 5-20

TABLE INFORMATION AND EXPLANATION OF ABBREVIATIONS (Continued)

F. <u>Valve type</u>: lists the valve design as indicated by the following abbreviations:

ANGLE	ANGLE
BALL	BALL
BUTTERFLY	BTF
CHECK	CK
RELIEF	RV
SAFETY	SV
3-WAY	3-WAY

G. <u>Actuator type</u>: lists the type of the valve actuator as indicated by the following abbreviations:

AIR OPERATOR	AO
HYDRAULIC OPERATOR	HY
MANUAL	M
MOTOR OPERATOR	MO
SELF ACTUATED	SA
SOLENOID OPERATOR	SO

- H. <u>Valve position</u>: indicates the normal position of the valve during Plant operation: either normally open (0) or normally closed (C).
 - <u>Stroke direction</u>: indicates the direction which an active valve must stroke to perform its safety function. Also, the direction in which the valve will be stroked to satisfy the exercising requirements of IWV-3410 or IWV-3520. This may be specified as open (0), closed (C) or both (O&C).

J. <u>Test</u>: lists the test or tests that will be performed for each value to fulfill the requirements of Reference Subsection 2.1.3, IWV. The following tests and abbreviations are used:

<u>Seat Leak Test:</u>

Ι.

Valve will be seat leak tested at least every two (2) years at the appropriate functional differential pressure.

AT

Full Stroke Exercise Test: BTO AND BTC

Valve will be full stroke exercised for operability in the direction necessary to fulfill its safety function. BTO indicates a test in the OPEN Direction and BTC indicates a test in the CLOSED Direction.

ATTACHMENT 1

PAGE 2 OF 7

TCN

REVISED

ENGINEERING PROCEDURE S01-V-2.15 **REVISION 5** ATTACHMENT 1 TCN 5-20

PAGE 18 OF 118

TABLE INFORMATION AND EXPLANATION OF ABBREVIATIONS (Continued)

(Continued)

J.

Partial Exercise Test:

BTPO and BTPC

Valve will be partially stroked (exercised) for operability in the direction necessary to fulfill its safety function. The Partial Stroke Test is used when full stroke exercising is impractical. BTPO indicates a test in the OPEN Direction and BTPC indicates a test in the CLOSED Direction.

CVTO and CTVC Check Valve Exercise Test:

Check valve will be exercised for operability in the direction necessary to fulfill its safety function. The preferred method of conducting the functional test is by the operation of the required system; however, disassembly and hand stroking is an acceptable alternate method. CTVO indicates a test in the OPEN Direction and CVTC indicates a test in the **CLOSED Direction.**

Check Valve Partial Exercise Test: CVPO and CVPC

Check valve will be partially stroked (exercised) for operability in the direction necessary to fulfill its safety function. The Partial Stroke Test is used when full stroke exercising is impractical. CVPO indicates a test in the OPEN Direction and CVPC indicates a test in the CLOSED Direction.

Fail Safe Test:

FST

PIT

RVT

All valves with fail safe actuators will be tested to verify proper fail safe operation upon loss of actuator power.

Position Indication Check:

All valves with remote position indicators will be checked at least once every two (2) years to verify that remote valve indications accurately reflect valve position.

Relief Valve Setpoint Check:

Relief and safety valve setpoints will be verified in accordance with Reference 2.1.3, IWV-3510.

Κ.

<u>Test Mode:</u> indicates the frequency at which the above mentioned tests will be performed. The following abbreviations are used:

PAGE 3 OF 7

CLARWIE AND EVPANDE.

10h

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 19 OF 118 ATTACHMENT 1 TCN _____

TABLE INFORMATION AND EXPLANATION OF ABBREVIATIONS (Continued)

K. (Continued)

Cold Shutdown:

CS

Valve testing at cold shutdown is valve testing which commences not later than forty-eight (48) hours after cold shutdown and continues until required testing is completed or Plant startup, whichever occurs first. "Cold Shutdown" testing will be initiated within 48 hours of entry into Mode 3 for valves requiring testing in Mode 3, within 48 hours of entry into Mode 4 for valves requiring testing in Mode 4, and within 48 hours of entry into mode 5 for valves requiring testing in Mode 5. Completion of all required valve testing is not a requisite to Plant startup. Valve testing which is not completed during a cold shutdown will be performed during subsequent cold shutdowns to meet the Code specified testing requirements. No valve need be tested more often than once every ninety (90) days.

<u>NOTE</u>: During extended outages the valves will be tested every three (3) months. Completion of all valve testing during cold shutdown is not required if Plant operating conditions will not permit the testing of specific valves.

Normal Operation:

OP

Valve tests with this designation will be performed once every three months.

Reactor Refueling:

RR

Valve tests with this designation will be conducted at reactor refueling outages.

- L. <u>Max Stroke Time</u>: Lists the maximum allowed full-stroke time in seconds for valves requiring test.
- M. <u>Relief Request</u>: References the relief requests contained in the Cold Shutdown Valve Testing Justification Table and Valve Relief Requests submitted to the NRC (see Attachment 5). Also lists clarification remarks.
- N. <u>Testing Organization</u>: Lists the Station Organization in charge of conducting the test.
- 0. <u>Test Procedure :</u> Lists the Procedure used to conduct the test.

CLARIF. AND BRANDE

REVISED

NEW

PAGE 4 OF 7

ATTACHMENT 1

ENGINEERING PROCEDURE S01-V-2.15 **REVISION 5** ATTACHMENT 1 TCN 5-20

PAGE 20 OF 118

TON

Added

EXPANDED

EXPANDEL

NOTES AND ABBREVIATIONS USED ON ATTACHMENT 2

NOTES: - 1.

2.

3.

4.

5.

- All motor operated valves fail-as-is and therefore do not require a fail safe test, Reference 2.1.3, IWV-3415.
- The maximum stroke time associated with this valve is an assigned value pursuant to Reference 2.1.3, IWV-3413. This stroke time is not a protected value and may be changed with approval of the Technical Manager.
- The maximum stroke time associated with this valve is a protected value and cannot be changed without a revision to the safety analysis or the Technical Specifications.
- Stroke times specified for this protected valve are minimum and maximum acceptable values in the given stroke direction.
 - These check valves will be disassembled, inspected, and manually stroked:
 - on a sampling basis one valve of the group each refueling or a.
 - all valves of the group each refueling b.
- This valve is a pressure relief valve and will be tested at the 6. frequency stated in Reference 2.1.3, IWV-3511.
- 7. The pressurizer safety valves and main steam safety valves shall be tested in accordance Technical Specification 4.1.2.
- The main steam power operated relief valves shall be tested in 8. accordance with Technical Specification Table 4.1.2.
- Any leakage from this valve is monitored during normal operation in 9. accordance with Technical Specification 3.1.4 and is collected in the Quench Tank.
- The seat leakage test for this valve will be performed in accordance 10. with 10 CFR 50, Appendix J requirements. The test frequency is specified in the Technical Specification 4.3.1. This frequency will not exceed each refueling outage. See procedure paragraph 6.3.4.2.
- This valve is within a non-safety related system. However, it is used 11. for Containment isolation and therefore will receive a seat leakage test in accordance with 10 CFR 50, Appendix J requirements.
- This valve is Type A passive and will only receive a seat leakage test.
 - This valve is an RCS pressure isolation valve and will be leak tested in accordance with Technical Specification 3.3.5.

ATTACHMENT 1

PAGE 5 OF 7

12.

13.

ENGINEERING PROCEDURE S01-V-2.15 REVISION 5 PAGE 21 OF 118 ATTACHMENT 1 TCN 5-20

NOTES AND ABBREVIATIONS USED ON ATTACHMENT 2 (Continued)

NOTES:

- This valve is tested every 18 months in accordance with Technical Specification 4.15.
 Deleted
- 16. Deleted
- 17. These values are not required to be automatic and do not require seat $\mathcal{E}^{\text{EVISED}}$ leak testing.
- 18. FV-3110 will be utilized as a manual valve until the start of Fuel Cycle 10. Only manual stroking is required until design changes are implemented to automate the valve.
- 19. This test will commence at the next refueling after June 1986.
- 20. The 2-Second maximum requirement of the IST Program is administratively imposed and is not protected. Increase the maximum allowable stroke time to 10 Seconds and implement an augmented testing program on the valve. Perform a stroke test once per week and measure stroke time.
- 21. The following valves have both a minimum and a maximum stroke time:

TAG Number	Minimum	Maximum
S1-FWS-HV-852A	3 Sec.	4.5 Sec.
S1-FWS-HV-8528	3 Sec.	4.5 Sec.
S1-FWS-HV-854A	5.5 Sec.	7 Sec.
S1-FWS-HV-854B	5.5 Sec.	7 Sec.
S1-FWS-HV-851A	4 Sec.	5 Sec.
S1-FWS-HV-851B	4 Sec.	5 Sec.
S1-FWS-HV-853A	3 Sec.	6 Sec.
S1-FWS-HV-853B	3 Sec.	6 Sec.
S1-FWS-HV-850A	9.5 Sec.	11 Sec.
S1-FWS-HV-850B	9.5 Sec.	11 Sec.
S1-FWS-HV-850C	9.5 Sec.	11 Sec.

ABBREVIATIONS

VALVE TYPE:

ANGLE	ANGLE VALVE	SV	SOLENOID VALVE
GA	GATE. VALVE	RV	RELIEF VALVE
GL	GLOBE VALVE	BTF	BUTTERFLY VALVE
CK	CHECK VALVE	BALL	BALL VALVE
	••••=••	3-WAY	3 WAY VALVE

ATTACHMENT 1

PAGE 6 OF 7

:Ch

REVISED

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 22 OF 118 ATTACHMENT 1 TCN 5-20

NOTES AND ABBREVIATIONS USED ON ATTACHMENT 2 (Continued)

ABBREVIATIONS (Continued)

ACTUATOR TYPE:

SO SOLENOID OPERATOR AO AIR OPERATOR SA SELF-ACTUATED HY HYDRAULIC OPERATOR MO MOTOR OPERATOR M MANUALLY OPERATE	OR D VALVE	
--	---------------	--

NOTES:

* See additional notes in Attachment 3.

VRR Valve Relief Request (Explained in Attachment 5)

TEST MODE:

CS COLD SHUTDOWN (Technical Specification Modes 3, 4 and 5)

RR REACTOR REFUELING (Technical Specification Mode 6)

OP NORMAL OPERATION (Technical Specification Modes 1 and 2)



0181d.cln

ATTACHMENT 1

PAGE 7 OF 7

TCN.

REVISED

	· · ·	•		۰.	•	•			· .	•	•
NUCLEAR	GÉNEF	ATING S	ITE			•			ENGINEER	ING PROCEDURE	SO1-V-2.15
JNIT 1		. Re	EN					•	REVISION	5	PAGE 23 OF
	e H	AS	D ADR.	•••						NI 2	
STAD	NTE	DHAN	OPENES	aber					100 <u>5-</u>	<u> </u>	
top !!!	"S	STEM	JE NY	- 1	Inserv	vice T	esting Prog	gram	for Valves		
IT IT	4 5	VS/ WI	qu ^v				Valve List	ing			
MWN,	STEV	e	()	est Urg'	S: M = P	lainte	nance, U =	Upe	rations, I = lechr	nical)	
RE .	per		Valve		Test	·					
	Sect.		and	Normal/	Туре				Test	· · ·	
Code	XI	Size	Actuator	Failed	and	Str.	Notes	VRR	Organization		
Class	Cat.	(in.)	Туре	Posit'n	Mode	Time	*See Att.3	No.	(Procedure)	Manufacture	r ·
•	• .								,		
** Svs1	tem: A	ir Condi	itionina							· .	
						۰. ۲.		•	•		100 A
* Valve	e: S1-	CVS-301((CVS-301):	POV-9 Ba	ckup Iso	latio	n Valve(Dwg	1.: 5	178601/B-4)		
2	A .	24	BTF/M	C/	AT/RR	,	10412		T(SO1-V-1.12)	Pratt	
* Valva		CVS-313/	(CVS-313)+	POV-10 R	ackun Is	olati		а.	5178601/0-6)	•	
2	A .	24	BTF/M	C/	AT/RR		10&12	3	T(S01-V-1.12)	Pratt	
. — .				•					••••••		•
* Valve	e: SI-	CVS-CV-1	l0(CV-10):	Sphere V	ent(Dwg.	: 517	8601/E-3)				
2	A	6	BTE/AO	0/0	AT/RR	ÅF	2410		T(SO1-V-1.12)	Fisher	• • •
2.	A	0	BIF/AU			25	2810 2810		0(501 - 12.4 - 2)	Fisher	•
2	A .	6	BTF/AU	0/0	PIT/RR		2810		0(501-12.8-8)	Fisher	
-		-		-, -	/ ••••			· .			
* Valve	e: S1-	CVS-CV-1	16(CV-116)):Sphere	Equaliz	ing V	alve (Insid	le) (D	wg.: 5178600/B-11)	
2	A :	6	BTF/AO	C/C	AT/RR		2810	6	T(S01-V-1.12)	Fisher	
2	A	6	BIF/AO	C/C	BIC/OP	25	2810	б	0(\$01-12.4-2)	Fisher	
2	A ·	0	BIF/AU			•	2810	0	U(501 - 12.4 - 2)	Fisher	
. 4	A	U	DIF/AU	ι/ι	FIJKK		COIU	O	0(301-12.0-0)	r i Sner	·)
* Valve	e: S1-	CVS-CV-1	146(CV-146)):Contai	n ment Sa	mple	to and From	1 R12	11/1212(Dwg.: 517	8600/D-11)	
2	A	1	GL/AO	0/C	AT/RR	· • · •	2&10	6	T(SO1-V-1.12)	Fisher	
.2	A	1	GL/AO	0/C	BTC/OP	5	2610	6	0(SO1-12.4-2)	Fisher	
2	A	1.	GL/AO	0/C	BTO/OP	2	2610	6	0(S01-12.4-2)	Fisher	
2	A	1 1	GL/AO	U/C		· .	2610	6	0(501 - 12.4 - 2)	Fisher	•
2	~	1 ·	uL/AU	U / U	r11/kk		2010 ,	Q.	0(201-12.0-0)	risner	

ATTACHMENT 2

PAGE 1 OF 78



ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN <u>5-20</u> SO1-V-2.15 PAGE 24 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

			M . 3		T . A			•		•	
· .	C A	•	Valve	N	lest				;		
	Sect.	C 1	and	Normal/	Туре	~ .				lest	
Code	XI	Size	Actuator	Failed	and	Str.	Notes	5	VKR	Organization	
Class	Cat.	(1n.)	Iype	Posit'n	Mode	lime	*See	Att.3	No.	(Procedure)	Manufacturer
* Valu		V7_2V1	147/CV-147		amolo Su	unn]v/	Dura •	51796		-21	· · · · ·
2	C. JI-	1	CI /AO	0/0	AT/DD	- H H H H	2110	31/00	6	TICOL V 1 121	Fichar
2	~	1	CL/AU	0/0	ATC /00	E	2010		0 2	1(301 - 1 - 1 - 12)	Fisher
2	A	1	GL/AU	U/L	DIL/UP	2	2010		0	0(501 - 12.4 - 2)	r isner Fisher
2	A	1	GL/AU	U/L		. Z	2410		0	0(501-12.4-2)	Fisher
2	A		GL/AU	0/0	FSI/CS		2810		6	0(501 - 12.4 - 2)	Fisher
2	A	1	GL/AO	0/C	PIT/RR		2&10		6	0(SO1-12.8-8)	Fisher
* Valv	e: S1-	CVS-CV-	2048(CV-204	18):Conta	ainment	Áir S	ample	to R1	212	Isolation (PASS)	(Dwg.: 5178601/G-5)
2	. B	3/8	GL/AO	0/0	BTC/OP	2	2.			0(\$01-12.4-2)	Unknown
2	. B	3/8	GL/AO	0/0	BTO/OP	2	2			0(\$01-12.4-2)	Unknown
2	.8	3/8	GL/AO	0/0	FST/OP		2			0(\$01-12.4-2)	Unknown
* Valv	e: S1-	CVS-CV-	2049(CV-204	(9):Cont	ainment	Atmos	phere	Outle	t Is	olation(Dwg.: 51	78601/F-5)
2	B	3/8	GL/AO	0/0	BTC/OP	2	2			0(\$01-12.4-2)	Unknown
2	R	3/8	GI /AO	0/0	RTO/OP	2	2			0(501-12 - 2)	Unknown
2	B	3/8	GL/AO	0/0	FST/OP	· •	2			0(\$01-12.4-2)	Unknown
* Valv	e: 51-	CVS-CV-	40(CV-40)·1	Instrume	nt Air 1	lent I	ncida	Soher	۱۳۰	a • 5178600/C-11	\
2	Δ	2	A-WAY/AO	0/0	AT/RR		2110	ohuci	6	T(SO1-V-1) 12)	Black
-		÷		.0/0			Lato.		v	1(501 1 1.12)	· Sivalle and
2	Α.	2	2. HAV /AO	<u>б/г</u>		6	2810		6	0/501 12 4.2)	Black
"	. ^	2	J-WAI/AU	0/0	DIC/UP	à	2010	•	U.	0(301-12.4-2)	Diduk, Siyallo and
-									· .	· · · ·	Siver Sund
.		2	2 HAV /AG						~	0/001 10 4 01	øryson Die ele
2	A	2	J-WAT/AU	U/L	121/12		2410	•	Ó	U(SUI-12.4-2)	black,
:		•	•						, s. 1	1	Sivalls and
						•	1 i				Bryson

ATTACHMENT 2

PAGE 2 OF 78

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 25 OF 118 ATTACHMENT 2 TCN_5-20____

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

C	ode Tass	Se XI Ca	ect.	Size (in.)	Val and Act Typ	ve l uator e	Norma Faile Posit	Te 1/ Ty ed ar :'n Me	est /pe nd ode	Str Tim	. Notes e *See At	VRR t.3 No.	Test Organization (Procedure)	Manufacturer	
* ?	Valvo	e:	S 1-	CVS-P	OV-	10(P	OV-10)):Sphe	ere Pi	irge	Retur	n(Dwg.: 5	178601/	D-6)	Dustt	
٢		A		24		DIF	/ 10	U/L	A 1	/KK		Ingis		1(301-12.0-17)	rrall	
*	Valve	e:	S1 -	CVS-P	0V -	9 (PO	V-91:	Sohere	Purc	ie Su	no]v[Dwa.: 517	8601/0-	3)	ť	
2		Å		24		B TF	/A0	C/C	A	/RR	·PP •J \!	10&12		T(S01-12.8-17)	Pratt	
<u> </u>	Ma 1		C 1	CNC C	., .		0 (C) (1010 0			1011		C	· · · · · · · · · · · · · · · · · · ·		
_ _	vaive		21-	12-2	Á - T	212-	8(2) -	1212-8	():UK	13 KE	-1211	and 1212	spnere	Supply Isolatio	n(Dwg.: 51/8601/F-3)	
2	. •	A		ļ		6A/	50	0/0	A	/KR	_	2810	×	I(SO1 - V - 1.12)	larget Rock	
2		A.		1		GA/	SO .	0/C	B	C/OP	2	2810		0(SO1-12.4-2)	Target Rock	
2		A		, 1		_GA/	'SO	0/C	B 1	1 0/0 P	2	2810	۰.	0(SO1-12.4-2)	Target Rock	
2		A		1		GA/	'SO 👘	0/C	FS	ST/OP) 	2&10		0(S01-12.4-2)	Target Rock	
2	•	A		1		GA/	'SO	0/C	P 1	T/RA		2810		0(\$01-12.8-8)	Target Rock	
*	Valve	a : .	<u>sı</u> -	CVS-S	V-1	212-	9(SV-	1212-9	1) • OR	IS RE	- 1211	and 1212	Snhara	Fyhaust Isolati	on/Dwg • 5178601/6-3)	
2		Δ.	••	1	• •	Γ Δ 7	'sn'	0/0	Δ1			2110	spiicie	T/S01-V-1 121	Target Bock	
2		Â		1		CA/	30 'SA '	0/0		'/ NN [C //)D	, <u>,</u>	2110		n(sol + 1, 12)	Target Rock	
2		· 🔒		1	•		30		01			2010		$0(501 - 12 \cdot 4 - 2)$	Target Rock	
- C - 1 A				1			30				<u> </u>	2010		0(501 - 12.4 - 2)	Target ROCK	
		A		1	. • •	_uA/	3U	U/L	12			2410	. ,	U(SUI-12.4-2)	larget Rock	
2		A		, I - ,		6A /	20	U/C	P1	I I/RH		2810	•	0(501-12.8-8)	larget Rock	

PAGE 3 OF 78

ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN 5-20

SO1-V-2.15 PAGE 26 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

			Valve .		Test		· . ·	· · · · · · · · · · · · · · · · · · ·
Code	Sect. XI	Size	and Actuator	Normal/ Failed	Type and	Test Str. Notes VRR Organiza	tion	·
Class	Cat.	(in.)	Туре	Posit'n	Mode	Time *See Att.3 No. (Procedu	re)	Manufacturer

** System: Auxiliary Cooling

*	Val 3	lve: C	S1	-CCI 1 -	-01 -1/2	1(CCW- CK/	011 'SA):F	RCP [0/	"A "	Therma CVTC/	il É 'CS	Barrier *	Inlet	Chec	ck, Va (alve D(SO	(Dwg. 1-12.	.: 5 .4-2	517831; ?)	2/B-2) Rockwell Edwards
*	Val 3	lve: C	. \$1	-CCI 1 ·	1-01 1/2	2(CCW- CK/	012 'SA	:):F	RCP 0/	"C"	Therma CVTC/	I E CS	Barrier *	Inlet	Chec	ck Va	alve D(SO)	(Dwg. 1-12.	.: 5 .4-2	517831: ?)	2/B-7) Rockwell Edwards
*	Val 3	lve: C	S 1	-CCI 1	1-03 ·1/2	2((CCW- CK/	032 'SA	:):F	RCP 0/	"C"	Therma CVTC/	I) E 'CS	Barrier *	Emerg	ency	Coo	ling D(SO	Chec 1-12.	ck (C . 4-2)wg.: { })	5178312/B-7) Rockwell Edwards
	3	C	• .	· 1·	-1/2	2	CK/	'SA		0/		CVTO/	'CS <u>.</u>	*	•		. (0(SO)	1-12.	. 4 - 2	2)	Rockwell Edwards
*	Val	ve:	SI	-CCI	1-03	5((CCW-	035):F	RCP	"A"	Therma	1 6	Barrier	Emerg	ency	Coo	lina	Chec	ck(C	wq.:	5178312/B-2)
	3	Ċ		1	1/2	2	CK/	SA		0/	•	CVTC/	CS	*		,	(D(SŎ	1-12.	. 4-2	2)	Rockwell Edwards
	3	C	÷	1	1/2		CK/	'SA		0/		CVTO/	CS	*	•	۰.	(D(SO	1-12.	.4-2	2)	Rockwell Edwards
*	Val	lve:	S 1	-CCI	1-04	0(1	CCW-	040):F	RCP	*B*	Therma	1 8	Barrier	Emera	encv	Coo	lina	Chec	ck(0	wa.: !	5178312/B-4)
	3	C		1.	1/2		CK/	'SA		0/	-	CVTC/	ĊS	*		-	(0(50)	1-12.	.4-2	?)	Rockwell
	3	C	•	1	1/2		CK/	'SA		0/		CVTO/	ĊS	*	•		, ₁ . ()(SO)	1-12.	4 - 2	2)	Edwards Rockwell Edwards

ATTACHMENT 2

PAGE 4 OF 78

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 27 OF 118 ATTACHMENT 2 TCN 5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Clas	Sec 2 XI 3 Cat	:t. Si L. (i	V a ze A n.) T	alve nd ctuator ype	Normal/ Failed Posit'n	Test Type and Mode	Str. Notes Time *See Att.3	VRR No.	Test Organization (Procedure)	Manufacturer
* Val 3	ve: S	51-CCW 2	-071 (CC C	W-071): K/SA	West RHR 0/	Pump Ret CVTO/CS	urn Check(Dwg.:	5178	3312/F-8) O(S01-12.4-2)	Kerotest
* Val 3	ve: S C	61-CCW 2	-074(CC C	W-074): K/SA	East RHR 0/	Pump Ret CVTO/CS	urn Check(Dwg.: *	5178	3312/G-8) 0(\$01-12.4-2)	Kerotest
* Val 3	ve: S C	51-CCW 1-	- 092(CC 1/2 C	W-092): K/SA	RCP Theri 0/	mal Barri CVTC/CS	er Inlet check(*	Dwg.:	5178312/B-4) 0(S01-12.4-2)	Rockwell Edwards
* Val	ve: S	51-CCW	-322(CC	W-322):	North Co	mponent C	ooling Water Pu	mp Di	isch Check(Dwg.:	5178310/E-5)
3	Č	8	C	K/SA	0/	CVTO/OP			0(\$01-12.4-2)	Crane
* Val	ve: S	51-CCW	-323(CC	H-323) :	Central (Component	Cooling Water	Pump	Disch Check(Dwg.	: 5178310/F-5)
3	C C	8 8	C C	K/SA K/SA	0/ 0/	CVTC/OP CVTO/OP		•	0(S01-12.4-2) 0(S01-12.4-2)	Crane Crane
* Val	ve: S	51-CCW	-325(CC	W-325):	South Co	mponent C	ooling Water Pu	mp Di	isch Check(Dwg.:	5178310/H-5)
3 3	C C	8 8	C	K/SA K/SA	0/ 0/	CVTC/OP CVTO/OP		•	0(S01-12.4-2) 0(S01-12.4-2)	Crane Crane
* Val	ve: S	1-CCW	-CV-722	A(CV-72	2A):RCP	"A" Therm	al Barrier Outl	et Co	ontrol(Dwg.: 5178	312/8-3)
3	. B	1-	1/2 G	L /AO	0/C	BTC/CS	5 2*		0(501-12.4-2)	Black, Sivalls and Bryson

ATTACHMENT 2

PAGE 5 OF 78

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 28 OF 118 ATTACHMENT 2 TCN 5-20

1. 		Inser	vice	Testing	Program	for Valu	ves	· · · ·	
				Valve	Listing	1	· · ·		•
	(Test O	rg's: M =	Maint	enance,	0 = Oper	rations,	T = Te	echnical)	

Code Class	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.3	VRR No.	Test Organization (Procedure)	Manufacturer
3	B	1-1/2	GL/AO	0/C	FST/CS		2*		0(\$01-12.4-2)	Black, Sivalls and
3	B	1-1/2	GL/AO	0/C	PIT/RR		2*	, ⁻	0(501-12.4-2)	Bryson Black, Sivalls and Bryson
* Valv 3	e: S1-(B	CCW-CV-7 1-1/2	722B(CV-72) GL/AO	2B):RCP ' 0/C	"B" Therm BTC/CS	al Bi 5	arrier Outle 2*	et Co	ontrol(Dwg.: 517831 O(SO1-12.4-2)	2/B-5) Black, Sivalls and
3	B	1-1/2	GL/AO	0/C	FST/CS		2*	••••	0(\$01-12.4-2)	Bryson Black, Sivalls and
3	B	1-1/2	GL/AO	0/C	PIT/RR		2*		0(\$01-12.4-2)	Bryson Black, Sivalls and Bryson
* Valv 3	e: S1-(B	CCW-CV-7 1-1/2	722C (CV-722 GL/AO	2C):RCP ' 0/C	'C" Therm BTC/CS	al Ba 5	arrier Outle 2*	et Co	ontrol(Dwg.: 517831 O(SO1-12.4-2)	2/B-8) Black, Sivalls and
3.	B	1-1/2	GL/AO	0/C	FST/CS	•	2*		0(S01-12.4-2)	Bryson Black, Sivalls and
3	B	1-1/2	GL/AO	0/C	PIT/RR		2*•		O(SO1-12.4-2)	Bryson Black, Sivalls and Bryson
· · · ·		• •		· · · ·	•				ATTACHMENT	2 PAG

