



LR-N18-0024

**FEB 12** 2018

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

HOPE CREEK GENERATING STATION  
RENEWED FACILITY OPERATING LICENSE NO. NPF-57  
NRC DOCKET NO. 50-354

Subject: Submittal of Program for Hope Creek Fourth Ten-Year Interval  
Inservice Testing Program

In accordance with the American Society of Mechanical Engineers (ASME) Code for Operation and Maintenance of Nuclear Power Plants (OM Code), Subsection ISTA-3200(a), "Administrative Requirements," enclosed for your information is a copy of the Inservice Testing (IST) Program Plan for the fourth ten-year interval. The fourth ten-year interval IST Program was developed in accordance with the requirements of the ASME OM Code-2012 Edition with no Addenda. The relief requests included within the program document were previously addressed under separate submittals. The fourth ten-year interval began on December 21, 2017 and concludes on December 20, 2026.

There are no regulatory commitments contained within this letter.

Should you have any questions concerning this matter, please contact Mr. Lee Marabella at 856-339-1208.

Sincerely,

A handwritten signature in black ink, appearing to read "Paul R. Duke, Jr.", written in a cursive style.

Paul R. Duke, Jr.  
Licensing Manager  
PSEG Nuclear LLC

Enclosure: Hope Creek Nuclear Generating Station Inservice Testing Program  
Submittal Interval 4

**FEB 12 2018**

LR-N18-0024

cc: Mr. David C. Lew, Administrator, Region I, NRC  
Mr. Justin Hawkins, NRC Senior Resident Inspector - Hope Creek  
Ms. Carleen J. Parker Project Manager, Hope Creek, USNRC  
Mr. Patrick Mulligan, Chief NJ Bureau of Nuclear Engineering /Manager IV  
Mr. Lee Marabella, Corporate Commitment Tracking Coordinator (w/o  
enclosure)  
Mr. Tom MacEwen, Hope Creek Commitment Tracking Coordinator (w/o  
enclosure)

LR-N18-0024

Enclosure

Hope Creek Nuclear Generating Station Inservice Testing Program Submittal Interval 4

# HOPE CREEK NUCLEAR GENERATING STATION

Hancocks Bridge, New Jersey

## INSERVICE TESTING PROGRAM SUBMITTAL INTERVAL 4

Effective Date  
December 21, 2017 through December 20, 2026

### REVISION 0

Docket No:50-354

Facility Operating License Number:NPF-57

Commercial Operation Date: December 20<sup>th</sup>, 1986

### APPROVALS:

Prepared by: James Rogers *James Rogers* Date: 12/15/2017  
Consultant – True North Consulting, LLC

Prepared by: Kenneth Hutko *Kenneth Hutko* Date: 12/18/17  
Station IST Program Engineer  
KENNETH HUTKO

Reviewed by: George Poopy *George Poopy* Date: 12/18/2017  
Corporate IST Program Engineer  
GEORGE POOPY

Approved By: Anthony Tramontana *Anthony Tramontana* Date: 12/19/17  
Station Engineering Programs Manager

Public Service Enterprise Group, LLC  
P.O. Box 236  
Hancocks Bridge, New Jersey 08038

# Hope Creek Inservice Testing Plan

## **REVISION LOG**

<b>Effective Date</b>	<b>Revision Description</b>	<b>Prepared; IST Program Engineer</b>	<b>Date</b>	<b>Approved; Engr. Programs Manager</b>	<b>Date</b>
12/21/17	Revision 0, Initial issue 4 <sup>th</sup> Interval	K. Hutko J. Rogers	12/21/17	A. Tramontana	12/21/17

# Hope Creek Inservice Testing Plan

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# **Hope Creek Inservice Testing Plan**

## **LIST OF EFFECTIVE SECTIONS**

Revision Log	Revision 12/21/2017
Table of Contents	Revision 12/21/2017
List of Affected Sections	Revision 12/21/2017
Program Narrative	Revision 12/21/2017
Table 1 - System and P&ID Listing	Revision 12/21/2017
Table 2 - Pump Test Table	Revision 12/21/2017
Table 3 - Valve Test Table	Revision 12/21/2017
Attachment 1 - Technical Positions	Revision 12/21/2017
Attachment 2 - Cold Shutdown Justifications	Revision 12/21/2017
Attachment 3 - Refueling Outage Justifications	Revision 12/21/2017
Attachment 4 – General and Pump Relief Requests	Revision 12/21/2017
Attachment 5 - Valve Relief Requests	Revision 12/21/2017

# Hope Creek Inservice Testing Plan

## 1.0 MANUAL SUMMARY

The Hope Creek Nuclear Generating Station Inservice Testing Manual has two major sections: Basis and Program. A description of the IST Manual sections is provided below:

**Basis** - This section identifies the pumps and valves that have safety functions which perform a specific function required to bring the reactor from any operating mode to the safe shutdown condition, in maintaining the safe shutdown condition, or in mitigating the consequences of an accident. For each system included in the program, each Piping and Instrument Diagram (P&ID) sheet was analyzed to determine if any pumps or valves had safety functions. Each pump or valve associated with each safety function was analyzed to determine if it had an active or passive safety function described in the UFSAR, Technical Specification, or other design basis documents. Note that some components with passive safety functions are not analyzed. An example of a passive component that is not analyzed is a manual vent, drain or test connection valve that is normally closed. Passive components analyzed include those valves located within a safety related flow path. All components with active safety functions are covered in the Basis document. The Basis document also contains test circuit diagrams, instrument accuracy tables, and a section for interpretation of requirements.

**Program** - This section is the submittal document for the Nuclear Regulatory Commission (NRC). This section meets the minimum content requirements for a Program Submittal, and is sufficiently complete to provide an adequate description of the program. This program document provides the following: a description of the IST Program, Hope Creek IST Technical Positions, Cold Shutdown Justifications, Refueling Outage Justifications, 10CFR50.55a Requests, Pump Test Tables and Valve Test Tables.



# Hope Creek Inservice Testing Plan

## 2.0 **PROGRAM SUBMITTAL**

### 2.1 **PROGRAM REVISION EXECUTIVE SUMMARY**

Interval 4 Program - Revision 0:  
120-Month 4<sup>th</sup> Ten Year Interval Program Update.

### 2.2 **PROGRAM PURPOSE**

The purpose of this program plan document is to provide the requirements for assessing the operational readiness of pumps and valves whose specific functions are required to bring the reactor from any operating mode to the safe shutdown condition, in maintaining the safe shutdown condition, or in mitigating the consequences of an accident.

Hope Creek Generating Station is licensed with a safe shutdown condition of Cold Shutdown.

The Inservice Testing Program for Pumps and Valves is applicable for a one hundred twenty (120) month interval. The chronology for Hope Creek Generating Station is listed below:

- The first 120-month interval began on 12/20/86, the commercial operating date, through 12/20/96. The first interval was extended an additional 12 months to end on 12/20/97 (ref. LR-N96404 dated 12/15/96.) This action was necessary to permit completion of the Interval 2 Program Update.
- The second 120-month interval IST Program began on 12/21/97 and was decreased to nine years, ending on 12/20/06.
- The third 120-month interval IST Program began on 12/21/2006. The third interval was extended an additional 12 months as allowed by ISTA-3120(d) to end on 12/20/2017 (Ref. LR-N17-0127, dated 8/17/2017). This action was necessary to permit completion of the Interval 4 Program Update (delayed waiting for endorsement of OM-2012 Code)
- The fourth 120-month interval IST Program is effective 12/21/2017 through 12/20/2026.

The Program portion of the IST Manual is submitted to the NRC for their overall review and specific approval of associated 10CFR50.55a Requests for the successive 120-month IST Program. The program documents submitted to the NRC are used to prepare for IST inspections and to review 10CFR50.55a Requests.

Regarding periodic changes, NUREG 1482 specifies that the program document need not be submitted more often than necessary to reflect major changes, but it is expected that licensees make changes to the document periodically, and once per cycle, or once every other cycle, a complete up-to-date, copy should be submitted to the NRC.

## Hope Creek Inservice Testing Plan

This program plan establishes the requirements which are then translated into implementing (surveillance) procedures for inservice testing and evaluation of Class 1, 2, and 3 pumps and valves. Additionally, using the guidance in NUREG 1482 and recent NRC rulemaking revising 10 CFR 50.55a(f)(4) regarding the scope of the IST Program, certain other valves not required to be classified as Class 1, 2, and 3, but which perform a specific function required to bring the reactor from any operating mode to the safe shutdown condition, in maintaining the safe shutdown condition, or in mitigating the consequences of an accident, are also included.

### 2.3 REGULATORY BASIS

Code of Federal Regulations, Title 10, Section 50.55a (10CFR50.55a), “Codes and Standards,” states requirements for IST of certain safety-related pumps and valves. These components are required to be tested according to the requirements of Operation and Maintenance of Nuclear Power Plants, ASME OM Code- Editions and Addenda through 2012. The testing is intended to assess operational readiness of components. The tests conducted during the initial and successive 120-month intervals are to be based on the requirements in the applicable edition and addenda of the Code, to the extent practical, within the limitations of design, geometry, and materials of construction, as described in 10 CFR50.55a(f)(4).

10 CFR50.55a(f)(4)(ii) requires that IST in each 120-month interval following the initial interval be conducted in compliance with the requirements of the latest edition and addenda of the Code incorporated by reference in 10CFR50.55a(b), in effect 12 months before the start of the interval. Pursuant to 10CFR50.55a(f)(4)(iv), IST may meet the requirements of subsequent editions and addenda incorporated by paragraph (b) or portions of a revised edition. When portions of a revised edition are used, all related requirements of the respective editions or addenda must be met and approval of the NRC obtained as clarified by RIS-04-012 dated 7/28/2004.

The NRC may authorize alternatives to Code testing requirements submitted as 10CFR50.55a requests, or submitted in a similar format that includes a description of the requirements, a description of the proposed alternative, and the justification for approval of the alternative. 10CFR50.55a(a)(z)(1) allows the NRC to authorize alternatives if “the proposed alternatives would provide an acceptable level of quality and safety.” The NRC will normally approve an alternative pursuant to this provisions only if the licensee proposes a method of testing that is an equivalent method, or an improvement, to the Code method, or if the testing will comply or is consistent with the later Code editions approved by NRC in 10CFR50.55a(b). Where testing would result in hardship or unusual difficulty without a compensating increase in the level of quality and safety, an alternate method of testing is documented in a 10CFR50.55a(z)(2) Request. Indices and text are provided as Attachment 4, General and Pump 10CFR50.55a Requests, and as Attachment 5, Valve 10CFR50.55a Requests.

The Hope Creek Inservice Testing Program for Pumps and Valves was developed in accordance with the requirements of ASME OM Code-2012, (Subsections ISTA, ISTB, ISTD, Mandatory Appendix I, Mandatory Appendix II, Mandatory Appendix III, and Mandatory Appendix V).. Subsection ISTE, “Risk Informed Inservice Testing of Components in Light-Water Reactor Nuclear Plants” and Subsection ISTF, “Inservice Testing of Pumps in Light-Water Reactor Nuclear Plants – Post 2000 Plants” of OM Code 2012 are not applicable to HCGS.

## Hope Creek Inservice Testing Plan

The components were classified and categorized in accordance with the Code of Record with test requirements and intervals assigned accordingly. Technical Specification, UFSAR and other licensing commitments were referenced during the assignment of test intervals. Additional guidance for the development of the Hope Creek Inservice Testing Program was obtained from NUREG 1482, "Guidelines for Inservice Testing at Nuclear Power Plants".

The 10CFR50 Appendix J Program Plan for Primary Containment Testing at Hope Creek Nuclear Generating Station is in compliance with the requirements of 10CFR50 Appendix J, Option B, Regulatory Guide 1.163, September 1995 and Station Technical Specifications.

Reactor system instrumentation line excess flow check valves (EFCVs) shall be tested in accordance with Technical Specification (TS) Surveillance Requirement (SR) 4.6.3.4 as addressed by 10CFR50.55a Relief Request VR-01. Surveillance 4.6.3.4 requires demonstration that a representative sample of reactor instrumentation line EFCVs are tested to demonstrate that the valve actuates to check flow on a simulated instrument line break. This surveillance requirement provides assurance that the instrument line EFCVs will perform so that the predicted radiological consequences will not be exceeded during a postulated instrument line break event as evaluated in the UFSAR. The Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program. Operating experience has demonstrated that these components are highly reliable and that failures to isolate are very infrequent. Therefore, testing of a representative sample was concluded to be acceptable from a reliability standpoint. Their testing is controlled by TS SR 4.6.3.4.

Snubber testing shall be performed in accordance with the requirements of OM Code Subsection ISTD "Preservice and Inservice Examination and Testing of Dynamic Restraints (Snubbers) in Light-Water Reactor Nuclear Power Plants," in addition to any requirements specified in Subsection ISTA "General Requirements." The scope of snubber testing as well as applicable test requirements shall be defined in the HCGS Snubber Program.

## Hope Creek Inservice Testing Plan

### 2.4 OM CODE CASE ACCEPTABILITY

#### **ISTA-3130 Application of Code Cases**

- (a) Code Cases to be used during a preservice or inservice test or examination shall be identified in the test plan.
- (b) Code Cases shall be applicable to the edition and addenda specified in the test plan.
- (c) Code Cases shall be in effect at the time the test plan is filed, except as provided in ISTA-3130(d).
- (d) Code Cases issued subsequent to filing the test plan may be proposed for use in amendments to the test plan.

#### **NUREG 1482 Section 2.1.1, ASME Code Case Applicability**

If a licensee would like to use an ASME Code Case with a Edition or Addendum of the ASME Code to which it is not applicable, the licensee' has the following options:

- a. Have the alternative to use the Code Case, beyond its stated applicability, authorized by the NRC pursuant to 10CFR50.55a(z), or
- b. If the Code Case is applicable to an Edition or Addendum of the ASME Code later than the version of the Code being used by the licensee, the licensee could update to the later version of the Code pursuant to 10CFR50.55a(f)(4)(iv)'or (g)(4)(iv) and then use the Code Case, provided the Code Case has been approved for use in the appropriate Regulatory Guide and incorporated by reference into, 10CFR50.55a. Note that the later version of the ASME Code must also have been incorporated by reference into 10CFR50.55a, the licensee must update all related requirements of the respective Edition or Addenda; and the update must be specifically approved by the Commission.

Licensee should not use ASME Code Cases with Editions and Addenda of the ASME Code to which they do not apply and that are not specifically approved for use by the NRC. More specifically, licensees should not "reconcile" the Applicability of Code Cases without consulting with the applicable ASME Code 'Committee.

#### **Regulatory Guide 1.192 Introduction and Discussion**

Regulatory Guide 1.192 identifies the Code Cases that have been determined by the NRC to be acceptable alternatives to applicable parts of the OM Code.

These Code Cases may be used by licensees, without request to the NRC, provided they are used with any identified limitations or modifications. *(SEE ABOVE OM ISTA-3130(b) REQUIREMENT; i.e., THE CODE CASE MUST BE APPLICABLE TO THE EDITION AND ADDENDA SPECIFIED IN THE TEST PLAN. PER NUREG 1482, AUTHORIZATION IS REQUIRED WHEN USING CODE CASES BEYOND THEIR STATED APPLICABILITY)*

## **Hope Creek Inservice Testing Plan**

OM Code Cases not yet endorsed by the NRC may be implemented through 10CFR50.55a(a)(z), which permits the use of alternatives to the Code requirements referenced in 10CFR50.55a provided the proposed alternatives result in an acceptable level of quality and safety and provided their use is authorized by the Director of the Office of Nuclear Reactor Regulation.

Regulatory guide 1.192, Appendix A lists the OM Code edition or addenda for each Code Case, with the date of approval by the ASME Board on Nuclear Codes and Standards. Appendix B is a numerical listing of the OM Code Cases.

Table 1, "Acceptable OM Code Cases," lists the Code Cases that are acceptable to the NRC for implementation in the IST of light water cooled nuclear power plants.

Table 2, "Conditionally Acceptable OM Code Cases," lists the Code Cases that are acceptable provided they are used with the identified limitations or modifications, i.e., the Code Case is generally acceptable but the NRC has determined that the alternative requirements must be supplemented in order to provide an acceptable level of quality and safety.

OM Code Cases that the NRC has determined to be unacceptable are listed in Regulatory Guide 1.193, "ASME Code Cases Not Approved for Use."

With regard to the use of any Code Case, it is the responsibility of the user to make certain that the provisions of the Code Case do not conflict with regulatory requirements or licensee commitments.

### **Code Cases Selected for use at HCGS**

Because ASME Code Case (CC) OMN-20, "Inservice Test Frequency" has been incorporated by reference into 10 CFR 50.55a(a)(1)(iii)(G), and 10 CFR 50.55a(b)(3)(x) allows licensees to implement CC OMN-20 for editions and addenda of the ASME OM Code listed in 10 CFR 50.55a(a)(1)(iv), including the 2012 edition, HCGS will not require relief request GR-01 for the fourth interval. Relief Request GR-01 was previously approved for the fourth interval in NRC Letter to PSEG, "Hope Creek Generating Station - Requests for Relief GR-01, PR-01, PR-02, VR-01, AND VR-02, for the Fourth Inservice Testing Interval (CAC Nos. MF7200, MF7201, MF7202, MF7203, AND MF7204) dated December 20, 2016 (ADAMS Accession No. ML16343A057).

# Hope Creek Inservice Testing Plan

## 2.5 PROGRAM DEVELOPMENT

The IST Program covers components in ASME Code Class systems and a limited number of Non-ASME Code Class systems. Components included in the IST Program are those whose specific functions are required to bring the reactor from any operating mode to the safe shutdown condition, in maintaining the safe shutdown condition, or in mitigating the consequences of an accident.

ASME Class 1, 2 and 3 piping and components are identified on the Hope Creek Piping and Instrument Diagrams (P&ID's). The P&ID's were reviewed to identify systems or portions of systems that are Code Class 1, 2, or 3. P&ID's containing Class 1, 2, or 3 plant pumps and valves or other pumps and valves with safety functions that were determined to be within the IST Program scope and require testing are listed in Table 1, System and P&ID Listing. Each Class 1, 2, and 3 component and non-Code component determined to be in-scope was reviewed to determine which require testing to satisfy the scope requirements of ASME OM Code-2012, Subsection ISTA, "General Requirements", Article ISTA-1000, "Introduction", Subarticle ISTA-1100, "Scope".

After all systems or portions of systems containing pumps and valves within the scope of the IST Program were identified, the safety function(s) for each component was determined. The safety function of each component is identified and documented in a computerized database. The references used in these determinations are also recorded and include the UFSAR, Technical Specifications, and other design basis documents. IST categories are assigned per ASME OM-2012 Code. In cases where an interpretation of the ASME OM Code or applicable regulations was necessary, the interpretation was documented in a plant-specific Technical Position. These Technical Positions are included in this program plan as Attachment 1, Technical Positions.

Where the testing of certain plant components is not possible during normal plant operation, an alternate testing schedule is documented in a Cold Shutdown Justification. An index and text is provided in Attachment 2, Cold Shutdown Justifications. Where the testing of certain plant components is not possible during a cold shutdown, an alternate testing schedule is documented in a Refueling Outage Justification. An index and text is provided in Attachment 3, Refueling Outage Justifications. Where plant design makes the testing of certain components complicated or impossible, an alternate method of testing is documented in a 10CFR50.55a Request. Indices and text are provided in Attachment 4, General and Pump 10CFR50.55a Requests, and Attachment 5, Valve 10CFR50.55a Requests.

Components failing to meet test requirements will be dispositioned by the Plant's Corrective Action program. Specific responsibilities are defined in the Plant procedures.

## Hope Creek Inservice Testing Plan

### 2.6 REFERENCES

Technical Specifications, Hope Creek Nuclear Generating Station.

Updated Final Safety Analysis Report, Hope Creek Nuclear Generating Station.