PAGE 6 OF 78



ENGINEERING PROCEDURE SO1-REVISION 5 PAGE ATTACHMENT 2 TCN ______

SO1-V-2.15 PAGE 29 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

		oct		Valve	Normal /	Test					Tact	· · · · · · · · · · · · · · · · · · ·	•
Code	- V	566. 1	C1-0		Rurmal/	Type	C +	Nata			lest Opportantion (
Clas	ss C	at.	(in.)	Туре	Posit'n	and Node	Str. Time	*See	Att.3	No.	(Procedure)	Manufacturer	
* Val	lve:	S1-	CCH-CV	-737A(CV-73	7A):Reci	rc Heat	Fxcha	naer (. Cor	ntrol Valve(Dwg.	: 5178310/(-9)	
3	B		6	BALL /HY	C/0	RTO/OP	140	2	·		0(50) - 12 4 - 2)	Gulf-Western	
3	Ř		6	RALL/HY	C/0	FST/OP		5	•.		0(501-12 4-2)	Gulf-Western	2
3 -	Ā		6	BALL/HY	C/0	PIT/RR		2			0(501 - 12 - 8 - 8)	Gulf-Western	CTR
•		• •	•	Unic Ly III	0/0						0(301 11:0 0)	Gutt Western	TIM
* Val	lve:	S1-	CCW-CV	-737B(CV-73	7B):Reci	rc Heat	Fxcha	naer (Cool ing	Cor	trol Valve(Dwg.	: 5178310/8-9)	1
3	B	••	6	BALL/HY	C/0	RTO/OP	140	2			0(501-12 4-2)	Gulf-Western	•
3	· B		6	BALL /HY	C/0	EST/OP	110	2			0(501 - 12 - 4 - 2)	Gulf-Western	1
3	Ē		6	BALL /HY	C/O	PIT/RR		2			0(501 - 12 - 8 - 8)	Gulf-Western	• .
			•		0,0	•••/				•	0(001 12:0 0)		
* Va]	ve:	S1 -	CCW-MO	V-720A (NOV-	720A) : To	D CCW He	eat Fx	change	er Outl	et (f)wa.: 5178310/G-	10)	
.3	8		10	GA/MO	0/AI	BTO/OP	200	182		(-	0(501-12.4-2)	Crane	•
3	B		10	GA/MO	0/AI	PIT/RR		182			0(501-12.8-8)	Crane	
		• •	· · · ·										· · · ·
* Val	lve:	S1-	CCW-MO	V-720B(MOV-	720B):Bo	ttom CCL	l Heat	Excha	naer O	iut 1e	et(Dwg.: 5178310	/E-10)	
3	B		10	GA/MO	C/AI	BTO/OP	200	182		~	0(\$01-12.4-2)	Crane	· ·
3	B		10	GA/MO	C/AI	PIT/RR		182			0(\$01-12.4-2)	Crane	· .
•					-,	÷ - •,			1		-,/		
* Val	lve:	S1-	CCW-RV	-721A(RV-72	IA): Pump	RCS-G-2	A The	rmal f	Barrier	Rel	lief Valve(Dwg.:	5178312/B-3)	
· 3	C		1/2X1	RV/SA	C/	RVT/RR		6			M(SO1-1-6.64)	Crosby	
			•		· ·			•					• •
* Val	lve:	S1-	CCW-RV	-721B(RV-72	18):Pump	RCS-G-2	28 The	rmal f	Barrier	Rel	lief Valve(Dwg.:	5178312/B-5)	•
3	C	• •	1/2X1	RV/SA	C/	RVT/RR		6			M(SO1-I-6.64)	Crosby	· ·
		1	•	•				-				1 · · · · · · · · · · · · · · · · · · ·	• • •
* Val	lve:	· S1-	CCW-RV	-721C(RV-72	1C):Pump	RCS-G-2	2C The	rmal E	Barrier	Rel	lief Valve(Dwg.:	5178312/B-8)	
3	C		1/2X1	RV/SA	C/ .	RVT/RR		6			M(SO1-I-6.64)	Crosby	
•				· ·	· .	•		•	•	• . •		<u>.</u>	

ATTACHMENT 2

PAGE 7 OF 78

ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN ______20

SO1-V-2.15 PAGE 30 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

 * Valve: S1-CCW-RV-787(RV-787): Pressure Relief to CCW Surge Tank(Dwg.: 5178310/B-4) 3 C 3X4 RV/SA C/ RVT/RR 6 M(SOI-1-6.64) Crosby * Valve: S1-CCW-TCV-601A(TCV-601A): Resid HX Temp Loop "A", East(Dwg.: 5178311/B-3) 3 B 8 GL/AO 0/O BTC/OP 45 2 O(SOI-12.4-2) Black, Sivalls and Bryson 3 B 8 GL/AO 0/O BTO/OP 120 2 O(SOI-12.4-2) Black, Sivalls and Bryson 3 B 8 GL/AO 0/O FST/OP 2 O(SOI-12.4-2) Black, Sivalls and Bryson 3 B 8 GL/AO 0/O FST/OP 2 O(SOI-12.4-2) Black, Sivalls and Bryson 3 B 8 GL/AO 0/O FST/OP 2 O(SOI-12.4-2) Black, Sivalls and Bryson 3 B 8 GL/AO 0/O PIT/RR 2 O(SOI-12.8-8) Black, Sivalls and Bryson 3 B 8 GL/AO 0/O BTC/OP 45 2 O(SOI-12.8-8) Black, Sivalls and Bryson 3 B 8 GL/AO 0/O BTC/OP 45 2 O(SOI-12.8-8) Black, Sivalls and Bryson 3 B 8 GL/AO 0/O BTC/OP 45 2 O(SOI-12.8-8) Black, Sivalls and Bryson 	Code Class	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. No Time *So	tes VRF ee Att.3 No.	Test Organization (Procedure)	Manufacturer	•••••••••••••••••••••••••••••••••••••••
* Valve: S1-CCW-TCV-601A(TCV-601A):Resid HX Temp Loop "A", East(Dwg.: 5178311/B-3) 3 8 6L/A0 0/0 BTC/OP 45 2 0(S01-12.4-2) Black, Sivalls and Bryson 3 8 8 GL/A0 0/0 BT0/OP 120 2 0(S01-12.4-2) Black, Sivalls and Bryson 3 8 8 GL/A0 0/0 FST/OP 2 0(S01-12.4-2) Black, Sivalls and Bryson 3 8 8 GL/A0 0/0 FST/OP 2 0(S01-12.4-2) Black, Sivalls and Bryson 3 8 8 GL/A0 0/0 FST/OP 2 0(S01-12.4-2) Black, Sivalls and Bryson 3 8 8 GL/A0 0/0 PIT/RR 2 0(S01-12.8-8) Black, Sivalls and Bryson 3 8 8 GL/A0 0/0 PIT/RR 2 0(S01-12.8-8) Black, Sivalls and Bryson * Valve: S1-CCW-TCV-601B(TCV-601B):Resid HX Temp Loop "A", West(Dwg.: 5178311/A-3) 3 8 8 GL/A0 0/0 BTC/OP 45 2 0(S01-12.4-2) Black, Sivalls and Bryson 3 8 6	* Valvo	e: S1-	CCW-RV-	787 (RV - 787):Pressu	re Relie	f to CCW	Surge Tank	Dwg.: 5178310/B-4)	Chachy	
 * Valve: S1-CCW-TCV-601A(TCV-601A):Resid HX Temp Loop *A*, East(Dwg.: 5178311/B-3) 3 B 8 GL/AO 0/0 BTC/OP 45 2 0(S01-12.4-2) Black, Sivalls and Bryson 3 B 8 GL/AO 0/0 BTO/OP 120 2 0(S01-12.4-2) Black, Sivalls and Bryson 3 B 8 GL/AO 0/0 FST/OP 2 0(S01-12.4-2) Black, Sivalls and Bryson 3 B 8 GL/AO 0/0 FST/OP 2 0(S01-12.4-2) Black, Sivalls and Bryson 3 B 8 GL/AO 0/0 PIT/RR 2 0(S01-12.8-8) Black, Sivalls and Bryson 3 B 8 GL/AO 0/0 PIT/RR 2 0(S01-12.8-8) Black, Sivalls and Bryson 3 B 8 GL/AO 0/0 PIT/RR 2 0(S01-12.8-8) Black, Sivalls and Bryson 3 B 8 GL/AO 0/0 BTC/OP 45 2 0(S01-12.4-2) Black, Sivalls and Bryson 	J	U .	· 384	NY JA	U/ 1	Ν 1 / ΝΝ	, O	-	M(201-1-0:04)	Crosby	
3 8 8 GL/A0 0/0 BTC/OP 45 2 0(S01-12.4-2) Black, Sivalls and Bryson 3 8 8 GL/A0 0/0 BTO/OP 120 2 0(S01-12.4-2) Black, Sivalls and Bryson 3 8 8 GL/A0 0/0 FST/OP 2 0(S01-12.4-2) Black, Sivalls and Bryson 3 8 8 GL/A0 0/0 FST/OP 2 0(S01-12.4-2) Black, Sivalls and Bryson 3 8 8 GL/A0 0/0 PIT/RR 2 0(S01-12.8-8) Black, Sivalls and Bryson * Valve: S1-CCW-TCV-601B(TCV-601B):Resid HX Temp Loop "A", West(Dwg.: S178311/A-3) 3 3 8 GL/A0 0/0 BTC/OP 45 2 0(S01-12.4-2) Black, Sivalls and Bryson	*_Valv	e: S1-	CCH-TCV	-601A(TCV-	601A):Re	sid HX T	emp Loop	"A", East(E	wg.: 5178311/B-3)		
3 B 8 GL/A0 0/0 BT0/0P 120 2 0(S01-12.4-2) Black, Sivalls and Bryson 3 B 8 GL/A0 0/0 FST/0P 2 0(S01-12.4-2) Black, Sivalls and Bryson 3 B 8 GL/A0 0/0 PIT/RR 2 0(S01-12.8-8) Black, Sivalls and Bryson 3 B 8 GL/A0 0/0 PIT/RR 2 0(S01-12.8-8) Black, Sivalls and Bryson * Valve: S1-CCW-TCV-601B(TCV-601B):Resid HX Temp Loop "A", West(Dwg.: 5178311/A-3) 3 B 8 GL/A0 0/0 BTC/0P 45 2 0(S01-12.4-2) Black, Sivalls and Bryson 3 B 8 GL/A0 0/0 BTC/0P 45 2 0(S01-12.4-2) Black, Sivalls and Bryson	3	B	8	GL/AO	0/0	BTC/OP	45 2		0(S01-12.4-2)	Black,	
3 B 8 GL/AO 0/0 BTO/OP 120 2 0(S01-12.4-2) Black, Sivalls and Bryson 3 B 8 GL/AO 0/0 FST/OP 2 0(S01-12.4-2) Black, Sivalls and Bryson 3 B 8 GL/AO 0/0 FST/OP 2 0(S01-12.4-2) Black, Sivalls and Bryson 3 B 8 GL/AO 0/0 PIT/RR 2 0(S01-12.8-8) Black, Sivalls and Bryson * Valve: S1-CCW-TCV-601B(TCV-601B):Resid HX Temp Loop "A", West(Dwg.: 5178311/A-3) 3 3 B 8 GL/AO 0/0 BTC/OP 45 2 0(S01-12.4-2) Black, Sivalls and Bryson 3 B 8 GL/AO 0/0 BTC/OP 45 2 0(S01-12.4-2) Black, Sivalls and Bryson	•									Sivalis and Bryson	
3 B 8 GL/AO 0/0 FST/OP 2 0(SO1-12.4-2) Black, Sivalls and Bryson 3 B 8 GL/AO 0/0 PIT/RR 2 0(SO1-12.8-8) Black, Sivalls and Bryson 3 B 8 GL/AO 0/0 PIT/RR 2 0(SO1-12.8-8) Black, Sivalls and Bryson * Valve: S1-CCW-TCV-601B(TCV-601B):Resid HX Temp Loop "A", West(Dwg.: 5178311/A-3) 3 3 B 8 GL/AO 0/0 BTC/OP 45 2 0(SO1-12.4-2) Black, Sivalls and Bryson	3.	B	8	GL/AO	0/0	BTO/OP	120 2		0(\$01-12.4-2)	Black,	
3 B 8 GL/AO 0/0 FST/OP 2 0(SO1-12.4-2) Black, Sivalls and Bryson 3 B 8 GL/AO 0/0 PIT/RR 2 0(SO1-12.8-8) Black, Sivalls and Bryson 3 B 8 GL/AO 0/0 PIT/RR 2 0(SO1-12.8-8) Black, Sivalls and Bryson * Valve: S1-CCW-TCV-601B(TCV-601B):Resid HX Temp Loop "A", West(Dwg.: 5178311/A-3) 3 3 B 6L/AO 0/0 BTC/OP 45 2 0(SO1-12.4-2) Black, Sivalls and Bryson										Sivalls and	
3 B 8 GL/AO O/O PIT/RR 2 O(SOI-12.4-2) Black, Sivalls and Bryson * Valve: SI-CCW-TCV-601B(TCV-601B):Resid HX Temp Loop "A", West(Dwg.: 5178311/A-3) 3 B 8 GL/AO O/O BTC/OP 45 2 O(SOI-12.4-2) Black, Sivalls and Bryson 3 B 8 GL/AO 0/O BTC/OP 45 2 O(SOI-12.4-2) Black, Sivalls and Bryson	3	R	8		0/0	EST/OD		•	A(SA1-12 A-2)	Bryson	
3 B 8 GL/AO O/O PIT/RR 2 O(SOI-12.8-8) Bryson Biack, Sivalls and Bryson * Valve: SI-CCW-TCV-601B(TCV-601B):Resid HX Temp Loop "A", West(Dwg.: 5178311/A-3) 3 B 8 GL/AO O/O BTC/OP 45 2 O(SOI-12.4-2) Black, Sivalls and Bryson 3 B 9 O(SOI-12.4-2) Black, Sivalls and Bryson		Ų	U	ul/nu	0/0	131/06	_	•	0(501-12.4-2)	Sivalls and	
3 B 8 GL/AO 0/O PIT/RR 2 O(SOI-12.8-8) Black, Sivalls and Bryson * Valve: S1-CCW-TCV-601B(TCV-601B):Resid HX Temp Loop "A", West(Dwg.: 5178311/A-3) 3 B 8 GL/AO 0/O BTC/OP 45 2 O(SOI-12.4-2) Black, Sivalls and Bryson 3 B 8 GL/AO 0/O BTC/OP 120 2 O(SOI-12.4-2) Black, Sivalls and Bryson	•					· ·	•	•		Bryson	
* Valve: S1-CCW-TCV-601B(TCV-601B):Resid HX Temp Loop "A", West(Dwg.: 5178311/A-3) 3 B 8 GL/AO O/O BTC/OP 45 2 O(S01-12.4-2) Black, Sivalls and Bryson 3 P 9 CL/AO 0/O PTO/OP 120 2 O(S01-12.4-2) Blyson	3	8	8	GL/AO	0/0	PIT/RR	2		0(SO1-12.8-8)	Black,	•••
* Valve: S1-CCW-TCV-601B(TCV-601B):Resid HX Temp Loop "A", West(Dwg.: 5178311/A-3) 3 B 8 GL/AO O/O BTC/OP 45 2 O(S01-12.4-2) Black, Sivalls and Bryson	· * *						•			Sivalls and	
* Valve: S1-CCW-TCV-601B(TCV-601B):Resid HX Temp Loop "A", West(Dwg.: 5178311/A-3) 3 B 8 GL/AO O/O BTC/OP 45 2 O(SO1-12.4-2) Black, Sivalls and Bryson		÷.,					•	· ·		01 y 3011	· ·.
J B B GL/AO O/O BTC/OP 45 2 O(SOI-12.4-2) Black, Sivalls and Bryson 3 P 9 GL/AO 0/O PTO/OP 120 0 0(SOI-12.4-2) Black, Sivalls and Bryson	* Valve	e: S1-	CCW-TCV	-601B(TCV-	601B):Res	sid HX To	emp Loop	"A", West(D	wg.: 5178311/A-3)		
3 P Q CLAR DA DE	5	B	8	GL/AO	0/0	BTC/OP	45 2	· · · ·	0(SO1-12.4-2)	Black,	
						•				SIVALIS AND Bryson	
3 b o GL/AU U/U BIU/UP 12U 2 U(SUI-12.4-2) BIACK,	3	B	8	GL/AO	0/0	BTO/OP	120 2		0(\$01-12.4-2)	Black,	
Sivalls and				•	· .		•			Sivalls and	

ATTACHMENT 2

1

PAGE 8 OF 78

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 31 OF 118 ATTACHMENT 2 TCN 5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Class	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.3	VRR No .	Test Organization (Procedure)	Manufacturer	
3	B	8	GL/AO	0/0	FST/OP		2		0(\$01-12.4-2)	Black, Sivalls and Bryson	
3 [/]	B	8	GL/AO	0/0	PIT/RR		2		0(\$01-12.8-8)	Black, Sivalls and	•

Sivalls Bryson

ATTACHMENT 2

PAGE 9 OF 78

ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN _5-20_ SO1-V-2.15 PAGE 32 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

•	Code Class	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.3	VRR No.	Test Organization (Procedure)	Manu	ıfacturer
	** Svs	tem: A	uxiliar	v Feedwate	r r							

* Va 2	lve: S	51-AFW- 3	303 (AFW-303) CK/SA	Steam Driven AF C/ CVTO/C	I Pump Disch Ch S ★	eck(Dwg.: 5178220/G-5) O(SO1-12.4-2)	Pacific	
* Va 2	lve: S C	1-AFW-	-304 (AFW-304) CK/SA):Motor Driven AF C/ CVTO/C	l Pump Discharg S *	e Check(Dwg.: 5178220/C- O(SO1-12.4-2)	5) Pacific	
* Va 2 2	lve: S AC AC	51-AFW- 3 3	-309(AFW-309) CK/SA CK/SA):Train B FCV-230 C/ AT/CS C/ CVTO/C	D Inlet Check(D * S *	wg.: 5178220/G-8) T(SO1-SPE-690) O(SO1-12.4-2)	Westinghouse Westinghouse	Indded
* Va 2 2	lve: S AC AC	51-AFW- 3 3	310(AFW-310) CK/SA CK/SA):Train B FCV-230 C/ AT/CS C/ CVTO/C	l, 3301 Inlet C * 5 *	heck(Dwg.: 5178220/F-8) T(SO1-SPE-690) O(SO1-12.4-2)	Westinghouse Westinghouse	1 AddEd
* Va 2 2	lve: S AC AC	51-AFW- 3 3	312(AFW-312) CK/SA CK/SA):Train B FCV-330 C/ AT/CS C/ CVTO/C	D Inlet Check(D * S *	wg.: 5178220/C-8) T(SO1-SPE-690) O(SO1-12.4-2)	Westinghouse Westinghouse	TCN 1Agd =d
• * V a 2 • 2	lve: S AC AC	51-AFW- 3 3	-317(AFW-317) CK/SA CK/SA):Train A FCV-330 C/ AT/CS C/ CVTO/C	D Inlet Check(D * 5 *	wg.: 5178220/B-7) T(SQ1-SPE-690) O(SQ1-12.4-2)	Westinghouse Westinghouse	1 Added
* Va 2 2	lve: S AC AC	51-AFW- 3 3	318(AFW-318) CK/SA CK/SA):Train A FCV-230 C/ AT/CS C/ CVTO/C	1, 3301 Inlet C 5 *	heck(Dwg.: 5178220/C-7) T(SO1-SPE-690) O(SO1-12.4-2)	Westinghouse Westinghouse	Added

ATTACHMENT 2

PAGE 10 OF 78

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 33 OF 118 ATTACHMENT 2 TCN 5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

,	Code Class	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.3	VRR No .	Test Organization (Procedure)	Manufacturer		
			ACH 200		T					· ·	• • •		
	- vaiv	e: 21-	AFW-320	(AFW-32U):	irain A i	FCV-2300	Inle	t_Check(Dwg.	.: 51	78220/C-6)		1 adde	- 1
	2	AC	3	CK/SA	C/	CVTO/CS	. ·	*		0(S01-12.4-2)	Westinghouse	1 point	-1
	÷ Mal		AEU 201	(ACH 201)	T				_				
	r valv	e: 51-	AFW-321	(AFW-321):	Irain A.	FCV-2300	Outle	et Check(Dwg	j.: -5	178220/H-11)	· · · · ·		_ 1
	2	AC	3	UK/SA		AI/LS		*		1(SOI-SPE-691)	Westinghouse	10 Addi	Q
	۲.	AL	3	LK/ SA	L/	LAID/12	. '			0(501-12.4-2)	Westinghouse		
1	* Valv	e: S1-	AFW-322	(AFW-322):	Train A	FCV-2301	. 330	1 Outlet Che	ock/D	Ma • 5178220/F-11)			
•	2	AC	3	CK/SA	C/	AT/CS	,	*		T(S01-SPF-691)	West inchouse	Add	E c
	2	AC 1	3	CK/SA	C/	CVTO/CS	• •	*	·	0(\$01-12.4-2)	Westinghouse	, ,,	
	• Valv	o• 51.	AFH_324/	AFW_324\+	FCV.3300	Outlot (hock	(Dum . E170)	20.00	111			
	2	AC	3	(K/SA (K/SA	C/		LIECK	(Dwg.: 51/02	20/6	-11) T/SA1 SDE 601)	Hastinghouse	1 Addin	J
	2	AC	3	CK/SA	C/	CVTO/CS		*		n(sol-spe-091)	Westinghouse	1 10920	Ŧ
2	-		-		-,	,	•	. •		0(301-12.4-6)	west ingnouse		
1	* Valvo	e: S1-	AFW-332((AFW-332):I	Notor Dri	iven AFW	Pump	Flush Water	r Che	ck(Dwg.: 5178220/D	-3)		
5	2	C	1	CK/SA	C/	CVTO/OP	. • •		(0(\$01-12.4-2)	Rockwell		
	1997 - 19	•								•	Edwards	• •	
	• Valv	a+ 512	AFW	AFH_3351+	Staam Dri	ivon AEU	Dumo	Eluch Hatom	. Cha	ak/Dum . 5170220/C	21		
'	2	C 51°]	CK/SA	C/	CVTO/OP	rump	riusn water	" une	CK(DWY.: 51/6220/F 0/\$01-12 4-2)	-3) Bockwoll		
•	-	•	• • •		v					0[301-12.4-2]	Edwarde	•	
	· · ·					•	•	the second se			Luwarus		
· 1	* Valvo	e: S1-	AFW-339((AFW-339):S	Steam Dri	iven AFW	Pump	Miniflow Ch	eck(Dwg.: 5178220/E-3)		· · ·	
	2	C	1	CK/SA	C/	CVTO/OP	•		(O(SO1-12.4-2)	Rockwell	· · ·	
			· ·		· · ·				<i><i>n</i></i>	· · ·	Edwards	й. 1914 - 1914 - 1914 - 1914 - 1914 - 1914 - 1914 - 1914 - 1914 - 1914 - 1914 - 1914 - 1914 - 1914 - 1914 - 1914	
	• • . •					•		× •			-		
	· •				•	- · · ·				ATTACHMENT	Z P	'AGE 11 OF 78	



ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 34 OF 118 ATTACHMENT 2 TCN 5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Clas	Sect. XI s Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Node	Str. Time	Notes VRR *See Att.3 No.	Test Organization (Procedure)	Manufacturer		
	•										
* Valv 2	ve: S1- C	AFW-340(1	AFW-340): CK/SA	Motor Dr C/	iven AFW CVTO/OP	Pump) Miniflow Check	(Dwg.: 5178220/E-3) O(SO1-12.4-2)	Rockwell Edwards		
* Valu 3 3	Ve: S1- AC AC	AFW-384 (3 3	AFW-384): CK/SA CK/SA	FV-3110 (C/ C/	Outlet CI AT/CS CVTO/CS	heck(Dwg.: 5178220/E	-8) T(SO1-SPE-690) O(SO1-12.4-2)	Unknown Unknown	10)	Added
* Valv 3	ve: S1- C	AFW-387 (4	AFW-387): CK/SA	Third AF	W Pump D CVTO/OP	ischa	rge Check(Dwg.:	5178223/F-7) O(SO1-12.4-2)	Unknown		
* Valv 3 3	ve: Sl- AC AC	AFW-388(3 3	AFW-388): CK/SA CK/SA	FV-3110 (C/ C/	Outlet Cl AT/CS CVTO/CS	heck(Dwg.: 5178220/C *	-9) T(SO1-SPE-690) O(SO1-12.4-2)	Unknown Unknown	TCN	Addea
* Valv 3 3	ve: Sl- AC AC	AFW-399(3 3	AFW-399): CK/SA CK/SA	FV-3110 (C/ C/	Outlet CI AT/CS CVTO/CS	heck(Dwg.: 5178220/G * *	-9) T(SO1-SPE-690) O(SO1-12.4-2)	Unknown Unknown	TON	Addec
* Valu 3	ve: \$1- C	AFW-403(3	AFW-403): CK/SA	Third AF	W Pump M CVTO/OP	inifl	ow Check(Dwg.:	5178223/E-8) O(SO1-12.4-2)	Pacific		· ·
* Valv 2 2	ve: S1- B B	AFW-CV-1 3 3	13(CV-113 ANGLE/AO ANGLE/AO):Steam O/AI O/AI	AFW Pump BTC/OP BTO/OP	Stea 120 120	m Supply Valve(I	Dwg.: 5178221/E-3) O(SO1-12.4-2) O(SO1-12.4-2)	Worthington Worthington		

ATTACHMENT 2

PAGE 12 OF 78

ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN 5-20 SO1-V-2.15 PAGE 35 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Co	ode	Sect XI	Size	Valve and Actuator	Normal/ Failed	Test Type and	Str.	Notes VRR	Test Organization	
C 1	lass	Çat.	(in.)	Туре	Posit'n	Mode	Time	*See Att.3 No.	(Procedure)	Manufacturer
*. \	/alvo	e: S1	-AFW-CV-	-3201 (CV-32)	D1):AFW	Turbine	Steam	Input Valve(Dw	g.: 5178221/E-6)	
. 2		B	6	GA/AO	C/C	BTO/OP	50	2	0(S01-12.4-2)	Copes Vulcan
2		B	3	GA/AO	C/C	FST/OP		2	0(\$01-12.4-2)	Copes Vulcan
* ۱	lalvo	e: S1	-AFW-CV-	-3213(CV-32)	13):AFW	Discharg	je Val	ve(Dwg.: 517822	D/H-6)	· ·
2		B	3	GA/AO	C/0	BTC/OP	20	2	O(SO1-12.4-2)	Copes Vulcan
2		B .	3	GA/AO	C/0	BTO/OP	20	2	0(\$01-12.4-2)	Copes Vulcan
- 2		B .	3	GA/AO	C/O	FST/OP		2	0(\$01-12.4-2)	Copes Vulcan
- 2		В	3	GA/AO	C/O	PIT/RR		2	0(S01-12.8-8)	Copes Vulcan
* -1	alvo	e: \$1	-AFW-FC	/-2300(FCV-	2300):AF	W Flow (Contro	1 to Steam Gene	rator MSS-E-1A(Dwg	.: 5178220/H-10)
2		B	· 3	GA/ÅO	0/0	BTC/OP	20	2*	0(\$01-12.4-2)	Copes Vulcan
2		B	3	GA/AO	0/0	BTO/OP	40	2*	0(\$01-12.4-2)	Copes Vulcan
2		. B	3	GA/AO	0/0	FST/CS		2*	0(\$01-12.4-2)	Copes Vulcan
2		B	3	GA/AO	0/0	PIT/RR		2*	0(501-12.8-8)	Copes Vulcan
÷ 1	alv	e: Sl	-AFW-FCV	-2301 (FCV-)	2301):AF	W Flow (Contro] to Steam Gene	rator MSS-E-1B(Dwg	: 5178220/D-10)
· 2		B	3	GA/AO	0/0	BTC/OP	20	2*	0(\$01-12.4-2)	Copes Vulcan
2		Ř	3	GA/AO	0/0	BTO/OP	40	2*	0(501 - 12, 4 - 2)	Cones Vulcan
- 2		R	3	GA/AO	0/0	FST/CS		2*	0(501 - 12 - 2)	Cones Vulcan
2	•	B	3	GA/AO	0/0	PIT/RR		2*	0(\$01-12.8-8)	Copes Vulcan
* 1	Jalu	a. C1	-		22001 • 85		`ont vo	1 to Starm Conc	maton MSS_E_1C/Dwg	· 5179220/C 101
	a i v	с. JI D	-Arw-ru 3	CA/AO	0/0	DIC/OD	20	1 LU SLEAM UENE	A(SA) 12 4 2)	$\begin{array}{c} 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 \\ 1 $
· 2		D D	2			DIL/UP	20	2-	U(301 - 12 - 4 - 2)	Copes Vulcan
· · · · C		0 . D	3	GA/AU	U/U ⁷	DIU/UP	4U	<u>۲</u>	U(5U(-12.4-2))	Copes Vulcan
2		0	3	GA/AU	0/0	r31/U3		Z=1 1 1	U(SUI-12.4-2)	Copes Vulcan
2		Ø	5	GA/AU	U/U	rii/kk	•	۲۳	0(501-12.8-8)	copes vuican

ATTACHMENT 2

PAGE 13 OF 78

ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN 5-20 SO1-V-2.15 PAGE 36 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Class	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes V *See Att.3 N	Test RR Organization o. (Procedure)	Manufacturer
* Valv	e· 51-	AFN-FCV	-3301/FCV-	33011.4F	H Flow C	ontro	l to Steam Ge	nerator MSS-E-18/Dwg	• 5178220/F-10)
2	B	3	GA/ÃO	0/0	BTC/OP	20	2*	0(\$01-12.4-2)	Copes Vulcan
2	B	3	GA/AO	0/0	BTO/OP	40	2*	0(501 - 12.4 - 2)	Copes Vulcan
2	R	3	GA/AO	0/0	EST/CS		2*	0(501 - 12.4 - 2)	Copes Vulcan
2	B	3	GA/AO	0/0	PIT/RR		2*	0(S01-12.8-8)	Copes Vulcan
* Valv	e: S1-	AFW-FV-	3110(FV-31)	10):Thir	d AFW Pu	mn Di	scharge Valve	(Dwg.: 5178223/F-9)	· · · · ·
2	B	4	GA/AO	C/0	BTC/OP	20	18	0(501 - 12.4 - 2)	Copes Vulcan
2	R	i	GA/AO		BTO/OP	20	18	0(501 - 12.4 - 2)	Copes Vulcan
2	R .	Å	GA/AO	C/0	EST/OP		18	0(501 - 12 - 4 - 2)	Copes Vulcan
2	B	• 4	GA/AO	C/0	PIT/RR		18	0(\$01-12.8-8)	Copes Vulcan
* Valv	e: S1-	AFW-MOV	-1202 (MOV-1	1202):AF	V Pump G	10S D	ischarge MOV/	Dwa.: 5178220/8-6)	· ·
2	R	3	GA/MO	C/AI	RTO/OP	15	182	0(501-12, 4-2)	Westinghouse
2	B	3	GA/MO	C/AI	PIT/RR		182	0(S01-12.8-8)	Westinghouse
* Valv	e: S1-	AFW-SV-	3200/54-32	00)•Auxi	liarv Fe	edwati	er Pump 6010	Solenoid Valve(Dwg.:	5178221/0-6)
2	R	1/2	64/50	C/0	RTO/OP	2	2	0(\$01-12 4-2)	Target Rock
2	R	1/2		č/0	FST/OP	.	2	0(501-12 - 4-2)	Target Rock
2	R S	1/2	GA/SO	C/O	PIT/RR		2	0(501 - 12, 8 - 8)	Target Rock
-		-/ -		-, -	• • • / •••	1.		-100	i
* Valv	e:ˈ\$1-/	AFW-SV-	3202 (SV-320	02):AFW :	Solenoid	Valv	e AFW-X-1062	Dump to Atmosphere(Dw	g.: 5178221/D-10)
2	B	1/2	GA/SO	0/0	BTO/OP	2	2	0(\$01-12.4-2)	Target Rock
2	8	1/2	GA/SO	0/0	FST/OP	-	2	0(\$01-12.4-2)	Target Rock
2	- B	1/2	GA/SO	0/0	PIT/RR	. *	2	0(\$01-12.8-8)	Target Rock

ATTACHMENT 2

PAGE 14 OF 78

Added
ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN 5-20

SO1-V-2.15 PAGE 37 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Ċ	ode lass	Sect XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ r Failed Posit'n	Test Type and Mode	Str. Notes Time *See Att.3	VRR No.	Test Organization (Procedure)	Manufacturer	
.*	Valv	s• 51	-AFH-SV	-3203/58-3	0031•VEM	bionala	Value AFM-Y-106	2 Ուս	mn to Atmocphave/(Wa + 5170221/C 10)	
2		R	1/2	-5205(50-5) 64/50	0/0	RTC /OP	2 2	L Dui	$\frac{1}{10} \frac{1}{10} \frac$	Target Dock	: ·
2		R	1/2	GA/SO	0/0	EST/OP	2		0(501 - 12 - 4 - 2)	Target Rock	•
2		B	1/2	GA/SO	0/0	PIT/RR	2	•	0(\$01-12.8-8)	Target Rock	
*	Valve	e: S1	-AFW-SV	-3204(SV-3	204):AFW	Solenoid	Valve AFW-X-106	2 Du	np to Atmosphere([wg.: 5178221/B-10)	•
2	• •	8	1/2	GA/SO	0/0	BTC/OP	2 2		0(\$01-12.4-2)	Target Rock	
2		B	1/2	GA/SO	0/0	FST/OP	2		0(\$01-12.4-2)	Target Rock	
2	·	B	1/2	GA/SO	0/0	PIT/RR	2		0(\$01-12.8-8)	Target Rock	•
*	Valve	e: S1	-AFW-SV	-3205(SV-32	205):AFW	Solenoid	Valve For Servio	ce Wa	ater to GO10(Dwg.	5178221/E-11)	REVISED
2		B	1/2	GA/SO	. C/O	BTO/OP	10 2820		0(S01-12.4-2)	Target Rock	STROKE
2	•	B	1/2	GA/SO	C/0	FST/OP	2		0(S01-12.4-2)	Target Rock	Time
2		B	1/2	GA/SO	C/O	PIT/RR	2		0(\$01-12.8-8)	Target Rock	
*	Valve	e: S1	-AFW-SV	-3211(SV-32	211):AFW	Solenoid	Valve Steam line	e to	AFW-X-1062 Drain	Dwg.: 5178221/G-5)	•
2		B	1/2	GA/SO	C/0	BTO/OP	2 2		0(\$01-12.4-2)	Target Rock	•
2		B	1/2	GA/SO	C/0	FST/OP	2		0(\$01-12.4-2)	Target Rock	•
2		B	1/2	GA/SO	C/0	PIT/RR	2		0(\$01-12.8-8)	Target Rock	
*	Valve	e: S1	-AFW-SV	-3214(SV-32	214):AFW	Solenoid	Valve Steam line	e to	AFW-X-1062 Drain	Dwg.: 5178221/F-6)	· · ·
2	.*	B	1/2	GA/SO	C/0	BTO/OP	2 2		0(\$01-12.4-2)	Target Rock	
2		B	1/2	GA/SO	C/0	FST/OP	2	• •	0(S01-12.4-2)	Target Rock	
2		8	1/2	GA/SO	C/0	PIT/RR	2		0(\$01-12.8-8)	Target Rock	

ATTACHMENT 2

PAGE 15 OF 78

ENGINEERING PROCEDURE **REVISION** 5 **ATTACHMENT 2** TCN _5-20

SO1-V-2.15 PAGE 38 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

	Sect.		Valve and	Normal/	Test Type			Test	•	
Code Class	XI Cat.	Size (in.)	Actuator Type	Failed Posit'n	and Mode	Str. Notes Time *See Att.3	VRR No .	Organization (Procedure)	Ha	anufacturer

** System: Chemical Feed

* Valve: S1-SHA-305(SHA-305):West Spray Additive Pump Discharge Check(Dwg.: 5178125/F-9) 2 С 3/4 CK/SA ° C/ CVTO/OP 0(S01 - 12.4 - 2)Kerotest * Valve: S1-SHA-306(SHA-306):East Spray Additive Pump Discharge Check(Dwg.: 5178125/H-9) 0(S01-12.4-2) 2 C . 3/4 CK/SA $C/^{\circ}$ CVTO/OP Kerotest * Valve: S1-SHA-RV-2000(RV-2000):Hydrazine Tank D-200 Relief Valve(Dwg.: 5178125/B-3) RV/SA RVT/RR 2 С 1 M(S01-1-6.64) C/ Crosby * Valve: S1-SHA-RV-2001(RV-2001):Relief Valve to Hydrazine Tank D-200(Dwg.: 5178125/B-3) C 1 2 RV/SA C/-RVT/RR M(SO1 - 1 - 6.64)Crosby * Valve: S1-SHA-RV-2002(RV-2002):Hydrazine Tank D-200 Relief Valve(Dwg.: 5178125/B-4) 2 RV/SA ·C/ RVT/RR M(S01-I-6.64) Crosby * Valve: S1-SHA-RV-2003A(RV-2003A):Relief Valve on Disch of Hydrazine Pump G200A(Dwg.: 5178125/F-8) 2. **C** -3/4 RV/SA **C/** RVT/RR M(SO1 - I - 6.64)Crosby * Valve: S1-SHA-RV-2003B(RV-2003B):Relief Valve on Spray Pump(Dwg.: 5178125/D-8) RVT/RR 2 ... C RV/SA 3/4 C/ M(SO1-I-6.64) Crosby * Valve: S1-SHA-SV-600(SV-600):East Hydrazine Spray Additive Pump Discharge(Dwg.: 5178125/H-10) 2 B 3/4 GL/SO C/0 BTO/OP 5 2 0(S01 - 12.4 - 2)Target Rock 2 B 3/4 GL/SO C/0 FST/OP 2 0(S01 - 12.4 - 2)Target Rock 2 **B** · 3/4 GL/SO C/0 · PIT/RR 2 0(S01 - 12.8 - 8)Target Rock

ATTACHMENT 2

PAGE 16 OF 78

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 39 OF 118 ATTACHMENT 2 TCN ______________

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Co C1	de lass	Sect XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.3	VRR 3 No.	Test Organization (Procedure)	Manufacturer
* V	/alvo	e: \$1-	SHA-SV	-601 (SV-601):West H	vdrazine	Spray	/ Additive	Pumo	Discharge(Dwg.:	5178125/F-9)
2		В .	3/4	GL/SO	C/0	BTO/OP	5	2	• •••••	0(\$01-12.4-2)	Target Rock
2		B .	3/4	GL/SO	Ċ/0	FST/OP		2	A.	0(S01-12.4-2)	Target Rock
2		<u></u>	3/4	GL/SO	C/0	PIT/RR		2		0(\$01-12.8-8)	Target Rock

ATTACHMENT 2

PAGE 17 OF 78

ENGINEERING PROCEDURE SO1-V-2.15 **REVISION 5** PAGE 40 OF 118 ATTACHMENT 2 TCN ______

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

			Valve		Test			;		•		
	Sect.		and	Normal/	Туре			•		Test		•
Code	XI	Size	Actuator	Failed	and	Str.	Notes		VRR	Organization		
Class	Cat.	(in.)	Туре	Posit'n	Mode	Time	*See /	Att.3	No.	(Procedure)	Manufa	icturer

** System: Chemical and Volume Control

* Val 2	lve: B	SI-BAS-C	V-334(CV-33 GL/AO	4):Boric C/O	Acid Inje BTO/OP	ction Pump 10 2	Alternate Suction(Dwg.: 51 O(SO1-12.4-2)	78145/G-3) Black,
2	B	2	GL/AO	C/0	FST/OP	2	0(501-12.4-2)	Bryson Black, Sivalls and
2	8	2	GL/AO	C/0	PIT/RR	2	0(\$01-12.8-8)	Bryson Black, Sivalls and
+ V-1					D	•	··	Bryson
- Vai 1	B	2 2	GL/AO	0C/C	BTC/OP	lsolation 10 2	(45 GPM)(Dwg.: 5178130/E-6 6 O(SO1-12.4-2)) Black, Sivalls and
1	B	2	GL/AO	0C/C	FST/CS	2	6 0(\$01-12.4-2)	Bryson Black, Sivalls and
1	B	2	GL/AO	0C/C	PIT/RR	2	6 0(\$01-12.8-8)	Bryson Black, Sivalls and

* Valve: S1-LDS-CV-203(CV-203):Letdown Orifice Isolation (90 GPM)(Dwg.: 5178130/F-6)
1 B 2 GL/AO OC/C BTC/OP 10 2 6 O(S01-12.4-2) Black,
Sivalls and

Bryson ATTACHMENT 2

Bryson

PAGE 17 OF 78

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 41 OF 118 ATTACHMENT 2 TCN 5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Clas	Sect XI s Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.	VRR 3 No.	Test Organization (Procedure)	Manufacturer	
1	8	2	GL/AO	00/0	FST/CS		2	6	0(501 - 12, 4 - 2)	Black	
	_					,	-			Sivalls and	
1	B .	2	GL/AO	0C/C	PIT/RR		2	6	0(\$01-12.8-8)	Black, Sivalls and Bryson	
* Valu	ve• \$1.	102-01-	204/64-204) • Latdow	n Orific	a Ica	lation /AE	CDW)	/Dug . 5179120/C 61	0133011	
1	8	2	GL/AO	00/0	BTC/OP	10	2	6 6	0(S01-12.4-2)	Black, Sivalls and	REVISED STROKE
1	8	2	GL/AO	0C/C	FST/CS		2	6	0(\$01-12.4-2)	Bryson Black, Sivalls and	1111-
1	B	2	GL7A0	0C/C	PIT/RR	•	2	6	0(\$01-12.8-8)	Bryson Black, Sivalls and	
				,				· .		Bryson	
* Valv	vė: S1-	LDS-CV-	525(CV-525)):Letdow	n Isolat	ion I	nside Sphe	re(Dw	g.: 5178130/C-10)	•	
2	A	2	BALL/HY	0/C	AT/RR		2810	6	T(SO1-V-1.12)	Unknown	Devicent
2	A .	2	BALL/HY	° 0/C	BTC/OP	50	2&10	6	0(SO1-12.4-2)	Unknown	STROKE
2	A A	2	BALL/HY BALL/HY	0/C 0/C	FST/CS PIT/RR	·	2&10 2&10	6 6	0(S01-12.4-2) 0(S01-12.8-8)	Unknown Unknown	TIME
* Vally	ve: \$1-	LDS-CV-	526(CV-526)):Letdow	n Isolat	ion O	utside Snh	ere(D	wg.: 5178140/B-3)	•	· · · · ·
2	A	2	BALL/HY	0/C	AT/RR		2810		T(SO1-V-1.12)	Gulf-Western EBV Division	

ATTACHMENT 2

PAGE 19 OF 78

ENGINEERING PROCEDURE REVISION 5 SO1-V-2.15 PAGE 42 OF 118 ATTACHMENT 2 TCN 5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

C C	ode 1ass	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att	VRR 3 No.	Test Organization (Procedure)	Manufacturer	
2		A	2	BALL/HY	0/C	BTC/OP	50	2&10		0(\$01-12.4-2)	Gulf-Western	REVISED
2		A	2	BALL/HY	0/C	FST/OP		2&10		0(\$01-12.4-2)	EBV Division Gulf-Western	TIME
2	. ·	A	2	BALL/HY	0/C	PIT/RR	•	2&10		0(\$01-12.8-8)	EBV Division Gulf-Western EBV Division	
*	Valve	e: S1-I C	RCP-005(2	RCP-005):: CK/SA	Sea] Supj O/	ply Chec CVTC/CS	k Valv	ve(Dwg.: *	517811(D/C-9) 0(S01-12.4-2)	Rockwell Edwards	
* 1	Valve	e: S1-I C	RCP-006(2	RCP-006): CK/SA	Seal Supp O/	oly Check CVTC/CS	k Valu	ve(Dwg.: *	5178110	0/E-9) 0(S01-12.4-2)	Rockwell Edwards	
* (Valve	e: S1-I C	RCP-104(2	RCP-104): CK/SA	Reactor (O/	Coolant (CVTC/CS	Pump '	"C" Seal *	Supply	Check Valve(Dwg.: O(SO1-12.4-2)	5178110/H-9) Rockwell Edwards	
* 1	Valve	e: S1-F B	RCP-CV-2 3/4	76(CV-276) GL/AO):RCP NO. 0/0	l Seal BTC/CS	Bypas 20	ss(Dwg.: 2*	5178111	/C-7) 0(S01-12.4-2)	Black, Sivalls and	
2		B	3/4	GL/AO	0/0	BTO/CS	20	2*		0(501-12.4-2)	Bryson Black, Sivalls and	
• .								•			Bryson	

ATTACHMENT 2

PAGE 20 OF 78

NUCLEAR GENERATING SITE UNIT 1



ENGINEERING PROCEDURE SO REVISION 5 PA ATTACHMENT 2 TCN 5-20

SO1-V-2.15 PAGE 43 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Clas	Sect. XI s Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes V *See Att.3 N	Test RR Organization D. (Procedure)	Manufacturer	
2	B	3/4	GL/AO	0/0	FST/CS ·	·. . · ·	2*	0(S01-12 A-2)	Black	· ·
									Sivalls and	· · · · · · · · · · · · · · · · · · ·
2	D	2/4	01 / 1 0						Bryson	
٤	Đ	3/4	GL/AU	0/0	PII/RR		2*	0(\$01-12.8-8)	Black,	•
				· · · ·	•				Sivalls and	
					•	•			Bryson	
* Val	ve: S1-	RCP-CV-	527 (CV-527)):Seal R	eturn Co	ntain	ment Isolation	n Inside Sphere(Dwa.:	5178111/8-111	
2	A	3	BALL/HY	0/C	AT/RR	.	2&10*	T(SO1-V-1.12)	Gulf-Western	
2		3	BALL/HY	0/0	BIC/CS	50	2&10*	0(\$01-12.4-2)	Gulf-Western	STROKE
2	Â	3	RALL/HT	0/L 0/C	FSI/US	· .	2810*	0(S01-12.4-2)	Gulf-Western	TIME
-	•••	•	UNEL/III	U/C	F.1 I/ KK	,	2410-	0(501-12.8-8)	Gulf-Western	
* Val	/e: S1-	RCP-FCV	-1115A(FCV-	-1115A):F	RCP "A"	Seal I	low Controlle	er(Dwa.: 5178)10/(-5)		
1	B	2	ANGLÉ/AO	0/0	BTC/CS	15	2*	0(S01-12.4-2)	Black.	· · ·
	· · · ·		- -		•	. •			Sivalls and	•
1	R	2	ANCI E /AO	n /n		.		· · · · · · · · · · · · · · · · · · ·	Bryson	
•	J.	.	ANGLE/AU	U/U	BIOLCZ	30 1	2*	0(SO1-12.4-2)	Black,	· · ·
• •		÷.,•							Sivalls and	
/ 1 /1/	B .	2	ANGLE/AO	0/0	BTPO/OP		2*	0(501-12 4-2)	Black	•
•			•				-	0(001 12.4 2)	Sivalls and	· .
•		•			• •		•		Bryson	· · ·
1	Ū	2	ANGLE/AO	0/0	FST/CS		2*	0(S01-12.4-2)	Black,	
							•		Sivalls and	
			1						Bryson	

ATTACHMENT 2

PAGE 21 OF 78

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 44 OF 118 ATTACHMENT 2 TCN _______

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Class	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.3	VRR No.	Test Organization (Procedure)	Manufacturer
Valv I	e: S1- B	RCP-FCV-	-1115B(FCV- ANGLE/A0	-1115B): 0/0	RCP "B" BTC/CS	Seal 1 15	Flow Contro 2*	ller	Dwg.: 5178110/E-5) 0(S01-12,4-2)	Rlack
, . L	B	2	ANGLE/AO	0/0	BTO/CS	30	2*		0(501-12.4-2)	Sivalls and Bryson Black, Sivalls and Bryson
L	B B	2	ANGLE/AO	0/0	BTPO/OP		2*	• • •	0(SO1-12.4-2)	Black, Sivalls and Bryson
• • •		-	-	-		• •	•		0(301-12.4-2)	Sivalls and Bryson'
Valve	e: S1- B	RCP-FCV- 2	1115C(FCV- ANGLE/AO	1115C):R 0/0	BTC/CS	Seal F 15	low Control 2*	ller(Dwg.: 5178110/H-5) O(SO1-12.4-2)	Black, Sivalls and
: .x	B	2	ANGLE/A0	0/0	BTO/CS	30	2*		0(\$01-12.4-2)	Bryson Black, Sivalls and
	B	2	ANGLE/A0	0/0	BTPO/OP		2*		0(\$01-12.4-2)	Bryson Black, Sivalls and
· · ·	8	2	ANGLE/A0	0/0	FST/CS	•	2*.		0(501-12.4-2)	Black, Sivalls and

Bryson ATTACHMENT 2

PAGE 22 OF 78

ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN ______ SO1-V-2.15 PAGE 45 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Class	Sect XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Notes Time *See Att.3	Test VRR Organization No. (Procedure)	Manufacturer
* Valv	e: S1	-RCP-FCV	-1115D(FCV	-1115D):	RCP "A"	Seal Supply High	Range(Dwg.: 5178110/B	-6)
1	B	2	GL/AÒ	C/C	BTO/CS	35 2*	0(\$01-12.4-2)	Black, Sivalls and
1	B	2	GL/AO	C/C	FST/CS	2*	0(501-12.4-2)	Bryson Black, Sivalls and
	•							Bryson
* Valv	e: Sl R	-RCP-FCV	-1115E(FCV GL/AO	-1115E):/	RCP "B"	Seal Supply High	Range(Dwg.: 5178110/E	-6) Black
	•	-		0,0			0(301 12.4 2)	Sivalls and
. 1	B	2	GL/AO	C/C	FST/CS	2*	0(\$01-12.4-2)	Black,
			• •	· ·		· · · · · ·	• • •	Sivalls and Bryson
* Valv	e: S1	-RCP-FCV	-1115F (FCV	-1115F):I	RCP "C"	Seal Supply High	Range(Dwg.: 5178110/G	-5)
1	B	2	GL/AO	C/C	BTO/CS	30 2*	0(\$01-12.4-2)	Black, Sivalls and
1	B	2	GL/AO	C/C	FST/CS	2*	0(\$01-12.4-2)	Bryson Black,
	•				· · · ·			Sivalls and Bryson
* Valv	e: \$1	-RCP-MOV	-18(MOV-18)):Seal Fi	ilter Ma	anifold Bypass Val	lve(Dwg.: 5178110/B-3)	
2	В ·	4	GA/MU GA/MO	C/AI	BIU/OP PIT/RR	120 182 182	0(S01-12.4-2) 0(S01-12.8-8)	Unknown Unknown

ATTACHMENT 2

PAGE 23 OF 78



ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN ______

SO1-V-2.15 PAGE 46 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Class	Sect XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Al	VRR t.3 No.	Test Organization (Procedure)	Manufacturer
* Valv	e: S1	-RCP-MOV	-19(MOV-19):Seal F	ilter Ma	an i fol	d Bypass	s Valve(l)wq.: 5178110/C-3)	• • • • • •
2 2	BB	4	GA/MO GA/MO	C/AI C/AI	BTO/OP PIT/RR	120	182 182		0(S01-12.4-2) 0(S01-12.8-8)	Unknown Unknown
* Valv 2	e: S1 B	-RCP-PCV 2	-1115A(PCV ANGLE/AO	-1115A): 0/0	RCP "A" BTC/CS	Seal. 40	Leakoff 2*	Isolati	on(Dwg.: 5178111/F- O(SO1-12.4-2)	2) Black, Sivalls and
2	B	2	ANGLE/AO	0/0	FST/CS		2*		0(\$01-12.4-2)	Black, Sivalls and Bryson
2	B	2	ANGLE/AO	0/0	PIT/RR	•	2*		0(\$01-12.8-8)	Black, Sivalls and Bryson
* Valv		-RCP-PCV	-1115B(PCV	-11158):	RCP "B"	Seal	leakoff	Isolati	on(Dwa.: 5178111/F-	6)
2	B	2	ANGLE/AO	0/0	BTC/CS	15	2*		0(\$01-12.4-2)	Black, Sivalls and
2	B	2	ANGLE/AO	0/0	FST/CS	•	2*	•	0(501-12.4-2)	Black, Sivalls and
2	B	2	ANGLE/AO	0/0	PIT/RR	•	2*		0(501-12.8-8)	Bryson Black, Sivalls and Bryson

ATTACHMENT 2

PAGE 24 OF 78



ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 47 OF 118 ATTACHMENT 2 TCN 5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

	Code Class	Sect XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Str Mode Tim	. Notes VRR e *See Att.3 No.	Test Organization (Procedure)	Hanufacturer	•
	*_Valv	e: \$1	-RCP-PCV-	1115C(PCV	-1115C):	RCP "C" Seal	Leakoff Isolati	on(Dwg.: 5178111/F-	9) Plack	
•	2	D.	ζ.	ANGLE/AU	0/0	BIL/LS 40	2-	0(501-12.4-2)	Sivalls and	•
	2	B.	2	ANGLE/AO	0/0	FST/CS	2*	0(501-12.4-2)	Bryson Black, Sivalls and	
	· · ·	· .			· .				Bryson	
	2	B .	2	ANGLE/AO	0/0	PIT/RR	2*	0(501-12.8-8)	Black, Sivalls and Bryson	
•								70111/0 101	- 	
. 1	* Valv 2	e: SI C	-KCP-KV-2 3	2004 (RV-20 RV/SA	04):RCP C/	Nater System RVT/RR	Relief(Dwg.: 51 6	/8111/A-10) M(SO1-I-6.64)	Crosby	
,	* Valv	e: \$1	-VCC-002((VCC-002):	Loop A C	harging Line	Check(Dwg.: 517	8135/G-11)		• .'
	1	C	2	CK/SA	0/	CVTC/ČS	•	0(\$01-12.4-2)	Rockwell Edwards	. :
1	* Valv	e: \$1	-VCC-003	(VCC-003):	Pressuri	zer Auxiliar	v Sprav Line Che	ck(Dwg.: 5178135/G-	11).	
·	1	C	2	CK/SA	C/	CVTC/CS	*	0(\$01-12.4-2)	Rockwell	•
	1	C	2	CK/SA	C/	CVTO/CS	*	0(\$01-12.4-2)	Rockwell Edwards	
	* Valv	ه. ۱۵	- VCC - 301	VCC-3011-	VCT Out1	et Check/Dwa	• 5178136/F-A)			•
	2	C	4	CK/SA	0/	CVIC/CS	*	0(S01-12.4-2)	Aloyco/ Walworth	
								ATTACHMENT	2	PA

PAGE 25 OF 78

ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN 5-20

SO1-V-2.15 PAGE 48 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

C C	ode Tass	Se XI Ca	ct. t.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Notes Time *See At	Test VRR Organization t.3 No. (Procedure)	Manufacturer
*	Valv	e:	Ś1-'	VCC-305	5(VCC-305):	South Ch	arging f	Pump Discharge	Line Check Valve(Dwg.: !	5178135/G-5).
2		0 0		3	CK/SA	0/	CVTC/OF		0(S01-12.4-2) 0(S01-12.4-2)	Crane Crane
		U		.	UN JN	v /			0(301-12.4-2)	CI dife
*	Valv	e:	S1-	VCC-306	5(VCC-306):	North Ch	arging f	Pump Discharge	Line Check Valve(Dwg.: !	5178135/F-6)
2		C		3	CK/SA	0/) .	0(\$01-12.4-2)	Crane
Z		Ľ		3	CK/SA	0/	CV10/01	•	0(\$01-12.4-2)	Crane
*	Valv	e:	S1-	VCC-331	(VCC-331):	South Ch	arging f	Pump Miniflow	Check(Dwg.: 5178135/E-5)	
2		C		2	CK/SA	0/ .	CVTO/OF)	Ŏ(SO1-12.4-2)	Crane
*	Valv	. .	\$1.	VCC-332)/VCC-332)·	North Ch	araina (Dump Miniflow	Chack(Dug + 5178135/F_A)	
2		Ċ		2	CK/SA	0/	CVTO/OF		0(S01-12.4-2)	Crane
•	Mal		C1	NCC 253		· · · · · · · · ·	4 0-3			•
- 2	VAIV	e: .r	21-	VLL-35/ 2	(VLL-35/):	Seal Hea	Ger Keit	et Check(Dwg.	: 51/8136/E-8) 0(501 12 4 2)	Crana
Ľ	•••••••	C		2	UN JA	4		•	0(301-12.4-2)	Crane
*	Valv	e:	S1-	VCC-CV-	-304(CV-304):Chargi	ng Line	Control Valve	(Dwg.: 5178135/G-10)	
1		B		2	GL/AO	0/C	BTC/CS	80 2*	0(\$01-12.4-2)	Black,
						· ·		•		Sivalls and
		· n	$(s_{i}) \in \mathcal{S}_{i}$	•	01 (40	0/0	DTA (00	100 01		Bryson
1		D·		2	GL/AU	U/L	BIO/C2	100 2*	0(501-12.4-2)	Black,
	· · ·						•	• •	· · · ·	Sivalis and
- 1		R		2	GI /A0	<u>ດ / ເ</u>	EST/CS	2*	0/(01-12)/(1-2)	Black
•				•	ul/ nu	u / u	131/03	٤	0(301-12.4-2)	Sivalle and
	,				•	• •		•		Bryson

ATTACHMENT 2

PAGE 26 OF 78

ENGINEERING PROCEDURE	S01-V-2.15	
REVISION 5	PAGE 49 OF	11
ATTACHMENT 2		
TCN 5-20	· · · · · ·	

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code	Sect. XI	Size	Valve and Actuator	Normal/ Failed	Test Type and	Str.	Notes	VRR	Test Organization	
Class	Cat.	(in.)	Туре	Posit'n	Mode	Time	*See Att.3	No.	(Procedure)	Manufacturer
1	B	2	GL/AO	0/C	PIT/RR		2*	1. T. S.	0(\$01-12.8-8)	Black, Sivalls and Bryson
* Valv 1	e: S1- B	VCC-CV-3 2	05(CV-305 GL/A0):Auxili C/C	ary Spra BTC/CS	y to 80	Pressurizer 2*	(Dwg	.: 5178135/G-10) O(SO1-12.4-2)	Black, Sivalls and
1	8	2	GL/AO	C/C	BTO/CS	100	2*	· · · · ·	0(\$01-12.4-2)	Bryson Black, Sivalls and Bryson
1	B	2	GL/AO	C/ C	FST/CS		2*	•	0(\$01-12.4-2)	Black, Sivalls and Bryson
1	B	2	GL/AO	C/C	PIT/RR		2*	· · · ·	0(\$01-12.8-8)	Black, Sivalls and Bryson
* Valv	e: \$1-	VCC-CV-4	10(CV-410):VCT Se	al Water	Inle	t(Dwg.: 517	8136,	/D-6)	0
2	D R	2	GL/AU		BIC/UP	. <u>D</u> .	2		U(501-12.4-2)	Grinnell
2	B	2	GL/AO	0C/	PIT/RR	· ·	2		0(\$01-12.8-8)	Grinnell
* Valv	e: S1-	VCC-CV-4	11(CV-411):VCT Se	al Water	Inle	t(Dwg.: 517	8136	/D-9)	
2	B	2	GL/AO	00/	BTC/OP	5	2		0(\$01-12.4-2)	Grinnell
2	R R	2	GL/AU GL/AO	00/	FSI/OP PIT/RD	.*	2		0(501-12.4-2)	Grinnell
-		•	art un	U U/	1 4 17 14		s F age and Share	· · ·	0(501 12.0 0)	WI ITHIG I I