Code of Federal Regulations, Title 10, Section 50.55a, “Codes and Standards”

10CFR50 Appendix A, General Design Criteria for Nuclear Power Plants

10CFR50 Appendix J, Primary Reactor Containment Leakage Testing for Water Cooled Power Reactors

ASME OM-2012 Code, Operation and Maintenance of Nuclear Power Plants

Minutes Of The Public Meetings On Generic Letter 89-04, dated October 25, 1989

Generic Letter No. 89-04, Guidance on Developing Acceptable Inservice Testing Programs.

NUREG-0800, Standard Review Plan.

NUREG-1482, Revision 2, October 2013, Guidelines for Inservice Testing at Nuclear Power Plants

NUREG/CP-0123, Second NRC/ASME Symposium on Pump & Valve Testing, Session 2A, Use of Ultrasonics and Acoustics in Measurement of Solenoid Valve Stroke Time at Hope Creek Generating Station.

NRC Inspection Procedure 73756, Inservice Testing of Pumps and Valves, July 27, 1995.

NRC Temporary Instruction 2515/110, Performance of Safety-Related Check Valves, November 1991.

NRC Temporary Instruction 2515/114, Inspection Requirements for Generic Letter 89-04, Acceptable Inservice Testing Programs, January 1992.

NRC Regulatory Guide 1.26, “Quality Group Classification and Standards for Water, Steam and Radioactive Waste Containing Components of Nuclear Power Plants.”

NRC Regulatory Guide 1.137, “Fuel Oil Systems for Standby Diesel Generators.”

NEI White Paper Revision 1, Standard Format for Requests from Commercial Reactor Licensees Pursuant to 10CFR50.55a, June 2004

Summary of Public Workshops; Inspection Procedure 73756 and Answers to IST Questions, July 18, 1997

NRC Regulatory Guide 1.192, “Operation and Maintenance Code Case Acceptability, ASME OM Code”, August 2014, Revision 1

NRC Regulatory Guide 1.193, “ASME Code Cases Not Approved for Use”, August 2014, Revision 4

# Hope Creek Inservice Testing Plan

## 2.7 DEFINITIONS

**Active valves** - Valves which are required to change obturator position to accomplish the required function(s) (e.g., valves which receive an automatic safety actuation signal, or check valves not locked or held in position). If a valve is routinely repositioned during power operations (or has an active safety function), it is an active valve. A valve need not be considered active if it is only temporarily removed from service or from its safety position for a short period of time, such as manually opening a sample valve to take a sample while maintaining administrative control over the valve.

**Active Failure** - A malfunction in the active part of a component. An active failure in mechanical components could be due to a part moving that should not move, or a part failing to move.

**Alert Range** - The range for a given pump parameter outside the normal operating range in which an increased testing frequency is specified.

**Category A, B, C or D** - Groupings of valves by function. When more than one distinguishing category characteristic is applicable, all requirements of each category are applicable, although duplication or repetition of common testing requirements is not required. The valve categories are as follows:

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

**Comprehensive Pump Test flow rate** - the flow rate established by the Owner that is effective for detecting mechanical and hydraulic degradation during subsequent testing. The best efficiency point, system flow rates, and any other plant-specific flow rates shall be considered.

**Containment Isolation Valve (CIV)** - Any valve whose function is to prevent post-accident containment atmosphere leakage to areas outside containment.

**Enforcement Authority** - A regional or local governing body, such as a state or municipality of the United States empowered to enact and enforce Boiler and Pressure Vessel Code Legislation.

**Exercising** - The demonstration, based on direct visual or indirect positive indications, that the moving parts of a valve will perform the required function(s).

**Fail-Safe Valve** - Valve that moves to the position required to fulfill its safety function upon loss of motive power (pneumatic, hydraulic or electric).



## Hope Creek Inservice Testing Plan

**Full Stroke Time** - The time interval from initiation of an actuating signal to a valve to the indication of the defined end of the operating stroke of the valve.

**Inservice Test** - A test for obtaining information through measurement or observation to determine the operational readiness of a pump or valve.

**Inservice Test Program Submittal** - The document that establishes scope and detailed testing requirements needed to comply with the ASME OM Code, applicable IST Technical Specifications and other licensing basis documents. The IST Program provisions that are submitted to the Regulatory Authority in accordance with applicable requirements.

**Inservice Test Program** - A collection of documents including the Inservice Test Program Submittal, procedures, records of tests, etc., that specify and implement inservice testing requirements.

**Instrument Accuracy** - The allowable inaccuracy of an instrument loop based on the square root of the sum of the squares of the inaccuracies (including gage readability) of each instrument or component in the loop. For flow loops, this inaccuracy does not include the inaccuracies of the flow sensing element; e. g., orifice, venturi, etc.

When a difference in readings taken from the same or different instruments is required to determine a value of a parameter (e.g., two levels taken over a timed interval to determine flow rate) the inaccuracy of the result is to be based on the square root of the sum of the squares of the inaccuracies of each instrument loop reading.

**Instrument Loop** - Two or more instrument or components working together to provide a single output (e.g., a vibration probe and its associated signal conditioning and readout devices).

**Leakage Rate Test** - Verification of the leak tight integrity of a valve using differential gas or liquid pressure or system fluid pressure.

**Maximum Required Accident Condition Flow** - The largest flow rate for which credit is taken for a component in a safety analysis in any flow configuration. The safety analyses are those contained in the UFSAR but are not limited to accident and transient analyses.

**Normal System Operating Conditions** - System fluid, pressure, and temperature during the phase of plant operation for which that system is intended to function.

**Obturator** - Valve closure member (disk, gate, plug, ball, etc.).

**Operational Readiness** - The ability of a pump or valve to perform its intended function.

**Owner** - The organization legally responsible for the operation, maintenance, safety, and power generation of the nuclear power plant.

# Hope Creek Inservice Testing Plan

## Partial-Stroke Exercising -

- a. Exercising a check valve to an open position less than full open or less than that required to pass the maximum required accident condition flow rate. Periodic partial stroking of check valves is no longer required by the OM Code.
- b. For power operated valves, exercising a valve to an intermediate position, versus fully open or fully closed.

**Passive Valve** - Valves which maintain obturator position and are not required to change obturator position to accomplish the required function(s) for shutting down the reactor to the safe shutdown condition, maintaining the reactor in safe shutdown, or in mitigating the consequences of an accident. If a valve is routinely repositioned during power operations (or has an active safety function), it is an active valve. A valve need not be considered active if it is only temporarily removed from service or from its safety position for a short period of time, such as stroke time measurement for surveillance testing or manually opening a sample valve to take a sample while maintaining administrative control over the valve.

Valves that are locked or deenergized in their required positions, or are only repositioned from their safety position under administrative control are, in most cases, considered passive. Valves that are routinely repositioned during plant operation are not considered passive. "Routine" includes valve operations which occur as a result of normal operating procedures. Valve operations included within off-normal or emergency procedures are not considered routine. Valve operations which occur as a result of system startup or shutdown procedures, or infrequent operating procedures may be considered routine depending upon the frequency of the operation.

**Plant Operation** - The conditions of startup, operation at power, hot standby, and reactor cooldown as defined by the OM Code and plant Technical Specifications.

**Pressure Isolation Valve (PIV)** - Either of two normally closed valves in series that isolate the reactor coolant system from an attached low pressure system, as defined by the Technical Specifications.

## Pump Groups: -

**Group A** - Pumps that are operated continuously or routinely during normal operation, cold shutdown, or refueling operations.

**Group B** – Pumps in standby systems that are not operated routinely except for testing.

**Rapid-Acting Valves** - An optional classification for power operated valves with a full stroke time of 2 seconds or less.

**Reactor Coolant System Pressure Isolation** - That function which prevents intersystem over pressurization between the reactor coolant system and connected low-pressure systems.

**Reference Values** - One or more values of test parameters measured or determined when the equipment is known to be operating acceptably.

## Hope Creek Inservice Testing Plan

**Regulatory Authority** - A federal government agency, such as the United States Nuclear Regulatory Commission, empowered to issue and enforce regulations concerning the design, construction, and operation of nuclear power plants.

**Remote Actuation** - Actuation of a pressure relief device through a generated signal rather than by static inlet pressure.

**Required Action Range** - That region outside the upper and lower limits in which the pump is considered inoperable until the cause of the deviation has been determined and the condition corrected.

**Skid-mounted Pumps and Valves** - Pumps and valves integral to or that support operation of major components, even though these pumps and valves may not be located directly on the skid. In general, these pumps and valves are supplied by the manufacturer of the major component.

Examples include:

- (a) diesel fuel oil pumps and valves;
- (b) steam admission and trip throttle valves for high-pressure coolant injection turbine-driven pumps;
- (c) steam admission and trip throttle valves for auxiliary feedwater turbine-driven pumps;
- (d) solenoid-operated valves provided to control an air-operated valve.

**Thermal Relief Valve** - A relief valve shall be considered in a thermal application if they serve to protect portions of safety-related systems or components solely from over pressure due to thermal expansion while the component or portion of system is in an isolated condition. The applicable system portion or component would not be isolated during normal operations or accident conditions.

**Vertical Line Shaft Pump** - A vertically suspended pump where the pump driver and pump element are connected by a line shaft within an enclosed column.

## Hope Creek Inservice Testing Plan

### 3.0 INSERVICE TESTING PROGRAM FOR PUMPS

#### 3.1 Pump Inservice Testing Program Description

This program establishes the requirements for the performance, administration, and implementation of the Inservice Testing Program for selected pumps at Hope Creek Nuclear Station. This program includes pumps that are provided with an emergency power source and are required in shutting down the reactor to the safe shutdown condition, maintaining the safe shutdown condition, or mitigating the consequences of an accident.

This program plan meets the requirements of ASME OM-2012 Code Edition, "Inservice Testing of Pumps in Light-Water Reactor Nuclear Power Plants". Specific 10CFR50.55a requests from Code requirements are contained in Attachment 4.

*NOTE: The pump groupings, instrument accuracy requirements, test parameters and acceptance criteria for test parameters are detailed in Subsection ISTB.*

*When a Group A test is required a Comprehensive test may be substituted. When a Group B test is required a Group A test or Comprehensive test may be substituted. A preservice test may be substituted for any inservice test.*

#### **Group A Pumps**

The OM Code defines Group A pumps as those pumps that are operated continuously or routinely during normal operation, cold shutdown, or refueling operations. HCGS considers the following pumps as being categorized as Group A as well as justification for grouping. Justification does not necessarily consider all safety related functions.

##### **Residual Heat Removal (RHR) Pumps A, B (System designation BC)**

Provide reactor vessel coolant inventory makeup following a large break LOCA. The low pressure coolant injection (LPCI) mode of RHR system operation is classified as an emergency core cooling system (ECCS) and is relied upon in accident analyses to provide adequate coolant flow to remove core decay heat and prevent core damage. These pumps provide residual heat removal flow during plant shutdown operations. It is noted that RHR Pump C or D is capable of being aligned to provide residual heat removal flow during plant shutdown operations however the ability to align these pumps to provide shutdown cooling is not required for the safe shutdown of the plant or to meet design bases accident assumptions. RHR Pumps C and D are considered Category B pumps.

##### **Safety Auxiliaries Cooling Pumps (SACS) A, B, C, D (System designation EG)**

Provide cooling water flow to various safety related components and room coolers. During normal plant operation, the SACS supplies cooling water to the fuel pool heat exchanger, Class 1E Equipment Chillers, Control Room Chillers and Primary Containment Instrument Gas Compressor Coolers, as well as the turbine auxiliaries cooling system (TACS). This system is required to operate during design basis accidents to support ECCS operation and to supply cooling water for decay heat removal (RHR heat exchangers) during shutdown operations.

## Hope Creek Inservice Testing Plan

### **High Pressure Coolant Injection (HPCI) Keep Full Jockey Pump** (System designation BJ)

Provide long-term feedwater sealing for the feedwater lines following a design basis LOCA. UFSAR 6.2.3.2.3 discusses the use of the HPCI and Reactor Core Isolation Cooling (RCIC) jockey pump loops to provide makeup water to the feedwater piping between the isolation valves to prevent bypass leakage. The jockey pump also maintains the HPCI discharge header full and pressurized during standby operation to prevent pipe damage from water hammer in the discharge line upon system initiation and improve system response time.

### **RCIC Keep Full Jockey Pump** (System designation BD)

Provide long-term feedwater sealing for the feedwater lines following a design basis LOCA. UFSAR 6.2.3.2.3 discusses the use of the HPCI and RCIC jockey pump loops to provide makeup water to the feedwater piping between the isolation valves to prevent bypass leakage. The jockey pump also maintains the RCIC discharge header full and pressurized during standby operation to prevent pipe damage from water hammer in the discharge line upon system initiation and improve system response time.

### **Control Area Chilled Water Pumps A & B** (System designation GJ)

Provide chill water flow to the control room chillers and maintain the control room temperatures within required limits during normal plant operation and during design basis accidents.

### **Safety Panel Room Chill Water Pumps A & B** (System designation GB)

Provide chill water flow to the safety-related panel room chillers and maintain the room temperatures within required limits during normal plant operation and during design basis accidents.

### **Service Water Pumps A, B, C, D** (System designation EA)

Provide cooling water from the river to the SACS during normal and emergency conditions. SACS is required to provide cooling water to various ECCS pumps and room coolers during a design basis accident.

### **Screen Wash Booster Pumps A, B, C, D** (System designation EP)

Provide cleaning spray flow for the service water traveling screens. These screens are located on the suction side of the service water pump to prevent debris from entering the service water system. Operation of the screen wash booster pump prevents the screen from clogging by providing a spray flow of sufficient velocity and pressure to ensure debris removal.

# Hope Creek Inservice Testing Plan

## **Group B Pumps**

The OM Code defines Group B pumps as those pumps in standby systems that are not operated routinely except for testing. HCGS considers the following pumps as being categorized as Group B as well as justification for grouping.

### **Residual Heat Removal Pumps C, D (System designation BC)**

Provide reactor vessel coolant inventory makeup following a large break LOCA. The LPCI mode of RHR system operation is classified as an ECCS and is relied upon in accident analyses to provide adequate coolant flow to remove core decay heat and prevent core damage. For operational flexibility a means is provided to align RHR pump C or D to the RCS for shutdown cooling. In the event RHR Pump A or B is not available, these pumps may be aligned to provide residual heat removal flow during plant shutdown operations. Normally, RHR pumps A and B supply the shutdown cooling requirements for the plant. The ability to align RHR pumps C or D to provide shutdown cooling is not required for the safe shutdown of the plant or to meet design bases accident assumptions.

### **Reactor Core Isolation Cooling Pump (System designation BD)**

While not credited as an ECCS component, the RCIC pump is safety-related and considered important to safety. This pump provides make-up capability for a small break LOCA in which the reactor vessel is not immediately depressurized.

### **High Pressure Coolant Injection Pump & Booster Pump (System designation BJ)**

The HPCI pump is an ECCS component that is also used to maintain reactor vessel inventory following reactor isolation and coincident failure of the non-ECCS RCIC system.

The HPCI Booster pump is integral with HPCI pump in that they are driven off the same turbine and ensures that the minimum net positive suction head requirements of the HPCI pump are maintained for the design accident flow rates.

### **Core Spray Pumps A, B, C, D (System designation BE)**

To provide reactor vessel inventory makeup and spray cooling during large breaks in which the reactor core is calculated to uncover. After ADS initiation, core spray also provides inventory makeup following a small break LOCA.

### **Standby Liquid Control (SLC) Injection Pumps A & B (System designation BH)**

The standby liquid control system is a special event plant capability system designed to provide a manual backup method, independent of the control rods, to achieve and maintain the reactor in a subcritical condition as nuclear system cools down. This pump provides the hydraulic force necessary to inject the boron solution into the reactor vessel.

### **Diesel Fuel Oil Transfer Pumps A, B, C, D, E, F, G, H (System designation KJ)**

Transfer diesel fuel oil from the fuel oil storage tank to the fuel oil day tank during engine operation. The fuel oil transfer pump automatically transfers fuel oil from the storage tank to the day tank at a rate greater than the engine consumption rate at full rated load.

## Hope Creek Inservice Testing Plan

### 3.2 Pump Program Table Description

The pumps included in the Hope Creek Nuclear Generating Station IST Program are listed in Table 2. The information contained in this table identifies those pumps required to be tested to the requirements of ASME OM Code-2012 Edition, Subsection ISTB, “Inservice Testing of Pumps in Light-Water Reactor Nuclear Power Plants”. The pump tables show the following information:

**PUMP NO** - Component number as used on the P&ID and other plant documents.

**PUMP DESCRIPTION** - A description of the component.

**PUMP GROUP** – Identifies Group A or Group B Categorization.

**P + ID No** - Hope Creek Piping & Instrument Diagram, dash, sheet number.

**P + ID Name** - The name of the Hope Creek Piping & Instrument Diagram.

**Drawing Coordinates** - A letter / number combination that aids in locating the component on the P&ID.

**ASME Class** - Classification per ASME Boiler and Pressure Vessel Code, Section III. Code classes are Class 1 (1), Class 2 (2), Class 3 (3), and non-class (NC).

**Pump Type** - Pump types are horizontal centrifugal, vertical line shaft centrifugal, or positive displacement.

**Driver** - The power conversion method for the pump. Drivers are motor or turbine.

**Mfg. Model ID** - The name or model identifier used by the manufacturer.

**TEST TYPE** - Parameter to be measured during test. Possible parameters are discharge pressure (P); differential pressure (dP); suction pressure (Pi); flow rate (Q); speed (N); Vibration (V).

**TEST FREQ.** - Quarterly full flow (Q); reactor refueling outage full flow (RF); or every two years (2 Y).

**CODE DEV** - If a 10CFR50.55a request is associated with this pump, the 10CFR50.55a request number is shown here. If a cold shutdown justification is associated with this pump, the cold shutdown justification number is shown here.

**COMMENTS** - If a technical position is associated with this pump, the technical position number is shown here. Any other information.

# Hope Creek Inservice Testing Plan

## 4.0 INSERVICE TESTING PROGRAM FOR VALVES

### 4.1 Valve Inservice Testing Program Description

This program establishes the requirements for the performance, administration, and implementation of the Inservice Testing Program for selected valves at Hope Creek Nuclear Station. This program includes those valves which are required to perform a specific function in shutting down the reactor to the safe shutdown condition, maintaining the safe shutdown condition, or mitigating the consequences of an accident.

This program plan meets the requirements of ASME OM-2012 Code Edition, Subsection ISTC, "Inservice Testing of Valves in Light-Water Reactor Nuclear Power Plants", Mandatory Appendix I, "Requirements for Inservice Performance Testing of Nuclear Power Plant Pressure Relief Devices", Mandatory Appendix II, "Check Valve Condition Monitoring Program", and Mandatory Appendix III, "Preservice and Inservice Testing of Active Electric Motor Operated Valve Assemblies in Light-Water Nuclear Power Plants". Specific 10CFR50.55a requests from Code requirements are contained in Attachment 5.

Class 1 thermal relief valves shall be tested in accordance with the requirements of paragraph I-1340 of Appendix I. Class 2 and 3 thermal relief valves shall be tested in accordance with the requirements of paragraph I-1390 of Appendix I.

Category C check valves shall be exercised nominally every 3 months, except as provided by ISTC-3522 and ISTC-5221. During operation at power, each check valve shall be exercised or examined in a manner that verifies obturator travel by using the methods in ISTC-5221. Each check valve exercise test shall include open and close tests. Open and closed tests need only be performed at an interval when it is practicable to perform both tests. Test order (e.g. whether the open test precedes the closed test) shall be determined by HCGS. Open and close tests are not required to be performed at the same time if they are both performed within the same interval.

#### **Check Valve (CV) Condition Monitoring**

As an alternative to the requirements of paragraphs ISTC-3510, ISTC-3520, ISTC-3530, ISTC-3550, and ISTC-5221, HCGS may establish a Condition Monitoring Program (CMP) per ISTC-5222. The purpose of this program is to both (a) improve check valve performance and to (b) optimize testing, examination, and preventive maintenance activities in order to maintain the continued acceptable performance of a select group of check valves. HCGS may implement this program on a valve or a group of similar valves.