ATTACHMENT 2

PAGE 27 OF 78



ENGINEERING PROCEDURE
REVISION 5SO1-V-2.15
PAGE 50 OF 118 ATTACHMENT 2 TCN 5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Class	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Node	Str. Time	Notes *See Att.3 M	VRR No.	Test Organization (Procedure)	Manufacturer	
k Valu	o. 51-	VCC_CV_1	528/CV_528	∏ [دم€•	aturn Coi	ntain	ment Isolatic	on (D	wa.: 5178136/E-10		
2	e. 31- A	3	BALL/HY	0/C	AT/RR		2&10*		T(SO1-V-1.12)	Gulf-Western	
-	•••		· • · · · · · · · · · · · · · · · · · ·	-, -	, ,	_	•			EBV Division	
2	A	3	BALL/HY	0/C	BTC/CS	50	2&10*	•	0(\$01-12.4-2)	Gulf-Western	REVISED
				-						EBV Division	JIRCHO
2	A	3	BALL/HY	0/C	FST/CS		2&10*		0(\$01-12.4-2)	Guit-Western	1.1/100
•		•		- 	017/00		2410+		0/501 12 9-91	Culf-Western	•
2	A .	3	BALL/HY	U/L	PII/KK		2010-	÷	0(301-12.0-0)	EBV Division	
* Valv 2	e: S1- B	VCC-FCV 2	-1112(FCV- ANGLE/AO	1112):Ch 0/C	arging F BTC/CS	1ow C 75	ontrol Valve 2*	(Dwg	g.: 5178135/G-8) O(SO1-12.4-2)	Black, Sivalls and Bryson	DEVISED STROKE TIME
2	B	2	ANGLE/AO	0/C	BIO/CS	33	2*	t.	U(501-12.4-2)	Sivalls and Bryson	
2	8	2	ANGLE/AO	0/C	BTPO/OP	I	2*		0(S01-12.4-2)	Black, Sivalls and	
2	B	2	ANGLE/AO	0/C	FST/CS		2*	•	0(\$01-12.4-2)	Black, Sivalls and	
2	B	2	ANGLE/AO	0/C	PIT/RR	•	2*		0(\$01-12.8-8)	Bryson Black, Sivalls and	
•	-	• ·					•			Bryson	

ATTACHMENT 2

PAGE 28 OF 78



ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 51 OF 118 ATTACHMENT 2 TCN 5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Class	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.3	Test VRR Organization No. (Procedure)	Manufacturer
* Valv	e: \$1-	VCC-MOV	-1100C (MOV	-1100C):	: VCT Outl	et (Dw	g.: 5178136,	/D-4)	
2	B	4	GA/MO	0/A1	BTC/CS	20	1&2*	0(\$01-12.4-2)	Unknown
2	B	4	GA/MO	0/AI	PIT/RR		182*	0(\$01-12.8-8)	Unknown
* Valv	e: S1-	VCC-RV-	289 (RV-289):Seal R	eturn He	ader I	Relief to V	CT(Dwg.: 5178136/D-9)	
C	2 ·	3X4	RV/SA	C/	RVT/RR		6	M(SO1-I-6.64)	Crosby

ATTACHMENT 2



ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 52 OF 118 ATTACHMENT 2 TCN 5 - 20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Class	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.3	VRR No.	Test Organization (Procedure)	Manufacturer
** Sys	tem: C	ompress	ed Air	-						
* Valv 2	e: Sl- AC,	ISA-001 1-1/2	(ISA-001): CK/SA	Instrume 0/	nt Air AT/RR	Header	Penetration 10&11	n Che	eck Valve(Dwg.: T(SO1-V-1.12)	5178449/F-2) Kerotest
* Valv 2	e: Sl- AC	ISA-016 2	(ISA-016): CK/SA	Service 0/	Air Con AT/RR	tainme	nt Penetrat 10 8 11	ion (Check(Dwg.: 517) T(SO1-V-1.12)	8442/D-11) Kerotest
* Valv 2	e: S1- A	ISA-539 2	(ISA-539): GL/M	SV-125A C/	Bypass(AT/RR	Dwg.:	5178442/D-10 10,11&12	0)	T(SO1-V-1.12)	Unknown

* Valve: S1-ISA-955(ISA-955):Sphere Instrument Air Supply Check Valve(Dwg.: 5178444/E-10) 2 AC 1-1/2 CK/SA O/ AT/RR 10&11 T(S01-V-1.12) Kerotest

*	Valve:	SI-ISA-S	SV-125A(SV-	-125A):Co	ontainment	Isolat	ion for	Service Air	to Sphere(Dw	g.: 51784	42/D-10
2	A	- 2	GA/SO	0/C	AT/RR		2,10811	T (SO	1-V-1.12)	Target	Rock
- 2	A .	2	GA/SO	0/C	BTC/OP	2	2;10&11	0(SO	1-12.4-2)	Target	Rock
2	A (2	GA/SO	0/C	FST/OP		2,10811	0(S0	1-12.4-2)	Target	Rock
2	A	2	GA/SO	0/C	PIT/RR		2,10811	. O(SO	1-12.8-8)	Target	Rock

ATTACHMENT 2

PAGE 30 OF 78



ENGINEERING PROCEDURE SU REVISION 5 PA ATTACHMENT 2 TCN 5-20

SO1-V-2.15 PAGE 53 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

•		· ·	Valve		Test				· . ·	
Code	Sect.	Siza	and Actuator	Normal/ Failed	Type	Str Notes	VRR	Test Organization	· .	· ·
Class	Cat.	(in.)	Туре	Posit'n	Mode	Time *See Att.3	No.	(Procedure)		Manufacturer

** System: Diesel #1 Air Starting

* 1	lalve: C	S1-DSS 3	-305(DSS Cl	S-305) K/S <mark>A</mark>	:D.G1 C/	Starting Air CVTO/OP	Manif Inlet Ck	(Right Front)(Dwg. O(SO1-12.4-2)	: 5178816/C-4) CLOW
* \ 3	/alve: C	S1-DSS 3	-306 (DS Cl	S-306) K/SA	:D.G1 C/	Starting Air CVTO/OP	Manif Inlet Ck	(Right Rear)(Dwg.: O(SO1-12.4-2)	: 5178816/C-9) CLOW
* 1	lalve: C	S1-DSS 3	-309 (DS: Cl	S-309) K/SA	:D.G1 C/	Starting Air CVTO/OP	Manif Inlet Ck	(Left Front)(Dwg. 0(SO1-12.4-2)	: 5178816/G-4) CLOW
* 1	alve:	S1-DSS	-310(DS	S-310)	:D.G1	Starting Air	Manif Inlet Ck	(Left Rear)(Dwg.:	5178816/G-9)
5	د ک	5 C1 D50		N 3A	L/	CVIU/UP	ank Inlat Chack	$V_{3}V_{2} = (12.4 - 2)$	LUW
	valve:	21-022	- 32/ (02	3-33/)	west 5	LATLING AIT I	ank inter check		Noveteet
3	C	2	i Cl	K/SA 🛛	C/	CVIC/OP	• •	0(501 - 12.4 - 2)	Kerotest
3	C	. 2 .	· Cl	K/SA	C/	CVTO/OP		0(\$01-12.4-2)	Kerotest
* 1	alve:	S1-DSS	-358(DS	S-358)	:East S	tarting Air T	ank Inlet Check	Valve(Dwg.: 51788)	15/D-12)
3	C	2	Č CI	K/SA İ	C/	CVTČ/OP		0(\$01-12.4-2)	Kerotest
3	Č	2	C	K/SA	C/	CVTO/OP	•	0(\$01-12.4-2)	Kerotest
* 1	Valve:	S1-DSS	-SV-301	(SV-30)]):Star	ting Air Mani	fold (Solenoid	Valve)(Dwg.: 51788	16/C-4)
3	R	3	G	À/SO	C/C	BTO/OP 2		0(\$01-12.4-2)	CALCON
ž	Ř		G	A/SO	Č/Č	FST/OP		0(501-12.4-2)	CALCON
									

ATTACHMENT 2

PAGE 31 OF 78

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 54 OF 118 ATTACHMENT 2 TCN 5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Class	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.3	VRR No.	Test Organization (Procedure)	Manuf	acturer
* Valv	e: S1-	DSS-SV-	302 (SV - 302):Starti	ng Air I	lan i fo	ld (Solenoid	d Va	lve SE)(Dwg.: !	5178816/G-9)
3	B	3	GÅ/SO	C/C	BTO/OP	2	•		0(\$01-12.4-2)	CALCO	Ň
3	B	3	GA/SO	C/C	FST/OP		•		0(\$01-12.4-2)	CALCO	N
* Valv	e: S1-	DSS-SV-	304 (SV-304)):Starti	ng Air I	lanifo	ld (Solenoid	d Va	lve NE)(Dwg.: !	5178816/C-9)
3	B	3	GĂ/SO	C/C	BTO/OP	2	•		0(\$01-12.4-2)	CALCO	Ň (Stational)
3	B	3	GA/SO	C/C	FST/OP		•		0(\$01-12.4-2)	CALCO	N
* Valv	e: S1-	DSS-SV-	305(SV-305)):Starti	ng Air I	lanifo	ld (Solenoid	d Va	lve NE)(Dwg.:	5178816/G- 4)
3 .	В.	3	GÅ/SO	C/C	BTO/OP	2	•		0(501 - 12.4 - 2)	CALCO	Ň
3	8	3	GA/SO	C/C	FST/OP				0(\$01-12.4-2)	CALCO	N .

ATTACHMENT 2

PAGE 32 OF 78

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 55 OF 118 ATTACHMENT 2 TCN 5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

	Cont		Valve	Noumol /	Test		•		Tost	
Code	XI	Size	Actuator	Failed	and	Str.	Notes	VRR	Organization	M
Class	Cat.	(in.)	Туре	Posit'n	Mode	lime	*See Att.3	NO.	(Procedure)	manuracturer

** System: Diesel #1 Generator Cooling

* .	Valve:	S1-DWS-30	6(DWS-306)	:Keep Wa	rm Pump Dis	charge Chec	k Valv	/e(Dwg.: 5178810/E-3)
3	B C	1-1/2	CK/SA	0/	CVTC/RR	5b	1	M(ŠO1-I-6.87)	CLOW
	B C	1-1/2	CK/SA	Ő/	CVTO/OP	5b	- 1	0(\$01-12.4-2)	CLOW
*	Valve:	S1-DWS-30	9 (DWS-309)):Cooling	Water Pump	Discharge	Check	Valve(Dwg.: 5178810	/C-4)
-	3 C	8	CK/SA	0/	CVTC/RR	5b	1	M(SO1-1-6.87)	CLOW
	i i	8	CK/SA	Ó/	CVTO/OP	5b	1	0(S01-12.4-2)	CLOW





ENGINEERING PROCEDURE S REVISION 5 P ATTACHMENT 2 TCN _______

SO1-V-2.15 PAGE 56 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code	Sect. XI S	ize	Valve and Actuator	Normal/ Failed	Test Type and	Str. Notes	Test VRR Organization	Maan 6a at
Class	Cat. ((in.)	Туре	Posit'n	Mode	Time *See Att.3	No. (Proçedure)	Manufacturer

** System: Diesel #2 Air Starting

* V 3	alve: C	S1-	DSN- 3	305(DSN- CK/	305) 'SA	D.G: //	2	Starting Air CVTO/OP	Manifold Inlet	Ck(So. W 0(SO1-	est)(Dwg. 12.4-2)	: 5178846/G-4) CLOW	
* V	alve:	S1 -	DSN-	306(DSN-	306)):D.G	2	Starting Air	Manif Inlet Ck	(Inlet X-	2)(Dwg.:	5178846/G-9)	
3	· C		3		CK/	SA	· · C/		CV10/OP		0(501-	12.4-2)	LLUW	
* V	alve	S 1-	NŚN.	309/	NSN.	309		-2	Starting Air	Manifold Inlet	Ck(No.Wes	t)(Dwa.:	5178846/C-4)	
3	C		3	2021	CK/	'SA	C/	•••	CVTO/OP		0(\$01-	12.4-2)	CLOW	
* v	alve:	S1 -	DSN-	-310(DSN-	310)):D.G	2	Starting Air	• Manif Inlet Ck	(Outlet	SV-404) ([Wg.: 5178846/C	-9)
3	C		3	•	CK/	SA	C/		🗢 СУТО/О́Р		0(SO1-	12.4-2)	CLOW	-
* v	alve:	S1-	DSN-	-357 (DSN-	-357)):Wes	ť S	tarting Air 1	ank Inlet Check	Valve(Dw	g.: 51788	845/E-1)	•
3	C		2		CK/	'SA İ	` C/	۰.	CVTČ/OP		0(SÓ1-	12.4-2)	Kerotest	
3	. 0		2		CK/	/SA	C/		CVTO/OP		0(SO1-	12.4-2)	Kerotest	
* V	alve:	S1-	DSN-	-358(DSN-	358)	:Eas	t Ş	tarting Air 1	ank Inlet Check	Valve(Dw	g.: 51788	345/E-12)	
3	C		2	•	CK/	'SA İ	Ć C/		CVTČ/OP		0(SO1-	12.4-2)	Kerotest	
3			2	•	CK/	/SA	C/	•	CVTO/OP		0(SO1-	12.4-2)	Kerotest	
* V	/alve:	S1-	DSN-	-SV-4	01(5	5V-4(01):S	tar	ting Air Mani	ifold Solenoid V	alve(Dwg.	: 5178846	5/C- 4)	·
3	· · · E	3	3		GÅ/	/SO	Č (C '	BTO/OP 2		0(SOI-	12.4-2)	CALCON	
3.	. · · · E	1	3		GA	/SO	C/	C	FST/OP		0(501-	12.4-2)	CALCON	

ATTACHMENT 2

PAGE 34 OF 78





ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 57 OF 118 ATTACHMENT 2 TCN _____

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Class	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.3	VRR No.	Test Organization (Procedure)	Manufacturer
* Valv	e: S1-	DSN-SV-	402 (SV - 402):Starti	ng Air M	lan i fo	ld Solenoid	Valv	ve(Dwg.: 5178846/(i-9)
3	B	3	GÀ/SO	C/C	BTO/OP	2		· .	0(\$01-12.4-2)	CALCON
3	. . ,	3	GA/SO	C/C	FST/OP				0(\$01-12.4-2)	CALCON
* Valv	e: S1-	DSN-SV-	404 (SV - 404):Starti	ng Air M	lanifo	ld Solenoid	Val	ve(Dwg.: 5178846/0	C-9)
3	R	3	GA/SO	C/C	BTO/OP	2	*,	· ·	0(\$01-12.4-2)	CALCON
3	B	3	GA/SO	C/C	FST/OP			•	0(\$01-12.4-2)	CALCON
* Valv	e: S1-	DSN-SV-	405(SV-405):Starti	ng Air M	lanifo	ld Solenoid	Val	ve(Dwg.: 5178846/(G-4)
3	R	3	GA/SO	C/C	BTO/OP	2			0(S01-12.4-2)	CALCON
. 3	B	3	GA/SO	C/C	FST/OP	-			0(501-12.4-2)	CALCON

ATTACHMENT 2

PAGE 35 OF 78



ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 58 OF 118 ATTACHMENT 2 TCN 5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

			Valve -		Test		
	Sect.		and	Normal/	Туре	Test	
Code	XI	Size	Actuator	Failed	and	Str. Notes VRR Organization	· · · · · ·
Class	Cat.	(in.)	Туре	Posit'n	Mode	Time *See Att.3 No. (Procedure)	Manufacturer

** System: Diesel #2 Generator Cooling

*	Valve:	S1	-DWN-306	(DWN-306)):Keep Wa	rm Pump Dis	charge Che	ck Val	ve(Dwg.: 5178840/E-3)
) C		1-1/2	CK/SA	0/	CVTC/RR	5b -	1	M(SO1-I-6.87)	CLOW
	B C		1-1/2	CK/SA	0/	CVTO/OP	5b	- 1	0(SO1-12.4-2)	CLOW
*	Valva	. C1	000 200	(DUN 200			D i i i i	C1 1	N-1	
	vaive.	21	-DMU-20à	(DMM-203)):cooiing	water rump	UISCharge	LNECK	valve(Dwg.: 51/8840)	/U-4)
3	B C	21	-DMU-20à	CK/SA	0/	CVTC/RR	Discharge 5b	Lneck	Walve(Dwg.: 51/8840, M(SO1-I-6.87)	/U-4) CLOW

ATTACHMENT 2

PAGE 36 OF 78

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 59 OF 118 ATTACHMENT 2 TCN ______

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Class	Sect. XI Cat.	Siz (in	Valve and e Actuator .) Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Note *See	s VRR Att.3 No.	Test Organization (Procedure)	Manufacturer
** Sys	tem: [)iese] Fuel Oil		•			: .	·	
* Valv 3 3	e: S1- C C	DFN-: 2 2	308(DFN-308): CK/SA CK/SA	Fuel Oil C/ C/	Transfer CVTC/OP CVTO/OP	Pumj	p "B".	Discharge	Check Valve(Dwg.: O(SO1-12.4-2) O(SO1-12.4-2)	5178830/E-11) Borg Warner Borg Warner
* Valv 3 3	e: S1 C C	DFN- 2 2	309(DFN-309): CK/SA CK/SA	Fuel Oil C/ C/	Transfer CVTC/OP CVTO/OP	Pumj	p "A"	Discharge	Check Valve(Dwg.: O(SO1-12.4-2) O(SO1-12.4-2)	5178830/E-8) Borg Warner Borg Warner
* Valv 3 3	e: S1- C C	DFS- 2 2	308(DFS-308): CK/SA CK/SA	Fuel Oil C/ C/	Transfer CVTC/OP CVTO/OP	Punj	р "В"	Discharge	Check Valve(Dwg.: O(SO1-12.4-2) O(SO1-12.4-2)	5178800/E-8) Borg Warner Borg Warner
* Valv 3 3	e: S1 C C	DFS-: 2 2	309(DFS-309): CK/SA CK/SA	Fuel Oil C/ C/	Transfer CVTC/OP CVTO/OP	Pumj	p. "A"	Discharge	Check Valve(Dwg.: O(SO1-12.4-2) O(SO1-12.4-2)	5178800/E-11) Borg Warner Borg Warner

ATTACHMENT 2

PAGE 37 OF 78



NUCLEAR GENERATING SITE UNIT 1

ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN 5-20

SO1-V-2.15 PAGE 60 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

		· ,	Valve		Test					· · ·
Code	Sect.	Size	and Actuator	Normal/ Failed	Type	Str	Notoc	VDD	Test	
Class	Cat.	(in.)	Туре	Posit'n	Node	Time	*See Att.3	No.	(Procedure)	Manufacturer

** System: Feedwater and Condensate

* 2	Valve: S AC	51-FWS-(10	DO6(FWS-006): CK/SA	:S/G 0/	E-18	Feedwater AT/CS	Supply *	Check(Dwg.:	5178225/C-3) T(SO1-SPE-691)
2	AC	10	CK/SA	0/		CVTC/CS	* .		0(\$01-12.4-2)
2	AC	10	CK/SA	0/	· .	CVTO/CS	° ≢ - ⁸		0(\$01-12.4-2)

Val 2	ve: S1 AC	-FWS-00 10	7 (FWS-007) CK/SA	:S/G 0/	E-1A	Feedwater AT/CS	Supply *	Check(Dwg.: 5178225/E-3) T(SO1-SPE-691)
2	AC	10	CK/SA	0/		CVTC/CS		0(\$01-12.4-2)
2	AC	10	CK/SA	0/		CVTO/CS	*	0(\$01-12.4-2)

2	AC	10	CK/SA	0/	E-10	AT/CS	supp iy	T(SO1-SPE	-691)
2	AC	10	CK/SA	0/		CVTC/CS	*	0(501-12.	4-2)
2	AC	10	CK/SA	0/	•	CVTO/CS	*	0(\$01-12.	4-2)

Atwood and Morrill Atwood and Morrill Atwood and Morrill

Atwood and Morrill Atwood and Morrill Atwood and Morrill

Atwood and Morrill Atwood and Morrill Atwood and

Morrill

Added

Addød

Added

ATTACHMENT 2

PAGE 38 OF 78

TON

ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN _______ SO1-V-2.15 PAGE 61 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Clas	Sect XI s Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See /	Att.3	VRR No .	Test Organization (Procedure)	Manufacturer	
* Val	ve: Sl	-FWS-345	(FWS-345):	FWS-456	Outlet C	heck \	/alve(Dwa.:	517	8206/G-8)		
2 2	AC AC	10 10	CK/SA CK/SA	0/ 0/	AT/CS CVTC/CS		*	• •		T (SO1 - SPE - 691) O (SO1 - 12 . 4 - 2)	Pacific Pacific	Addeq
* Val	ve: Sl	-FWS-346	(FWS-346):	FWS-457	Outlet C	heck \	Valve(Dwg.:	517	8206/E-8)		1
2 2	AC AC	10 10	CK/SA CK/SA	0/ 0/	AT/CS CVTC/CS		*	• • •		T(SO1-SPE-691) O(SO1-12.4-2)	Pacific Pacific	I ADDED
* Val	ve: Sl	-FWS-378	(FWS-378):	CV-144 0	utlet Ch	eck Va	alve(D	wq.:	5178	206/D-8)	•	
2 2 2	AC AC AC	4	CK/SA CK/SA CK/SA	C/ C/ C/	AT/CS CVTC/CS CVTO/CS		* *	· · · ·	:	T(SO1-SPE-691) O(SO1-12.4-2) O(SO1-12.4-2)	Pacific Pacific Pacific	TCN Added
+ ¥.1		5UC 270		· ·			1 (0					
- Vai 2 2 2	AC AC AC AC	-FW5-379 4 4 4	CK/SA CK/SA CK/SA CK/SA	C/ C/ C/ C/	AT/CS CVTC/CS CVTO/CS	eck V	aive(D) * *	wg.: :	21/8	206/F-8) T(S01-SPE-691) O(S01-12.4-2) O(S01-12.4-2)	Pacific Pacific Pacific	1 AddEd
* Val	ve: Sl	-FWS-398	(FWS-398):	FV-458 0	utlet Ch	eck V	alve(D	WCI.: !	5178	206/C-8)		
2 2	AC AC	10 10	CK/SA CK/SA	0/ 0/	AT/CS CVTC/CS		*		•	T (SO1-SPE-691) O(SO1-12.4-2)	Pacific Pacific	I fadea
* Val	ve: Sl	-FWS-417	(FWS-417):	CV-143 0	utlet Ch	eck V	alve(D	wa.: !	5178	206/B-8)	•	
2 2 2	AC AC AC	4 4 4	CK/SA CK/SA CK/SA	C/ C/ C/	AT/CS CVTC/CS CVTO/CS		* * *	• · ·		T(SO1-SPE-691) O(SO1-12.4-2) O(SO1-12.4-2)	Pacific Pacific Pacific	Added
		÷					1					1.

ATTACHMENT 2

PAGE 39 OF 78





ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 62 OF 118 ATTACHMENT 2 TCN _______

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

(• (Code Class	Sec XI Cat	t. Si . (i	ze n.)	Valve and Actuator Type	Normal Failed Posit	Test 1/ Type d and 'n Mode	Str. Time	Notes *See	s Att.3	VRA No .	Test Organization (Procedure)	Manufacturer	
* *	Valv	ې م۰ c	1_FWS	_439/	FWS_439\+	Fact Fr	Adwater ni	.mn N	ischai	cae Ch	erk	Valve(Dwg.: 5178205/	/(-5)	
	2	с. ј Г	12	-430(CK/SA	U/	CVTC/RR	amp o	Sh	ge en	10	M(RMO & WORK PLAN)	Pacific	
	2	ř	12		CK/SA	0/	CVTC/RR	•	5h		10	M(RMO & WORK PLAN)	Pacific	ана стана br>Стана стана
	2	č	12		CK/SA	0/	CVTO/OP	•	5b		10	0(\$01-12.4-2)	Pacific	
										·		······································	(0.5)	
*	Valv	e: S	1-FWS	-439(FWS-439):	West Fo	eedwater p	ump D	ischai	rge Ch	eck	Valve(Dwg.: 51/8205)	(G-5)	. · ·
÷	2	C	12		CK/SA	0/	CVIC/RR		- 5b		10	M(RMO & WORK PLAN)	Pacific	
	2	° C -	12		CK/SA	0/	CVIO/RR		5b -		10	M(RMU & WURK PLAN)	Pacific	•
	2	C	12		CK/SA	0/	CVTO/OP		5b		10	0(\$01-12.4-2)	Pacific	
*	Valv	e: 5	I-FWS	-CV-1	00/CV-100)•Stear	n Generato	r 81a	udown	Trin	Vali	ve to Blwdwn Tank(Dw	a.: 5178206/C-3)	1
	2	R	2	••••	ANGI F/AO	,	BTC/OP	20	2			0(\$01-12.4-2)	Black.	CORRECTED
	-	•	-		141422/110	•/•	0.0, 0.						Sivalls and	
							· .		· · .	••	· ·		Bryson	
	2	R	2		ANGLE/AO	0/0	EST/OP		2			0(501 - 12.4 - 2)	Black.	- -
•	•	Ξ.	-		/11/02/2/110			•	-				Sivalls and	
			*	-	· .		•						Bryson.	
						. ·					-	· · · · · · · · · · · · · · · · · · ·	· · · · · · · · · · · · · · · · · · ·	I.
*	Valv	e: S	1-FWS	-CV-1	00A(CV-10	0A):Sto	eam Genera	tor B	lowdo	wn To	Out	fall(Dwg.: 5178206/C	-2)	
	2	B	. 2		GA/SO	0/0	BTC/OP	20.	2			0(SO1-12.4-2)	Control	: · · · ·
									• •	•	• •		Components	
•	2	B	2	۰.	GA/SO	0/C	FST/OP		2			0(S01-12.4-2)	Control	
				•			•						Components	

ATTACHMENT 2

PAGE 40 OF 78



ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 63 OF 118 ATTACHMENT 2 TCN 5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Class	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.3	VRR No.	Test Organization (Procedure)	Manufacturer
* Valv	e: S1-	FWS-CV-1	00B(CV-10	0B):Stear	n Genera	tor B	lowdown To	Outfa	all(Dwg.: 5178206/C-	-3)
2	B	3	GA/AO	0/C	BTC/OP	5	2	•	0(\$01-12.4-2)	Control Components
2	B	3	GA/A0	0/C	FST/OP		2		0(\$01-12.4-2)	Control Components
* Valv	e: S1-	FWS-CV-1	42(CV-142):Feedwat	ter Bypa	ss Reg	gulator - "	A" St	team Generator(Dwg.:	: 5178206/F-8)
2	8	4	GÀ/AO	C/C	BTC/CS	30	2*		0(\$01-12.4-2)	Blaw Knox & Copes Vulcan
2	B	4.	GA/AO	C/C	BTO/CS	30	2*		0(\$01-12.4-2)	Blaw Knox &
2	B	4	GA/AO	C/C	BTPO/OP		2*		0(\$01-12.4-2)	Blaw Knox &
2	B	4	GA/AO	C/C	FST/CS		2*		0(501-12.4-2)	Blaw Knox & Copes Vulcan
'Valv	e: S1-	FWS-CV-1	43(CV-143)):Feedwat	ter Bypa	ss Re	qulator - "	C `S1	team Generator(Dwg.	: 5178206/B-8)
2	B	4	GÀ/AO	C/C	BTC/CS	30	2*	`.	0(\$01-12.4-2)	Blaw Knox &
2	B	.4	GA/A0	C/C	BTO/CS	30	2*		0(501-12.4-2)	Copes Vulcan Blaw Knox &
2	·B	4	GA/AO	C/C	BTPO/OP	. • .	2*		0(\$01-12.4-2)	Copes Vulcan Blaw Knox &
2	B	4	GA/AO	C/C	FST/CS	. •	2*		0(\$01-12.4-2)	Copes Vulcan Blaw Knox & Copes Vulcan

ATTACHMENT 2

PAGE 41 OF 78

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 64 OF 118 ATTACHMENT 2 TCN ______

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Class	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes VRR *See Att.3 No.	Test Organization (Procedure)	Manufacturer
* Valv	e: S1-	FWS-CV-1	44/CV-144	\ : Feedwa	ter Ryna	ss Rei	mulator - "R" Si	team Concrator/Dwa	• 5179206/D-91
2	B	4	GA/AO	C/C	BTC/CS	30	2*	0(S01-12.4-2)	Blaw Knox &
2	B	4	GA/AO	C/C	BTO/CS	30	2*	0(\$01-12.4-2)	Copes Vulcan Blaw Knox & Copes Vulcan
2	B	4	GA/AO	C/C	BTPO/OP	•	2*	0(\$01-12.4-2)	Blaw Knox &
2	B	4	GA/AO	C/C	FST/CS	•	2*	0(501-12.4-2)	Copes Vulcan Blaw Knox & Copes Vulcan
* Valvo	e: S1-	FWS-CV-3	6(CV-36):I	East Fee	iwater P	umo M	iniflow(Dwg.: 5)	178205/B-10)	
2	B	3	GL/AO	C/0	BTC/OP	240	2	0(\$01-12.4-2)	Black, Sivalls and
2	B	2	GŁ/AO	C/0	FST/OP		2	0(\$01-12.4-2)	Bryson Black, Sivalls and Bryson
* Valve		FWS-CV-3	7/68-371.4	Fast Foo	lwator D	umm Mi	iniflow/Dwa · 51	179205/0-101	·
2	B	3	GL/A0	C/O	BTC/OP	240	2	0(\$01-12.4-2)	Black, Sivalls and
2	B	3	GL/AO	C/0	FST/OP		2	0(S01-12.4-2)	Bryson Black, Sivalls and Bryson

ATTACHMENT 2

PAGE 42 OF 78

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 65 OF 118 ATTACHMENT 2 TCN ______

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

	•	Se	ct.	Valve and	Normal/	Test Type	•			Test	•
	Códe Class	XI Cat	Siz t. (in	e Actuato .) Type	or Failed Posit'n	and Node	Str. Time	Notes *See Att.3	VRR B No.	Organization (Procedure)	Manufacturer
*	Valv	'e: .	S1-FWS-	FCV-456(FCV	-456) [°] :Main	Feedwat	er Flo	ow Control	Valv	e - S/G "A"(Dwg.:	5178206/G-8)
. 2	2	B	8	GAŽAO	0/0	BTC/CS	50	2*		0(\$01-12.4-2)	Fisher
2	Ž	B	8	GA/AO	0/0	BTPO/OP		2*		0(S01-12.4-2)	Fisher
2	2	B	8	GA/AO	0/0	FST/CS		2*		.0(\$01-12.4-2)	Fisher
*	Valv	e: :	S1-FWS-	FCV-457(FCV	-457):Main	Feedwat	er Flo	ow Control	Valv	e - S/G "B"(Dwg.:	5178206/E-8)
2	2	B	8	GA/AO	0/0	BTC/CS	55	2*		0(\$01-12.4-2)	Fisher
2	2	8	8	GA/AO	0/0	BTPO/OP		2*	*	0(\$01-12.4-2)	Fisher
	2	B	8	GA/AO	0/0	FST/CS		2*		0(\$01-12.4-2)	Fisher
*	Valv	e:	S1-FWS-	FCV-458(FCV	-458):Main	Feedwat	er Fl	ow Control	Valv	e - S/G "C"(Dwg.:	5178206/C-8)
	?	B	8	GA/AO	0/0	BTC/CS	35	2*		0(\$01-12.4-2)	Fisher
	2	Ř	. 8		0/0	BTPO/OP	••	- 2*		0(501 - 12, 4 - 2)	Fisher
	2	B	8	GA/AO	0/0	FST/CS	·	2*		0(\$01-12.4-2)	Fisher
. *	Valv	e: 1	S1-FWS-	HV-852A(HV-	852A):Feed	oumo Dis	charo	e (East)(D		5178205/C-6)	
2	2	B	12	GA/HY	0/AI	BTC/CS	4.5	3.4521*		0(\$01-12.4-2)	Darling
	2	B	12	GA/HY	0/AI	PIT/RR		3,4821*		0(\$01-12.8-8)	Darling
	Valv	e:	S1-FWS-	HV-852B(HV-	852B):Feed	pump Dis	charg	e (West)(Dw		5178205/G-6)	
	2	B	12	GA/HY	0/AI	BTC/CS	4.5	3.4521*		0(\$01-12.4-2)	Darling
	2	B	12	GA/HY	0/A1	PIT/RR		3,4821*	•	0(\$01-12.8-8)	Darling
*	Valv	e:	S1-FWS-	HV-854A(HV-	854A):East	Feedwat	er Pu	mp Suction	(Dwgʻ.	: 5178205/C-3)	· · ·
2	2	B	14	GAÌHY	0/AI	BTC/CS	7	3.4821*		0(S01-12.4-2)	Darling
·	2	ß	14	GA/HY	0/AI	PIT/RR		3,4821*		0(501-12.8-8)	Darling

ATTACHMENT 2

PAGE 43 OF 78

ENGINEERING PROCEDURE	S01-V-2.15	
REVISION 5	PAGE 66 OF	118
ATTACHMENT 2		4
TCN <u>5-0-</u>	• * *	

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Clas	Sect e XI ss Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.3	VRR No.	Test Organization (Procedure)	Manufacturer
* Va	lve: Sl	-FWS-HV-	854B(HV-85	4B):West	Feedwat	er Pu	mp Suction(Dwg.:	5178205/G-3)	
2	B	14	GA/HY	0/AI	BTC/CS	7	3.4821*	Ξ.	0(\$01-12.4-2)	Darling
2	B	14	GA/HY	O/AI	PIT/RR		3,4&21*		0(\$01-12.8-8)	Darling
* Vai	lve: Sl	-FWS-MOV	-20(MOV-20):Feedwa	ter Bloc	k Val	ve (B)(Dwg.	: 517	/8206/E-7)	•
2	B	10	GÀ/MO	0/AI	BTC/CS	60	1*		0(S01-12.4-2)	Pacific
2	B	10	GA/MO	O/AI	PIT/RR		1* :		0(\$01-12.8-8)	Pacific
* Va	lve: Sl	-FWS-MOV	-21 (MOV-21)) : Feedwa	ter Bloc	k Val	ve (A)(Dwg.	: 517	/8206/G-7)	
2	B	10	GÀ/MO	O/AI	BTC/CS	60	1*		0(S01-12.4-2)	Pacific
2	B	10	GA/MO	0/AI	PIT/RR		1*		0(\$01-12.8-8)	Pacific
* Val	lve: Sl	-FWS-MOV	-22(MOV-22):Feedwa	ter Bloc	k Val	ve (C)(Dwg.	: 517	/8206/C-7)	
2	B	10	GÀ/MO	0/AI	BTC/CS	60	1*```		0(S01-12.4-2)	Pacific
2	Ŗ	10	GA/MO	0/AI	PIT/RR	*** R	1*		0(S01-12.8-8)	Pacific

ATTACHMENT 2

PAGE 44 OF 78

TCKI

REVISED Stroke Times



PAGE 67 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

	· · ·		Valve	•	Test	•				
	Sect.		and	Normal/	Туре			Test		
Code	XL	Size	Actuator	Failed	and	Str. Note	es VRR	Organization		
Class	Cat.	(in.)	Туре	Posit'n	Mode	Time *Se	e Att.3 No.	(Procedure)	Manufact	urer

** System: High Radiation Sampling

.* 	Valve: 2 AC	S1-PAS- 3/4	004 (PAS-004 CK/SA	4):RCS Sai C/	mple Return Ch AT/RR	eck Valve(Dw 10&11	g.: 5178950/F-10) T(SO1-V-1.12)	Borg Warner
*	Valve:	S1-PAS-	SV-3303(SV	-3303):RC	S Sample Retur	n Penetratio	n Isolation(Dwg.: 517	8950/F-9)
: 2	2 A	1	GL/SO	C/C	AT/RR	2,10811	T(SO1-V-1.12)	Target Rock
1	2 A	1 -	GL/SO	C/C	BTC/OP 2	2,10&11	0(\$01-12.4-2)	Target Rock
- 6	2 🔥	· 1	GL/SO	C/C	BTO/OP 2	2.10811	0(501-12.4-2)	Target Rock
1	2 A	1	GL/SO	Ċ/C	FST/OP	2.10811	0(501 - 12.4 - 2)	Target Rock
-	2 · A	1915 1 . +	GL/SO	C/C	PIT/RR	2,10&11	0(501-12.8-8)	Target Rock

ATTACHMENT 2

PAGE 45 OF 78

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 68 OF 118 ATTACHMENT 2 TCN ______

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

			Valve	•	Test				· .
	Sect.		and	Normal/	Туре	• •		Test	
Code	XI	Size	Actuator	Failed	and	Str.	Notes	VRR Organization	
Class	Cat.	(in.)	Туре	Posit'n	Mode	Time	*See Att.3	No. (Procedure)	Manufacture

** System: Miscellaneous Water

*	Va 2	ve: A	S1 C	-CRS 2	-020(CI (RŚ- CK/	020) 'S A	:Refue C/	ling	Pumps AT/RR	to	Letdown 10&12	System	Check T ((Va] (S01-	ve(Dwg V-1.12].: 2):	51781 K	20/D- erote	-2) est
*	Val	ve:	S1	-CRS	-301 (CI	RŚ-	301)	: RWST	Outl	et Che	ck(D	ng.: 517	B120/B-	9)			•	,		•
	2	C	· ·	8		CK/	'SA İ	C/		CVPO/0	IP È	*	·	00	SO1 -	12.4-2	2)	· A	loyce	D
	2	Č		8		CK/	SA	Č/		CVTO/C	S	*		0	SO1 -	12.4-2	2) . '	• • A	loyce	D
*	Val	ve:	S1	-CRS	-304(C	RS -	304	:Refue	lina	Water	Pum	o Discha	rae Che	ck (N	lorth) (Dwg.	.: 5	17812	0/F-1	B)
	2	0		6		CK/	SA	C/		CVTC/C	S	*		ò	SO1 -	12.4-2	2)	· B	ora I	larner
	2	č	•	6	ĺ	CK/	'SA	Č/	•	CVTO/C	S	*		Ō(SO1 -	12.4-2	2)	B	org I	larner
	Va	ive:	S1	-CRS	-305/Cl	RS-	· 305)	:Refue	lina	Water	• Pum	Discha	rae Che	ck (S	South) (Dwg.	.: 5	17812	0/H-1	B)
*	2	n.		6		CK.	ISA	C/		CVTC/C	S	*		ò	SO1 -	12.4-2	2)	8	ora l	Varner
	2	Č		6		CK/	/SA	Č/		CVTO/C	ŝ	*		Ō	S01-	12.4-2	2)	B	org l	Warner
*	Va	lve:	· S1	-CRS	-341(C)	RS-	341	Alter	nate	Hot L	ea R	ecirc(Dw	a.: 517	8120/	/D-4)					
	2	A		2		GA/	/M	C/		AT/RR	.	10412	•	Ţ	(SO1-	V-1.12	2)	K	erot	est
*	Va	lve:	S1	-CRS	-CV-11	•	.v-1	(4):Sph	ere	Sprav	Head	er Isola	tion Au	ix. Sp	oray	Contro	o1 (0	wg.:	5178	120/F-2
	2	B		6		BÌF	-/A0	C/0		BTO/CS	5 30	2*		0	(SOÌ -	12.4-2	2)	F	ishe	r
	2	. A		6		RTI	-/A0	Č/Ō		EST/CS		2*		Ō	501-	12.4-2	2)	F	i she	r
	2	B		6		BTI	-/A0	C/0		PIT/RF	ί.	2*	· .	, Õ	<u> </u> <u>so</u> 1-	12.8-8	BÍ	F	ishe	r í

PAGE 46 OF 78

ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN 5-20 SO1-V-2.15 PAGE 69 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Clas	Sect XI SS Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See	Att.3	VRR No .	Test Organization (Procedure)	Manufacturer	
* Val	ve: Sl	-CRS-CV	-517(CV-517)):Block	Valve -	Conta	inment	Spray	Flá	w Control(Dwg.:	5178120/E-5)	• •
· 2	·B	6	BÅLL/HY	0/0	BTC/OP	50 ·	2		•	0(\$01-12.4-2)	Unknown	<
. 2	B	6	BALL/HY	0/C	BTO/OP	200	2.	· . ·		0(\$01-12.4-2)	Unknown	
2	B	6	BALL/HY	0/C	FST/OP		2			0(S01-12.8-8)	Unknown	REVISED
2	B .	6	BALL/HY	0/C	PIT/RR		2			0(S01-12.4-2)	Unknown	STROKE
												TIMES
* Val	ve: S1	-CRS-CV	-518(CV-518)):Block	Valve -	Conta	inment	Spray	Flo	ow Control(Dwg.:	5178120/F-5)	· · · ·
2	B.	6	BÁLL/HY	O/C	BTC/OP	50	2			0(S01-12.4-2)	Unknown	·).
2	B	6	BALL/HY	0/C	BTO/OP	200	.2			0(S01-12.4-2)	Unknown	
2	B	6	BALL/HY	0/C	FST/OP		2			0(\$01-12.4-2)	Unknown	
2	B	6	BALL/HY	O/C	PIT/RR		2			0(\$01-12.8-8)	Unknown	
* Val 2	ve: S1 B	-CRS-CV 6	-82(CV-82):: BTF/AO	Sphere S C/O	pray He BTO/CS	ader I 25	solati 2*	on Con	tro	Valve(Dwg.: 5] O(SO1-12.4-2)	78120/F-3) Continental	•
2 ·	• B _•	6 ·	BTF/AO	C/0	FST/CS		2*	1.0		0(S01-12.4-2)	Continental	•
2	8	6	BTF/AO	C/0	PIT/RR		2*			0(S01-12.8-8)	Continental	
* Val	ve: Sl	-CRS-CV	-92(CV-92):: RTF/A0	Sphere S	pray He RTO/RR	ader I 20	solati 2814	on 4"	Buti 5	terfly Valve(Dwg O(SO1-12.4-2)	j.: 5178120/D-3) Fisher	
2	Ř.		RTE/AO	C/C	PIT/RR	20	2214		5	0(501-12.8-8)	Fisher	
•	U			0/0	1. 1 . 17 mm		EWIT,		Ÿ	0(001 12:0 0)		
* Val	ve: S1	SDW-CV	-115/08-115).Servic	e Water	Sunnl	v / Dwn	· 5178	381	/R-6)		
2	A	2	GI /AO	0/0	AT/RP	- abb i	2810		/	T(S01-V-1, 12)	Fisher	
2	Ä	2	GI /AO	0/0	RTC/OP	6	2810			0(501-12.4-2)	Fisher	
2	A -	2		0/0	FST/OP		2110	•		0(501 - 12, 4 - 2)	Fisher	• .
2	Δ	2			DIT/DD	•	2110	• •	•	0(501-12 8-8)	Fisher	•
f	~	4	ul/ NU	Ult	1111100		caiu	•	1.1	01001 10.0 01	I I JIIGI	

ATTACHMENT 2

PAGE 47 OF 78



ENGINEERING PROCEDURE SOI REVISION 5 PAGE ATTACHMENT 2 TCN ______

SO1-V-2.15 PAGE 70 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

C C	ode 1ass	Sect XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.	VRR 3 No.	Test Organization (Procedure)	Manufacturer	•
*	Valv	e: S1	-SDW-CV-	-537(C V-53 7):Servic	e Water	Supply	y Isolatio	n (Dwg	.: 5178381/8-5)		
- 2		A	2	BALL/AO	0/0	AT/RR		2810	`6 [¯]	T(SO1-V-1.12)	Contromatics	
2		A	2	BALL/AO	O/C	BTC/OP	15	2&10	6	0(\$01-12.4-2)	Contromatics	
2	·	A	2	BALL/AO	0/C	FST/CS		2&10	6	0(\$01-12.4-2)	Contromatics	
2		A	Ž	BALL/AO	0/C	PIT/RR		2&10	6	0(\$01-12.8-8)	Contromatics	
*	Valv	e: S1	-TCW-CV-	-515(CV-515):Turbin	e Plant-	Cooli	ng Water F	rom S	phere(Dwg.: 5178320)/D-7)	•
2		B	6	BALL/HY	0/0	BTC/OP	120	2	•	0(501-12.4-2)	Unknown	
2		B	6	BALL/HY	Ö/C	FST/OP		2		0(501-12.4-2)	Unknown	
2		B •	6	BALL/HY	0/0	PIT/RR	· · .	2		0(501-12.8-8)	Unknown	•
*	Valv	e: S1	-TCW-CV-	-516(CV-516):Turbin	e Plant	Cooli	ng Water t	o Sph	ere(Dwg.: 5178320/0	8)	
2		B	6	BALL/HY	0/0	BTC/OP	120	2		0(\$01-12.4-2)	Unknown	
2		B	6	BALL/HY	Ő/Č	FST/OP		2		0(501-12.4-2)	Unknown	
2		B	6	BALL/HY	0/C	PIT/RR		2		0(\$01-12.8-8)	Unknown	
		· ·		• :	· · ·		· .			-		

ATTACHMENT 2

REVISED STROKE TIMES



ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 71 OF 118 ATTACHMENT 2 TCN ______

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

			Valve	• •	Test	*			<i>.</i>	•	
	Sect.	•	and	Normal/	Туре				Test		
Code	XI	Size	Actuator	Failed	and	Str.	Notes	VRR	Organization	· · · ·	
Class	Cat.	(iņ.)	Туре	Posit'n	Mode	Time	*See Att.:	B No.	(Procedure)	Maņufactur	rer

****** System: Nitrogen

* Valve: S1-GNI-001(GNI-001): Sphere Nitrogen Penetration Isolation(Dwg.: 5178405/C-2) 2 A 3/4 GL/M C/ AT/RR 10,11&12 T(SO1-V-1.12) Kerotest * Valve: S1-GNI-336(GNI-336): Nitrogen to Sphere Test Panels(Dwg.: 5178400/B-6) 2 A 3/4 GL/M C/ AT/RR 10,11&12 T(SO1-V-1.12) Unknown

ATTACHMENT 2

PAGE 49 OF 78

ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN ______ SO1-V-2.15 PAGE 72 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Class	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.3	VRR No.	Test Organization (Procedure)	Manufacturer
** Sys	tem: F	Post Acc	ident H2 M	onitorin	9		 		•	· .
* Valv	e: S1-	GNI-SV-	2004 (SV-200	04):Hydro	ogen Mon	itor	Containment	Iso	lation Valve(Dwg.:	5178402/F-5)
2	A -	1/2	GL/SO	0/0	ĀT/RR		2.10811		T(SO1-V-1.12)	Target Rock
2	A	1/2	GL/SO	0/0	BTC/OP	2	2.10811		0(501 - 12, 4 - 2)	Target Rock
2	. A	1/2	GL/SO	O/C	FST/OP		2.10811		0(501 - 12, 4 - 2)	Target Rock
2	A :	1/2	GL/SO	0/0	PIT/RR		2,10411		0(\$01-12.8-8)	Target Rock
* Valv	e: S1-	GNI-SV-	3004 (SV - 30(04):Hydro	ogen Mon	itor	Containment	Iso	lation Valve(Dwg.:	5178405/H-2)
2	A - 1	1/2	GL/SO	0/0	ĂT/RR		2.10811	6	T(SO1-V-1.12)	Target Rock
2	A	1/2	GL/SO	0/C	BTC/OP	2	2.10811	6	0(\$01-12.4-2)	Target Rock
2	A	1/2	GL/SO	0/C	FST/CS		2,10811	6 1	0(501-12.4-2)	Target Rock
2	A	1/2	GL/SO	0/C	PIT/RR		2,10&11	6	0(\$01-12.8-8)	Target Rock

ATTACHMENT 2

PAGE 50 OF 78


ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN _______ SO1-V-2.15 PAGE 73 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

		· · ·	Valve		Test		•			1 I		
	Sect.		and 👘	Norma1/	Туре				Test		· .	· .
Code	XI	Size	Actuator	Failed	and	Str.	Notes	VRR	Organization		• •	
Class	Cat.	(in.)	Туре	Posit'n	Mode	: .Time	*See Att.3	No.	(Procedure)		Manufac	turer

** System: Radioactive Waste Disposal

*	Valve	:	S1-GNI-CV	-535(CV-53	5):PRT-R(CDT N2 Supply	Isol Valve	Outside Containment(Dw	g.: 5178158/C-10
2	2 - 1	A	1	BÁLL/AO	0/0	AT/RR	2,10411	T(SO1-V-1.12)	Contromatics
2		A	1	BALL/AO	0/C	BTC/OP 5	2,10811	0(\$01-12.4-2)	Contromatics
2		A	1	BALL/AO	0/C	FST/OP	2,10&11	0(\$01-12.4-2)	Contromatics
2	2 . 1	A	1	BALL/AO	0/C	PIT/RR	2,10&11	T (SO1-12.8-8)	Contromatics
*	Valve	:	S1-GNI-CV	-536(CV-53)	6):PRT-R(CDT N2 Supply	Isol Valve	Inside Containment(Dwg	.: <u>5178158/C-9</u>)
2	2 1	A	· 1	BÁLL/AO	0/C	AT/RR	5,10&11	6 T(SO1-V-1.12)	Contromatics
2	2 1	A	1	BALL/AO	0/C	BTC/OP 5	5,10&11	6 0(S01-12.4-2)	Contromatics
2	2 1	A	. 1	BALL/AO	0/C	FST/CS	2,10&11	6 0(S01-12.4-2)	Contromatics
2	۲. I	A	1	BALL/AO	0/0	PIT/RR	2,10&11	6 0(SO1-12.8-8)	Contromatics
* `	Valve	:	S1-RLC-CV	-102(-CV-10)	2):Soher	e Sumo Pumo D	ischarge (1	nside)(Dwg. : 5178158/G-	9)
2		Å	1-1/2	GL/AO	0/C	AT/RR	2,10811	6 T(SO1-V-1.12)	Black, Sivalls and
							· ·		Bryson
2		A	1-1/2	GL/AO	0/C	BTC/OP 5	2,10&11	6 T(S01-V-1.12)	Black, Sivalls and
				· .				•	Reven
2	,	A	1-1/2	GL /AO	0/0	FST/CS	2 10411	6 0/501-12 4-21	Rlack
-			• •/ •	22,710	0,0	131/03	6,1V011	0 0(301-12.4-2)	Sivalls and
	÷.,				,				Rryson
2		A	1-1/2	GL/AO	0/C	PIT/RR	2 10811	6 0(\$01-12,8-8)	Black.
	-	-			-, -				Sivalls and
	•		• .			•			Bryson

ATTACHMENT 2

PAGE 51 OF 78

SO1-V-2.15 PAGE 74 OF 118 ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN 5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code	Sect. XI	Size	Valve and Actuator	Normal/ Failed	Test Type and Str.	Notes VRR	Test Organization	
Class	Cat.	(in.)	Туре	Posit'n	Mode Time	e *See Att.3 No.	(Procedure)	Manufacturer
* Valv	e: S1-	RLC-CV-1	03(CV-103):Sohere	Sumo Pumo Di	scharge (Outsid	e Containment)(Dwo	5178158/6-10)
2	Α	1-1/2	GL/AO	0/C	AT/RR	2,10411	T(SO1-V-1.12)	Black, Sivalls and
2	A	1-1/2	GL/AO	0/C	BTC/OP 5	2,10&11	0(501-12.4-2)	Bryson Black, Sivalls and
2	A	1-1/2	GL/AO	0/C	FST/OP	2,10811	0(SO1-12.4-2)	Bryson Black, Sivalls and
2	A	1-1/2	GL/AO	0/C	PIT/RR	2,10411	0(\$01-12.8-8)	Black, Black, Sivalls and Bryson
* Valv	e: S1-	RLC-CV-1	04(CV-104)	:RCDT P	ump Discharge	Containment Is	olation (Inside)(D	wg.: 5178158/F-9
2	A .	2	GĽ/AO	0/C	AT/RR	1,10411 6	T(SO1-V-1.12)	Black, Sivalls and
2	A	2	GL/AO	0/C	BTC/OP 5	1,10411 6	0(\$01-12.4-2)	Black, Sivalls and
2	A	2	GL/AO	0/C	FST/CS	1,10811 6	0(\$01-12.4-2)	Bryson Black, Sivalls and
2	A	2	GL/AO	0/C	PIT/RR	1,10811 6	0(501-12.8-8)	Bryson Black, Sivalls and
•			•	÷ 1		। • • • • • • • • • • • • • • • • • • •	•	Bryson

ATTACHMENT 2

PAGE 52 OF 78



ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN 5-20 SO1-V-2.15 PAGE 75 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