## Hope Creek Inservice Testing Plan

Examples of candidates for (a) improved valve performance are check valves that:

- have an unusually high failure rate during inservice testing or operations
- *cannot be exercised under normal operating conditions or during shutdown*
- exhibit unusual, abnormal, or unexpected behavior during exercising or operation
- the Owner elects to monitor for improved valve performance

Examples of candidates for (b) optimization of testing, examination, and preventive maintenance activities are check valves with documented acceptable performance that:

- have had their performance improved under the Condition Monitoring Program
- cannot be exercised or are not readily exercised during normal operating conditions or during shutdowns
- can only be disassembled and examined
- the Owner elects to optimize all the associated activities of the valve or valve group in a consolidated program.

The program shall be implemented in accordance with Appendix II, “Check Valve Condition Monitoring Program”, of OM-2012 Code.

Check valves included in the CV CMP (See Table 4) are denoted in the IST Program Bases by group number (ex.: CMP-xx). When a CMP is Active, the group specific package controls the activities AND test frequencies, the test deferral justification specified in the IST Program Tables and IST Bases become non-applicable. Where there is no CMP listed, the IST Program controls the activities AND the test requirements specified in the IST Program Tables and IST Bases are applicable.

If the Appendix II condition monitoring program for a valve or valve group is discontinued then the requirements of ISTC-3510, ISTC-3520, ISTC-3530, ISTC-3550, and ISTC-5221 shall be implemented.

### **Manual Valves**

Manual valves shall be exercised through a complete cycle at least once every 2 years (ISTC-3540). Exercise testing shall be considered acceptable if valve stem travel exhibits unrestricted movement with no abnormal resistance or binding through one complete cycle. Where practical, process parameters may be utilized to verify obturator movement. However, where process parameters are utilized to verify obturator movement it is not necessary to be performed simultaneous to manual exercising. This testing methodology is consistent with the discussion provided in NUREG-1482, Section 4.4.3.

# Hope Creek Inservice Testing Plan

## 4.2 Valve Program Table Description

The valves included with the Hope Creek Nuclear Generating Station IST Program are listed in Table 3. The information contained in these exhibits identifies those valves required to be tested to the requirements of ASME OM-2012 Code Edition, Subsection ISTC, "Inservice Testing of Valves in Light-Water Reactor Nuclear Power Plants," Mandatory Appendix I, "Requirements for Inservice Performance Testing of Nuclear Power Plant Pressure Relief Devices," Mandatory Appendix II, "Check Valve Condition Monitoring Program," and Mandatory Appendix III, "Preservice and Inservice Testing of Active Electric Motor Operated Valve Assemblies in Light-Water Nuclear Power Plants." Valves exempt per Subsection ISTC are not listed. The headings for the valve tables are delineated below.

**VALVE NO** - Component number as used on the P&ID and other plant documents.

**VALVE DESCRIPTION** - A description of the component.

**P & ID No** - Hope Creek Piping & Instrument Diagram, dash, sheet number.

**P & ID Name** - The name of the Hope Creek Piping & Instrument Diagram.

**Drawing Coordinates** - A letter / number combination that aids in locating the component on the P&ID.

**ASME Class** - Classification per ASME Boiler and Pressure Vessel Code, Section III. Code classes are Class 1 (1), Class 2 (2), Class 3 (3), and non-class (NC).

**IST Cat** - Classification per Subsection ISTC, SubArticle ISTC-1300. IST Categories are A (e.g.; valves where seat leakage is critical to their safety function), B (e.g.; any valves where seat leakage is not critical to their safety function), C (e.g.; check and relief valves), AC (e.g.; check and relief valves where the leak rate is critical to their safety function) or D (e.g.; rupture disk or explosive actuated valve).

**Valve Type** - The possible valve types are diaphragm, check, plug, relief, Thermal Relief Valve, gate, globe, stop check, three way, butterfly, ball, needle, modified check valve, rupture disc, testable check valve, or excess flow check valve.

**Actuator Type** - The possible actuator types are air operated (AO), manually operated (MAN), motor operated (MO), self operated (SE), solenoid operated (SO), hydraulically operated (HO), or self operated with a motor operator (such as stop check valve) (SE/MO).

**Valve Size** - The nominal valve size in inches.

**Normal Position** - The possible normal positions are open, closed, both open and closed (Open/Close), modulating, locked closed, locked open, throttled open, or position dependent upon component operation (i.e. operates automatically with main component) (Automatic).

**Safety Position** - The possible safety positions are open, closed, or both open and closed (Open/Closed),

## Hope Creek Inservice Testing Plan

**A/P Classification** - The classification of the valve as either Active or Passive. An Active valve must reposition to fulfill its safety function. A Passive valve need not reposition but must remain in its normal position to fulfill its safety function.

**TEST TYPE** - Parameter to be measured during test. Possible test types are as follows:

**DI-S** – Disassembly and Inspection

**EX** – Explosive valve test.

**EXC** – Check valve test to the closed position.

**EXO** – Check valve test to the open position.

**FSC** – Full stroke exercise to the closed position (non-timed).

**FSO** – Full stroke exercise to the open position. (non-timed)

**FSTC** – Fail safe test to the closed position.

**FSTO** – Fail safe test to the open position.

**FSX** – Full stroke exercise of an MOV (non-timed) from open to closed to open or from closed to open to closed positions

**LJ** – A Type C leak rate test per 10CFR50 Appendix J requirements. This test applies to containment isolation valves.

**LT** – Leak rate test to ASME OM Code requirements. This test applies to valves where leakage might negatively affect their safety function but are not containment isolation valves, such as PIVs and accumulator check valves. (Suffixes include: -Air, -H<sub>2</sub>O, & -P/F)

**PIT** – Position indication test.

**PVT** – MOV periodic diagnostic test

**RD** – Rupture disc test requirements per I-1360

**RV** – Relief valve test.

**SKID** – Skid-Mounted Component satisfied by testing major component.

**SPI** – Supplemental Position Indication Specified when additional testing is required to meet NRC condition on use of OM-2012 Code and ISTC-3700, position verification testing.

**SPTV** – Vacuum breaker setpoint test

**STC** – Stroke time test to the closed position. (Also satisfies full stroke exercise test)

**STO** – Stroke time test to the open position. (Also satisfies full stroke exercise test)

**TRV** – Thermal Relief valve test.

**TQ** – Full stroke exercise test using a mechanical exerciser (Torque wrench)  
(Suffixes include: -FOF, -FOI, -LF, & -LI)

**TEST FREQ** - Quarterly (Q), Cold shutdown (CS), Refueling outage (RF), Once every 18 months (18 M), Once every 'X' number of months ('X' M), Once every two years (2 Y), Once every 'X' number of years ('X' Y) (used for diagnostic testing of MOVs per Appendix III), at the frequency specified in the Check Valve Condition Monitoring Program Plan (CM), or Appendix J Option B (Opt B).

**CODE DEV** - If a Cold Shutdown Justification, Refueling Outage Justification, or 10CFR50.55a request is associated with this valve, the number is shown here.

**COMMENTS** - If a technical position is associated with this valve, the technical position number is shown here. Any other information.

## Hope Creek Inservice Testing Plan

**TABLE 1: SYSTEM AND P&ID LISTING  
SYSTEMS IN IST PROGRAM**

<u>P&amp;ID</u>	<u>Sheet</u>	<u>System Name</u>
M-01-1	1	Main Steam System,
M-08-0	1, 2	P&ID Condensate & Refueling Water Storage and Transfer
M-10-1	1, 2, 4	P&ID Service Water
M-11-1	1, 2, 3, 4	Safety Auxiliaries Cooling Reactor Building
M-12-1	1, 2	P&ID Safety Auxiliaries Cooling Auxiliary Building
M-13-1	1	P&ID Reactor Auxiliaries Cooling
M-15-0	1, 2, 3, 4, 5	P&ID Compressed Air
M-15-1	1	Breathing Air
M-25-1	1	Plant Leak Detection
M-30-1	1, 2, 3	Diesel Engine Auxiliary Systems Starting Air & Lube Oil
M-38-0	1, 2	Post Accident Sampling System
M-41-1	1, 2	P&ID Nuclear Boiler
M-42-1	1, 2	P&ID Nuclear Boiler Vessel Instrumentation
M-43-1	1	P&ID Reactor Recirculation System
M-44-1	1	P&ID Reactor Water Clean-Up
M-45-1	1	Instrument Gas Compressor
M-46-1	1, 2	P&ID Control Rod Hydraulic Part A
M-47-1	1	P&ID Control Rod Hydraulic Part B
M-48-1	1	P&ID Standby Liquid Control
M-49-1	1	P&ID Reactor Core Isolation Cooling
M-50-1	1	P&ID RCIC Pump Turbine
M-51-1	1, 2	P&ID Residual Heat Removal
M-52-1	1	P&ID Core Spray
M-53-1	1, 2	P&ID Fuel Pool Cooling & Torus Water Cleanup
M-55-1	1	P&ID High Pressure Coolant Injection
M-56-1	1	P&ID HPCI Pump Turbine
M-57-1	1	P&ID Containment Atmosphere Control
M-58-1	1	Containment Hydrogen Recombination System
M-59-1	1, 2, 3	P&ID Primary Containment Instrument Gas
M-60-1	1	Primary Containment Leakage Rate Testing
M-61-1	1, 2	P&ID Liquid Radwaste Collection
M-66-0	1	P&ID Solid Radwaste
M-72-1	1	P&ID Main Steam Isolation Valve Sealing System
M-87-1	2, 4	P&ID Chilled Water System Auxiliary Building Chilled Water
M-90-1	1, 2, 3	P&ID Aux. Bldg. Control Area Chilled Water System
10855-M-18(Q)48		EDG Air Start System
10855-M-18(Q)50		EDG Jacket Water Cooling System
10855-M-18(Q)56		EDG Lube Oil System

## **Hope Creek Inservice Testing Plan**

### **TABLE 2**

#### **PUMP TEST TABLE**

# Hope Creek Inservice Testing Plan

Hope Creek UNIT 1

## BC - RESIDUAL HEAT REMOVAL (RHR) (HOPE CREEK)

Pump ID	Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1BC -1A-P-202	M51-1-2(B4)	2	A	GRP A/CPT GPM	1 Q			HC.OP-IS.BC-0001	
				GRP A/CPT D/P	1 Q			HC.OP-IS.BC-0001	
				GRP A/CPT VIB-M1H	1 Q			HC.OP-IS.BC-0001	
				GRP A/CPT VIB-M1V	1 Q			HC.OP-IS.BC-0001	
				GRP A/CPT VIB-M1A	1 Q			HC.OP-IS.BC-0001	
				GRP A/CPT VIB-M2H	1 Q			HC.OP-IS.BC-0001	
				GRP A/CPT VIB-M2V	1 Q			HC.OP-IS.BC-0001	
				GRP A/CPT VIB-M2A	1 Q			HC.OP-IS.BC-0001	
				GRP A/CPT VIB-P1H	1 Q			HC.OP-IS.BC-0001	
				GRP A/CPT VIB-P1V	1 Q			HC.OP-IS.BC-0001	
				GRP A/CPT VIB-P1A	1 Q			HC.OP-IS.BC-0001	
'A' RESIDUAL HEAT REMOVAL (RHR) PUMP CB									
H1BC -1B-P-202	M51-1-1(B6)	2	A	GRP A/CPT GPM	1 Q			HC.OP-IS.BC-0003	
				GRP A/CPT D/P	1 Q			HC.OP-IS.BC-0003	
				GRP A/CPT VIB-M1H	1 Q			HC.OP-IS.BC-0003	
				GRP A/CPT VIB-M1V	1 Q			HC.OP-IS.BC-0003	
				GRP A/CPT VIB-M1A	1 Q			HC.OP-IS.BC-0003	
				GRP A/CPT VIB-M2H	1 Q			HC.OP-IS.BC-0003	
				GRP A/CPT VIB-M2V	1 Q			HC.OP-IS.BC-0003	
				GRP A/CPT VIB-M2A	1 Q			HC.OP-IS.BC-0003	
				GRP A/CPT VIB-P1H	1 Q			HC.OP-IS.BC-0003	
				GRP A/CPT VIB-P1V	1 Q			HC.OP-IS.BC-0003	
				GRP A/CPT VIB-P1A	1 Q			HC.OP-IS.BC-0003	
'B' RESIDUAL HEAT REMOVAL (RHR) PUMP CB									

# Hope Creek Inservice Testing Plan

## Hope Creek UNIT 1

### BC - RESIDUAL HEAT REMOVAL (RHR) (HOPE CREEK)

Pump ID Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1BC -1C-P-202	M51-1-2(B3)	2	B	GRP B/CPT D/P	1 Q		HC.OP-IS.BC-0002	
				GRP B/CPT GPM	1 Q		HC.OP-IS.BC-0002	
				GRP B/CPT VIB-M1A	2 Y		HC.OP-IS.BC-0002	
				GRP B/CPT VIB-M1H	2 Y		HC.OP-IS.BC-0002	
				GRP B/CPT VIB-M1V	2 Y		HC.OP-IS.BC-0002	
				GRP B/CPT VIB-M2A	2 Y		HC.OP-IS.BC-0002	
				GRP B/CPT VIB-M2H	2 Y		HC.OP-IS.BC-0002	
				GRP B/CPT VIB-M2V	2 Y		HC.OP-IS.BC-0002	
				GRP B/CPT VIB-P1A	2 Y		HC.OP-IS.BC-0002	
				GRP B/CPT VIB-P1H	2 Y		HC.OP-IS.BC-0002	
				GRP B/CPT VIB-P1V	2 Y		HC.OP-IS.BC-0002	
'C' RESIDUAL HEAT REMOVAL (RHR) PUMP   CB								
H1BC -1D-P-202	M51-1-1(A7)	2	B	GRP B/CPT D/P	1 Q		HC.OP-IS.BC-0004	
				GRP B/CPT GPM	1 Q		HC.OP-IS.BC-0004	
				GRP B/CPT VIB-M1A	2 Y		HC.OP-IS.BC-0004	
				GRP B/CPT VIB-M1H	2 Y		HC.OP-IS.BC-0004	
				GRP B/CPT VIB-M1V	2 Y		HC.OP-IS.BC-0004	
				GRP B/CPT VIB-M2A	2 Y		HC.OP-IS.BC-0004	
				GRP B/CPT VIB-M2H	2 Y		HC.OP-IS.BC-0004	
				GRP B/CPT VIB-M2V	2 Y		HC.OP-IS.BC-0004	
				GRP B/CPT VIB-P1A	2 Y		HC.OP-IS.BC-0004	
				GRP B/CPT VIB-P1H	2 Y		HC.OP-IS.BC-0004	
				GRP B/CPT VIB-P1V	2 Y		HC.OP-IS.BC-0004	
'D' RESIDUAL HEAT REMOVAL (RHR) PUMP   CB								

# Hope Creek Inservice Testing Plan

Hope Creek UNIT 1

## BD - REACTOR CORE ISOLATION COOLING SYSTEM

Pump ID Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1BD -10-P-203	M50-1-1(E5)	2	B	GRP B/CPT GPM	1 Q	RP - 02	HC.OP-IS.BD-0001	
				GRP B/CPT SPD	1 Q		HC.OP-IS.BD-0001	
				GRP B/CPT D/P	1 Q		HC.OP-IS.BD-0001	
				GRP B/CPT VIB-T1H	2 Y		HC.OP-IS.BD-0001	
				GRP B/CPT VIB-T1V	2 Y		HC.OP-IS.BD-0001	
				GRP B/CPT VIB-T1A	2 Y		HC.OP-IS.BD-0001	
				GRP B/CPT VIB-T2H	2 Y		HC.OP-IS.BD-0001	
				GRP B/CPT VIB-T2V	2 Y		HC.OP-IS.BD-0001	
				GRP B/CPT VIB-T2A	2 Y		HC.OP-IS.BD-0001	
				GRP B/CPT VIB-P1H	2 Y		HC.OP-IS.BD-0001	
				GRP B/CPT VIB-P1V	2 Y		HC.OP-IS.BD-0001	
				GRP B/CPT VIB-P1A	2 Y		HC.OP-IS.BD-0001	
				GRP B/CPT VIB-P2H	2 Y		HC.OP-IS.BD-0001	
				GRP B/CPT VIB-P2V	2 Y		HC.OP-IS.BD-0001	
				GRP B/CPT VIB-P2A	2 Y		HC.OP-IS.BD-0001	
REACTOR CORE ISOLATION COOLING PUMP   CB								



## Hope Creek Inservice Testing Plan

Hope Creek UNIT 1

### BD - REACTOR CORE ISOLATION COOLING SYSTEM

Pump ID Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
<b>H1BD -1B-P-228</b>	M50-1-1(E5)	2	A	GRP A/CPT D/P	1 Q		HC.OP-IS.BD-0002	
				GRP A/CPT GPM	1 Q		HC.OP-IS.BD-0002	
				GRP A/CPT VIB-M1H	1 Q		HC.OP-IS.BD-0002	
				GRP A/CPT VIB-M1V	1 Q		HC.OP-IS.BD-0002	
				GRP A/CPT VIB-M1A	1 Q		HC.OP-IS.BD-0002	
				GRP A/CPT VIB-M2H	1 Q		HC.OP-IS.BD-0002	
				GRP A/CPT VIB-M2V	1 Q		HC.OP-IS.BD-0002	
				GRP A/CPT VIB-M2A	1 Q		HC.OP-IS.BD-0002	
				GRP A/CPT VIB-P1H	1 Q		HC.OP-IS.BD-0002	
				GRP A/CPT VIB-P1V	1 Q		HC.OP-IS.BD-0002	
				GRP A/CPT VIB-P1A	1 Q		HC.OP-IS.BD-0002	
				GRP A/CPT VIB-P2H	1 Q		HC.OP-IS.BD-0002	
				GRP A/CPT VIB-P2V	1 Q		HC.OP-IS.BD-0002	
				GRP A/CPT VIB-P2A	1 Q		HC.OP-IS.BD-0002	
PUMP- RCIC ECCS JOCKEY	CB							

# Hope Creek Inservice Testing Plan

## Hope Creek UNIT 1

### BE - CORE SPRAY (HOPE CREEK)

Pump ID Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1BE -1A-P-206	M52-1-1(C6)	2	B	GRP B/CPT D/P	1 Q		HC.OP-IS.BE-0001	
				GRP B/CPT GPM	1 Q		HC.OP-IS.BE-0001	
				GRP B/CPT VIB-M1A	2 Y		HC.OP-IS.BE-0001	
				GRP B/CPT VIB-M1H	2 Y		HC.OP-IS.BE-0001	
				GRP B/CPT VIB-M1V	2 Y		HC.OP-IS.BE-0001	
				GRP B/CPT VIB-M2A	2 Y		HC.OP-IS.BE-0001	
				GRP B/CPT VIB-M2H	2 Y		HC.OP-IS.BE-0001	
				GRP B/CPT VIB-M2V	2 Y		HC.OP-IS.BE-0001	
				GRP B/CPT VIB-P1A	2 Y		HC.OP-IS.BE-0001	
				GRP B/CPT VIB-P1H	2 Y		HC.OP-IS.BE-0001	
				GRP B/CPT VIB-P1V	2 Y		HC.OP-IS.BE-0001	
'A' REACTOR CORE SPRAY PUMP								
H1BE -1B-P-206	M52-1-1(C4)	2	B	GRP B/CPT D/P	1 Q		HC.OP-IS.BE-0002	
				GRP B/CPT GPM	1 Q		HC.OP-IS.BE-0002	
				GRP B/CPT VIB-M1H	2 Y		HC.OP-IS.BE-0002	
				GRP B/CPT VIB-M1V	2 Y		HC.OP-IS.BE-0002	
				GRP B/CPT VIB-M1A	2 Y		HC.OP-IS.BE-0002	
				GRP B/CPT VIB-M2H	2 Y		HC.OP-IS.BE-0002	
				GRP B/CPT VIB-M2V	2 Y		HC.OP-IS.BE-0002	
				GRP B/CPT VIB-M2A	2 Y		HC.OP-IS.BE-0002	
				GRP B/CPT VIB-P1H	2 Y		HC.OP-IS.BE-0002	
				GRP B/CPT VIB-P1V	2 Y		HC.OP-IS.BE-0002	
				GRP B/CPT VIB-P1A	2 Y		HC.OP-IS.BE-0002	
'B' REACTOR CORE SPRAY PUMP								

# Hope Creek Inservice Testing Plan

## Hope Creek UNIT 1

### BE - CORE SPRAY (HOPE CREEK)

Pump ID	Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1BE -1C-P-206	M52-1-1(C5)	2	B	GRP B/CPT D/P	1 Q			HC.OP-IS.BE-0001	
				GRP B/CPT GPM	1 Q			HC.OP-IS.BE-0001	
				GRP B/CPT VIB-M1A	2 Y			HC.OP-IS.BE-0001	
				GRP B/CPT VIB-M1H	2 Y			HC.OP-IS.BE-0001	
				GRP B/CPT VIB-M1V	2 Y			HC.OP-IS.BE-0001	
				GRP B/CPT VIB-M2A	2 Y			HC.OP-IS.BE-0001	
				GRP B/CPT VIB-M2H	2 Y			HC.OP-IS.BE-0001	
				GRP B/CPT VIB-M2V	2 Y			HC.OP-IS.BE-0001	
				GRP B/CPT VIB-P1A	2 Y			HC.OP-IS.BE-0001	
				GRP B/CPT VIB-P1H	2 Y			HC.OP-IS.BE-0001	
				GRP B/CPT VIB-P1V	2 Y			HC.OP-IS.BE-0001	
'C' REACTOR CORE SPRAY PUMP									
H1BE -1D-P-206	M52-1-1(C3)	2	B	GRP B/CPT D/P	1 Q			HC.OP-IS.BE-0002	
				GRP B/CPT GPM	1 Q			HC.OP-IS.BE-0002	
				GRP B/CPT VIB-M1H	2 Y			HC.OP-IS.BE-0002	
				GRP B/CPT VIB-M1V	2 Y			HC.OP-IS.BE-0002	
				GRP B/CPT VIB-M1A	2 Y			HC.OP-IS.BE-0002	
				GRP B/CPT VIB-M2H	2 Y			HC.OP-IS.BE-0002	
				GRP B/CPT VIB-M2V	2 Y			HC.OP-IS.BE-0002	
				GRP B/CPT VIB-M2A	2 Y			HC.OP-IS.BE-0002	
				GRP B/CPT VIB-P1H	2 Y			HC.OP-IS.BE-0002	
				GRP B/CPT VIB-P1V	2 Y			HC.OP-IS.BE-0002	
				GRP B/CPT VIB-P1A	2 Y			HC.OP-IS.BE-0002	
'D' REACTOR CORE SPRAY PUMP									

# Hope Creek Inservice Testing Plan

Hope Creek UNIT 1

## BH - STANDBY LIQUID CONTROL (HOPE CREEK)

Pump ID	Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1BH -1A-P-208	M48-1-1(D5)	2	B	GRP B/CPT DISP	1 Q			HC.OP-IS.BH-0003	
				GRP B/CPT GPM	1 Q			HC.OP-IS.BH-0003	
				GRP B/CPT VIB-M1H	2 Y			HC.OP-IS.BH-0003	
				GRP B/CPT VIB-M1V	2 Y			HC.OP-IS.BH-0003	
				GRP B/CPT VIB-M1A	2 Y			HC.OP-IS.BH-0003	
				GRP B/CPT VIB-M2H	2 Y			HC.OP-IS.BH-0003	
				GRP B/CPT VIB-M2V	2 Y			HC.OP-IS.BH-0003	
				GRP B/CPT VIB-M2A	2 Y			HC.OP-IS.BH-0003	
				GRP B/CPT VIB-G1H	2 Y			HC.OP-IS.BH-0003	
				GRP B/CPT VIB-G1V	2 Y			HC.OP-IS.BH-0003	
				GRP B/CPT VIB-G1A	2 Y			HC.OP-IS.BH-0003	
				GRP B/CPT VIB-P1H	2 Y			HC.OP-IS.BH-0003	
				GRP B/CPT VIB-P1V	2 Y			HC.OP-IS.BH-0003	
				GRP B/CPT VIB-P1A	2 Y			HC.OP-IS.BH-0003	
				GRP B/CPT VIB-P2H	2 Y			HC.OP-IS.BH-0003	
				GRP B/CPT VIB-P2V	2 Y			HC.OP-IS.BH-0003	
				GRP B/CPT VIB-P2A	2 Y			HC.OP-IS.BH-0003	
PUMP- STBY LIQ CONTROL									

# Hope Creek Inservice Testing Plan

Hope Creek UNIT 1

## BH - STANDBY LIQUID CONTROL (HOPE CREEK)

Pump ID Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1BH -1B-P-208	M48-1-1(C5)	2	B	GRP B/CPT DISP	1 Q		HC.OP-IS.BH-0004	
				GRP B/CPT GPM	1 Q		HC.OP-IS.BH-0004	
				GRP B/CPT VIB-M1H	2 Y		HC.OP-IS.BH-0004	
				GRP B/CPT VIB-M1V	2 Y		HC.OP-IS.BH-0004	
				GRP B/CPT VIB-M1A	2 Y		HC.OP-IS.BH-0004	
				GRP B/CPT VIB-M2H	2 Y		HC.OP-IS.BH-0004	
				GRP B/CPT VIB-M2V	2 Y		HC.OP-IS.BH-0004	
				GRP B/CPT VIB-M2A	2 Y		HC.OP-IS.BH-0004	
				GRP B/CPT VIB-G1H	2 Y		HC.OP-IS.BH-0004	
				GRP B/CPT VIB-G1V	2 Y		HC.OP-IS.BH-0004	
				GRP B/CPT VIB-G1A	2 Y		HC.OP-IS.BH-0004	
				GRP B/CPT VIB-P1H	2 Y		HC.OP-IS.BH-0004	
				GRP B/CPT VIB-P1V	2 Y		HC.OP-IS.BH-0004	
				GRP B/CPT VIB-P1A	2 Y		HC.OP-IS.BH-0004	
				GRP B/CPT VIB-P2H	2 Y		HC.OP-IS.BH-0004	
				GRP B/CPT VIB-P2V	2 Y		HC.OP-IS.BH-0004	
				GRP B/CPT VIB-P2A	2 Y		HC.OP-IS.BH-0004	
PUMP- STBY LIQ CONTROL								

# Hope Creek Inservice Testing Plan

Hope Creek UNIT 1

## BJ - HIGH PRESS COOLANT INJECT (HPCI) (HOPE CREEK)

Pump ID Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1BJ -10-P-204	M56-1-1(E4)	2	B	GRP B/CPT D/P	1 Q	RP - 01	HC.OP-IS.BJ-0001	
				GRP B/CPT GPM	1 Q		HC.OP-IS.BJ-0001	
				GRP B/CPT SPD	1 Q		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-T1H	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-T1V	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-T1A	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-T2H	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-T2V	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-T2A	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-P1H	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-P1V	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-P1A	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-P2H	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-P2V	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-P2A	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-G1H	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-G1V	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-G1A	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-G4H	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-G4V	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-G4A	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-P3H	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-P3V	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-P3A	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-P4H	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-P4V	2 Y		HC.OP-IS.BJ-0001	
				GRP B/CPT VIB-P4A	2 Y		HC.OP-IS.BJ-0001	
HPCI PUMP	CB							

# Hope Creek Inservice Testing Plan

Hope Creek UNIT 1

## BJ - HIGH PRESS COOLANT INJECT (HPCI) (HOPE CREEK)

Pump ID Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
<b>H1BJ -10-P-217</b>	M56-1-1(E6)	2	B	(No Tests)				
HPCI BOOSTER PUMP	CB							
<b>H1BJ -1A-P-228</b>	M56-1-1(F5)	2	A	GRP A/CPT GPM	1 Q		HC.OP-IS.BJ-0002	
				GRP A/CPT D/P	1 Q		HC.OP-IS.BJ-0002	
				GRP A/CPT VIB-M1H	1 Q		HC.OP-IS.BJ-0002	
				GRP A/CPT VIB-M1V	1 Q		HC.OP-IS.BJ-0002	
				GRP A/CPT VIB-M1A	1 Q		HC.OP-IS.BJ-0002	
				GRP A/CPT VIB-M2H	1 Q		HC.OP-IS.BJ-0002	
				GRP A/CPT VIB-M2V	1 Q		HC.OP-IS.BJ-0002	
				GRP A/CPT VIB-M2A	1 Q		HC.OP-IS.BJ-0002	
				GRP A/CPT VIB-P1H	1 Q		HC.OP-IS.BJ-0002	
				GRP A/CPT VIB-P1V	1 Q		HC.OP-IS.BJ-0002	
				GRP A/CPT VIB-P1A	1 Q		HC.OP-IS.BJ-0002	
				GRP A/CPT VIB-P2H	1 Q		HC.OP-IS.BJ-0002	
				GRP A/CPT VIB-P2V	1 Q		HC.OP-IS.BJ-0002	
				GRP A/CPT VIB-P2A	1 Q		HC.OP-IS.BJ-0002	
HPCI JOCKEY PUMP	CB							

# Hope Creek Inservice Testing Plan

## Hope Creek UNIT 1

### EA - SERVICE WATER (HOPE CREEK)

Pump ID	Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1EA -1A-P-502	M10-1-1(E7)	3	A	GRP A/CPT GPM	1 Q			HC.OP-IS.EA-0001	
				GRP A/CPT D/P	1 Q			HC.OP-IS.EA-0001	
				GRP A/CPT VIB-M1H	1 Q			HC.OP-IS.EA-0001	
				GRP A/CPT VIB-M1V	1 Q			HC.OP-IS.EA-0001	
				GRP A/CPT VIB-M1A	1 Q			HC.OP-IS.EA-0001	
				GRP A/CPT VIB-M2H	1 Q			HC.OP-IS.EA-0001	
				GRP A/CPT VIB-M2V	1 Q			HC.OP-IS.EA-0001	
				GRP A/CPT VIB-M2A	1 Q			HC.OP-IS.EA-0001	
				GRP A/CPT VIB-P1H	1 Q			HC.OP-IS.EA-0001	
				GRP A/CPT VIB-P1V	1 Q			HC.OP-IS.EA-0001	
				GRP A/CPT VIB-P1A	1 Q			HC.OP-IS.EA-0001	
"A" SERVICE WATER PUMP		PBI-N							
H1EA -1B-P-502	M10-1-1(E4)	3	A	GRP A/CPT D/P	1 Q			HC.OP-IS.EA-0002	
				GRP A/CPT GPM	1 Q			HC.OP-IS.EA-0002	
				GRP A/CPT VIB-M1H	1 Q			HC.OP-IS.EA-0002	
				GRP A/CPT VIB-M1V	1 Q			HC.OP-IS.EA-0002	
				GRP A/CPT VIB-M1A	1 Q			HC.OP-IS.EA-0002	
				GRP A/CPT VIB-M2H	1 Q			HC.OP-IS.EA-0002	
				GRP A/CPT VIB-M2V	1 Q			HC.OP-IS.EA-0002	
				GRP A/CPT VIB-M2A	1 Q			HC.OP-IS.EA-0002	
				GRP A/CPT VIB-P1H	1 Q			HC.OP-IS.EA-0002	
				GRP A/CPT VIB-P1V	1 Q			HC.OP-IS.EA-0002	
				GRP A/CPT VIB-P1A	1 Q			HC.OP-IS.EA-0002	
"B" SERVICE WATER PUMP		PBI-N							



# Hope Creek Inservice Testing Plan

## Hope Creek UNIT 1

### EA - SERVICE WATER (HOPE CREEK)

Pump ID	Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1EA -1C-P-502	M10-1-1(E6)	3	A	GRP A/CPT D/P	1 Q			HC.OP-IS.EA-0003	
				GRP A/CPT GPM	1 Q			HC.OP-IS.EA-0003	
				GRP A/CPT VIB-M1H	1 Q			HC.OP-IS.EA-0003	
				GRP A/CPT VIB-M1V	1 Q			HC.OP-IS.EA-0003	
				GRP A/CPT VIB-M1A	1 Q			HC.OP-IS.EA-0003	
				GRP A/CPT VIB-M2H	1 Q			HC.OP-IS.EA-0003	
				GRP A/CPT VIB-M2V	1 Q			HC.OP-IS.EA-0003	
				GRP A/CPT VIB-M2A	1 Q			HC.OP-IS.EA-0003	
				GRP A/CPT VIB-P1H	1 Q			HC.OP-IS.EA-0003	
				GRP A/CPT VIB-P1V	1 Q			HC.OP-IS.EA-0003	
				GRP A/CPT VIB-P1A	1 Q			HC.OP-IS.EA-0003	
"C" SERVICE WATER PUMP		PBI-N							
H1EA -1D-P-502	M10-1-1(E3)	3	A	GRP A/CPT D/P	1 Q			HC.OP-IS.EA-0004	
				GRP A/CPT GPM	1 Q			HC.OP-IS.EA-0004	
				GRP A/CPT VIB-M1H	1 Q			HC.OP-IS.EA-0004	
				GRP A/CPT VIB-M1V	1 Q			HC.OP-IS.EA-0004	
				GRP A/CPT VIB-M1A	1 Q			HC.OP-IS.EA-0004	
				GRP A/CPT VIB-M2H	1 Q			HC.OP-IS.EA-0004	
				GRP A/CPT VIB-M2V	1 Q			HC.OP-IS.EA-0004	
				GRP A/CPT VIB-M2A	1 Q			HC.OP-IS.EA-0004	
				GRP A/CPT VIB-P1H	1 Q			HC.OP-IS.EA-0004	
				GRP A/CPT VIB-P1V	1 Q			HC.OP-IS.EA-0004	
				GRP A/CPT VIB-P1A	1 Q			HC.OP-IS.EA-0004	
"D" SERVICE WATER PUMP		PBI-N							

# Hope Creek Inservice Testing Plan

Hope Creek UNIT 1

## EG - SAFETY & TURBINE AUX CLG (SACS) (HOPE CREEK)

Pump ID Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1EG -1A-P-210	M11-1-1(G5)	3	A	GRP A/CPT GPM	1 Q		HC.OP-IS.EG-0001	
				GRP A/CPT D/P	1 Q		HC.OP-IS.EG-0001	
				GRP A/CPT VIB-M1H	1 Q		HC.OP-IS.EG-0001	
				GRP A/CPT VIB-M1V	1 Q		HC.OP-IS.EG-0001	
				GRP A/CPT VIB-M1A	1 Q		HC.OP-IS.EG-0001	
				GRP A/CPT VIB-M2H	1 Q		HC.OP-IS.EG-0001	
				GRP A/CPT VIB-M2V	1 Q		HC.OP-IS.EG-0001	
				GRP A/CPT VIB-M2A	1 Q		HC.OP-IS.EG-0001	
				GRP A/CPT VIB-P1H	1 Q		HC.OP-IS.EG-0001	
				GRP A/CPT VIB-P1V	1 Q		HC.OP-IS.EG-0001	
				GRP A/CPT VIB-P1A	1 Q		HC.OP-IS.EG-0001	
				GRP A/CPT VIB-P2H	1 Q		HC.OP-IS.EG-0001	
				GRP A/CPT VIB-P2V	1 Q		HC.OP-IS.EG-0001	
				GRP A/CPT VIB-P2A	1 Q		HC.OP-IS.EG-0001	
'A' SAFETY AUXILIARY COOLING (SAC) PUMP								

## Hope Creek Inservice Testing Plan

Hope Creek UNIT 1

### EG - SAFETY & TURBINE AUX CLG (SACS) (HOPE CREEK)

Pump ID	Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1EG -1B-P-210	M11-1-1(D5)	3	A	GRP A/CPT GPM	1 Q			HC.OP-IS.EG-0002	
				GRP A/CPT D/P	1 Q			HC.OP-IS.EG-0002	
				GRP A/CPT VIB-M1H	1 Q			HC.OP-IS.EG-0002	
				GRP A/CPT VIB-M1V	1 Q			HC.OP-IS.EG-0002	
				GRP A/CPT VIB-M1A	1 Q			HC.OP-IS.EG-0002	
				GRP A/CPT VIB-M2H	1 Q			HC.OP-IS.EG-0002	
				GRP A/CPT VIB-M2V	1 Q			HC.OP-IS.EG-0002	
				GRP A/CPT VIB-M2A	1 Q			HC.OP-IS.EG-0002	
				GRP A/CPT VIB-P1H	1 Q			HC.OP-IS.EG-0002	
				GRP A/CPT VIB-P1V	1 Q			HC.OP-IS.EG-0002	
				GRP A/CPT VIB-P1A	1 Q			HC.OP-IS.EG-0002	
				GRP A/CPT VIB-P2H	1 Q			HC.OP-IS.EG-0002	
				GRP A/CPT VIB-P2V	1 Q			HC.OP-IS.EG-0002	
				GRP A/CPT VIB-P2A	1 Q			HC.OP-IS.EG-0002	
'B' SAFETY AUXILIARY COOLING (SAC) PUMP									

## Hope Creek Inservice Testing Plan

Hope Creek UNIT 1

### EG - SAFETY & TURBINE AUX CLG (SACS) (HOPE CREEK)

Pump ID Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1EG -1C-P-210	M11-1-1(F5)	3	A	GRP A/CPT GPM	1 Q		HC.OP-IS.EG-0003	
				GRP A/CPT D/P	1 Q		HC.OP-IS.EG-0003	
				GRP A/CPT VIB-M1H	1 Q		HC.OP-IS.EG-0003	
				GRP A/CPT VIB-M1V	1 Q		HC.OP-IS.EG-0003	
				GRP A/CPT VIB-M1A	1 Q		HC.OP-IS.EG-0003	
				GRP A/CPT VIB-M2H	1 Q		HC.OP-IS.EG-0003	
				GRP A/CPT VIB-M2V	1 Q		HC.OP-IS.EG-0003	
				GRP A/CPT VIB-M2A	1 Q		HC.OP-IS.EG-0003	
				GRP A/CPT VIB-P1H	1 Q		HC.OP-IS.EG-0003	
				GRP A/CPT VIB-P1V	1 Q		HC.OP-IS.EG-0003	
				GRP A/CPT VIB-P1A	1 Q		HC.OP-IS.EG-0003	
				GRP A/CPT VIB-P2H	1 Q		HC.OP-IS.EG-0003	
				GRP A/CPT VIB-P2V	1 Q		HC.OP-IS.EG-0003	
				GRP A/CPT VIB-P2A	1 Q		HC.OP-IS.EG-0003	
'C' SAFETY AUXILIARY COOLING (SAC) PUMP								

# Hope Creek Inservice Testing Plan

Hope Creek UNIT 1

## EG - SAFETY & TURBINE AUX CLG (SACS) (HOPE CREEK)

Pump ID	Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1EG -1D-P-210	M11-1-1(C5)	3	A	GRP A/CPT GPM	1 Q			HC.OP-IS.EG-0004	
				GRP A/CPT D/P	1 Q			HC.OP-IS.EG-0004	
				GRP A/CPT VIB-M1H	1 Q			HC.OP-IS.EG-0004	
				GRP A/CPT VIB-M1V	1 Q			HC.OP-IS.EG-0004	
				GRP A/CPT VIB-M1A	1 Q			HC.OP-IS.EG-0004	
				GRP A/CPT VIB-M2H	1 Q			HC.OP-IS.EG-0004	
				GRP A/CPT VIB-M2V	1 Q			HC.OP-IS.EG-0004	
				GRP A/CPT VIB-M2A	1 Q			HC.OP-IS.EG-0004	
				GRP A/CPT VIB-P1H	1 Q			HC.OP-IS.EG-0004	
				GRP A/CPT VIB-P1V	1 Q			HC.OP-IS.EG-0004	
				GRP A/CPT VIB-P1A	1 Q			HC.OP-IS.EG-0004	
				GRP A/CPT VIB-P2H	1 Q			HC.OP-IS.EG-0004	
				GRP A/CPT VIB-P2V	1 Q			HC.OP-IS.EG-0004	
				GRP A/CPT VIB-P2A	1 Q			HC.OP-IS.EG-0004	
'D' SAFETY AUXILIARY COOLING (SAC) PUMP									