 Valve: S1-RLC-CV-105(CV-105):RCDT Pump Discharge Containment Isolation (Outside(Dwg.: 5178158/F-2 A 2 GL/AO O/C AT/RR 2,10&11 T(SO1-V-1.12) Black, Sivalls and Bryson A 2 GL/AO O/C BTC/OP 5 2,10&11 O(SO1-12.4-2) Black, Sivalls and Bryson A 2 GL/AO O/C FST/OP 2,10&11 O(SO1-12.4-2) Black, Sivalls and Bryson A 2 GL/AO O/C PIT/RR 2,10&11 O(SO1-12.4-2) Black, Sivalls and Bryson A 2 GL/AO O/C PIT/RR 2,10&11 O(SO1-12.8-8) Black, Sivalls and Bryson A 2 GL/AO O/C PIT/RR 2,10&11 O(SO1-12.8-8) Black, Sivalls and Bryson A 2 GL/AO O/C PIT/RR 2,10&11 O(SO1-12.8-8) Black, Sivalls and Bryson A 2 GL/AO O/C BTC/OP 5 2,10&11 6 T(SO1-V-1.12) Black, Sivalls and Bryson 	r.
2 A 2 GL/AO O/C AT/RR 2,10&11 T(SO1-V-1.12) Black, Sivalls and Bryson 2 A 2 GL/AO O/C BTC/OP 5 2,10&11 O(SO1-12.4-2) Black, Sivalls and Bryson 2 A 2 GL/AO O/C FST/OP 2,10&11 O(SO1-12.4-2) Black, Sivalls and Bryson 2 A 2 GL/AO O/C FST/OP 2,10&11 O(SO1-12.4-2) Black, Sivalls and Bryson 2 A 2 GL/AO O/C PIT/RR 2,10&11 O(SO1-12.8-8) Black, Sivalls and Bryson * Valve: S1-RLC-CV-106(CV-106):RCDT Vent Containment Isolation (Inside)(Dwg.: 5178158/D-9) 2 A 2 GL/AO O/C AT/RR 2,10&11 6 T(SO1-V-1.12) Black, Sivalls and Bryson 2 A 2 GL/AO O/C BTC/OP 5 2,10&11 6 O(SO1-12.4-2) Black,	F-10)
2 A 2 GL/AO O/C BTC/OP 5 2,10&11 O(SO1-12.4-2) Black, 2 A 2 GL/AO O/C FST/OP 2,10&11 O(SO1-12.4-2) Black, 2 A 2 GL/AO O/C FST/OP 2,10&11 O(SO1-12.4-2) Black, 2 A 2 GL/AO O/C PIT/RR 2,10&11 O(SO1-12.8-8) Black, 5 ivalls and Bryson 4 Valve: S1-RLC-CV-106(CV-106):RCDT Vent Containment Isolation (Inside)(Dwg.: 5178158/D-9) 2 A 2 GL/AO O/C AT/RR 2,10&11 6 T(SO1-V-1.12) Black, Sivalls and Bryson 4 Valve: S1-RLC-CV-106(CV-106):RCDT Vent Containment Isolation (Inside)(Dwg.: 5178158/D-9) 2 A 2 GL/AO O/C BTC/OP 5 2,10&11 6 O(SO1-12.4-2) Black, Sivalls and Bryson	,
2 A 2 GL/AO O/C BTC/OP 5 2,10&11 O(SO1-12.4-2) Black, Sivalls and Bryson 2 A 2 GL/AO O/C FST/OP 2,10&11 O(SO1-12.4-2) Black, Sivalls and Bryson 2 A 2 GL/AO O/C FST/OP 2,10&11 O(SO1-12.4-2) Black, Sivalls and Bryson 2 A 2 GL/AO O/C PIT/RR 2,10&11 O(SO1-12.8-8) Black, Sivalls and Bryson 2 A 2 GL/AO O/C PIT/RR 2,10&11 O(SO1-12.8-8) Black, Sivalls and Bryson 4 2 GL/AO O/C AT/RR 2,10&11 6 T(SO1-V-1.12) Black, Sivalls and Bryson 2 A 2 GL/AO O/C BTC/OP 5 2,10&11 6 O(SO1-12.4-2) Black, Sivalls and Bryson	
2 A 2 GL/AO O/C BIC/OP 5 2,10all O(SOI-12.4-2) Black, Sivalls and 2 A 2 GL/AO O/C FST/OP 2,10all O(SOI-12.4-2) Black, Sivalls and 2 A 2 GL/AO O/C PIT/RR 2,10all O(SOI-12.4-2) Black, Sivalls and 2 A 2 GL/AO O/C PIT/RR 2,10all O(SOI-12.8-8) Black, Sivalls and 2 A 2 GL/AO O/C PIT/RR 2,10all O(SOI-12.8-8) Black, Sivalls and 8 Sivalls and Bryson Sivalls and Bryson 2 A 2 GL/AO O/C AT/RR 2,10all 6 T(SOI-V-1.12) Black, 2 A 2 GL/AO O/C BTC/OP 5 2,10all 6 O(SOI-12.4-2) Black, 2 A 2 GL/AO O/C BTC/OP 5 2,10all 6 O(SOI-12.4-2) Black,	
2 A 2 GL/AO O/C FST/OP 2,10&11 O(SO1-12.4-2) Black, 2 A 2 GL/AO O/C PIT/RR 2,10&11 O(SO1-12.4-2) Black, 5 ivalls and Bryson 4 Valve: S1-RLC-CV-106(CV-106):RCDT Vent Containment Isolation (Inside)(Dwg.: 5178158/D-9) 2 A 2 GL/AO O/C AT/RR 2,10&11 6 T(SO1-V-1.12) Black, Sivalls and Bryson 4 2 GL/AO O/C BTC/OP 5 2,10&11 6 O(SO1-12.4-2) Black, Sivalls and Bryson 5 ivalls and 1 isolation (Inside)(Dwg.: 5178158/D-9) 2 A 2 GL/AO O/C BTC/OP 5 2,10&11 6 O(SO1-12.4-2) Black, Sivalls and 1 isolation (Inside)(Dwg.: 5178158/D-9) 2 A 2 GL/AO O/C BTC/OP 5 2,10&11 6 O(SO1-12.4-2) Black, 1 isolation (Inside)(Dwg.: 5178158/D-9) 2 A 2 GL/AO O/C BTC/OP 5 2,10&11 6 O(SO1-12.4-2) Black,	•
2 A 2 GL/AO O/C FST/OP 2,10&11 O(SO1-12.4-2) Black, Sivalls and Bryson 2 A 2 GL/AO O/C PIT/RR 2,10&11 O(SO1-12.4-2) Black, Sivalls and Bryson 2 A 2 GL/AO O/C PIT/RR 2,10&11 O(SO1-12.8-8) Black, Sivalls and Bryson * Valve: S1-RLC-CV-106(CV-106):RCDT Vent Containment Isolation (Inside)(Dwg.: 5178158/D-9) 2 2 A 2 GL/AO O/C AT/RR 2,10&11 6 T(SO1-V-1.12) Black, Sivalls and Bryson 2 A 2 GL/AO O/C BTC/OP 5 2,10&11 6 O(SO1-12.4-2) Black, Sivalls and Bryson	
2A2GL/AOO/CPIT/RR2,10&11O(SO1-12.8-8)Sivalls and Bryson2A2GL/AOO/CPIT/RR2,10&11O(SO1-12.8-8)Black, Sivalls and Bryson* Valve:S1-RLC-CV-106(CV-106):RCDTVent Containment Isolation (Inside)(Dwg.: 5178158/D-9)2A2GL/AO2A2GL/AOO/CAT/RR2,10&116T(SO1-V-1.12)Black, Sivalls and Bryson2A2GL/AOO/CBTC/OP52,10&116O(SO1-12.4-2)Black, Sivalls and Bryson	
2A2GL/AOO/CPIT/RR2,10&11O(SO1-12.8-8)Black, Sivalls and Bryson2A2GL/AOO/CPIT/RR2,10&11O(SO1-12.8-8)Black, Sivalls and Bryson2A2GL/AOO/CAT/RR2,10&116T(SO1-V-1.12)Black, Sivalls and Bryson2A2GL/AOO/CBTC/OP52,10&116O(SO1-12.4-2)Black, Sivalls and Bryson	
2 A 2 GL/AU O/C PIT/RR 2,10all O(SUI-12.8-8) Black, Sivalls and Bryson * Valve: S1-RLC-CV-106(CV-106):RCDT Vent Containment Isolation (Inside)(Dwg.: 5178158/D-9) 2 A 2 GL/AO O/C AT/RR 2,10all 6 T(SOI-V-1.12) Black, Sivalls and Bryson 2 A 2 GL/AO O/C BTC/OP 5 2,10all 6 O(SOI-12.4-2) Black, Sivalls and	· .
Valve: S1-RLC-CV-106(CV-106):RCDT Vent Containment Isolation (Inside)(Dwg.: 5178158/D-9) 2 A 2 GL/AO O/C AT/RR 2,10&11 6 T(SO1-V-1.12) Black, Sivalls and Bryson 2 A 2 GL/AO O/C BTC/OP 5 2,10&11 6 O(SO1-12.4-2) Black, Sivalls and	
Valve: S1-RLC-CV-106(CV-106):RCDT Vent Containment Isolation (Inside)(Dwg.: 5178158/D-9) 2 A 2 GL/AO O/C AT/RR 2,10&11 6 T(SO1-V-1.12) Black, Sivalls and Bryson 2 A 2 GL/AO O/C BTC/OP 5 2,10&11 6 O(SO1-12.4-2) Black, Sivalls and Bryson	•
 Valve: S1-RLC-CV-106(CV-106):RCDT Vent Containment Isolation (Inside)(Dwg.: 5178158/D-9) A 2 GL/AO O/C AT/RR 2,10&11 6 T(SO1-V-1.12) Black, Sivalls and Bryson A 2 GL/AO O/C BTC/OP 5 2,10&11 6 O(SO1-12.4-2) Black, Sivalle and 	
2 A 2 GL/AO O/C AT/RR 2,10&11 6 T(SO1-V-1.12) Black, Sivalls and Bryson 2 A 2 GL/AO O/C BTC/OP 5 2,10&11 6 O(SO1-12.4-2) Black, Black,	
2 A 2 GL/AO O/C BTC/OP 5 2,10&11 6 O(SO1-12.4-2) Black, Sivalls and Bryson Black, Sivalls and	
2 A 2 GL/AO O/C BTC/OP 5 2,10&11 6 O(SO1-12.4-2) Black,	
c dc/dc dc/dc dc/dc dc/dc dc/dc dc/dc dc/dc dc/dc dc/dc dc/dc dc/dc dc/dc	
Sivaris and Bryson	
2 A 2 GL/AO O/C FST/CS 2,10&11 6 O(SO1-12.4-2) Black,	
Sivalls and	
Bryson	•.
c n c uL/AU U/C $P11/KK$ $2,10411$ 6 $U(SU1-12.8-8)$ Black,	
Sivalis and Reven	

ATTACHMENT 2

PAGE 53 OF 78



ENGINEERING PROCEDURE SO1 REVISION 5 PAG ATTACHMENT 2 TCN 5-20

SO1-V-2.15 PAGE 76 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Class	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.3	VRR No.	Test Organization (Procedure)	Manufacturer
* Valv	e: S1-	RLC-CV-1	107 (CV - 107)):RCDT_V	ent Conta	inmer	nt Isolation	n (Oi	utside)(Dwa.: 51)	78158/D-10)
2	A	2	GL/AO	0/C	AT/RR		2,10811		T(SO1-V-1.12)	Black, Sivalls and Bryson
2	A	2	GL/AO	0/C	BTC/OP	5	2,10811	· ·	0(\$01-12.4-2)	Black, Sivalls and Bryson
2	A ¹	2	GL/AO	0/C	FST/OP	·	2,10811		0(\$01-12.4-2)	Black, Sivalls and Bryson
2	A	2	GL/AO	0/C	PIT/RR		2,10&11		0(\$01-12.8-8)	Black, Sivalls and Bryson

2 B 1 GA/SO O/C BTC/OP 2 O(SO1-12.4-2)

Unknown

ATTACHMENT 2

PAGE 54 OF 78

NUCLEAR GENERATING SITE UNIT 1



ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 77 OF 118 ATTACHMENT 2 TCN 5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Sect. Code XI Size Class Cat. (in.)	Valve Test and Normal/Type Actuator Failed and Type Posit'n Mode	Test Str. Notes VRR Organization Time *See Att.3 No. (Procedure)	Manufacturer

** System: Reactor Coolant

• 🛣	Valve:	S1 -	-GNI-102	2 (GNI - 102) : I	N2 Supp	ly Check (to Pov	er Operate	d Reli	ef Valve(Dwg.:	5178405/G-2)
. 2	2 A	C ·	1	CK/SA	°C/	AT/RR		10*	T T	(SO1-V-1.12)	Kerotest
2	2 A	C	1	CK/SA	C/	CVTC/CS		10*	0	(S01-12.4-2)	Kerotest
2	2 A	C	1	CK/SA	Ċ/	CVTO/CS		10*	. 0	(\$01-12.4-2)	Kerotest
`★.	Valve:	S1-	GNI-CV-	-532(CV-532):Power	Operated	Relie	ef Valve Nit	trogen	Supply(Dwg.:	5178404/C-10)
- 2	2 🕺 🖊		3/4	BALL/AO	0/0	AT/RR		2&10	6 T	(SO1-V-1.12)	Contromatics
2	2 1	·	3/4	BALL/AO	0/0	BTC/OP	5	2&10	6 - 0	(SO1-12.4-2)	Contromatics
2	2		3/4	BALL/AO	O/C	BTO/OP	5	2810	6 0	(SO1-12.4-2)	Contromatics
2			3/4	BALL/AO	0/C	FST/CS	-	2810	6 0	(\$01-12.4-2)	Contromatics
2	2 4		3/4	BALL/AO	0/C	PIT/RR		2&10	6 0	(SO1-12.8-8)	Contromatics
-*	Valve:	S1-	PHU-CV-	-533(CV-533):Press	urizer Re	lief	ank Makeup	Water	- CIS Valve(D	wg.: 5178370/G-9)
. 2	2 A		2	BÅLL/AO	O/C	AT/RR		2&10	6 T	(SO1-V-1.12)	Contromatics
2	2		- 2	BALL/AO	0/0	BTC/OP	.20	2810	6 0	(\$01-12.4-2)	Contromatics
1	2		2	BALL/AO	0/C	FST/CS		2610	6 0	(\$01-12.4-2)	Contromatics
	2 A		Ž	BALL/AO	0/C	PIT/RR		2810	6 0	(SO1-12.8-8)	Contromatics
•	Valve:	S1-	PHU-CV-	-534 (CV-534):Press	urizer Re	lief]	lank Makeup	Water	- CIS Valve(D	wg.: 5178370/G-7)
2	2 ° A		2	BÅLL/AO	0/0	AT/RR		2410	T	(SO1-V-1.12)	Contromatics
	2. A		2	BALL/AO	0/C	BTC/OP	10	2810	0	(SO1-12.4-2)	Contromatics
1	2 🍐 🖡		2	BALL/AO	0/0	FST/OP		2810	Ö	(\$01-12.4-2)	Contromatics
1	2 A		2	BALL/AO	0/C	PIT/RR	-1 · ·	2&10	Ō	(SO1-12.8-8)	Contromatics

ATTACHMENT 2

PAGE 55 OF 78

NUCLEAR GENERATING SITE UNIT 1

ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN 5-20 SO1-V-2.15 PAGE 78 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

•	Code Class	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.	VRR 3 No.	Test Organization (Procedure)	Manufacturer
			070 01 0) . O					No. 1	
	- varv 1	e: 51- B	2 2	GL/A0	0/0	BTC/OP	iver u	289 289	6	0(SO1-12.4-2)	Anchor Darling
	1	B	2	GL/AO	0/0	BTO/OP	.5	289	6	0(\$01-12.4-2)	Anchor Darling
	ו	B	2	GL/AO	0/0	FST/CS		289	6	0(\$01-12.4-2)	Anchor Darling
	1	8	2	GL/AO	0/0	PIT/RR	·	289	6	0(\$01-12.8-8)	Anchor Darling
/	* Valv	e: \$1-	PZR-CV-	531 (CV-531):Pressu	rizer Po	wer O	perated Re	lief	Valve(Dwg.: 51781	05/E-2)
	1	B	2	GL/AO	0/0	BTC/OP	15	289	6	0(\$01-12.4-2)	Anchor Darling
	1	B	2	GL/AO	0/0	BTO/OP	5	289	6	0(\$01-12.4-2)	Anchor Darling
	1	B	2	GL/AO	0/0	FST/CS	• .	289	6	0(\$01-12.4-2)	Anchor Darling
	1	В	2	GL/AO	0/0	PIT/RR		289	6	0(\$01-12.8-8)	Anchor Darling
	* Valv	e: S1-	PZR-CV-	545(CV-545):Pressu	rizer Po	wer O	perated Re	lief	Block Valve(Dwg.:	5178105/E-2)
	1	R	2	GL/AO	ι/ΰ	RIC/CS	5	289*		U(SO1-12.4-2)	Black, Sivalls and
	1	B	2	GL/AO	C/C	FST/CS		289*	-1	0(S01-12.4-2)	Bryson Black, Sivelle and
,		•		•				• •	.* *		Sivalis and Bryson

ATTACHMENT 2

PAGE 56 OF 78



ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 79 OF 118 ATTACHMENT 2 TCN 5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Class	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Str. Mode Time	Notes VR *See Att.3 No	Test R Organization . (Procedure)	Manufacturer
1	B	2	GL/AO	C/C	PIT/RR	2&9*	0(\$01-12.8-8)	Black, Sivalls and Bryson
* Valv 1	е: S1- В	PZR-CV- 2	546(CV-546) GL/AO	:Pressu C/C	rizer Power O BTC/CS 5	perated Relief 2&9*	Block Valve(Dwg.: O(SO1-12.4-2)	5178105/G-2) Black, Sivalls and
1	B	2	GL/AO	C/C	FST/CS	2&9*	0(\$01-12.4-2)	Bryson Black, Sivalls and Bryson
. 1 .	B	2	GL/AO	C/C	PIT/RR	289*	0(SO1-12.8-8)	Black, Sivalls and Bryson
* Valv 1	e: S1- C	PZR-RV- 3X6	532(RV-532) RV/SA):Pressu C/	rizer Relief PIT/RR	Valve(Dwg.: 5) 7	178105/E-5) M(S01-I-2.3)	Crosby
_l *\Valv	C e: S1-	3X6 P7R-RV-	RV/SA 533(RV-533)	C/ Pressu	RVT/RR rizer Relief	7 Valve(Dwo.: 51	M(SO1-I-2.3)	Crosby
1	C C	3X6 3X6	RV/SA RV/SA	C/ C/	PIT/RR RVT/RR	7 7	M(SO1-I-2.3) M(SO1-I-2.3)	Crosby Crosby
* Valv 2 2 2	e: S1- B B B	PZR-SV- 3/4 3/4 3/4	2403 (SV-240 GA/SO GA/SO GA/SO	03):Pres C/C C/C C/C C/C	surizer Vent BTO/CS 2 FST/CS PIT/RR	Block to PRT([2&9* 2&9* 2&9*	Dwg.: 5178105/C-9) O(SO1-12.4-2) O(SO1-12.4-2) O(SO1-12.8-8)	Target Rock Target Rock Target Rock

ATTACHMENT 2

PAGE 57 OF 78

ENGINEERING PROCEDURE
REVISION 5SO1-V-2.15
PAGE 80 OF 118ATTACHMENT 2
TCN 5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Coc Cla	Sect le XI lss Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Notes Time *See Att.3	VRR No.	Test Organization (Procedure)	Manufa	cturer
• V-		D70 CV			•				۰ <u>۲</u> ۰۰۰.	•
° − , v e	line: 21	-PZK-3V-	2404(38-24))4):Pres	surizer	Vent to PRI(Dwg.	: 51	/8105/C-9)		
3	· B	3/4	GA/SO	C/C	BTO/CS	2 289*		O(SO1-12.4-2)	Target	Rock
3	L R	· 3/4 ·	GA/SO	C/C	FST/CS	2&9*		O(SO1-12.4-2)	Target	Rock
3	В	3/4	GA/SO	C/C	PIT/RR	249*	,	0(\$01-12.8-8)	Target	Rock
* .Va	lve: Sl	-PZR-SV-	3403 (SV-34()3):Pres	surizer	Head Vent(Dwg.: !	5178	105/R-9)		•••
2	B	3/4	GAŻSO	C/C	BTO/CS	2 289*		0(501-12 - 2)	Target	Rock
2	B	3/4	GA/SO	.C/C	EST/CS	289*		0(501-12, 4-2)	Target	Rock
2	B	3/4	GA/SO	C/C	PIT/RR	289*		0(\$01-12.8-8)	Target	Rock
* Va	lve: Sl	-P7R-SV-	3404/54-340	A) · Proc	urizor	Head Vont to Cont		nont/Dug . 5170105	/0 10)	
3	R	3/4	nov(30-34)	Γ/Γ	PTA/CC			ment(Dwg.: 51/6105)	/B-10)	D1-
	Ř	3/4			ECT/CC			0(501 - 12.4 - 2)	Target	ROCK
2	D D	3/4			F31/U3	289-		0(501-12.4-2)	larget	ROCK
		· J/ 4	WY 30	L/L	PII/KK	269*		0(501-12.8-8)	larget	Rock
* Va	lve: Sl	-RCS-SV-	2401 (SV-240)):RPV	lead Ver	nt Back to Contair	nment	t(Dwg.: 5178100/C-	8)	
2	. B -	3/4	GA/SO	C/C	BTO/CS	2 289*		0(S01-12.4-2)	Target	Rock
2	B	3/4	GA/SO	C/C	FST/CS	289*		0(501 - 12.4 - 2)	Target	Rock
2	B	3/4	GA/SO	C/C	PIT/RR	289*		0(\$01-12.8-8)	Target	Rock
* Va	lve: SI	-RCS-SV-2	2402/58-240	2):RPV 1	lead Ver	t to Containment	 (Dwa	• 5179100/C_01		•
3	B	3/4	GA/SO	c /c			UNN	(1, 21/0100/0-3)	Tangat	Deek
3	B	3/4	02/40	r/r	ECT/CC	c 207- 210+		0(501 - 12.4 - 2)	Target	ROCK
3	R.	3/4			DIT/00	209"		U(501 - 12.4 - 2)	Target	KOCK
		J/ 7	ury su	いし	LI I KK	289*		U(SUI-12.8-8)	larget	KOCK

ATTACHMENT 2

PAGE 58 OF 78





Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Class	Sect. e XI ss Cat.	Size (in.)	Valve and Actuator Typ e	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.3	Test VRR Organization No. (Procedure)	Nanufacturer
* Va	lve: Sl-	-RCS-SV-	3401 (SV-34(01):React	tor Vess	e] He	ad Vent Blo	ck to PRT(Dwg.: 5178100)/B-8)
2	B	3/4	GA/SO	C/C	BTO/CS	2	289*	0(S01-12.4-2)	Target Rock
2	B	3/4	GA/SO	C/C	FST/CS	· ·	289*	0(\$01-12.4-2)	Target Rock
2	B	3/4	GA/SO	C/C	PIT/RR	<i>.</i>	2&9*	0(SO1-12.8-8)	Target Rock
* Va	lve: Sl	-RCS-SV-	3402 (SV-340	D2):React	tor Vess	el He	ad Vent to	PRT(Dwg.: 5178100/B-9)	
3	B .	3/4	GA/SO	C/C	BTO/CS	2	289*	0(\$01-12.4-2)	Target Rock
3	B	3/4	GA/SO	C/C	FST/CS		289*	0(\$01-12.4-2)	Target Rock
- 3	B	3/4	GA/SO	C/C	PIT/RR		289*	0(\$01-12.8-8)	Target Rock

ATTACHMENT 2

PAGE 59 OF 78

SO1-V-2.15 PAGE 81 OF 118



NUCLEAR GENERATING SITE UNIT 1

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 82 OF 118 ATTACHMENT 2 TCN 5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

		. 1	Valve	1	Test	•	·				
Code	Sect.	64	and	Normal/	Туре	с	Nahaa	W00	Test		• .
Class	Cat.	(in,)	Type	Posit'n	and Mode	Str. Time	*See Att.3	No.	(Procedure)	. M	anufacturer

** System: Reactor Cycle Sampling

*	Valve:	: [`] S	1-RSS-C	:V-	2145	(CV	-2145):Cł	narging Sam	ple	Isolatio	n Valve	Before	PASS(Dwg.:	5178150/E-11)	
2	E	3	3/4		GL	'so	0/0	BTC/OP	5	2		0(\$01	-12.4-2)	Target Rock	•
2	E	3	3/4		GL	SO/	Ő/Č	BTO/OP	3	2	· .	0(501	-12.4-2)	Target Rock	
2	F	Į.	3/4		GI	/sn	Ő/Č	EST/OP		2			-12 4-21	Target Rock	· · · · ·
- 7		Ś	2/4			/00 /cn		017/00		2		0(501	12.4-21	Target NOCK	I Added
2			3/4		· UL/	20	U/L	PII/KK	ej e s	2		0(201	-12.8-8)	larget Rock	Huero.
×	Valve:	: S	1-RSS-C	V-1	948((:v -!	948):PRT	Gas Space	Same	ole Valve	(Dwa.:	5178150	/F-3)		
2			3/8		GÌ	/A0	0/0	AT/RR		2	6	TISO	-12.8-8)	Masoneilan	
2		i i	3/8		10	/40	· · · · ·	BTC /OD	10	2	6		-12 4-21	Macongilan	
			2/0					ECT/CC	10		č		-12.4-21	Hasune i lan	• . · · ·
. "		•	3/0			AU	·//	F31/U3		۲.	. 0	0(201	-12.4-2)	Masonentan	
*	Valve:	S	1-RSS-C	:V-9	949((. V-9	949):PRT	Gas Space	Sam	ole Isolat	tion Va	lve(Dwg	.: 5178150/	F-7)	
2	A	1	3/8		GĽ/	/A0	° C/C	AT/RR		2	•	TÍSOI	-12.8-8)	Masoneilan	
2	A	۱.	3/8		GL	/A0	C/C	BTC/OP	12	2		0(501	-12 4-21	Masoneilan	PEVIX
2		Ň	3/8		- GL	/40	<u>, , , , , , , , , , , , , , , , , , , </u>	FST/OP				0/501	-12 4-21	Macongilan	
2			3/0	, ['] ·						2			12.4-2)		
		•	3/0		uL/	AU	ι/ι	PII/KK		Z	14	0(201	-12.8-8)	masoneilan	
*	Valve:	S	1-RSS-C	V-9	95170	:v-	951):Pres	surizer li	mic	I Sample 1	lalve(D	wa • 51	78150/B-3)	· ·	. •
2		Ĭ	3/8		(ia	40	<u> </u>	AT/DD	4416	211	A 10(D)	T/SU1	-V-1 12)	Maconoilan	· · · · ·
5			2/0	•					10	2411	. U	0(50)	10 4 21	Massadilar	• •
2			3/0		uL/			BIL/UP	12	Zali	. 0	0(201	-12.4-2)	masoneilan	
2	· · · P		· 3/8		GL/	A Û	ι/ί	FSI/CS	•	2811	6	<u> </u>	-12:4-2) 🛸	Masoneilan	·

PAGE 60 OF 78

ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN

S01-V-2,15 PAGE B3 OF L18 2 '4

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

		Soct		Valve	Normal /	Test					Tost	1	.
Co	de	XI	Size	Actuator	Failed Posit'n	and Mode	Str	. Notes	A++ 3	VRF	Organization (Procedure)	Manufacturor	
	433	uut.	()	1162	i vare n	NUCC	. i i din		AUU.J	110 .	linocedurej	nanuraccurci	
										·		•	
* V	alv	e: S1	-RSS-CV-	953(CV-953):Pressu	rizer St	eam S	Sample	Valve(Dwg	j.: 5178150/C-3)	•	
- 2		A 1 1	3/8	GL/AO	C/C	AT/RR		2811		6	T(SO1-V-1.12)	Masoneilan	
2	·	A :	3/8	GL/AO	C/C	BTC/OP	12	2&11		6	0(S01-12.4-2)	Masoneilan	REVISED
2	,	A , '	3/8	GL/AO	C/C	FST/CS		2&11		6	0(\$01-12.4-2)	Masoneilan	TIME
. × γ	alvo	e: S1	-RSS-CV-	955(CV-955):Reactor	r Coolan	it Sv	stem Lo	op Sam	e l a	Valve(Dwg.: 5178	150/E-3)	
2	· .	Â	3/8	GL/AO	C/C	AT/RR		2&11		6	T(SO1-V-1.12)	Masoneilan	
- 2		Â	3/8	GL/AO	č/č	BTC/OP	8	2811		6	0(501 - 12.4 - 2)	Masoneilan	1
2		A	3/8	GL/AO	Ċ/Ċ	FST/CS	Ξ.	2&11		6	0(\$01-12.4-2)	Masoneilan.	•
* V	alv	e: S1	-RSS-CV-	956(CV-956):Loop "(C" Cold	Leg	Sample	Isolat	ion	(Dwg.: 5178150/D-	3)	
2	•	Α .	3/8	GĽ/AO	C/C	AT/RR	-	2811	• •	6	T(S01-V-1.12)	Worthington	<r (n)<="" td=""></r>
2		A	3/8	GL/AO	C/C	BTC/OP	35	2811	•	6	0(S01-12.4-2)	Worthington	I LICE
2	• .	A	3/8	GL/AO	C/C	FST/CS		2&11	÷	6	0(SO1-12.4-2)	Worthington	STROKE
* V	alv	e: S1	-RSS-CV-	957(CV-957) RHR Sau	mnle Iso	latio		• 5178	1150)/F-6)		TIME
2		Δ	3/8	GI /AD	C/C	AT/RR		2811			77(501-V-1)(12)	Masonoilan	
5		Δ	3/8			RTC /OP	25	211			0(501-12)	Masonoilan	
2		Â	3/8		C/C	EST/OD	LJ	211			0(501-12.4-2)	Maconoilan	
2		Â	3/8			PIT/RR	•	2811			0(501-12.8-8)	Masoneilan	• • [*]
			-, -	9277.00	-, -	••••							
* V	alv	e: S1	-RSS-CV-	962(CV-962):RHR He	at Excha	nder	Outlet	Sampl	e l	solation(Dwg.: 51	78150/E-3)	the second second second second second second second second second second second second second second second se
2		A	3/8	GL/AO	C/C	AT/RR		2811		6	T(SO1-V-1.12)	Masoneilan	•
2		A	3/8	GL/AO	Ċ/Ċ	BTC/OP	10	2811	•	6	0(\$01-12.4-2)	Masoneilan	
2		A	3/8	GL/AO	Č/Č	FST/CS		2811	•	6	0(501-12.4-2)	Masoneilan	

ATTACHMENT 2





Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

•	Code Class	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.3	VRR No	Test Organization (Procedure)	Manufacture
1	: • Valv	e: S1-	RSS-CV-	992(CV-992)):Pressu	rizer Sau	nple	Isolation(D	MQ.:	5178150/8-7)	<u>х</u>
	2	A	3/8	GI /AO	C/C	AT/RR		2811		T(SO1-V-1.12)	Masoneilan
	2	Å	3/8	GI /AO	Č/Č	BTC/OP	15	2811		0(501-12.4-2)	Masoneilan
	2	Â	3/8		C/C	EST/OP	· · ·	2811	•	0(501 - 12.4 - 2)	Masoneilan
	2	Â	3/8	GL/AO	Č/Č	PIT/RR		2811		0(501-12.8-8)	Masoneilan
1	* Valv	e: S1-	RSS-SV-	3302(SV-33	02):RCS	LOOD "C"	Samp	le Valve(Dw	q.:	5178150/C-5)	
	2	A.	3/8	GA/SO	0/0	AT/RR		2&11		T(SO1-V-1.12)	Target Rock
	2	Â	3/8	GA/SO	0/0	BTC/OP	5	2811		0(\$01-12.4-2)	Target Rock
	2	Å	3/8	GA/SO	Ő/Č	BTO/OP	2	2811	• •	0(\$01-12.4-2)	Target Rock
	2	Â	3/8	GA/SO	0/C	FST/OP	-	2811	• • •	0(\$01-12.4-2)	Target Rock

ATTACHMENT 2

PAGE 62 OF 78

ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN ______ SO1-V-2.15 PAGE 85 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Class	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Notes VRR Time *See Att.3 No.	Test Organization (Procedure)	Manufacturer
** Sys	tem: A	les idua 1	Heat Remo	val				
* Valv 2	e: S1- C	RHR-013 6	(RHR-013): CK/SA	West RHR O/	Pump Dis CVTC/CS	scharge Check Valve(Dwg.: 5178130/D-5) O(SO1-12.4-2)	Aloyco/ Halworth
2	C	6	CK/SA	0/	CVTO/CS	*	0(\$01-12.4-2)	Aloyco/ Walworth
* Valv	e: S1-	RHR-014	(RHR-014):	East RHR	Pump Dis	scharge Check Valve(Dwg.: 5178130/8-5)	•
2	C	6	CK/SA	0/	CVTC/CS	*	0(\$01-12.4-2)	Aloyco/ Walworth
2	C	6	CK/SA	0/	CVTO/CS	• • • • •	0(\$01-12.4-2)	Aloyco/ Walworth
* Valv	e: S1-	RHR-HCV	-602 (HCV-6	02):RHR ((Loon "A")	Cold Lea)(Dwa.: 51)	78130/R-91
2	B	6	BTF/AO	C/AI	BTO/CS	40 *	0(S01-12.4-2)	Black, Sivalls and
2	B	6 .	BTF/AO	C/AI	BTPO/OP	*	0(\$01-12.4-2)	Bryson Black, Sivalle and
2	B	6	BTF/AO	C/AI	PIT/RR		0(501-12.8-8)	Bryson Black,
				•.				Bryson

ATTACHMENT 2

PAGE 63 OF 78

ENGINEERING PROCEDURE SOI REVISION 5 PAC ATTACHMENT 2 TCN 5-20

SO1-V-2.15 PAGE 86 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

:	·	Se	cţt.	•	Valve and	Normal/	Test Type	· •		•	Test	
C C	lode lass	XI Ca	t.	Size (in.)	Actuator Type	Failed Posit'n	and Mode	Str. Time	Notes *See At	VRR t.3 No.	Organization (Procedure)	Manufacture
•	 		~					_				· ·
Ξ,	Valv	e: :	21-K	HK-MUY	-813(MDA-8	13):KHK	Suction	From	RCS(Dwg.	: 517813	30/B-2)	
1		D		0.		L/AI	BIU/LS	120	162*		U(501 - 12.4 - 2)	Unknown
. 1		D		0	WV NU	C/AI	P11/KK	· ·	142"	· . '	0(201-15-9-9)	UNKNOWN
*	Valv	e:	S1-R	HR-MOV	-814 (MOV-8	14):RHR	Suction	From	RCS(Dwg.	: 517813	30/C-2)	
1		8		8	GA/HO	C/AI	BTO/CS	120	182*		0(S01-12.4-2)	Unknown
1	L	B		8	GA/MO	C/AI	PIT/RR		182*	÷ .	0(S01-12.8-8)	Unknown
*	Valv	• •	S1_0		-8224 (MOV-	822A\·Fa	et DHD I	Hast 1	Sychanger	Inlat/	Dua • 5179120/8_7	\
. 1	valv	R	эт-и	A	GA/MO	Ο <i>μεκ</i> ί.εα Γ/ΔΙ		120	112	tuier(i	My 51/0150/0-7	/ Crane
1		B		8	GA/HO	C/AI	PIT/RR	120	182	1	0(S01-12.8-8)	Crane
		•	. · .									
*	Valv	e:	\$1-R	HR-MOV	-822B(MOV-	822B):We	est RHR I	Heat I	Exchanger	· Inlet(I	Dwg.: 5178130/D-7) and the second
1		B		8	GA/MO	C/AI	BTO/OP	120	182		0(S01-12.4-2)	Crane
· .]	l ,	B		8	GA/MO	C/AI	PIT/RR		182		0(\$01-12.8-8)	Crane
*	Valv	e:	S1-R	HR-MOV	-833(MOV-8	33):RHR	Dischar	ae to	Reactor	Coolant	System(Dwg.: 517	8130/C-11)
1	1	B		8	GA/MO	C/AI	BTO/CS	90	182*		0(501 - 12.4 - 2)	Unknown
1		B		8	GA/MO	C/AI	PIT/RR		182*		0(\$01-12.8-8)	Unknown
*	Valv	• •	\$1.R		-834/MOV-8	341.040	Dischar	no to	Peactor	Coolant	System/Dwg · 517	8130/(-12)
<u></u> 1		R	94 N	A	GA/MO	Γ/ΔΙ	RTA/CS	100	1122	CUUIANI	Jystem(Dwy J17	linknown
1	i	B		ě	GA/MO	C/AI	PIT/RR	100	182*	-	0(501 - 12.8 - 8)	Unknown
	- ·.	-		-		-,						JUNIA
*	Valv	e:	\$1-R	HR-RV-	206 (RV-206):RHR Re	lief Va	lve to) Pressur	izer Re	lief Header(Dwg.:	5178130/A-6)
2	2	Ċ	•	2-1/2X	4 RV/SO	C/	RVT/RR		6		M(SO1-I-6.64)	Crosby

ATTACHMENT 2

PAGE 64 OF 78



ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 87 OF 118 ATTACHMENT 2 TCN <u>5- 30</u>

Manufacturer

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

			Valve		Test					
	Sect.		and	Normal/	Туре				Test	
Code	XI	Size	Actuator	Failed	and	Str.	Notes	VRR	Organization	
Class	Cat.	(in.)	Туре	Posit'n	Mode	Time	*See Att.3	No.	(Procedure)	

****** System: Safety Injection

*	İ	/a]	ve:	S1-CRS	-008(CRS-008)	:East	Recirculation	Pump Disch	narge Che	eck(Dwa.	: 5178121/	(F-8)
1	2		Ċ	6	CK/SA	C/	CVTC/RR	5b	3.	MIRMO 8	WORK PLAN	I).Crane
2	2		C	6	CK/SA	Č/	CVTO/RR	5b	3	M(RMO 8	WORK PLAN	I) Crane
*	V	la]	ve:	S1-CRS	-009(CRS-009)	:West	Recirculation	Pump Disch	arge Cho	eck(Dwg.	: 5178121/	′F-5)
	2		C	6	CK/SA	- C/-	CVTC/RR	5b	-	M(RMO 8	WORK PLAN	I) Crane
	2		ູ	6	CK/SA	C/	CVTO/RR	5b	3	M(RMO 8	WORK PLAN	l) Crane
*	۷	la)	ve:	S1-CRS	-MOV-866A (MOV	-866A)	East Recircu	lation Pump	Dischai	rae(Dwa.	: 5178121/	/E-8)
- 1	2		B	4	GA/MO	0/Aİ	BTO/CS 2	40 182*		0(\$01-1	2.4-21	Unknown
2	2		8	4	GA/HO	0/A1	PIT/RR	182*		0(501-1	2.8-8)	Unknown
*	V	/a]	ve:	S1-CRS	-MOV - 866B (MOV	-866B)	:West Recircu	lation Pump	Dischai	rae(Dwa.	: 5178121/	(E-5)
1	2		B	. 4	GA/MO	0/A1	BTO/CS 2	40 182*		0(\$01-1	2.4-21	linknown
1	2		B	4	GA/MO	0/A1	PIT/RR	182*		0(501-1	2.4-2)	Unknown
*	'V	al	ve:	S1-CRS	-MOV - 880 (MOV -	880):F	Refueling Wate	r Cross-Tie	to RCP	Seals(D	wa.: 5178]	20/D-5)
1	2		B	4	GAŻMO	C/AI	BTO/CS 2	5 1*		0(501-1	2.4-21	Unknown
1	2		B	4	GA/MO	C/AI	PIT/RR	ļ*	· · · · ·	0(501-1	2.8-8)	Unknown
*	Ŋ	[a]	ve:	S1-CRS	-MOV-883 (MOV-	883):R	Refueling Wate	r Storage T	ank Out	let(Dwa.	: 5178120/	(B-9)
1	2 '		. B	8	GA/MO	0/A1	BTC/CS 3	50 1*		0(\$01-1	2.4-2)	WKM
. 2	2		B	8	GA/MO	0/A1	PIT/RR	1*		0(501-1	2.8-8)	WKM

ATTACHMENT 2

PAGE 65 OF 78



Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Clas	Sect XI s Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and S Mode T	itr. Notes ime *See Att	T VRR (3 No. (est Irganization Procedure)	Manufacturer
* Va1 2	ve: S1 C	-CRS-RV-8 1/2X1	82 (RV-882 RV/SA):Relief C/	Valve(Dwg RVT/RR	J.: 5178120/C	(-5)	1(501-1-6-64)	Crosby
* 11-1		ENC CH O	764/CM 07			• • •			
2	B	-rws-lv-d 3	GL/A0	C/C	BTO/CS 2	' Pump Recirc 2*	ulation C	to RWS1(Dwg.:)(SO1-12.4-2)	5178205/C-10) Black, Sivalls and
2	B	3	GL/AO	C/C	FST/CS	2*	C	(SO1-12.4-2)	Bryson Black, Sivalls and
2	B	3	GL/AO	C/C	PIT/RR	2*	C	(\$01-12.8-8)	Bryson Black, Sivalls and Bryson
* Val	ve: Sl	-FWS-CV-8	75 0 (CV-87	5B):West	Feedwater	Pump Recirc	noitefu	to RUST/Dwg ·	5178205/E_10)
2	B	3	GL/AO	C/C	BTO/CS 3	0 2*	0	(\$01-12.4-2)	Black, Sivalls and
2	B .	3	GL/AO	C/C	FST/CS	2*	C	(\$01-12.4-2)	Bryson Black, Sivalls and
2	B	3	GL/AO	C/C	PIT/RR	2*	. 0	(\$01-12.8-8)	Bryson Black, Sivalls and
•			· ·	,			•		Bryson

ATTACHMENT 2

PAGE 66 OF 78

ENGINEERING PROCEDURESO1-V-2.15REVISION 5PAGE 89 OF 118ATTACHMENT 2TCNTCN5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Class	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Notes Time *See Att.3	Test VRR Organization No. (Procedure)	Manufacturer
* Valv	e: S1-	RCP-337(RCP-337):	Sprav Ch	eck to R	CP Seal Water Svs	stem(Dwg.: 5178110/H-3)	
2	C	4	CK/SA	C/	CVTC/CS	*	0(\$01-12.4-2)	Rockwell
		· · · ·		•				Edwards
2	C	4	CK/SA	C/	CVTO/CS	*	0(\$01-12.4-2)	Rockwell
•	•							Edwards
* Valu	o. <u>6</u> 1.	1500 J12	. / 200 - 212	Čafotv Tr	niaction	to PCS Loop A Ch	ock/Dwg + 5179115/C-10	1
·· • • • • • •	QU	- 6 - 6	CK/SD	Salery II	AT/RR	5a 13819	4 = 0(501 - 12, 9 - 9)	Rockwell
•	ņ.	.	CIY SH	~/		JujiJuiJ	• 0(001 12:5 5)	Edwards
1 .	AC	6	CK/SA	C/ 1	CVTC/RR	5a.13819	4 M(RMO & WORK PLAN)	Rockwell
а	· .	:		•			•	Edwards
1	AC	6	CK/SA	Ç/	CVTO/RR	5a,13&19	4 M(RMO & WORK PLAN)	Rockwell
•						· · · · · · · · ·		Edwards
+ 141.			10000		- 4004 400		ack/Dug . 5170115/5 10	`
- Valv	e: 21-	·212-004(212-004):	Sarely I	AT/DD	LO KUS LOOP U UN	10CK(DWG.: 51/8115/E-10) Pockwoll
	AL.	V	CRY JA	v /	AT / KA	Ja, 13013	4 0(301-12.3-3)	Edwards
1	AC -	6	CK/SA	°C/	CVTC/RR	5a.13819	4 M(RMO & WORK PLAN)	Rockwell
		. .		-1	,	,,		Edwards
1 .	AC	6	CK/SA	C/	CVTO/RR	5a,13&19	4 M(RMO & WORK PLAN)	Rockwell
• •								Edwards

ATTACHMENT 2

PAGE 67 OF 78



ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 90 OF 118 ATTACHMENT 2 TCN <u>5-20</u>

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Clas:	Sect. XI s Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.3	VRR No.	Test Organization (Procedure)	Manufacturer
.* Valv		\$15-010/	\$15-010):	Safety II	niection	to R	CS Loon B C	heck	(Dwg.: 5178115/F-10	1
1	AC	6	CK/SA	C/	AT/RR		5a, 13819	4	0(\$01-12.9-9)	Rockwell Edwards
1	AC	6	CK/SA	C/	CVTC/RR	· · ·	5a,13&19	4	M(RMO & WORK PLAN)	Rockwell Edwards
1	AC	6	CK/SA	C/	CVTO/RR	•	5a, 13819	4.	M(RMO & WORK PLAN)	Rockwell Edwards
* Valv	ve: S1-	SIS-303(SIS-303):	lest Safe	etv Inje	ction	Pump Disch	arge	Check(Dwg.: 517811	5/G-3)
2	C	12	CK/SA	C/	CVPO/OP		5a&19	2	0(\$01-12.4-2)	Crane
2	Ċ	12	CK/SA	Ċ/	CVTC/RR		5a&19	2	M(RMO & WORK PLAN)	Crane
2	C	12	CK/SA	C/	CVTO/RR	. •	5a&19	2	M(RMO & WORK PLAN)	Crane
* Valu	ve: Sl·	SIS-304(SIS-304):	East Safe	ety Inje	ction	Pump Disch	arge	Check(Dwg.: 517811	5/C-3)
2	, C	12	CK/SA	C/	CVPO/OP		5a&19	2	0(\$01-12.4-2)	Crane
2	C -	12	CK/SA	C/	CVTC/RR		5a&19	2	M(RMO & WORK PLAN)	Crane
2	C ; 1	12	CK/SA	C/	CVTO/RR		5a&19	2	M(RMO & WORK PLAN)	Crane
* Val	ve: Sl-	SIS-HV-8	51A(HV-85	IA):Safe	ty Inject	tion 3	System Disc	harg	e of G3A(Dwg.: 5178	115/D-6)
2	B	14	GA/HY	C/AI	BTO/CS	5	3,4821*		0(\$01-12.4-2)	Darling
2	B	14	GA/HY	C/AI	PIT/RR		3,4821*		0(\$01-12.8-8)	Darling
* Val	ve: Sl-	SIS-HV-8	51B(HV-85	1B):Safet	ty Inject	tion S	System Disc	harg	e of G3B(Dwg.: 5178	115/G-6)
2	B	14.	GA/HY	C/AI	BTO/CS	5	3,4821*		0(\$01-12.4-2)	Darling
2	B	14	GA/HY	C/AI	PIT/RR	•	3,4821*	*. *	0(SO1-12.8-8)	Darling

| Added

Added

I Added

ATTACHMENT 2

PAGE 68 OF 78

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 91 OF 118 ATTACHMENT 2 TCN <u>5-みつ</u>

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

	Code Class	Sec XI Cat	t. Sizo . (in	Valve and Actuator .) Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.3	VRR No .	Test Organization (Procedure)	Manufacturer
*	• Valv	e: S	1-SIS-I	IV-853A(HV-85	(3A):Safe	ty Injec	tion	Pump Discha	rae 1	to East FW Pump(Dwg	.: 5178115/D-4)
•	2	8	16	GA/HY	C/AI	BTO/ČS	6	3,4821*		0(\$01-12.4-2)	Darling
	2	B	16	GA/HY	C/ĄI	PIT/RR		3,4821*		0(\$01-12.8-8)	Darling
×	• Valv	e: S	1-SIS-1	IV-853B(HV-85	(3B):Safe	tv Injec	tion	Pumo Discha	rae 1	to FW Pump G3R(Dwg.	· 5178115/6-5)
	2	B	16	GA/HY	C/AI	BTO/CS	6	3.4821*		0(S01-12.4-2)	Darling
•	2	B	16	GA/HY	C/AI	PIT/RR	-	3,4821*		0(\$01-12.8-8)	Darling
	• Valv	e': 5	1-515-1	OV-356/MOV-3	56)·Safe	tv Inioc	tion	Recirculatio	on ta	PCS Loop Allowa +	5179115/C-11V
	1	B	2	GA/MO	C/AI	BTO/CS	30	183*		0(S01-12.4-2)	Rockwell
				•							Edwards
	1.	B	2	GA/MO	C/AI	PIT/RR	• •	1&3*	·.	0(\$01-12.8-8)	Rockwell
					•	÷.					Edwards
1	Valv	e: S	1-SIS-	10V-357(MOV-3	57):Safe	tv Iniec	tion	Recirculatio	on to	RCS LOOD R/Dwg.	5178115/F-11)
,	1	8	2	GA/MO	C/AI	BTO/CS	30	183*		0(\$01-12.4-2)	Rockwell
•						•					Edwards
	1	B	2	GA/MO	C/AI	PIT/RR		183*		0(\$01-12.8-8)	Rockwell
					•	· .			,		Edwards
,	• Valv	e: S	1-SIS-	10V-358(MOV-3	58):Safe	ty Injec	tion	Recirculatio	on to	RCS Loop C(Dwg.:	5178115/D-11)
•	1	8	2	GA/MO	C/AI	BTO/CS	30	183*		O(SO1-12.4-2)	Rockwell
	_		·			•••			. •		Edwards
÷	1	B	. 2 .	GA/HO	C/AI	PIT/RR		183*		0(S01-12.8-8)	Rockwell
	• •	,									Edwards

ATTACHMENT 2

PAGE 69 OF 78

ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN 5-22 SO1-V-2.15 PAGE 92 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

	Code Class	Se X	ect. I at.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.3	VRR No.	Test Organization (Procedure)	Manufacturer
1	• Valv	e:	S1-	SIS-MOV	-850A (MOV-	850A):Sa	fety Inj	ectio	n Discharge	to	RCS Loop A(Dwg.:	5178115/6-10)
:	1 1	B		6	GA/MO GA/MO	C/AI C/AI	BTO/CS PIT/RR	11	1,3,4&21* 1,3,4&21*	• •	0(S01-12.4-2) 0(S01-12.8-8)	Unknown Unknown
4	Valv	e:	S1 -	SIS-MOV	-850B(MOV-	850B):Sa	fety Inj	ection	n Discharge	to	RCS Loop B(Dwg.:	5178115/F-10)
	i	B		6	GA/MO	C/AI	PIT/RR	÷ #	1,3,4821*		0(\$01-12.8-8)	Unknown
. 1	Valv	e: R	S1-	SIS-MOV	-850C (MOV-	850C):Sa	fety Inj BTO/CS	ection	n Discharge	to	RCS Loop C(Dwg.:	5178115/E-10)
	i	B	. * [*]	6	GA/MO	C/AI	PIT/RR	• • •	1,3,4821*		0(\$01-12.8-8)	Unknown
1	Valv	e:	S 1-	SIS-RV-	868 (RV-868):Safety	Injecti	on Sys	stem Relief	¥a]	ve(Dwg.: 5178115/	B-9)
	- Valu		s1_0	• 	2000/54-20	~~ 001.Dick	Nont fo	~ UV C		5170	H(301-1-0.04)	crosby ,
	2	R	91 - I	3/4	64/S0	C/C	RTO/OP	2 2	2	2110	(15/0-0)	Target Peck
	2	B		3/4	GA/SO	C/C	EST/OP	-	2		0(501-12, 4-2)	Target Rock
	2	B		3/4	GA/SO	C/C	PIT/RR	• •	2		0(\$01-12.8-8)	Target Rock
	Valv	e:	S1- 5	SIS-SV-	3900(SV-39	00):Disk	Vent fo	r HV-8	351B(Dwa.: !	5178	115/H-6)	
	2	B		3/4	GA/SO	C/C	BTO/OP	2	2		0(\$01-12.4-2)	Target Rock
	2	. B		3/4	GA/SO	C/C	FST/OP		2	•	0(\$01-12.4-2)	Target Rock
	2	B		3/4	GA/SO	C/C	PIT/RR		2	•	0(\$01-12.4-2)	Tarnet Rock
ł	Valv	e:	S1-	SIS-SV-	702A(SV-70	2A):Safe	ty Injec	tion 1	Irain "C" H	eade	r Vent(Dwg.: 5178	115/C-8)
	2	B.		3/4	GA/SU			2			0(501 - 12.4 - 2)	Marotta
	C			J/4	00/ 20	0/0	T T T / KK	т. ₁ ,			ATTACHME	Marotta NT 2 PA

70 OF 78

101

4

28.022

1.44

ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN 5-20

S01-V-2.15 PAGE 93 OF 118 4 4

/(N

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

C	ode lass	Sec XI Cat	t. . (ize in.)	Va an Ac Ty	lve d tuato pe	Norm or Fail Posi	1 al/ 1 ed a t'n P	est ype Ind lode	Str. Time	Note: *See	s Att.	VRR 3 No.	Test Organiz (Proced	ation ure)	Mar	ufacture	er
*	Valv	e: S	1-S]	S-SV	-702B	(SV-7	/02B):S	afety	/ Inje	ction	Train	"C"	Header	Vent(D	wg.: 517	8115/D	10)	
2		B		5/4 5/4	GA GA	/ /S0	C/C	F	PIT/RR	2				0(501-1	2.8-8)	Mai Mai	otta	
* 2	Valvo	e:S B	1-SI 3	S-SV 8/4	-702C GA	(SV-7 /S0	'02C):S C/C	afety E	/ Inje TC/OP	ction 2	Irain.	-B-	Header	r Vent(D 0(SO1-1	wg.: 51/ 2.4-2)	8115/C Mai	-8) rotta	
.`_2 ★	Valv	B e:S	1-SI	5/4 [S-SV	GA - 702D	/so (sv-7	C/C (02D):S	afety	PIT/RR	ction	Train	"B"	Header	0(SO1-1 r Vent(D	2.8-8) wg.: 517	Mai 8115/E	rotta • 10)	
2	, , , , , , , , , , , , , , , , , , ,	B	3	/ 4	GA	/SO	C/C	Ē	TC/OP	2		·		0(501-1	2.4-2)	Mai	rotta	
. *	Valvo	e: S	1-VC	C-38	8(VCC	-388)	:MOV-1	100B	& D II	nlet (heck(Dwg.:	5178	136/G-2)	270 07			
2		C	. 4		CK	/SA	C/	C	VTO/C	S.	*			0(S01-1	2.4-2)	Al Q	byco/ lworth	•
*	Valve	e: S	1-V(C-MO	V-110	OB (MC)V-1100	B):CF	S Suc	tion t	o Chai	rging	Pump	(Dwg.: 5	178136/G	-3)	•	
2		B B	4		GA GA	/M0 /M0	C/AI C/AI	F	DTO/CS PIT/RR	10	183* 183*	•		0(S01-1 0(S01-1	2.4-2) 2.4-2)	Uni Uni	known Known	
*	Valvo	e: S	1-VC	C-MO	V-110	OD (MC	V-1100	D):CF	IS Suct	tion t	o Chai	rging	Pump	(Dwg.: 5	178136/G	i-3)	: • :	
2		B B	4	} -	GA GA	/M0 /M0	C/AI C/AI	E	TO/CS	10	1&3* 1&3*	 		0(S01-1 0(S01-1	2.4-2) 2.8-8)	Un Un	known Known	• * * • •

ATTACHMENT 2

PAGE 71 OF 78

ENGINEERING PROCEDURE
REVISION 5SO1-V-2.15
PAGE 94 OF 118ATTACHMENT 2
TCN 5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

	· .	. · ·	Valve	•	Test		
· · · · · ·	Sect.		and	Normal/	Туре	Test	
Code	XI	Size 🗄	Actuator	Failed	and	Str. Notes VRR Organization	
Class	Cat.	(in.)	Туре	Posit'n	Mode	Time *See Att.3 No. (Procedure)	Manufacturer

** System: Salt Water Cooling

* 3 3	Valve	e: C C	S1	-SWC 12 12	-338	(SWC CK, CK,	-338) /SA /SA	Auxil: 0/C 0/C	iary Salt W CVTC/OP CVTO/OP	ater Coo	ling S	Syst	Pump Disch Check(Dwg O(SO1-12.4-2) O(SO1-12.4-2)	j.: 5178350/C-5) Mission Mission
* 3	Val <u>v</u> e	e: B	S 1	-SWC 12	381	(SWC Bt	-381) F/M	Auxil: O/AI	iary Salt W BTO/OP	later Coo	ling	Syst	Pump Discharge(Dwg.: O(SO1-12.4-2)	5178350/E-6) Unknown
*	Valvo	e: C C	S1-	- SWC 12 12	-382	(SWC CK CK	-382 /SA /SA):North 0/C 0/C	Salt Water CVTC/OP CVTO/OP	Cooling	Syst	Pump	Discharge Check(Dwg O(SO1-12.4-2) O(SO1-12.4-2)	g.: 5178350/G-5) Marlin Marlin
* 3	Valvo B	e: C C	S1	-SWC 12 12	-383	(SWC CK CK	- 383 / SA / SA) : South 0/C 0/C	Salt Water CVTC/OP CVTO/OP	Cooling	Syst	Pump	p Discharge Check(Dw O(SO1-12.4-2) O(SO1-12.4-2)	g.: 5178350/E-5) Marlin Marlin

ATTACHMENT 2

PAGE 72 OF 78



NUCLEAR GENERATING SITE UNIT 1

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 95 OF 118 ATTACHMENT 2 TCN 5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

	•		Valve		Test				•		
	Sect.	•	and	Normal/	Туре		· •		Test	· ·	•
Code	XI	Size	Actuator	Failed	and	Str.	Notes	VRR	Organization		
Class	Cat.	(in.)	Туре	Posit'n	Mode	Time	*See Att.3	No.	(Procedure)	Ma	nufacturer

System: Steam

	* Va 2	lve: B	S1-I	ISS-CV 4	-76(CV-76) GL/AO	:East C/C	Steam Dump BTO/CS	to Atmosphere(Dwg.: 30 8*	5178225/B-9) O(SO1-12.4-2)	Black, Sivalls and
•	2	B	•	4 .	GL/AO	C/C	FST/CS	8*	0(\$01-12.4-2)	Bryson Black, Sivalls and Bryson
1	* Va	lve:	S1-I	ISS-CV	-77(CV-77)	:West	Steam Dump	to Atmosphere(Dwg.:	5178225/6-9)	· .
	2	B		4	ĠL/AO	C/C	BTO/CS	30 8*	0(\$01-12.4-2)	Black, Sivalls and
•	2	B	· ·	4	GL/AO	C/C	FST/CS	8*	0(501-12.4-2)	Bryson Black, Sivalls and Bryson
. 1	* Va	lve:	S1-I	ISS-CV	-78(CV-78)	:East	Steam Dump	to Atmosphere(Dwg.:	5178225/B-10)	
	2	B		4	ĠL/AO	C/C	BTO/CS	30 8*	O(SO1-12.4-2)	Black,
•	2	B	· · .	4	GL/AO	C/C	FST/CS	8*	0(\$01-12.4-2)	Sivalls and Bryson Black, Sivalls and Bryson

ATTACHMENT 2

PAGE 73 OF 78



ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN520 SO1-V-2.15 PAGE 96 OF 118

· ;		•		•	Inserv	vice T	esting Prog Valve List	ing	for Valves	· · ·
		· · ·	(1	'est Org'	s: M = I	lainte	enance, O =	Oper	ations, T = Techr	nical)
Code Class	Sect XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Notes *See Att.3	VRR No.	Test Organization (Procedure)	Manufacture
* Valv 2	e: S1 B	-MSS-CV- 4	79(CV-79): GL/AO	lest Ste C/C	am Dump BTO/CS	to Ati 30	mosphere(Dw 8*	g.: E	0(\$01-12.4-2)	Black, Sivalls and
2	B	4	GL/AO	C/C	FST/CS	• •	8*		0(\$01-12.4-2)	Black, Sivalls and Bryson
* Valv 2	e: S1 B	-MSS-PV- 24	1650(PV-16 GA/HY	50):Main 0/0	Turbine BTC/OP	Stop 2	Valve(Dwg. 2	: 517	/8226/B-9) 0(S01-12.4-2)	Unknown
× Valv	e: Sl	24 -MSS-PV- 24	- 1651 (PV- 16 GA/HY	0/0 51):Main 0/0	Turbine BTC/OP	Stop 2	z Valve(Dwg. 2	: 517	0(301-12.8-8) /8226/F-9) 0(S01-12.4-2)	Unknown
2 * Valv	B e: S1	24 -MSS-RV-	GA/HY	0/0 in Steam	PIT/RR Safety	Valve	2 (Dwa.: 5178	225/0	0(\$01-12.8-8) 6-6)	Unknown
2	C	6X10	SV/SA	C/	RVT/RR		7		M(Ś01-I-2.4)	Manning, Maxwell and Moore
* Valv 2	ve: S1 C	-MSS-RV 6X10	10(RV-10): SV/SA	Main Ste C/	am Safet RVT/RR	y Val	ve(Dwg.: 51 7	7822	5/C-8) M(SO1-I-2.4)	Manning, Maxwell and Moore

ATTACHMENT 2

PAGE 74 OF 78

ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 2 TCN 5-20 SO1-V-2.15 PAGE 97 OF 118

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Se Code XI Class Ca	ct. Size t. (in.)	Valve and N Actuator F Type P	lormal/ ailed Posit'n	Test Type and Mode	Str. Notes VR Time *See Att.3 No	Test R Organization . (Procedure)	Manufacturer
* Valve: 2 C	S1-MSS-RV-2 6X10	(RV-2):Main SV/SA C) Steam :/	Safety RVT/RR	Valve(Dwg.: 5178225 7	/C-6) M(SO1-I-2.4)	Manning, Maxwell and Moore
* Valve: 2 C	S1-MSS-RV-3 6X10	(RV-3):Main SV/SA C	Steam	Safety RVT/RR	Valve(Dwg.: 5178225 7	/G-6) M(SO1-I-2.4)	Manning, Maxwell and Moore
* Valve: 2 C	S1-MSS-RV-4 6X10	(RV-4):Main SV/SA C) Steam	Safety RVT/RR	Valve(Dwg.: 5178225 7	/C-6) M(SO1-I-2.4)	Manning, Maxwell and Moore
* Valve: 2 C	S1-MSS-RV-5 6X10	(RV-5):Main SV/SA C	n Steam C/	Safety RVT/RR	Valve(Dwg.: 5178225 7	/G-7) M(SO1-1-2.4)	Manning, Maxwell and Moore
* Valve: 2 C	S1-MSS-RV-6 6X10	(RV-6):Main SV/SA C	n Steam C/	Safety RVT/RR	Valve(Dwg.: 5178225 7	6/C-7) M(SO1-I-2.4)	Manning, Maxwell and Moore

ATTACHMENT 2

PAGE 75 OF 78

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 98 OF 118 ATTACHMENT 2 ICN 5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