# Hope Creek Inservice Testing Plan

Hope Creek UNIT 1

## EP - SERV WTR SCREENS & BACKWASH (HOPE CREEK)

Pump ID	Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1EP -1A-P-507	M10-1-1(D7)	3	A	GRP A/CPT GPM	1 Q			HC.OP-IS.EP-0001	
				GRP A/CPT D/P	1 Q			HC.OP-IS.EP-0001	
				GRP A/CPT VIB-M1H	1 Q			HC.OP-IS.EP-0001	
				GRP A/CPT VIB-M1V	1 Q			HC.OP-IS.EP-0001	
				GRP A/CPT VIB-M1A	1 Q			HC.OP-IS.EP-0001	
				GRP A/CPT VIB-M2H	1 Q			HC.OP-IS.EP-0001	
				GRP A/CPT VIB-M2V	1 Q			HC.OP-IS.EP-0001	
				GRP A/CPT VIB-M2A	1 Q			HC.OP-IS.EP-0001	
				GRP A/CPT VIB-P1H	1 Q			HC.OP-IS.EP-0001	
				GRP A/CPT VIB-P1V	1 Q			HC.OP-IS.EP-0001	
				GRP A/CPT VIB-P1A	1 Q			HC.OP-IS.EP-0001	
				GRP A/CPT VIB-P2H	1 Q			HC.OP-IS.EP-0001	
				GRP A/CPT VIB-P2V	1 Q			HC.OP-IS.EP-0001	
				GRP A/CPT VIB-P2A	1 Q			HC.OP-IS.EP-0001	
PUMP-SPRAY WTR BOOSTER									

# Hope Creek Inservice Testing Plan

Hope Creek UNIT 1

## EP - SERV WTR SCREENS & BACKWASH (HOPE CREEK)

Pump ID Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1EP -1B-P-507	M10-1-1(D4)	3	A	GRP A/CPT GPM	1 Q		HC.OP-IS.EP-0002	
				GRP A/CPT D/P	1 Q		HC.OP-IS.EP-0002	
				GRP A/CPT VIB-M1H	1 Q		HC.OP-IS.EP-0002	
				GRP A/CPT VIB-M1V	1 Q		HC.OP-IS.EP-0002	
				GRP A/CPT VIB-M1A	1 Q		HC.OP-IS.EP-0002	
				GRP A/CPT VIB-M2H	1 Q		HC.OP-IS.EP-0002	
				GRP A/CPT VIB-M2V	1 Q		HC.OP-IS.EP-0002	
				GRP A/CPT VIB-M2A	1 Q		HC.OP-IS.EP-0002	
				GRP A/CPT VIB-P1H	1 Q		HC.OP-IS.EP-0002	
				GRP A/CPT VIB-P1V	1 Q		HC.OP-IS.EP-0002	
				GRP A/CPT VIB-P1A	1 Q		HC.OP-IS.EP-0002	
				GRP A/CPT VIB-P2H	1 Q		HC.OP-IS.EP-0002	
				GRP A/CPT VIB-P2V	1 Q		HC.OP-IS.EP-0002	
				GRP A/CPT VIB-P2A	1 Q		HC.OP-IS.EP-0002	
PUMP-SPRAY WTR BOOSTER								

## Hope Creek Inservice Testing Plan

Hope Creek UNIT 1

### EP - SERV WTR SCREENS & BACKWASH (HOPE CREEK)

Pump ID Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1EP -1C-P-507	M10-1-1(D6)	3	A	GRP A/CPT GPM	1 Q		HC.OP-IS.EP-0003	
				GRP A/CPT D/P	1 Q		HC.OP-IS.EP-0003	
				GRP A/CPT VIB-M1H	1 Q		HC.OP-IS.EP-0003	
				GRP A/CPT VIB-M1V	1 Q		HC.OP-IS.EP-0003	
				GRP A/CPT VIB-M1A	1 Q		HC.OP-IS.EP-0003	
				GRP A/CPT VIB-M2H	1 Q		HC.OP-IS.EP-0003	
				GRP A/CPT VIB-M2V	1 Q		HC.OP-IS.EP-0003	
				GRP A/CPT VIB-M2A	1 Q		HC.OP-IS.EP-0003	
				GRP A/CPT VIB-P1H	1 Q		HC.OP-IS.EP-0003	
				GRP A/CPT VIB-P1V	1 Q		HC.OP-IS.EP-0003	
				GRP A/CPT VIB-P1A	1 Q		HC.OP-IS.EP-0003	
				GRP A/CPT VIB-P2H	1 Q		HC.OP-IS.EP-0003	
				GRP A/CPT VIB-P2V	1 Q		HC.OP-IS.EP-0003	
				GRP A/CPT VIB-P2A	1 Q		HC.OP-IS.EP-0003	
PUMP-SPRAY WTR BOOSTER								



## Hope Creek Inservice Testing Plan

Hope Creek UNIT 1

### EP - SERV WTR SCREENS & BACKWASH (HOPE CREEK)

Pump ID	Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1EP -1D-P-507	M10-1-1(D3)	3	A	GRP A/CPT GPM	1 Q			HC.OP-IS.EP-0004	
				GRP A/CPT D/P	1 Q			HC.OP-IS.EP-0004	
				GRP A/CPT VIB-M1H	1 Q			HC.OP-IS.EP-0004	
				GRP A/CPT VIB-M1V	1 Q			HC.OP-IS.EP-0004	
				GRP A/CPT VIB-M1A	1 Q			HC.OP-IS.EP-0004	
				GRP A/CPT VIB-M2H	1 Q			HC.OP-IS.EP-0004	
				GRP A/CPT VIB-M2V	1 Q			HC.OP-IS.EP-0004	
				GRP A/CPT VIB-M2A	1 Q			HC.OP-IS.EP-0004	
				GRP A/CPT VIB-P1H	1 Q			HC.OP-IS.EP-0004	
				GRP A/CPT VIB-P1V	1 Q			HC.OP-IS.EP-0004	
				GRP A/CPT VIB-P1A	1 Q			HC.OP-IS.EP-0004	
				GRP A/CPT VIB-P2H	1 Q			HC.OP-IS.EP-0004	
				GRP A/CPT VIB-P2V	1 Q			HC.OP-IS.EP-0004	
				GRP A/CPT VIB-P2A	1 Q			HC.OP-IS.EP-0004	
PUMP-SPRAY WTR BOOSTER									

## Hope Creek Inservice Testing Plan

Hope Creek UNIT 1

### FC - RCIC TURBINE STEAM (HOPE CREEK)

Pump ID									
Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes	
H1FC -10-P-271	M50-1-1(E8)	2	N/A	(No Tests)					
RCIC TURBINE MAIN OIL PUMP									

## Hope Creek Inservice Testing Plan

Hope Creek UNIT 1

### FD - HPCI TURBINE STEAM (HOPE CREEK)

Pump ID Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
<b>H1FD -10-P-213</b> PUMP- HPCI AUX OIL	M56-1-1(F2)	2	N/A	(No Tests)				
<b>H1FD -10-P-272</b> PUMP- HPCI TURBINE MAIN OIL	M56-1-1(F2)	2	N/A	(No Tests)				

# Hope Creek Inservice Testing Plan

Hope Creek UNIT 1

## GJ - AUX BLDG CHILLED WTR - CTRL RM (HOPE CREEK)

Pump ID Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1GJ -1A-P-400	M90-1-1(D4)	3	A	GRP A/CPT FLOW-VOLTS	1 Q		HC.OP-IS.GJ-0001	
				GRP A/CPT D/P	1 Q		HC.OP-IS.GJ-0001	
				GRP A/CPT VIB-M1H	1 Q		HC.OP-IS.GJ-0001	
				GRP A/CPT VIB-M1V	1 Q		HC.OP-IS.GJ-0001	
				GRP A/CPT VIB-M1A	1 Q		HC.OP-IS.GJ-0001	
				GRP A/CPT VIB-M2H	1 Q		HC.OP-IS.GJ-0001	
				GRP A/CPT VIB-M2V	1 Q		HC.OP-IS.GJ-0001	
				GRP A/CPT VIB-M2A	1 Q		HC.OP-IS.GJ-0001	
				GRP A/CPT VIB-P1H	1 Q		HC.OP-IS.GJ-0001	
				GRP A/CPT VIB-P1V	1 Q		HC.OP-IS.GJ-0001	
				GRP A/CPT VIB-P1A	1 Q		HC.OP-IS.GJ-0001	
				GRP A/CPT VIB-P2H	1 Q		HC.OP-IS.GJ-0001	
				GRP A/CPT VIB-P2V	1 Q		HC.OP-IS.GJ-0001	
				GRP A/CPT VIB-P2A	1 Q		HC.OP-IS.GJ-0001	
PUMP- CTL RM CHL WTR CIRC & DRIVE MOTOR								

## Hope Creek Inservice Testing Plan

Hope Creek UNIT 1

### GJ - AUX BLDG CHILLED WTR - CTRL RM (HOPE CREEK)

Pump ID Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
<b>H1GJ -1A-P-414</b>	M90-1-3(G6)	3	A	GRP A/CPT GPM	1 Q		HC.OP-IS.GJ-0003	
				GRP A/CPT D/P	1 Q		HC.OP-IS.GJ-0003	
				GRP A/CPT VIB-M1H	1 Q		HC.OP-IS.GJ-0003	
				GRP A/CPT VIB-M1V	1 Q		HC.OP-IS.GJ-0003	
				GRP A/CPT VIB-M1A	1 Q		HC.OP-IS.GJ-0003	
				GRP A/CPT VIB-M2H	1 Q		HC.OP-IS.GJ-0003	
				GRP A/CPT VIB-M2V	1 Q		HC.OP-IS.GJ-0003	
				GRP A/CPT VIB-M2A	1 Q		HC.OP-IS.GJ-0003	
				GRP A/CPT VIB-P1H	1 Q		HC.OP-IS.GJ-0003	
				GRP A/CPT VIB-P1V	1 Q		HC.OP-IS.GJ-0003	
				GRP A/CPT VIB-P1A	1 Q		HC.OP-IS.GJ-0003	
				GRP A/CPT VIB-P2H	1 Q		HC.OP-IS.GJ-0003	
				GRP A/CPT VIB-P2V	1 Q		HC.OP-IS.GJ-0003	
				GRP A/CPT VIB-P2A	1 Q		HC.OP-IS.GJ-0003	

"A" "TSC" CHILLED WATER SUPPLY PUMP FOR

# Hope Creek Inservice Testing Plan

Hope Creek UNIT 1

## GJ - AUX BLDG CHILLED WTR - CTRL RM (HOPE CREEK)

Pump ID	Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1GJ -1B-P-400	M90-1-2(C4)	3	A	GRP A/CPT D/P	1 Q			HC.OP-IS.GJ-0002	
				GRP A/CPT FLOW-VOLTS	1 Q			HC.OP-IS.GJ-0002	
				GRP A/CPT VIB-M1H	1 Q			HC.OP-IS.GJ-0002	
				GRP A/CPT VIB-M1V	1 Q			HC.OP-IS.GJ-0002	
				GRP A/CPT VIB-M1A	1 Q			HC.OP-IS.GJ-0002	
				GRP A/CPT VIB-M2H	1 Q			HC.OP-IS.GJ-0002	
				GRP A/CPT VIB-M2V	1 Q			HC.OP-IS.GJ-0002	
				GRP A/CPT VIB-M2A	1 Q			HC.OP-IS.GJ-0002	
				GRP A/CPT VIB-P1H	1 Q			HC.OP-IS.GJ-0002	
				GRP A/CPT VIB-P1V	1 Q			HC.OP-IS.GJ-0002	
				GRP A/CPT VIB-P1A	1 Q			HC.OP-IS.GJ-0002	
				GRP A/CPT VIB-P2H	1 Q			HC.OP-IS.GJ-0002	
				GRP A/CPT VIB-P2V	1 Q			HC.OP-IS.GJ-0002	
				GRP A/CPT VIB-P2A	1 Q			HC.OP-IS.GJ-0002	
PUMP- CTL RM CHL WTR CIRC & DRIVE MOTOR									

# Hope Creek Inservice Testing Plan

Hope Creek UNIT 1

## GJ - AUX BLDG CHILLED WTR - CTRL RM (HOPE CREEK)

Pump ID Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1GJ -1B-P-414	M90-1-3(C6)	3	A	GRP A/CPT GPM	1 Q		HC.OP-IS.GJ-0004	
				GRP A/CPT D/P	1 Q		HC.OP-IS.GJ-0004	
				GRP A/CPT VIB-M1H	1 Q		HC.OP-IS.GJ-0004	
				GRP A/CPT VIB-M1V	1 Q		HC.OP-IS.GJ-0004	
				GRP A/CPT VIB-M1A	1 Q		HC.OP-IS.GJ-0004	
				GRP A/CPT VIB-M2H	1 Q		HC.OP-IS.GJ-0004	
				GRP A/CPT VIB-M2V	1 Q		HC.OP-IS.GJ-0004	
				GRP A/CPT VIB-M2A	1 Q		HC.OP-IS.GJ-0004	
				GRP A/CPT VIB-P1H	1 Q		HC.OP-IS.GJ-0004	
				GRP A/CPT VIB-P1V	1 Q		HC.OP-IS.GJ-0004	
				GRP A/CPT VIB-P1A	1 Q		HC.OP-IS.GJ-0004	
				GRP A/CPT VIB-P2H	1 Q		HC.OP-IS.GJ-0004	
				GRP A/CPT VIB-P2V	1 Q		HC.OP-IS.GJ-0004	
				GRP A/CPT VIB-P2A	1 Q		HC.OP-IS.GJ-0004	
"B" "TSC" CHILLED WATER SUPPLY PUMP FOR								

# Hope Creek Inservice Testing Plan

## Hope Creek UNIT 1

### JE - DIESEL FUEL OIL STOR & TRSFR (HOPE CREEK)

Pump ID Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1JE -1A-P-401	M30-1-1(C7)	3	B	GRP B/CPT GPM	1 Q		HC.OP-IS.JE-0001	
				GRP B/CPT D/P	1 Q		HC.OP-IS.JE-0001	
				GRP B/CPT VIB-M1H	2 Y		HC.OP-IS.JE-0001	
				GRP B/CPT VIB-M1V	2 Y		HC.OP-IS.JE-0001	
				GRP B/CPT VIB-M1A	2 Y		HC.OP-IS.JE-0001	
				GRP B/CPT VIB-P1H	2 Y		HC.OP-IS.JE-0001	
				GRP B/CPT VIB-P1V	2 Y		HC.OP-IS.JE-0001	
				GRP B/CPT VIB-P1A	2 Y		HC.OP-IS.JE-0001	
PUMP- DIESEL F.O. TRANSFER								
H1JE -1B-P-401	M30-1-1(A7)	3	B	GRP B/CPT GPM	1 Q		HC.OP-IS.JE-0002	
				GRP B/CPT D/P	1 Q		HC.OP-IS.JE-0002	
				GRP B/CPT VIB-M1A	2 Y		HC.OP-IS.JE-0002	
				GRP B/CPT VIB-M1H	2 Y		HC.OP-IS.JE-0002	
				GRP B/CPT VIB-M1V	2 Y		HC.OP-IS.JE-0002	
				GRP B/CPT VIB-P1A	2 Y		HC.OP-IS.JE-0002	
				GRP B/CPT VIB-P1H	2 Y		HC.OP-IS.JE-0002	
				GRP B/CPT VIB-P1V	2 Y		HC.OP-IS.JE-0002	
PUMP- DIESEL F.O. TRANSFER								
H1JE -1C-P-401	M30-1-1(C4)	3	B	GRP B/CPT GPM	1 Q		HC.OP-IS.JE-0003	
				GRP B/CPT D/P	1 Q		HC.OP-IS.JE-0003	
				GRP B/CPT VIB-M1H	2 Y		HC.OP-IS.JE-0003	
				GRP B/CPT VIB-M1V	2 Y		HC.OP-IS.JE-0003	
				GRP B/CPT VIB-M1A	2 Y		HC.OP-IS.JE-0003	
				GRP B/CPT VIB-P1H	2 Y		HC.OP-IS.JE-0003	
				GRP B/CPT VIB-P1V	2 Y		HC.OP-IS.JE-0003	
				GRP B/CPT VIB-P1A	2 Y		HC.OP-IS.JE-0003	
PUMP- DIESEL F.O. TRANSFER								



# Hope Creek Inservice Testing Plan

## Hope Creek UNIT 1

### JE - DIESEL FUEL OIL STOR & TRSFR (HOPE CREEK)

Pump ID Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1JE -1D-P-401	M30-1-1(A4)	3	B	GRP B/CPT GPM	1 Q		HC.OP-IS.JE-0004	
				GRP B/CPT D/P	1 Q		HC.OP-IS.JE-0004	
				GRP B/CPT VIB-M1H	2 Y		HC.OP-IS.JE-0004	
				GRP B/CPT VIB-M1V	2 Y		HC.OP-IS.JE-0004	
				GRP B/CPT VIB-M1A	2 Y		HC.OP-IS.JE-0004	
				GRP B/CPT VIB-P1H	2 Y		HC.OP-IS.JE-0004	
				GRP B/CPT VIB-P1V	2 Y		HC.OP-IS.JE-0004	
				GRP B/CPT VIB-P1A	2 Y		HC.OP-IS.JE-0004	
PUMP- DIESEL F.O. TRANSFER								
H1JE -1E-P-401	M30-1-1(C5)	3	B	GRP B/CPT GPM	1 Q		HC.OP-IS.JE-0005	
				GRP B/CPT D/P	1 Q		HC.OP-IS.JE-0005	
				GRP B/CPT VIB-M1H	2 Y		HC.OP-IS.JE-0005	
				GRP B/CPT VIB-M1V	2 Y		HC.OP-IS.JE-0005	
				GRP B/CPT VIB-M1A	2 Y		HC.OP-IS.JE-0005	
				GRP B/CPT VIB-P1H	2 Y		HC.OP-IS.JE-0005	
				GRP B/CPT VIB-P1V	2 Y		HC.OP-IS.JE-0005	
				GRP B/CPT VIB-P1A	2 Y		HC.OP-IS.JE-0005	
PUMP- DIESEL F.O. TRANSFER								
H1JE -1F-P-401	M30-1-1(A5)	3	B	GRP B/CPT GPM	1 Q		HC.OP-IS.JE-0006	
				GRP B/CPT D/P	1 Q		HC.OP-IS.JE-0006	
				GRP B/CPT VIB-M1H	2 Y		HC.OP-IS.JE-0006	
				GRP B/CPT VIB-M1V	2 Y		HC.OP-IS.JE-0006	
				GRP B/CPT VIB-M1A	2 Y		HC.OP-IS.JE-0006	
				GRP B/CPT VIB-P1H	2 Y		HC.OP-IS.JE-0006	
				GRP B/CPT VIB-P1V	2 Y		HC.OP-IS.JE-0006	
				GRP B/CPT VIB-P1A	2 Y		HC.OP-IS.JE-0006	
PUMP- DIESEL F.O. TRANSFER								