	10 No. 1	. î ș	Valve	$M_{\rm eff} = M_{\rm eff} M_{\rm eff}$	Test			
Code Class	Sect. XI Cat.	Size (in.)	and Actuator Type	Normal/ Failed Posit'n	Type and Mode	Str. Notes Time *See Att.3	Test VRR Organization No. (Procedure)	Manufacturer

* Valve: S1-MSS-RV-7(RV-7):Main Steam Safety Valve(Dwg.: 5178225/G-7) 2 C 6X10 SV/SA C/ RVT/RR 7 M(SO1-I-2.4)

* Valve: S1-MSS-RV-8(RV-8):Main Steam Safety Valve(Dwg.: 5178225/C-8) 2 C 6X10 SV/SA C/ RVT/RR 7 M(SO1-I-2.4)

* Valve: S1-MSS-RV-9(RV-9):Main Steam Safety Valve(Dwg.: 5178225/G-8) 2 C 6X10 SV/SA C/ RVT/RR 7 M(S01-I-2.4) Manning, Maxwell and Moore

Manning, Maxwell and Moore

Manning, Maxwell and Moore

ATTACHMENT 2

PAGE 76 OF 78

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 99 OF 118 ATTACHMENT 2 TCN ______O

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

		1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	Valve		Test			•		•	
Code	Sect. XI	Size	and Actuator	Normal/ Failed	Type and	Str.	Notes	VRR	Test Organizatio	n	
Class	Cat.	(in.)	Туре	Posit'n	Mode	Time	*See Att.3	No.	(Procedure)		Manufacturer

****** System: Turbine Cycle Sampling

*	V	/a]v	e:	S1-FSS-SV	-119(SV-119)	:Steam	Generator "A"	Sample Isolation Valve(Dwg.: 5178260/F-2)
	2	· .	B	1/4	GA/SO	0/0	BTC/OP 2	2&17 O(SO1-12.4-2) Target Rock
•	2		B	1/4	GA/SO	0/0	FST/OP	2&17 0(S01-12.4-2) Target Rock
	2		B	1/4	GA/SO	0/C	PIT/RR	2&17 0(S01-12.8-8) Target Rock
*	V	alv	e:	SI-FSS-SV	-120(SV-120)	:Steam	Generator "B"	Sample Isolation Valve(Dwg.: 5178260/F-3)
	2		B	1/4	GA/SO	0/C	BTC/OP 2	2&17 0(S01-12.4-2) Target Rock
	2		B	1/4	GA/SO	0/0	FST/OP	2&17 0(SO1-12.4-2) Target Rock
•.	2		B	1/4	GA/SO	0/C	PIT/RR	2&17 0(S01-12.8-8) Target Rock
• 🔹	N	alv	e:	S1-FSS-SV	-121(SV-121)	:Steam	Generator "C"	Sample Isolation Valve(Dwg.: 5178260/F-4)
	2		B	1/4	GA/SO	0/C	BTC/OP 2	2&17 O(SO1-12.4-2) Target Rock
	2	•	B	1/4	GA/SO	0/0	FST/OP	2&17 0(SO1-12.4-2) Target Rock
	2		B	1/4	GA/SO	0/C	PIT/RR	2&17 0(\$01-12.8-8) Target Rock
*	Ň	/alv	e:	S1-FSS-SV	-122(SV-122)	:Steam	Generator "B"	Blowdown Sample Isolation(Dwg.: 5178260/F-5)
	2		B	3/8	GA/SO	0/C	BTC/OP 2	2&17 O(SO1-12.4-2) Target Rock
	2	. ,	B	3/8	GA/SO	0/C	FST/OP	2&17 0(S01-12.4-2) Target Rock
	2		B	3/8	GA/SO	0/C	PIT/RR	2&17 0(SO1-12.8-8) Target Rock
*	N	alv	e:	S1-FSS-SV	-123(SV-123)	:Steam	Generator "A"	Blowdown Sample Isolation(Dwg.: 5178260/F-5)
	2	*	B	· 3/8	GA/SO	0/C	BTC/OP 2	2&17 O(SO1-12.4-2) Target Rock
	2		B	3/8	GA/SO	0/C	FST/OP	2&17 O(SO1-12.4-2) Target Rock
	2	•• ••	B	3/8	GA/SO	0/C	PIT/RR	2&17 0(SO1-12.8-8) Target Rock

ATTACHMENT 2

PAGE 77 OF 78

ENGINEERING PROCEDURE
REVISION 5SO1-V-2.15
PAGE 100 OF 118 ATTACHMENT 2 TCN 5-20

Inservice Testing Program for Valves Valve Listing (Test Org's: M = Maintenance, O = Operations, T = Technical)

Code Class	Sect. XI Cat.	Size (in.)	Valve and Actuator Type	Normal/ Failed Posit'n	Test Type and Mode	Str. Time	Note *See	s Att.3	VRR No.	Test Organization (Procedure)	Manuf	acture	er
---------------	---------------------	---------------	----------------------------------	------------------------------	-----------------------------	--------------	--------------	------------	------------	-------------------------------------	-------	--------	----

* V	alve:	SI-FSS-SV	-124(SV-124):Steam	Generator '	*C*	B1 owdown	Sample Isolation(Dwg.:	5178260/F-6)
2	B	3/8	GA/SO	0/0	BTC/OP 2		2&17	0(\$01-12.4-2)	Target Rock
2	B	3/8	GA/SO	0/0	FST/OP		2&17	0(\$01-12.4-2)	Target Rock
2	· 8	3/8	GA/SO	0/C	PIT/RR		2&17	0(S01-12.8-8)	Target Rock

ATTACHMENT 2

PAGE 78 OF 78

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 101 OF 118 ATTACHMENT 3 TCN _______

·	SYSTEM	• •		
REACTOR	COOLANT SYSTEM		· · · · · · · · · · · · · · · · · · ·	
VALVE NUMBER	P&ID + COORD.	CLASS	VALVE CAT.	JUSTIFICATION FOR COLD SHUTDOWN TESTING FREQUENCY OF VALVES
	· · ·		• • •	
CV-545	5178105/E-2	1	• B	Failure of valve during operation could cause breach of Reactor Coolant System pressure boundary.
CV-546	5178105/G-2	· · · ·	B	Same as CV-545
GN I - 102	5178405/G-2	2	AC	This check valve provides containment isolation for the nitrogen backup supply to the Pressurizer Power Operated relief valves an block valves. The valve is located inside Containment and is no accessible during Plant operation.
REACTOR	COOLANT GAS VENT	-		
SV-2401	5178100/C-8	1	B	Same as CV-545
SV-2402	5178100/C-9	1	B	Same as CV-545
SV-2403	5178105/C-9	1	В	Same as CV-545
SV-2404	5178105/C-9	1	В	Same as CV-545
SV-3401	5178100/B-8	1	₿.	Same as CV-545
SV-3402	5178100/B-9	1	B	Same as CV-545
SV-3403	5178105/B-9	1	B	Same as CV-545
SV-3404	5178105/B-10	1	R	Sama as (V-545

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 102 OF 118 ATTACHMENT 3 TCN 5-20

SYSTEM REACTOR COOLANT SYSTEM				
VALVE NUMBER	P&ID + COORD.	CLASS	VALVE CAT.	JUSTIFICATION FOR COLD SHUTDOWN TESTING FREQUENCY OF VALVES
CV-276	5178111/C-7	2	B	Full or partial stroke exercising during Plant operation would affect operation of the seal water system.
CV-304	5178135/G-10	1	8	Full or partial stroke exercising would affect reactor coolant level during Plant operation.
CV-305	5178135/G-10	1	B	Full or partial stroke exercising during Plant operation would result in thermal shock to the pressurizer spray header.

ENGINEERING PROCEDURE SOI-V-2.15 REVISION 5 PAGE 103 OF 118 ATTACHMENT 3 TCN 5-20

	SYSTEM		- -	
<u>CHEMI</u> VALVE NUMBER	CAL AND VOLUME CONT P&ID + COORD.	CLASS	VALVE CAT.	JUSTIFICATION FOR COLD SHUTDOWN TESTING FREQUENCY OF VALVES
CV-527	5178111/8-11	2	A	This valve can be operated full open or full closed only. Closing this during operation would interrupt RCP seal water return flow and cause relief valve (RV-2004) in the upstream piping to lift.
CV-528	5178136/E-10	2	A	Same as CV-527
FCV-1112	5178135/G-8	2	A	Full stroke exercising during Plant operation would inhibit charging flow.
FCV-1115A	5178110/C-5	1	A	Full stroke exercising of this valve would interrupt seal water flow to the RCPs and could result in damage to the pump seals.
FCV-11158	5178110/E-5	1	A	Same as FCV-1115A
FCV-1115C	5178110/H-5	- 1.	A	Same as FCV-1115A
FCV-1115D	5178110/8-6	1	A	Partial or full stroke exercising during plant operation would result in excessive Reactor Coolant Pump seal water flow and potential subsequent damage to the pump seals.
FCV-1115E	5178110/E-6	1	A	Same as FCV-1115D
FCV-1115F	5178110/G-5	1	A	Same as FCV-1115F

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 104 OF 118 ATTACHMENT 3 TCN _______

CHEMI	SYSTEM Cal and volume cont	ROL SYSTEM		
VALVE NUMBER	P&ID + COORD.	CLASS	VALVE CAT.	JUSTIFICATION FOR COLD SHUTDOWN TESTING FREQUENCY OF VALVES
MOV/LCV 1100C	5178136/D-4	2	B	Closing this valve during normal operation would isolate the normal suction to the charging pumps and consequently interrupt reactor coolant pump seal flow. Alternate flow paths would result in overboration of the Reactor Coolant System and a Plant shutdown.
PCV-1115A	5178111/F-2	2	B	This valve operates full open or full closed only. Exercising this valve during plant operation would inhibit seal water flow to the Reactor Coolant pumps possibly damaging the pumps.
PCV-1115B	5178111/F-6	2	8	Same as PCV-1115A
PCV-1115C	5178111/F-9	2	B	Same as PCV-1115A
VCC-301	5178136/E-4	2	C	This valve cannot be stroked during normal operation without interrupting flow to the charging pumps suction.
RCP-104	5178110/E-8	1	C	This valve cannot be stroked during normal operation without affecting seal injection flow to the Reactor Coolant pumps.
RCP-006	5178110/E-9	1	C	Same as RCP-104.
RCP-005	5178110/C-9	1	C	Same as RCP-104.
VCC-002	5178135/G-11	1 •	C	This valve cannot be stroked during normal operation without affecting Reactor Coolant Level Control.
VCC-003	5178135/G-11	1	C	Exercising.this valve during normal operation would result in thermal shock to the auxiliary spray header in the pressurizer.

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 105 OF 118 ATTACHMENT 3 TCN 5-30

CHEMI	SYSTEM Cal and volume con	ITROL SYSTEM		
VALVE NUMBER	P&ID + COORD.	CLASS	VALVE CAT.	JUSTIFICATION FOR COLD SHUTDOWN TESTING FREQUENCY OF VALVES
VCC - 357	5178136/E-8	2	C	Testing this valve while in operation would require isolation of the seal water return line and stopping both charging pumps causing interruption of Reactor Coolant pump seal water flow.
CV-722A	5178312/B-3	3.	В	This value is full open or full closed only. Full stroking during normal operation would interrupt cooling water flow to the Reactor Coolant pump thermal barrier cooling coils.
CV-722B	5178312/B-6	3	B	Same as CV-722A.
CV-722C	5178312/8-8	3	B	Same as CV-722A.
CCW-071 CCW-074	5178312/G-8 5178312/F-8	3	C	Full stroke testing of these check valves cannot be accomplished during power operation. These two check valves discharge through a common flowmeter. Verification of flow through each check valve cannot be accomplished without isolation of one check valve. The isolation valves for these check valves are located inside containment and therefore are inaccessible during power operation. Full stroke exercising shall be performed during cold shutdown.
CCW-011	5178312/B-2	3	C	Testing of this valve requires interruption of cooling water to the Reactor Cooling pump.
CCW-092	5178312/B-4	3	C	Same as CCW-011.
CCW-012	5178312/B-7	3	C	Same as CCW-011.





ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 106 OF 118 ATTACHMENT 3 TCN 5-20

CHEM	SYSTEM	N CVCTCM		
VALVE	R P&ID + COORD.	CLASS	VAL VE CAT	JUSTIFICATION FOR COLD SHUTDOWN TESTING FREQUENCY OF VALVES
CCW-035	5178312/B-2	3	C	Testing of this valve requires interruption of cooling water to the Reactor Cooling pump.
CCW-040	5178312/B-4	3	C	Same as CCW-035.
CCW-032	5178312/B-7	3	C	Same as CCW-035.
HC V -602	5178130/B-9	2	B	This value is located inside Containment at the lowest level in a high radiation area. It is inaccessible during Plant operation. The value has remote position indication of the closed position only. Thus, there exists no means of verifying value full stroke action during Plant operation.
MOV-813	5178130/B-2	1	B	This valve cannot be full or partial stroked during normal operation. Opening this valve could subject residual heat removal piping and components to pressure above their design.
MOV-814	5178130/C-2	1	B	Same as MOV-813.
MOV-833	5178130/C-11	1	B	Same as MOV-813.
MOV-834	5178130/C-12	1	. B	Same as MOV-813.
RHR-014	5178130/B-5	2	C	Residual heat removal pumps must be run to stroke this valve. This can only be done during cold shutdown due to system pressure limitations.
RHR-013	5178130/D-5	2	C	Same as RHR-014.

NUCLEAR GENERATION SITE





SAFET	SYSTEM Y INJECTION SYSTEM	· · · · · · · · · · · · · · · · · · ·		
VALVE NUMBER	P&ID + COORD.	CLASS	VALVE CAT.	JUSTIFICATION FOR COLD SHUTDOWN TESTING FREQUENCY OF VALVES
CV-875A	5178205/C-10	2	B.	This valve cannot be full or part stroked during normal Plant operation. Opening this valve would cause unborated feedwater to flow into the RWST diluting its boron concentration.
CV-8758	5178205/F-10	. 2	B	Same as CV-875A.
HV-851A	5178115/D-6	2	A	Exercising this valve during normal operation would disrupt feedwater flow to the steam generator.
HV-851B	5178115/G-6	2	A	Same as HV-851A.
HV-853A	5178115/0-4	2	B	This valve operates full open or full closed only. Full stroking during normal Plant operations would cause boron dilution of the RWST.
HV-853B	5178115/G-5	2	B	Same as HV-853A.
MOV-356	5178115/G-11	1	B	This valve can be operated full open or full closed only. Opening this valve during Plant operation would disrupt RCP seal water flow.
MOV-357	5178115/F-11	1.	B	Same as MOV-356.
MOV-358	5178115/D-11	1	B	Same as MOV-356.
MOV-850A	5178115/G-10	1	B	This valve cannot be full or part stroke exercised during normal operation since it performs a pressure isolation function

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 108 OF 118 ATTACHMENT 3 TCN ______

SAFET	SYSTEM Y INJECTION SYSTEM		- · ·	
VALVE NUMBER	P&ID + COORD.	CLASS	VALVE CAT.	JUSTIFICATION FOR COLD SHUTDOWN TESTING FREQUENCY OF VALVES
MOV-850B	5178115/F-10	.1	B	Same as MOV-850A.
MOV-850C	5178115/E-10	1	B	Same as MOV-850A.
MOV-866A	5178121/E-8	2	B	This value is located on the discharge line of the SIS recirculation pumps. Pumps are normally dry and in a standby value lineup for post-LOCA recirculation. Testing during normal Plant operation could result in loss of recirculation capabilities.
MOV-866B	5178121/E-5	2	B	Same as MOV-866A.
MOV-880	5178120/D-5	2	B	Opening this valve during operation would disrupt RCP seal water flow.
MOV - 883	5178120/B-9	2	B	MOV-883 is normally in the OPEN position. If this valve were closed for testing, it would isolate both trains of containment spray, which is a violation of Technical Specification 3.3.1. Therefore, this valve is tested at cold shutdown.
MOV/LCV- 1100B	5178136/G-3	2	B	Full or part stroking of this valve during normal Plant operation would affect reactor coolant level control.
MOV/LCV-	5178136/G-3	2	B	Same as MOV/LCV-1100B
		·		
------------------	-------------------------------	-------	---------------	---
		•		
NUCLE UNIT	AR GENERATION SITE 1			ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 109 OF 118 ATTACHMENT 3 TCN 5-00
			C	COLD SHUTDOWN VALVE TESTING JUSTIFICATION TABLE SU-2900 & SU-3900 NEWE BEEN DELETED
SAFE	SYSTEM TY INJECTION SYSTEM			TABLE
VAL VE NUMBEI	R P&ID + COORD.	CLASS	VALVE CAT.	JUSTIFICATION FOR COLD SHUTDOWN TESTING FREQUENCY OF VALVES
CC - 388		2	C	This valve cannot be full or part stroked during normal plant operation. Stroking would require opening MOV/LCV-1100B or MOV/LCV-1100D which would affect reactor coolant level control.
CP-337		2	C	Same as MOV-880.
-76	5178225/B-9	2	B	Exercising this valve during normal Plant operation would dump steam to the atmosphere.
V-77	5178225/G-9	2	B	Same as CV-76.
V-78	5178225/B-10	2	B	Same as CV-76.
/-79	5178225/G-10	2	B	Same as CV-76.
V-82	5178120/F-3	2	B	This valve cannot be full or partially stroked during normal Plant operation. Stroking the valve would cause the RWST to partially drain to the containment spray piping and into Containment through a drain in the spray piping.
V-114	5178120/F-2	2	B	Same as CV-82.
RS-304	5178120/F-8	2	C	This valve cannot be stroke tested during operation due to the potential for flooding the fire protection or containment spray piping with borated water.
RS-305	5178120/H-8	2	C	Same as CRS-304.



NUCLEAR GENERATION SITE UNIT 1

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 110 OF 118 ATTACHMENT 3 TCN ______ 5-20

COLD SHUTDOWN VALVE TESTING JUSTIFICATION TABLE

SYSTEM

FEEDWATER AND CONDENSATE SYSTEM

VAL VE NUMBER	P&ID + COORD.	CLASS	VALVE CAT.	JUSTIFICATION FOR COLD SHUTDOWN TESTING FREQUENCY OF VALVES
CV-142	5178206/F-8	2	8	Full stroke exercising during Plant operation would disrupt feedwater flow.
CV-143	5178206/B-8	2	B	Same as CV-142.
CV-144	5178206/D-8	2	B	Same as CV-142.
FCV-456	5178206/G-8	2	A	Full stroke exercising during Plant operation would interrupt feedwater flow to the steam generator.
FCV-457	5178206/E-8	2	A ¹	Same as FCV-456.
FCV-458	5178206/C-8	2	A	Same as FCV-456.
HV-852A	5178205/C-6	_ 2	₿	This valve operates full open or full closed only. Full stroking during normal Plant operations would cause loss of feedwater to the steam generators.
HV-852B	5178205/G-6	2	B	Same as HV-852A.
HV-854A	5178205/C-3	2	B	Same as HV-852A.
HV-854B	5178205/G-3	2	B	Same as HV-852A.
MOV - 20	5178206/E-7	2	8	Same as FCV-456.
MOV - 21	5178206/G-7	2	. B ,	Same as FCV-456.



ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 111 OF 118 ATTACHMENT 3 TCN <u>S-DD</u>

COLD SHUTDOWN VALVE TESTING JUSTIFICATION TABLE

VALVE NUMBER	P&ID + COORD.	CLASS	VAL CA	LVE JUSTIFICATION FOR COLD SHUTDOWN AT. TESTING FREQUENCY OF VALVES
MOV-22	5178206/C-7	2	B	Same as FCV-456.
FWS-378	5178207/D-8	2	C	Exercising the Main Feedwater/Steam Generator check valves during normal Plant power operation would interfere with the operation of the Steam Generator Level Control System.
FWS-379	5178206/F-8	2	C	Same as FWS-378.
FWS-417	5178205/B-8	2	C	Same as FWS-378.
FWS-398	5178206/C-8	2	C	Full or part stroking of this valve during normal Plant operation would interrupt feedwater flow to the steam generator.
FWS-345	5178206/G-8	2	C	Same as FWS-398.
FWS-346	5178206/E-8	2	C	Same as FWS-398.
FWS-006	5178225/C-3	2	C	Same as FWS-398.
FWS-007	5178225/E-3	2	C	Same as FWS-398.
FWS-012	5178225/G-3	2	C	Same as FWS-398.



NUCLEAR GENERATION SITE

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 112 OF 118 ATTACHMENT 3 TCN 5-20

COLD SHUTDOWN VALVE TESTING JUSTIFICATION TABLE

AUXIL	SYSTEM IARY FEEDWATER SY	(STEM		
VALVE NUMBER	P&ID + COORD.	VALVE CLASS CAT.		JUSTIFICATION FOR COLD SHUTDOWN TESTING FREQUENCY OF VALVES
FNS-438	5178205/C-5	2 C	Same as FWS-398	In addition, this valve will be partially disassembled and stroked by hand at Reactor Refueling Interval
FWS-439	5178205/6-5	2 C	Same as FWS-398	In addition, this valve will be partially disassembled and stroked by hand at Reactor Refueling Interval
FCV-2300	5178220/H-10	2 B	Fail-safe testing o control system of o loop requires verif loop is normally en from quarterly fail of deenergizing and degradation of the tested during cold	f this value requires removing all power from the ne train. Deenergizing and energizing this control ication of the bistable setpoints. This control ergized in Modes 1 through 5. Relief is requested -safe testing of this value to reduce the frequency energizing of the control loop to minimize control loop components. This will be fail-safe shutdown.
FCV-2301	5178220/D-10	2 B	Same as FCV-2300.	
FCV-3300	5178220/C-10	2 B	Same as FCV-2300.	
FCV-3301	5178220/E-10	2 B	Same as FCV-2300.	
AFW-303	5178220/G-5	2 C	Testing this valve (injecting cold wate	during normal Plant operation would require r into the steam generators. This would result in

thermal shock to the steam generators.



ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 113 OF 118 ATTACHMENT 3 TCN $\leq - 20$

COLD SHUTDOWN VALVE TESTING JUSTIFICATION TABLE

	SYSTEM					•
AUXIL	IARY FEEDWATER SYST	EM			WETTELCAT	ION FOR COLD SHUTDOWN
VAL VE NUMBER	P&ID + COORD.	CLASS	VALVE CAT,		JUSTIFICAT	FREQUENCY OF VALVES
AFW-304	5178220/C-5	2	C	Same as AFW-303.		
AFW-317	5178220/B-7	2	C	Same as AFW-303.	ана С	
AFW-324	5178220/C-11	2	C	Same as AFW-303.		
AFW-318	5178220/C-7	2	C	Same as AFW-303.		
AFW-322	5178220/F-11	2	C	Same as AFW-303.		
AFW-320	5178220/C-6	2	C	Same as AFW-303.		
AFW-321	5178220/H-11	2	C	Same as AFW-303.	•	
AEN-312	5178220/0-8	- 2	С.,	Same as AFW-303.		· · · ·

NUCLEAR GENERATION SITE



ENGINEERING PROCEDURE REVISION 5 ATTACHMENT 3	SO1-V-2. PAGE 114	15 OF	118
TCN 5-20		•	

COLD SHUTDOWN VALVE TESTING JUSTIFICATION TABLE

AUXILI	ARY	FFFN	WATED
-OKUTEI		ILLU	WAILK

SYSTEM

VALVE <u>NUMBE</u>	P&ID + COORD.	VALVE CLASS CAT.		JUSTIFICATION FOR COLD SHUTDOWN TESTING FREQUENCY OF VALVES		
AFW-310	5178220/F-8	2	C Same as AFW-303.			
ĄFW-309	5178220/G-8	2	C Same as AFW-303.			
AFW-384 -	5178220/	3	C Same as AFW-303.			
AFW-388	5178220/	3	C Same as AFW-303.			
AFW-399	5178220/	3	C Same as AFW-303.			

NUCLEAR	GENERATION S	ITENT
	NTIPE ATT	herr
(Thi	9 15 NG ~	COMPUTE

a.

b.

с.

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 115 OF 118 ATTACHMENT 4 TCN <u>5-20</u>

COMPUTER ASSISTED MANAGEMENT OF IST

The Station Technical Division will assign an IST Coordinator to implement its responsibilities under the IST Program. The Coordinator will report to the STA Supervisor, Units 2 & 3.

Technical maintains a comprehensive, computerized data base for all pumps and valves in the IST Program. The IST Coordinator uses this data base to accomplish the following tasks:

1. Track the testing status of each pump and valve.

(To be in place for Unit 1 by Return to service, Early July 1986 - Units 2 & 3 by November 26, 1986).

2. Establish and maintain a technical performance base for each pump and valve.

(To be in place by November 28, 1986 for all three units).

- 3. Provide maintenance and testing visibility in order for the Coordinator to adjust valve program testing frequency to ensure that the program remains responsive to current conditions. Pump testing frequency is controlled in the Pump IST Program.
 - (To be in place by November 28, 1986 for all three units),
- 4. Provide for data base review to ensure that maintenance outage work on pumps and valves takes into account the valve's (or pump's) program performance. The Coordinator will adjust valve testing interval on the basis of the Code requirements and his professional judgement.

(To be in place by November 28, 1986 for all three units).

- 5. Provide reports to the Cognizant Engineers to identify problem valves which need design upgrading.
- 6. On a periodic basis, issue trend reports to management identifying problem areas and highlighting trends. Trends that are of concern will be brought to the attention of the On-Site Review Committee.

Technical will identify those pumps and valves that require testing and the schedule for testing as follows:

1. Quarterly Interval: These valves will be identified in the Program, Reference 2.1.1.

ATTACHMENT 4

ENGINEERING PROCEDURE S01-V-2.15 **REVISION 5** ATTACHMENT 4 TCN 5-20

PAGE 116 OF 118

COMPUTER ASSISTED MANAGEMENT OF IST (Continued)

- 2. Cold Shutdown Interval: At the conclusion of each outage, Technical will issue a memorandum to Operations and Maintenance as appropriate. which lists the valves which must be tested at the next forced outage of 48 hours duration or greater. This list will be based on four factors:
 - The importance to safety assigned each valve not tested in the a. last 90 days.
 - The maintenance history (reliability) of each valve. Cold ь. shutdown interval valves will be selected on the basis of the testing performance and the maintenance history (i.e., the worst performing valves will be tested more that others).
 - The time since each valve was tested. с.
 - d. A minimum of 25% of all cold shutdown valves shall be tested each Mode 5 outage. The goal will be to test all valves, if time allows.
- 3. Refueling Interval valves: These valves will be identified in the Program. (Pumps are addressed in the Pump IST program.)



ATTACHMENT 4

PAGE 2 OF 2

THIS ENTIRE ATTACHMENT NUCLEAR GENERATION SITE UNIT 1

VRR Number

1.

2

3

5

6

7

8.

ENGINEERING PROCEDURE S01-V-2.15 **REVISION 5** ATTACHMENT 5 TCN 5-20

PAGE 117 OF 118

Explanation of Valve Relief Requests

Submitted to the NRC

Content

Diesel Generator Cooling Water valves, DWS-306, DWS309 and DWN-309, will be stroked open quarterly. In addition, they will be disassembled and inspected at each refueling outage. Photographs of the valve's "As-Found" internals will be taken, any abnormalities observed will be noted and the photographs will be retained as records.

Safety Injection check valves, SIS-303 and SIS-304, will be partially disassembled, inspected and manually full-stroked at alternate refuelings. Photographs of the valves', "As-Found" internals will be taken and retained as records, taking note of any abnormalities observed. If the full-stroke capability of the disassembled valve is in question, the other valve will be disassembled, inspected and manually full-stroked during the same outage.

Both Safety Injection check valves, CRS-008 and CRS-009, will be disassembled and inspected at each refueling outage. Photographs of the valves' "As-Found" internals will be taken, any abnormalities observed will be noted and the photographs will be retained as records.

Safety Injection check valves, SIS-003, SIS-004 and SIS-010, will be partially disasembled, inspected and manually full-stroked at each refueling on a rotating basis (one valve per refueling). However, if it is not found that the full-stroke capability of the disassembled valve is in question, the other two valves will be similarly disassembled, inspected and manually full-stroked during the same outage. Photographs of the valves' "As-Found" internals will be taken and retained as records, taking note of any abnormalities observed.

Containment Fire Spray valve, CV-92, will'be exercised during refueling when the RWST is drained.

Fail-safe testing of all-power operated valves requiring fail-safe testing located inside containment will be performed during cold shutdown. CANCELLED,

Cancelled.

Valves with stroke times of 2 seconds or less that exhibit an increase in stroke time of 50% or more, need not have the test frequency increased. However, if a valve stroke time does exceed. its maximum stroke time value, it will be declared inoperable.

ATTACHMENT 5

PAGE 1 OF 2

NUCLEAR GENERATION SITE

9

10

ENGINEERING PROCEDURE SO1-V-2.15 REVISION 5 PAGE 118 OF 118 ATTACHMENT 5 TCN <u>6-20</u>

Cancelled.

Feedwater Pump Discharge valves, FWS-438 and FWS-439, will be disassembled and inspected at each refueling outage. Photographs of the valves' "As-Found" internals will be taken, any abnormalities observed will be noted and the photographs will be retained as records.





ATTACHMENT 5

PAGE 2 OF 2