# Hope Creek Inservice Testing Plan

## Hope Creek UNIT 1

### JE - DIESEL FUEL OIL STOR & TRSFR (HOPE CREEK)

Pump ID Description	PID (Coord)	Class	Group	Required Test	Freq.	Code Deviation	Procedure	Plan Notes
H1JE -1G-P-401	M30-1-1(C2)	3	B	GRP B/CPT GPM	1 Q		HC.OP-IS.JE-0007	
				GRP B/CPT D/P	1 Q		HC.OP-IS.JE-0007	
				GRP B/CPT VIB-M1H	2 Y		HC.OP-IS.JE-0007	
				GRP B/CPT VIB-M1V	2 Y		HC.OP-IS.JE-0007	
				GRP B/CPT VIB-M1A	2 Y		HC.OP-IS.JE-0007	
				GRP B/CPT VIB-P1H	2 Y		HC.OP-IS.JE-0007	
				GRP B/CPT VIB-P1V	2 Y		HC.OP-IS.JE-0007	
				GRP B/CPT VIB-P1A	2 Y		HC.OP-IS.JE-0007	
PUMP- DIESEL F.O. TRANSFER								
H1JE -1H-P-401	M30-1-1(A2)	3	B	GRP B/CPT GPM	1 Q		HC.OP-IS.JE-0008	
				GRP B/CPT D/P	1 Q		HC.OP-IS.JE-0008	
				GRP B/CPT VIB-M1H	2 Y		HC.OP-IS.JE-0008	
				GRP B/CPT VIB-M1V	2 Y		HC.OP-IS.JE-0008	
				GRP B/CPT VIB-M1A	2 Y		HC.OP-IS.JE-0008	
				GRP B/CPT VIB-P1H	2 Y		HC.OP-IS.JE-0008	
				GRP B/CPT VIB-P1V	2 Y		HC.OP-IS.JE-0008	
				GRP B/CPT VIB-P1A	2 Y		HC.OP-IS.JE-0008	
PUMP- DIESEL F.O. TRANSFER								

## **Hope Creek Inservice Testing Plan**

### **TABLE 3**

#### **VALVE TEST TABLE**

Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

AB - Main Steam

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1AB</b> <b>-1ABPSV-4500A</b> *PSV F013A DISCH LINE VAC BFKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (C5)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-4500B</b> *PSV F013B DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (C6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-4500C</b> *PSV F013C DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (C6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-4500D</b> *PSV F013D DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (B6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-4500E</b> *PSV F013E DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (B6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-4500F</b> *PSV F013F DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (B6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-4500G</b> *PSV F013G DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (B6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-4500H</b> *PSV F013H DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (B6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-4500J</b> *PSV F013J DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (B6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-4500K</b> *PSV F013K DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (B6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-4500L</b> *PSV F013L DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (B6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-4500M</b> *PSV F013M DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (B6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-4500P</b> *PSV F013P DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (A6)	Closed/en/Clos	NA	RV	6 Y	70108799

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Unit 1

Valve Table

AB - Main Steam

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1AB</b> <b>-1ABPSV-4500R</b> *PSV F013R DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (A6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-F013F-B</b> *MS LINE B SAFETY RELIEF VALVE -1108 PSI	1	N	C	A	8	Safety Relief	SE	M41-1 SH. 2 (B8)	Closed/en/Clos	NA	RV	5 Y	VR - 02
<b>H1AB</b> <b>-1ABPSV-F013G-B</b> *MS LINE C SAFETY RELIEF VALVE -1120 PSI	1	N	C	A	8	Safety Relief	SE	M41-1 SH. 2 (B8)	Closed/en/Clos	NA	RV	5 Y	VR - 02
<b>H1AB</b> <b>-1ABPSV-F013H-B</b> *MS LINE D SAFETY RELIEF VALVE -1108 PSI	1	N	C	A	8	Safety Relief	SE	M41-1 SH. 2 (B8)	Closed/en/Clos	NA	RV	5 Y	VR - 02
<b>H1AB</b> <b>-1ABPSV-F013J-B</b> *MS LINE A SAFETY RELIEF VALVE -1120 PSI	1	N	C	A	8	Safety Relief	SE	M41-1 SH. 2 (B8)	Closed/en/Clos	NA	RV	5 Y	VR - 02
<b>H1AB</b> <b>-1ABPSV-F013K-B</b> *MS LINE B SAFETY RELIEF VALVE -1108 PSI	1	N	C	A	8	Safety Relief	SE	M41-1 SH. 2 (B8)	Closed/en/Clos	NA	RV	5 Y	VR - 02
<b>H1AB</b> <b>-1ABPSV-F013L-B</b> *MS LINE C SAFETY RELIEF VALVE -1120 PSI	1	N	C	A	8	Safety Relief	SE	M41-1 SH. 2 (B8)	Closed/en/Clos	NA	RV	5 Y	VR - 02
<b>H1AB</b> <b>-1ABPSV-F013M-B</b> *MS LINE D SAFETY RELIEF VALVE -1108 PSI	1	N	C	A	8	Safety Relief	SE	M41-1 SH. 2 (B8)	Closed/en/Clos	NA	RV	5 Y	VR - 02
<b>H1AB</b> <b>-1ABPSV-F013P-B</b> *MS LINE B SAFETY RELIEF VALVE -1120 PSI	1	N	C	A	8	Safety Relief	SE	M41-1 SH. 2 (A8)	Closed/en/Clos	NA	RV	5 Y	VR - 02
<b>H1AB</b> <b>-1ABPSV-F013R-B</b> *MS LINE A SAFETY RELIEF VALVE -1120 PSI	1	N	C	A	8	Safety Relief	SE	M41-1 SH. 2 (A8)	Closed/en/Clos	NA	RV	5 Y	VR - 02
<b>H1AB</b> <b>-1ABPSV-F037A-B</b> *PSV F013A DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (C6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-F037B-B</b> *PSV F013B DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (C6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-F037C-B</b> *PSV F013C DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (C6)	Closed/en/Clos	NA	RV	6 Y	70108799

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Hope Creek Nuclear Plant

Unit 1

Valve Table

AB - Main Steam

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1AB</b> <b>-1ABPSV-F037D-B</b> *PSV F013D DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (C6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-F037E-B</b> *PSV F013E DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (C6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-F037F-B</b> *PSV F013F DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (B6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-F037G-B</b> *PSV F013G DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (B6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-F037H-B</b> *PSV F013H DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (B6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-F037J-B</b> *PSV F013J DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (B6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-F037K-B</b> *PSV F013K DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (B6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-F037L-B</b> *PSV F013L DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (B6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-F037M-B</b> *PSV F013M DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (B6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-F037P-B</b> *PSV F037P DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (B6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB</b> <b>-1ABPSV-F037R-B</b> *PSV F037R DISCH LINE VAC BRKR	3	N	C	A	6	Relief	SE	M41-1 SH. 2 (A6)	Closed/en/Clos	NA	RV	6 Y	70108799
<b>H1AB -1ABV-043</b> MAIN STEAM	3	N	AC	A	0.5	Check	SE	M41-1 SH. 2 (C5)	Closed/en/Clos	NA	EXC EXO LT-Air	1 RF 1 RF 18 M	RJ - 02 RJ - 02
<b>H1AB -1ABV-044</b> MAIN STEAM	3	N	AC	A	1	Check	SE	M41-1 SH. 2 (C5)	Closed/en/Clos	NA	EXC EXO LT-Air	1 RF 1 RF 18 M	RJ - 02 RJ - 02

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Hope Creek Nuclear Plant

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Valve Table

AB - Main Steam

Valve ID	Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	----- Position -----	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
H1AB -1ABV-045	3	N	AC	A	1	Check	SE	M41-1 SH. 2 (C5)	Closed/en/Clos	NA	EXC EXO LT-Air	1 RF 1 RF 18 M	RJ - 02 RJ - 02	
MAIN STEAM														
H1AB -1ABV-046	3	N	AC	A	1	Check	SE	M41-1 SH. 2 (C5)	Closed/en/Clos	NA	EXC EXO LT-Air	1 RF 1 RF 18 M	RJ - 02 RJ - 02	
MAIN STEAM														
H1AB -1ABV-047	3	N	AC	A	1	Check	SE	M41-1 SH. 2 (B5)	Closed/en/Clos	NA	EXC EXO LT-Air	1 RF 1 RF 18 M	RJ - 02 RJ - 02	
MAIN STEAM														
H1AB -1ABV-048	3	N	AC	A	1	Check	SE	M41-1 SH. 2 (B5)	Closed/en/Clos	NA	EXC EXO LT-Air	1 RF 1 RF 18 M	RJ - 02 RJ - 02	
MAIN STEAM														
H1AB -1ABV-049	3	N	AC	A	1	Check	SE	M41-1 SH. 2 (B5)	Closed/en/Clos	NA	EXC EXO LT-Air	1 RF 1 RF 18 M	RJ - 02 RJ - 02	
MAIN STEAM														
H1AB -1ABV-050	3	N	AC	A	1	Check	SE	M41-1 SH. 2 (B5)	Closed/en/Clos	NA	EXC EXO LT-Air	1 RF 1 RF 18 M	RJ - 02 RJ - 02	
MAIN STEAM														
H1AB -1ABV-051	3	N	C	A	1	Check	SE	M41-1 SH. 1 (G4)	Closed Closed	NA	EXC EXO	CM CM	RJ - 03 RJ - 03	CMP-02
MAIN STM. (INBOARD MSIV)														
H1AB -1ABV-052	3	N	C	A	1	Check	SE	M41-1 SH. 1 (G4)	Closed Closed	NA	EXC EXO	CM CM	RJ - 03 RJ - 03	CMP-02
MAIN STM. (INBOARD MSIV)														
H1AB -1ABV-053	3	N	C	A	1	Check	SE	M41-1 SH. 1 (G4)	Closed Closed	NA	EXC EXO	CM CM	RJ - 03 RJ - 03	CMP-02
MAIN STM. (INBOARD MSIV)														
H1AB -1ABV-054	3	N	C	A	1	Check	SE	M41-1 SH. 1 (G4)	Closed Closed	NA	EXC EXO	CM CM	RJ - 03 RJ - 03	CMP-02
MAIN STM. (INBOARD MSIV)														
H1AB -1ABV-055	3	N	C	A	1	Check	SE	M41-1 SH. 1 (G3)	Closed Closed	NA	EXC EXO	CM CM	CS - 02 CS - 02	CMP-03
MAIN STM. (OUTBOARD MSIV)														
H1AB -1-AB-V056	3	N	C	A	1	Check	SE	M41-1 SH. 1 (G3)	Closed Closed	NA	EXC EXO	CM CM	CS - 02 CS - 02	CMP-03
ACCUM AT212 INST GAS SUP CHK V														

Hope Creek Inservice Testing Plan

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Valve Table

AB - Main Steam

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1AB -1ABV-057</b>	3	N	C	A	1	Check	SE	M41-1 SH. 1 (G3)	Closed Closed NA	EXC EXO	CM CM	CS - 02 CS - 02	CMP-03
MAIN STM. (OUTBOARD MSIV)													
<b>H1AB -1ABV-058</b>	3	N	C	A	1	Check	SE	M41-1 SH. 1 (G3)	Closed Closed NA	EXC EXO	CM CM	CS - 02 CS - 02	CMP-03
MAIN STM. (OUTBOARD MSIV)													
<b>H1AB -1ABV-109</b>	3	N	AC	A	1	Check	SE	M41-1 SH. 2 (B5)	Closed/en/Clos	EXC EXO LT-Air	1 RF 1 RF 18 M	RJ - 02 RJ - 02	
MAIN STEAM													
<b>H1AB -1ABV-110</b>	3	N	AC	A	1	Check	SE	M41-1 SH. 2 (B5)	Closed/en/Clos	EXC EXO LT-Air	1 RF 1 RF 18 M	RJ - 02 RJ - 02	
MAIN STEAM													
<b>H1AB -1ABV-111</b>	3	N	AC	A	1	Check	SE	M41-1 SH. 2 (B5)	Closed/en/Clos	EXC EXO LT-Air	1 RF 1 RF 18 M	RJ - 02 RJ - 02	
MAIN STEAM													
<b>H1AB -1ABV-112</b>	3	N	AC	A	1	Check	SE	M41-1 SH. 2 (B5)	Closed/en/Clos	EXC EXO LT-Air	1 RF 1 RF 18 M	RJ - 02 RJ - 02	
MAIN STEAM													
<b>H1AB -1ABV-113</b>	3	N	AC	A	1	Check	SE	M41-1 SH. 2 (A5)	Closed/en/Clos	EXC EXO LT-Air	1 RF 1 RF 18 M	RJ - 02 RJ - 02	
MAIN STEAM													
<b>H1AB -1ABV-114</b>	3	N	AC	A	1	Check	SE	M41-1 SH. 2 (B5)	Closed/en/Clos	EXC EXO LT-Air	1 RF 1 RF 18 M	RJ - 02 RJ - 02	
MAIN STEAM													
<b>H1AB -1ABXV-3666A</b>	1	N	C	A	1	Excess Flow Che	SE	M41-1 SH. 1 (F3)	Open/en/Clos	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*MAIN STEAM LINE A EXCESS FLOW													
<b>H1AB -1ABXV-3666B</b>	1	N	C	A	1	Excess Flow Che	SE	M41-1 SH. 2 (H6)	Open/en/Clos	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*MAIN STEAM LINE B EXCESS FLOW													
<b>H1AB -1ABXV-3666C</b>	1	N	C	A	1	Excess Flow Che	SE	M41-1 SH. 2 (H6)	Open/en/Clos	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*MAIN STEAM LINE C EXCESS FLOW													
<b>H1AB -1ABXV-3666D</b>	1	N	C	A	1	Excess Flow Che	SE	M41-1 SH. 2 (G6)	Open/en/Clos	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*MAIN STEAM LINE D EXCESS FLOW													



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Valve Table

AB - Main Steam

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1AB</b> <b>-1ABXV-3667A</b> *MAIN STEAM LINE A EXCESS FLOW	1	N	C	A	1	Excess Flow Che	SE	M41-1 SH. 1 (F3)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1AB</b> <b>-1ABXV-3667B</b> *MAIN STEAM LINE B EXCESS FLOW	1	N	C	A	1	Excess Flow Che	SE	M41-1 SH. 2 (H6)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1AB</b> <b>-1ABXV-3667C</b> *MAIN STEAM LINE C EXCESS FLOW	1	N	C	A	1	Excess Flow Che	SE	M41-1 SH. 2 (G6)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1AB</b> <b>-1ABXV-3667D</b> *MAIN STEAM LINE D EXCESS FLOW	1	N	C	A	1	Excess Flow Che	SE	M41-1 SH. 2 (G6)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1AB</b> <b>-1ABXV-3668A</b> *MAIN STEAM LINE A EXCESS FLOW	1	N	C	A	1	Excess Flow Che	SE	M41-1 SH. 1 (E4)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1AB</b> <b>-1ABXV-3668B</b> *MAIN STEAM LINE B EXCESS FLOW	1	N	C	A	1	Excess Flow Che	SE	M41-1 SH. 2 (H6)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1AB</b> <b>-1ABXV-3668C</b> *MAIN STEAM LINE C EXCESS FLOW	1	N	C	A	1	Excess Flow Che	SE	M41-1 SH. 2 (G6)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1AB</b> <b>-1ABXV-3668D</b> *MAIN STEAM LINE D EXCESS FLOW	1	N	C	A	1	Excess Flow Che	SE	M41-1 SH. 2 (G6)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1AB</b> <b>-1ABXV-3669A</b> *MAIN STEAM LINE A EXCESS FLOW	1	N	C	A	1	Excess Flow Che	SE	M41-1 SH. 1 (E3)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1AB</b> <b>-1ABXV-3669B</b> *MAIN STEAM LINE B EXCESS FLOW	1	N	C	A	1	Excess Flow Che	SE	M41-1 SH. 2 (H6)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1AB</b> <b>-1ABXV-3669C</b> *MAIN STEAM LINE C EXCESS FLOW	1	N	C	A	1	Excess Flow Che	SE	M41-1 SH. 2 (G6)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1AB</b> <b>-1ABXV-3669D</b> *MAIN STEAM LINE D EXCESS LINE	1	N	C	A	1	Excess Flow Che	SE	M41-1 SH. 2 (G6)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01

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Hope Creek Nuclear Plant

Unit 1

Valve Table

AB - Main Steam

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
									Normal	Safety	Fail-Safe				
<b>H1AB</b> <b>-AB-HV-F016</b> OP/V039 INBD DRN LN INBD ISLN 52-212181	1	N	A	A	3	Gate	MO	M41-1 SH. 1 (E4)	Open	Closed	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M		
<b>H1AB</b> <b>-AB-HV-F019</b> OP/V040 INBD DRN LN OUTBD ISLN 52-242083	1	N	A	A	3	Gate	MO	M41-1 SH. 1 (E3)	Open	Closed	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M		
<b>H1AB</b> <b>-AB-HV-F022A</b> OP/V028 MN STM LN A INBD MSIV	1	N	A	A	26	Globe	AO	M41-1 SH. 1 (F4)	Open	Closed	Closed	FSC FSTC LJ PIT STC	CS 1 RF 18 M 2 Y CS	CS - 01 RJ - 01	
<b>H1AB</b> <b>-AB-HV-F022B</b> OP/V029 MN STM LN B INBD MSIV	1	N	A	A	26	Globe	AO	M41-1 SH. 1 (F4)	Open	Closed	Closed	FSC FSTC LJ PIT STC	CS 1 RF 18 M 2 Y CS	CS - 01 RJ - 01	CS - 01
<b>H1AB</b> <b>-AB-HV-F022C</b> OP/V030 MN STM LN C INBD MSIV	1	N	A	A	26	Globe	AO	M41-1 SH. 1 (F4)	Open	Closed	Closed	FSC FSTC LJ PIT STC	CS 1 RF 18 M 2 Y CS	CS - 01 RJ - 01	CS - 01
<b>H1AB</b> <b>-AB-HV-F022D</b> OP/V031 MN STM LN D INBD MSIV	1	N	A	A	26	Globe	AO	M41-1 SH. 1 (F4)	Open	Closed	Closed	FSC FSTC LJ PIT STC	CS 1 RF 18 M 2 Y CS	CS - 01 RJ - 01	CS - 01
<b>H1AB</b> <b>-AB-HV-F028A</b> OP/V032 MN STM LN A OUTBD MSIV	1	N	A	A	26	Globe	AO	M41-1 SH. 1 (F4)	Open	Closed	Closed	FSC FSTC LJ PIT STC	CS CS 18 M 2 Y CS	CS - 01 CS - 01	CS - 01

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Hope Creek Nuclear Plant

Unit 1

Valve Table

AB - Main Steam

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
									Normal	Safety	Fail-Safe				
<b>H1AB</b> <b>-AB-HV-F028B</b> OP/V033 MN STM LN B OUTBD MSIV	1	N	A	A	26	Globe	AO	M41-1 SH. 1 (F4)	Open	Closed	Closed	FSC FSTC LJ PIT STC	CS CS 18 M 2 Y CS	CS - 01 CS - 01	
<b>H1AB</b> <b>-AB-HV-F028C</b> OP/V034 MN STM LN C OUTBD MSIV	1	N	A	A	26	Globe	AO	M41-1 SH. 1 (F4)	Open	Closed	Closed	FSC FSTC LJ PIT STC	CS CS 18 M 2 Y CS	CS - 01 CS - 01	
<b>H1AB</b> <b>-AB-HV-F028D</b> OP/V035 MN STM LN D OUTBD MSIV	1	N	A	A	26	Globe	AO	M41-1 SH. 1 (F4)	Open	Closed	Closed	FSC FSTC LJ PIT STC	CS CS 18 M 2 Y CS	CS - 01 CS - 01	

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Valve Table

AE - Feedwater

Valve ID	Valve					Actuator	Drawing	Position			Required	Frequency			RR/CSJ/ROJ	Comments / Notes
Description	Class	Aug.	Cat.	A/P	Size	Type	Type	& Coord	Normal	Safety	Fail-Safe	Test				
H1AE -1AEV-003	1	N	AC	A	24	Check	SE	M41-1 SH. 1 (E7)	Open	ven/Clos	NA	EXC	1 RF	RJ - 04		
												EXO	1 RF	RJ - 04		
												LJ	2 Y			
*VALVE CLASS: DLA																
H1AE -1AEV-007	1	N	AC	A	24	Check	SE	M41-1 SH. 1 (D7)	Open	ven/Clos	NA	EXC	1 RF	RJ - 04		
												EXO	1 RF	RJ - 04		
												LJ	2 Y			
*VALVE CLASS: DLA																
H1AE -1AEV-127	2	N	C	A	4	Modified Check	SE	M44-1 SH. 1 (H7)	ven/Clos	Closed	NA	EXC	CM	CS - 04	CMP-05	
												EXO	CM	CS - 04		
												TQ-FOI	CM	CS - 04		
												TQ-LI	CM	CS - 04		
*VALVE CLASS: DBB																
H1AE -1AEV-128	2	N	C	A	4	Modified Check	SE	M44-1 SH. 1 (H7)	ven/Clos	Closed	NA	EXC	CM	CS - 04	CMP-05	
												EXO	CM	CS - 04		
												TQ-FOI	CM	CS - 04		
												TQ-LI	CM	CS - 04		
*VALVE CLASS: DBB																
H1AE -AE-HV-41442		N	B	A	2	Globe	MO	M41-1 SH. 1 (E8)	Closed	ven/Clos	NA	FSX	18 M	CS - 03		
												PIT	10 Y			
												PVT	10 Y			
OP/V138 FW SUP LNS A&B XCONN 52-232054																
H1AE -AE-HV-F032A	2	N	AC	A	24	Stop Check	SE/MO	M41-1 SH. 1 (D8)	Open	Closed	NA	EXC	CS	CS - 05		
												EXO	CS	CS - 05		
												FSX	CS	CS - 05		
												LT-H2O	18 M			
												PIT	10 Y			
												PVT	10 Y			
OP/V005 FW SPLY LINE A INL CHK 52-212102																
H1AE -AE-HV-F032B	2	N	AC	A	24	Stop Check	SE/MO	M41-1 SH. 1 (E8)	Open	Closed	NA	EXC	CS	CS - 05		
												EXO	CS	CS - 05		
												FSX	CS	CS - 05		
												LT-H2O	18 M			
												PIT	10 Y			
												PVT	10 Y			
OP/V001 FW SPLY LINE B INL CHK 52-222102																
H1AE -AE-HV-F0392		N	AC	A	4	Stop Check	SE/MO	M44-1 SH. 1 (H6)	Open	Closed	NA	EXC	18 M	CS - 21	CMP-04	
												EXO	18 M			
												FSC	18 M	CS - 21		
												LT-H2O	18 M			
												PIT	10 Y	CS - 21		
												PVT	10 Y	CS - 21		
OP/V021 RWCU RTN - RPV																

Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

AE - Feedwater

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	----- Position ----- Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1AE</b> <b>-AE-HV-F074A</b> OP/V006 FW SPLY LINE A OUTBD	1	N	AC	A	24	Check	SE	M41-1 SH. 1 (D7)	Open iven/Clos	NA	EXC EXO LJ PIT	CS CS 2 Y 2 Y	CS - 06 CS - 06
<b>H1AE</b> <b>-AE-HV-F074B</b> OP/V002 FW SPLY LINE B OUTBD	1	N	AC	A	24	Check	SE	M41-1 SH. 1 (E7)	Open iven/Clos	NA	EXC EXO LJ PIT	CS CS 2 Y 2 Y	CS - 06 CS - 06

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*AP - Condensate Storage & Transfer*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1AP -1-AP-V036</b>	2	N	C	A	3	Modified Check	SE	M55-1 SH. 1 (E5)	Closed	Closed	NA	EXC EXO TQ-FOI TQ-LI	CM CM CM CM		CMP-21
CS XFR TO HPCI DISC ISLN CHK V															
<b>H1AP -1-AP-V037</b>	2	N	C	A	3	Modified Check	SE	M55-1 SH. 1 (E5)	Closed	Closed	NA	EXC EXO TQ-FOI TQ-LI	CM CM CM CM		CMP-21
CS XFR TO HPCI DISC ISLN CHK V															
<b>H1AP -1-AP-V039</b>	2	Y	C	A	3	Modified Check	SE	M52-1 SH. 1 (G4)	Closed	Closed	NA	EXC EXO TQ-FOI TQ-LI	CM CM CM CM		CMP-07
CS XFR TO A CORE SPRAY DSCH CK CB															
<b>H1AP -1-AP-V040</b>	2	N	C	A	3	Modified Check	SE	M52-1 SH. 1 (G4)	Closed	Closed	NA	EXC EXO TQ-FOI TQ-LI	CM CM CM CM		CMP-07
CS XFR TO A CORE SPRAY DSCH CK CB															
<b>H1AP -1-AP-V042</b>	2	Y	C	A	4	Modified Check	SE	M51-1 SH. 2 (H4)	Closed	Closed	NA	EXC EXO TQ-FOI TQ-LI	CM CM CM CM		CMP-08
COND XFR TO A RHR PMP DISCH HDR CHK VLV															
<b>H1AP -1-AP-V043</b>	2	N	C	A	4	Modified Check	SE	M51-1 SH. 2 (G4)	Closed	Closed	NA	EXC EXO TQ-FOI TQ-LI	CM CM CM CM		CMP-08
COND XFR TO A RHR PMP DISCH HDR CHK VLV															
<b>H1AP -1-AP-V045</b>	2	Y	C	A	4	Modified Check	SE	M51-1 SH. 2 (H4)	Closed	Closed	NA	EXC EXO TQ-FOI TQ-LI	CM CM CM CM		CMP-01
COND XFR TO C RHR PMP DISCH HDR CHK VLV															
<b>H1AP -1-AP-V046</b>	2	N	C	A	4	Modified Check	SE	M51-1 SH. 2 (G4)	Closed	Closed	NA	EXC EXO TQ-FOI TQ-LI	CM CM CM CM		CMP-01
COND XFR TO C RHR PMP DISCH HDR CHK VLV															
<b>H1AP -1-AP-V050</b>	2	Y	C	A	3	Modified Check	SE	M49-1 SH. 1 (C5)	Closed	Closed	NA	EXC EXO TQ-FOI TQ-LI	CM CM CM CM		CMP-06
CS XFR TO RCIC DSCH ISLN CHK V															

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*AP - Condensate Storage & Transfer*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1AP -1-AP-V051</b>	2	N	C	A	3	Modified Check	SE	M49-1 SH. 1 (C5)	Closed	Closed	NA	EXC EXO TQ-FOI TQ-LI	CM CM CM CM		CMP-06
CS XFR TO RCIC DSCH ISLN CHK V															
<b>H1AP -1-AP-V054</b>	2	Y	C	A	4	Modified Check	SE	M51-1 SH. 1 (H6)	Closed	Closed	NA	EXC EXO TQ-FOI TQ-LI	CM CM CM CM		CMP-08
COND XFR TO B RHR PMP DISCH HDR CHK V CB															
<b>H1AP -1-AP-V055</b>	2	N	C	A	4	Modified Check	SE	M51-1 SH. 1 (H6)	Closed	Closed	NA	EXC EXO TQ-FOI TQ-LI	CM CM CM CM		CMP-08
COND XFR TO B RHR PMP DISCH HDR CHK V CB															
<b>H1AP -1-AP-V057</b>	2	Y	C	A	4	Modified Check	SE	M51-1 SH. 1 (H6)	Closed	Closed	NA	EXC EXO TQ-FOI TQ-LI	CM CM CM CM		CMP-01
COND XFR TO D RHR PMP DISCH HDR CHK V CB															
<b>H1AP -1-AP-V058</b>	2	N	C	A	4	Modified Check	SE	M51-1 SH. 1 (H6)	Closed	Closed	NA	EXC EXO TQ-FOI TQ-LI	CM CM CM CM		CMP-01
COND XFR TO D RHR PMP DISCH HDR CHK V CB															
<b>H1AP -1-AP-V060</b>	2	Y	C	A	3	Modified Check	SE	M52-1 SH. 1 (G4)	Closed	Closed	NA	EXC EXO TQ-FOI TQ-LI	CM CM CM CM		CMP-07
CS XFR TO B CORE SPRAY DSCH CHK CB															
<b>H1AP -1-AP-V061</b>	2	N	C	A	3	Modified Check	SE	M52-1 SH. 1 (G4)	Closed	Closed	NA	EXC EXO TQ-FOI TQ-LI	CM CM CM CM		CMP-07
CS XFR TO B CORE SPRAY DSCH CHK CB															
<b>H1AP -AP-HV-F0112</b>		Y	B	A	10	Gate	MO	M55-1 SH. 1 (F5)	Closed	Closed	NA	FSX PIT PVT	18 M 10 Y 10 Y		
OP/1-V004 HPCI/RCIC RET TO CST 72-251032															

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BB - Nuclear Boiler & Reactor Recirc*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BB -1BBSV-4310</b> INBOARD CONTAINMENT ISOLATION VALVE (REC	1	N	A	A	0.75	Globe	SO	M43-1 SH. 1 (H4)	Open	Closed	Closed	FSC FSTC LJ PIT STC	1 Q 1 Q Opt B 2 Y 1 Q		
<b>H1BB -1BBSV-4311</b> OUTBOARD CONTAINMENT ISOLATION VALVE (RE	1	N	A	A	0.75	Globe	SO	M43-1 SH. 1 (H3)	Open	Closed	Closed	FSC FSTC LJ PIT STC	1 Q 1 Q Opt B 2 Y 1 Q		
<b>H1BB -1BBV-043</b> *VALVE CLASS: CCA	2	N	AC	A	0.75	Check	SE	M43-1 SH. 1 (C3)	Open	Closed	NA	EXC EXO LJ	CM CM Opt B	RJ - 06 RJ - 06	CMP-09
<b>H1BB -1BBV-047</b> *VALVE CLASS: CCA	2	N	AC	A	0.75	Check	SE	M43-1 SH. 1 (B3)	Open	Closed	NA	EXC EXO LJ	CM CM Opt B	RJ - 06 RJ - 06	CMP-09
<b>H1BB -1BBV-232</b> CH "A" REF LEG BACKFILL CHECK VALVE	2	N	C	A	0.375	Check	SE	M46-1 SH. 2 (B7)	Open	Closed	NA	EXC EXO	CM CM	RJ - 07 RJ - 07	CMP-10
<b>H1BB -1BBV-233</b> CH "A" REF LEG BACKFILL CHECK VALVE	2	N	C	A	0.375	Check	SE	M46-1 SH. 2 (B7)	Open	Closed	NA	EXC EXO	CM CM	RJ - 07 RJ - 07	CMP-10
<b>H1BB -1BBV-239</b> CH "B" REF LEG BACKFILL CHECK VALVE	2	N	C	A	0.375	Check	SE	M46-1 SH. 2 (B7)	Open	Closed	NA	EXC EXO	CM CM	RJ - 07 RJ - 07	CMP-10
<b>H1BB -1BBV-240</b> CH "B" REF LEG BACKFILL CHECK VALVE	2	N	C	A	0.375	Check	SE	M46-1 SH. 2 (B7)	Open	Closed	NA	EXC EXO	CM CM	RJ - 07 RJ - 07	CMP-10
<b>H1BB -1BBV-246</b> CH "C" REF LEG BACKFILL CHECK VALVE	2	N	C	A	0.375	Check	SE	M46-1 SH. 2 (B7)	Open	Closed	NA	EXC EXO	CM CM	RJ - 07 RJ - 07	CMP-10
<b>H1BB -1BBV-247</b> CH "C" REF LEG BACKFILL CHECK VALVE	2	N	C	A	0.375	Check	SE	M46-1 SH. 2 (B7)	Open	Closed	NA	EXC EXO	CM CM	RJ - 07 RJ - 07	CMP-10
<b>H1BB -1BBV-253</b> CH "D" REF LEG BACKFILL CHECK VALVE	2	N	C	A	0.375	Check	SE	M46-1 SH. 2 (B7)	Open	Closed	NA	EXC EXO	CM CM	RJ - 07 RJ - 07	CMP-10



Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BB - Nuclear Boiler & Reactor Recirc*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BB -1BBV-254</b>	2	N	C	A	0.375	Check	SE	M46-1 SH. 2 (B7)	Open Closed NA	EXC EXO	CM CM	RJ - 07 RJ - 07	CMP-10
CH "D" REF LEG BACKFILL CHECK VALVE													
<b>H1BB -1BBXV-3621</b>	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (G4)	Open en/Clos	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*1BB-LT-3622B INSTRUMENT LINE													
<b>H1BB -1BBXV-3725</b>	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (G6)	Open en/Clos	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*EXCESS FLOW CHECK VALVE													
<b>H1BB -1BBXV-3726A</b>	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (F6)	Open en/Clos	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*EXCESS FLOW CHECK VALVE													
<b>H1BB -1BBXV-3726B</b>	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (F4)	Open en/Clos	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*EXCESS FLOW CHECK VALVE													
<b>H1BB -1BBXV-3727A</b>	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (F6)	Open en/Clos	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*EXCESS FLOW CHECK VALVE													
<b>H1BB -1BBXV-3727B</b>	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (F4)	Open en/Clos	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*EXCESS FLOW CHECK VALVE													
<b>H1BB -1BBXV-3728A</b>	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (F6)	Open en/Clos	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*EXCESS FLOW CHECK VALVE													
<b>H1BB -1BBXV-3728B</b>	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (F4)	Open en/Clos	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*EXCESS FLOW CHECK VALVE													
<b>H1BB -1BBXV-3729A</b>	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (E6)	Open en/Clos	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*EXCESS FLOW CHECK VALVE													
<b>H1BB -1BBXV-3729B</b>	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (E4)	Open en/Clos	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*EXCESS FLOW CHECK VALVE													
<b>H1BB -1BBXV-3730A</b>	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (E6)	Open en/Clos	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*EXCESS FLOW CHECK VALVE													

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BB - Nuclear Boiler & Reactor Recirc*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BB -1BBXV-3730B</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (E4)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3731A</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (E6)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3731B</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (E4)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3732A</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (B8)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3732B</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (E4)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3732C</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (B8)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3732D</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (B8)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3732E</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (B8)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3732F</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (B8)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3732G</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (B8)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3732H</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (B8)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3732J</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (E6)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BB - Nuclear Boiler & Reactor Recirc*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BB -1BBXV-3732K</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (A8)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3732L</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (A8)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3732M</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (A8)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3732N</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (A8)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3732P</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (A8)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3732R</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (A8)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3732S</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (A8)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3732T</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (A8)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3732U</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (A8)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3732V</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (A8)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3732W</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (A8)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3734A</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M42-1 SH. 1 (D6)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BB - Nuclear Boiler & Reactor Recirc*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BB -1BBXV-3734B</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	Excess Flow Che	SE	M42-1 SH. 1 (D4)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1BB -1BBXV-3734C</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	Excess Flow Che	SE	M42-1 SH. 1 (B7)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1BB -1BBXV-3734D</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	Excess Flow Che	SE	M42-1 SH. 1 (B7)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1BB -1BBXV-3737A</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	Excess Flow Che	SE	M42-1 SH. 1 (D4)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1BB -1BBXV-3737B</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	Excess Flow Che	SE	M42-1 SH. 1 (D6)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1BB -1BBXV-3738A</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	Excess Flow Che	SE	M42-1 SH. 1 (C6)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1BB -1BBXV-3738B</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	Excess Flow Che	SE	M42-1 SH. 1 (C4)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1BB -1BBXV-3783</b> *EXCESS FLOW CHECK VLV	1	N	C	A	1	Excess Flow Che	SE	M43-1 SH. 1 (C8)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1BB -1BBXV-3785</b> *EXCESS FLOW CHECK VLV	1	N	C	A	1	Excess Flow Che	SE	M43-1 SH. 1 (B8)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1BB -1BBXV-3787</b> *EXCESS FLOW CHECK VLV	1	N	C	A	1	Excess Flow Che	SE	M43-1 SH. 1 (A8)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1BB -1BBXV-3789</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	Excess Flow Che	SE	M43-1 SH. 1 (A8)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1BB -1BBXV-3801A</b> *EXCESS FLOW CHECK VLV	1	N	C	A	1	Excess Flow Che	SE	M43-1 SH. 1 (G3)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BB - Nuclear Boiler & Reactor Recirc*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BB -1BBXV-3801B</b> *EXCESS FLOW CHECK VALVE	1	N	C	A	1	ccess Flow Che	SE	M43-1 SH. 1 (F3)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3801C</b> *EXCESS FLOW CHECK VLV	1	N	C	A	1	ccess Flow Che	SE	M43-1 SH. 1 (F3)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3801D</b> *EXCESS FLOW CHECK VLV	1	N	C	A	1	ccess Flow Che	SE	M43-1 SH. 1 (E3)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3802A</b> *EXCESS FLOW CHECK VLV	1	N	C	A	1	ccess Flow Che	SE	M43-1 SH. 1 (F3)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3802B</b> *EXCESS FLOW CHECK VLV	1	N	C	A	1	ccess Flow Che	SE	M43-1 SH. 1 (F3)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3802C</b> *EXCESS FLOW CHECK VLV	1	N	C	A	1	ccess Flow Che	SE	M43-1 SH. 1 (F3)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3802D</b> *EXCESS FLOW CHECK VLV	1	N	C	A	1	ccess Flow Che	SE	M43-1 SH. 1 (E3)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3803A</b> *EXCESS FLOW CHECK VLV	1	N	C	A	1	ccess Flow Che	SE	M43-1 SH. 1 (E3)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3803B</b> *EXCESS FLOW CHECK VLV	1	N	C	A	1	ccess Flow Che	SE	M43-1 SH. 1 (D3)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3803C</b> *EXCESS FLOW CHECK VLV	1	N	C	A	1	ccess Flow Che	SE	M43-1 SH. 1 (D3)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3803D</b> *EXCESS FLOW CHECK VLV	1	N	C	A	1	ccess Flow Che	SE	M43-1 SH. 1 (D3)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BB -1BBXV-3804A</b> *EXCESS FLOW CHECK VLV	1	N	C	A	1	ccess Flow Che	SE	M43-1 SH. 1 (E3)	Open iven/Clos	NA EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BB - Nuclear Boiler & Reactor Recirc*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BB -1BBXV-3804B</b> *EXCESS FLOW CHECK VLV	1	N	C	A	1	Excess Flow Che	SE	M43-1 SH. 1 (D3)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1BB -1BBXV-3804C</b> *EXCESS FLOW CHECK VLV	1	N	C	A	1	Excess Flow Che	SE	M43-1 SH. 1 (D3)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1BB -1BBXV-3804D</b> *EXCESS FLOW CHECK VLV	1	N	C	A	1	Excess Flow Che	SE	M43-1 SH. 1 (D3)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1BB -1BBXV-3820</b> *EXCESS FLOW CHECK VLV	1	N	C	A	1	Excess Flow Che	SE	M43-1 SH. 1 (D7)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1BB -1BBXV-3821</b> *EXCESS FLOW CHECK VLV	1	N	C	A	1	Excess Flow Che	SE	M43-1 SH. 1 (D8)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1BB -1BBXV-3826</b> *EXCESS FLOW CHECK VLV	1	N	C	A	1	Excess Flow Che	SE	M43-1 SH. 1 (A3)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1BB -1BBXV-3827</b> *EXCESS FLOW CHECK VLV	1	N	C	A	1	Excess Flow Che	SE	M43-1 SH. 1 (A3)	Open /en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

Unit 1

*BC - Residual Heat Removal*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BC</b> <b>-1BCHV-F040-E11</b> *RHR DISCH TO RDWST ISLN OUTBD	2	N	B	A	4	Globe	MO	M51-1 SH. 1 (F3)	Closed Closed NA	FSX PIT PVT	1 RF 10 Y 10 Y		
<b>H1BC</b> <b>-1BCHV-F074</b> EMERG CLG WTR M/U LOOP B	3	N	B	A	1	Globe	AO	M10-1 SH. 2 (B3)	Open Closed Closed	FSC FSTC STC	1 Q 1 Q 1 Q		
<b>H1BC</b> <b>-1BCPSV-4425</b> *REACT RECIRC TO RHR SYS	1	N	C	A	1	Relief	SE	M51-1 SH. 1 (E8)	Closed/en/Clos	RV	5 Y		
<b>H1BC</b> <b>-1BCPSV-4431A-E</b> *RHR HEAT EXCHANGER AE205	2	N	C	A	0.75	Relief	SE	M51-1 SH. 2 (C7)	Closed/en/Clos	RV	10 Y		
<b>H1BC</b> <b>-1BCPSV-4431B-E</b> *RHR HEAT EXCHANGER BE205	2	N	C	A	0.75	Relief	SE	M51-1 SH. 1 (C3)	Closed/en/Clos	RV	10 Y		
<b>H1BC</b> <b>-1BCPSV-F025A-E</b> *LPCI INJECTION LN A	2	N	C	A	1	Relief	SE	M51-1 SH. 2 (F4)	Closed/en/Clos	RV	10 Y		
<b>H1BC</b> <b>-1BCPSV-F025B-E</b> *RHR LPCI INJECTION LINE B	2	N	C	A	1	Relief	SE	M51-1 SH. 1 (F5)	Closed/en/Clos	RV	10 Y		
<b>H1BC</b> <b>-1BCPSV-F025C-E</b> *LPCI INJECTION LN C	2	N	C	A	1	Relief	SE	M51-1 SH. 2 (F4)	Closed/en/Clos	RV	10 Y		
<b>H1BC</b> <b>-1BCPSV-F025D-E</b> *RHR LPCI INJECTION LINE D	2	N	C	A	1	Relief	SE	M51-1 SH. 1 (G5)	Closed/en/Clos	RV	10 Y		
<b>H1BC</b> <b>-1BCPSV-F029-E1</b> *RHR PUMP SUCT SHUTDN CLG	2	N	C	A	1	Relief	SE	M51-1 SH. 1 (E6)	Closed/en/Clos	RV	10 Y		
<b>H1BC</b> <b>-1BCPSV-F030A-E</b> *RHR PMP A SUPPR POOL SUCT	2	N	C	A	1	Relief	SE	M51-1 SH. 2 (C3)	Closed/en/Clos	RV	10 Y		
<b>H1BC</b> <b>-1BCPSV-F030B-E</b> *RHR PUMP B SUPPR POOL SUCT	2	N	C	A	1	Relief	SE	M51-1 SH. 1 (C7)	Closed/en/Clos	RV	10 Y		
<b>H1BC</b> <b>-1BCPSV-F030C-E</b> *RHR PMP C SUPPR POOL SUCT	2	N	C	A	1	Relief	SE	M51-1 SH. 2 (C2)	Closed/en/Clos	RV	10 Y		

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

Unit 1

*BC - Residual Heat Removal*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BC -1BCPSV-F030D-E</b> *RHR PUMP D SUPPR POOL SUCT	2	N	C	A	1	Relief	SE	M51-1 SH. 1 (C7)	Closed/en/Clos	NA	RV	10 Y	
<b>H1BC -1BCV-002</b> D RHR PUMP DSCHG CHECK	2	N	C	A	18	Check	SE	M51-1 SH. 1 (B5)	Closed/en/Clos	NA	EXC EXO	1 Q 1 Q	
<b>H1BC -1BCV-008</b> B RHR PUMP DSCHG CHECK	2	N	C	A	18	Check	SE	M51-1 SH. 1 (C5)	Closed/en/Clos	NA	EXC EXO	1 Q 1 Q	
<b>H1BC -1-BC-V030</b> RHR PMP BP202 DSCH CHK VLV	2	N	C	A	4	Modified Check	SE	M51-1 SH. 1 (D6)	Closed Open	NA	EXC EXO TQ-FOI TQ-LI	1 Q 1 Q 1 Q 1 Q	
<b>H1BC -1-BC-V033</b> RHR PMP D MIN FLO CHK VLV	2	N	C	A	4	Modified Check	SE	M51-1 SH. 1 (D5)	Closed Open	NA	EXC EXO TQ-FOI TQ-LI	1 Q 1 Q 1 Q 1 Q	
<b>H1BC -1-BC-V074</b> RHR LOOP B RET TO RECIR LOOP B	1	N	B	P	12	Gate	MAN	M51-1 SH. 1 (F7)	cked Op Open	NA	PIT	2 Y	
<b>H1BC -1-BC-V075</b> RHR LOOP B LPCI MAN ISLN VLV	1	N	B	P	12	Gate	MAN	M51-1 SH. 1 (F8)	cked Op Open	NA	PIT	2 Y	
<b>H1BC -1-BC-V076</b> RHR LOOP D LPCI MANISO VLV	1	N	B	P	12	Gate	MAN	M51-1 SH. 1 (G8)	cked Op Open	NA	PIT	2 Y	
<b>H1BC -1-BC-V078</b> RECIRC LOOP B TO RHR SUP MAN V	1	N	B	P	20	Gate	MAN	M51-1 SH. 1 (E8)	Open Open	NA	PIT	2 Y	
<b>H1BC -1BCV-089</b> DP228 DISCHARGE CHECK VLV	2	N	C	A	1	Check	SE	M51-1 SH. 1 (C5)	Open Closed	NA	EXC EXO	CM CM	TP - 05 TP - 05
<b>H1BC -1BCV-099</b> C RHR PUMP DSCHG CHECK	2	N	C	A	18	Check	SE	M51-1 SH. 2 (B4)	Closed/en/Clos	NA	EXC EXO	1 Q 1 Q	
<b>H1BC -1BCV-105</b> A RHR PUMP DSCHG CHECK	2	N	C	A	18	Check	SE	M51-1 SH. 2 (B4)	Closed/en/Clos	NA	EXC EXO	1 Q 1 Q	



Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BC - Residual Heat Removal*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BC -1-BC-V127</b>	2	N	C	A	4	Modified Check	SE	M51-1 SH. 2 (D4)	Closed Open NA	EXC EXO TQ-FOI TQ-LI	1 Q 1 Q 1 Q 1 Q		
RHR PMP MIN FLO CHK VLV					CB								
<b>H1BC -1-BC-V130</b>	2	N	C	A	4	Modified Check	SE	M51-1 SH. 2 (D4)	Closed Open NA	EXC EXO TQ-FOI TQ-LI	1 Q 1 Q 1 Q 1 Q		
RHR PMP C MIN FLO CHK VLV					CB								
<b>H1BC -1-BC-V181</b>	1	N	B	P	12	Gate	MAN	M51-1 SH. 2 (F2)	cked Op Open NA	PIT	2 Y		
RHR LOOP C LPCI MAN ISLN VLV													
<b>H1BC -1-BC-V182</b>	1	N	B	P	12	Gate	MAN	M51-1 SH. 2 (F2)	cked Op Open NA	PIT	2 Y		
RHR LOOP A LPCI MANISO VLV													
<b>H1BC -1-BC-V183</b>	1	N	B	P	12	Gate	MAN	M51-1 SH. 2 (E3)	cked Op Open NA	PIT	2 Y		
RHR LOOP A RET TO RECIR LOOP A													
<b>H1BC -1BCV-194</b>	2	N	C	A	1	Check	SE	M51-1 SH. 1 (C5)	Open Closed NA	EXC EXO	CM CM	TP - 05 TP - 05	
DP228 DISCHARGE CHECK VLV													
<b>H1BC -1BCV-206</b>	2	N	C	A	1	Check	SE	M51-1 SH. 2 (D4)	Open Closed NA	EXC EXO	CM CM		
CP228 JOCKEY PP DISCH TO A RHR					CB								
<b>H1BC -1BCV-208</b>	2	N	C	A	1	Check	SE	M51-1 SH. 2 (C4)	Open Closed NA	EXC EXO	CM CM	TP - 05 TP - 05	
CP228 DISCHARGE CHECK VLV													
<b>H1BC -1BCV-211</b>	2	N	C	A	1	Check	SE	M51-1 SH. 2 (C4)	Open Closed NA	EXC EXO	CM CM	TP - 05 TP - 05	
CP228 DISCHARGE CHECK VLV													
<b>H1BC -1BCV-260</b>	2	N	C	A	1	Check	SE	M51-1 SH. 1 (D6)	Open Closed NA	EXC EXO	CM CM		
DP228 JOCKEY PP DISCH TO B RHR					CB								
<b>H1BC -1BCV-308</b>	2	N	C	A	2	Check	SE	M52-1 SH. 1 (E3)	Open Closed NA	EXC EXO	CM CM	TP - 05 TP - 05	
DP228 DISCH CHCK VLV TO CORE SPRAY													
<b>H1BC -1BCV-312</b>	2	N	C	A	2	Check	SE	M52-1 SH. 1 (D5)	Open Closed NA	EXC EXO	CM CM	TP - 05 TP - 05	
CP228 DISCH CHK VLV TO CORE SPRAY													

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BC - Residual Heat Removal*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BC -1BCV-423</b>	3	N	C	A	2	Check	SE	M10-1 SH. 2 (B3)	Closed Open NA	DI-S	CM		
B SACS/FUEL POOL SSW EMERG MU CHK VLV													
<b>H1BC -1BCXV-4411A</b>	1	N	C	A	1	Excess Flow Che	SE	M51-1 SH. 2 (G3)	Open den/Clos NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*EXCESS FLOW CHK FOR PDT-N060A													
<b>H1BC -1BCXV-4411B</b>	1	N	C	A	1	Excess Flow Che	SE	M51-1 SH. 1 (H7)	Open den/Clos NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*EXCESS FLOW CHK FOR PDT-N060B													
<b>H1BC -1BCXV-4411C</b>	1	N	C	A	1	Excess Flow Che	SE	M51-1 SH. 2 (G3)	Open den/Clos NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*EXCESS FLOW CHK FOR PDT-N060A													
<b>H1BC -1BCXV-4411D</b>	1	N	C	A	1	Excess Flow Che	SE	M51-1 SH. 1 (G7)	Open den/Clos NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*EXCESS FLOW CHK FOR PDT-N060B													
<b>H1BC -1BCXV-4429A</b>	1	N	C	A	1	Excess Flow Che	SE	M51-1 SH. 2 (F3)	Open den/Clos NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*EXCESS FLOW CHK FOR PDT-N058A													
<b>H1BC -1BCXV-4429B</b>	1	N	C	A	1	Excess Flow Che	SE	M51-1 SH. 1 (F6)	Open den/Clos NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*EXCESS FLOW CHK FOR PDT-N058B													
<b>H1BC -1BCXV-4429C</b>	1	N	C	A	1	Excess Flow Che	SE	M51-1 SH. 2 (F3)	Open den/Clos NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*EXCESS FLOW CHK FOR PDT-N058C													
<b>H1BC -1BCXV-4429D</b>	1	N	C	A	1	Excess Flow Che	SE	M51-1 SH. 1 (G6)	Open den/Clos NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
*EXCESS FLOW CHK FOR PDT-N058D													
<b>H1BC -BC-HV-5055A</b>	2	N	B	P	2	Globe	MO	M58-1 SH. 1 (C7)	Closed Closed NA	PIT	2 Y		
OP/V520 RHR LP A TO H2 RECOMB 52-212273													
<b>H1BC -BC-HV-5055B</b>	2	N	B	P	2	Globe	MO	M58-1 SH. 1 (A7)	Closed Closed NA	PIT	2 Y		
OP/V521 RHR LP B - H2 RECOMB 52-222192													
<b>H1BC -BC-HV-F003A</b>	2	N	B	A	18	Globe	MO	M51-1 SH. 2 (D6)	Open den/Clos NA	FSX PIT PVT	18 M 10 Y 10 Y		
OP/V108 RHR HX A OUTLET MOV 52-212013													

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BC - Residual Heat Removal*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BC -BC-HV-F003B</b> OP/V011 RHR HX B OUTLET VLV 52-222013	2	N	B	A	18	Globe	MO	M51-1 SH. 1 (E3)	Open	Open/Clos	NA	FSX PIT PVT	18 M 6 Y 6 Y		
<b>H1BC -BC-HV-F004A</b> OP/V103 RHR PMP A SUP POOL SUC 52-212031	2	N	B	A	24	Gate	MO	M51-1 SH. 2 (C3)	Open	Closed	NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1BC -BC-HV-F004B</b> OP/V006 RHR PMP B SUP POOL SUC 52-222031	2	N	B	A	24	Gate	MO	M51-1 SH. 1 (C7)	Open	Closed	NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1BC -BC-HV-F004C</b> OP/V098 RHR PMP C SUP POOL SUC 52-232031	2	N	B	A	24	Gate	MO	M51-1 SH. 2 (C2)	Open	Closed	NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1BC -BC-HV-F004D</b> OP/V001 RHR PMP D SUP POL SUCT 52-242031	2	N	B	A	24	Gate	MO	M51-1 SH. 1 (C7)	Open	Closed	NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1BC -BC-HV-F006A</b> OP/V104 RHR PMP A SUC FM RCIRC 52-451012	2	N	B	A	18	Gate	MO	M51-1 SH. 2 (B2)	Closed	Open/Clos	NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1BC -BC-HV-F006B</b> OP/V007 RHR PMP B SUC FM RCIRC 52-222032	2	N	B	A	18	Gate	MO	M51-1 SH. 1 (C7)	Closed	Open/Clos	NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1BC -BC-HV-F007A</b> OP/V128 RHR PMP A MIN FL VLV 52-212041	2	N	B	A	4	Gate	MO	M51-1 SH. 2 (D4)	Open	Open/Clos	NA	FSX PIT PVT STC	18 M 10 Y 10 Y 18 M		
<b>H1BC -BC-HV-F007B</b> OP/V031 RHR PMP B MIN FL MOV 52-222041	2	N	B	A	4	Gate	MO	M51-1 SH. 1 (D6)	Open	Open/Clos	NA	FSX PIT PVT STC	18 M 10 Y 10 Y 18 M		
<b>H1BC -BC-HV-F007C</b> OP/V131 RHR PMP C MIN FL VLV 52-232041	2	N	B	A	4	Gate	MO	M51-1 SH. 2 (D4)	Open	Open/Clos	NA	FSX PIT PVT STC	18 M 10 Y 10 Y 18 M		

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BC - Residual Heat Removal*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BC -BC-HV-F007D</b> OP/V034 RHR PMP D MIN FL MOV 52-242041	2	N	B	A	4	Gate	MO	M51-1 SH. 1 (D5)	Open en/Clos	NA	FSX PIT PVT STC	18 M 10 Y 10 Y 18 M	
<b>H1BC -BC-HV-F008</b> OP/V164 B REC - RHR S/D OTBD 52-242082	1	N	A	A	20	Gate	MO	M51-1 SH. 1 (E6)	Closed en/Clos	NA	FSX LT-H2O PIT PVT STC	18 M 18 M 10 Y 10 Y 18 M	CS - 07   CS - 07
<b>H1BC -BC-HV-F009</b> OP/V071 B RCIRC - RHR S/D CLG 52-451061	1	N	A	A	20	Gate	MO	M51-1 SH. 1 (E8)	Closed en/Clos	NA	FSX LT-H2O PIT PVT STC	18 M 18 M 10 Y 10 Y 18 M	CS - 07   CS - 07
<b>H1BC -BC-HV-F010A</b> OP/V125 RHR LOOP C TEST RET 52-232044	2	N	B	A	18	Globe	MO	M51-1 SH. 2 (D4)	Closed Closed	NA	FSX PIT PVT STC	18 M 10 Y 10 Y 18 M	
<b>H1BC -BC-HV-F010B</b> OP/V027 RHR LOOP D TEST RET 52-242044	2	N	B	A	18	Globe	MO	M51-1 SH. 1 (D5)	Closed Closed	NA	FSX PIT PVT STC	18 M 10 Y 10 Y 18 M	
<b>H1BC -BC-HV-F015A</b> OP/V110 RHR LP A RET TO RECIRC 52-481062	1	N	A	A	12	Globe	MO	M51-1 SH. 2 (E3)	Closed en/Clos	NA	FSX LT-H2O PIT PVT STC	18 M 18 M 10 Y 10 Y 18 M	CS - 07   CS - 07
<b>H1BC -BC-HV-F015B</b> OP/V013 RHR LP B RET TO RECIRC 52-242022	1	N	A	A	12	Globe	MO	M51-1 SH. 1 (F6)	Closed en/Clos	NA	FSX LT-H2O PIT PVT STC	18 M 18 M 10 Y 10 Y 18 M	CS - 07   CS - 07
<b>H1BC -BC-HV-F016A</b> OP/V115 RHR LP A OBD CNTMT SPY 52-212061	2	N	B	A	16	Gate	MO	M51-1 SH. 2 (G5)	Closed en/Clos	NA	FSX PIT PVT	18 M 10 Y 10 Y	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BC - Residual Heat Removal*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BC -BC-HV-F016B</b> OP/V018 RHR LP B OBD CNTMT SPY 52-222061	2	N	B	A	16	Gate	MO	M51-1 SH. 1 (G6)	Closed/en/Clos	NA	FSX PIT PVT	18 M 10 Y 10 Y	
<b>H1BC -BC-HV-F017A</b> OP/V113 RHR LP A LPCI INJ VLV 52-212052	1	N	A	A	12	Gate	MO	M51-1 SH. 2 (F3)	Closed/en/Clos	NA	FSX LT-H2O PIT PVT STO	18 M 18 M 10 Y 10 Y 18 M	CS - 07    CS - 07
<b>H1BC -BC-HV-F017B</b> OP/V016 RHR LP B LPCI INJ VLV 52-222052	1	N	A	A	12	Gate	MO	M51-1 SH. 1 (F6)	Closed/en/Clos	NA	FSX LT-H2O PIT PVT STO	18 M 18 M 10 Y 10 Y 18 M	CS - 07    CS - 07
<b>H1BC -BC-HV-F017C</b> OP/V101 RHR LP C LPCI INJ VLV 52-232052	1	N	A	A	12	Gate	MO	M51-1 SH. 2 (F3)	Closed/en/Clos	NA	FSX LT-H2O PIT PVT STO	18 M 18 M 10 Y 10 Y 18 M	CS - 07    CS - 07
<b>H1BC -BC-HV-F017D</b> OP/V004 RHR LP D LPCI INJ VLV 52-242052	1	N	A	A	12	Gate	MO	M51-1 SH. 1 (G7)	Closed/en/Clos	NA	FSX LT-H2O PIT PVT STO	18 M 18 M 10 Y 10 Y 18 M	CS - 07    CS - 07
<b>H1BC -BC-HV-F021A</b> OP/V116 RHR LP A IBD CNTMT SPY 52-451062	2	N	B	A	16	Gate	MO	M51-1 SH. 2 (G3)	Closed/en/Clos	NA	FSX PIT PVT	18 M 10 Y 10 Y	
<b>H1BC -BC-HV-F021B</b> OP/V019 RHR LP B IBD CNTMT SPY 52-222062	2	N	B	A	16	Gate	MO	M51-1 SH. 1 (G7)	Closed/en/Clos	NA	FSX PIT PVT	18 M 10 Y 10 Y	
<b>H1BC -BC-HV-F024A</b> OP/V124 RHR LOOP A TST RET VL 52-212192	2	N	B	A	18	Globe	MO	M51-1 SH. 2 (D4)	Closed/en/Clos	NA	FSX PIT PVT STC	18 M 10 Y 10 Y 18 M	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BC - Residual Heat Removal*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BC -BC-HV-F024B</b> OP/V028 RHR LOOP B TST RET V 52-222063	2	N	B	A	18	Globe	MO	M51-1 SH. 1 (E6)	Closed/en/Clos	NA	FSX PIT PVT STC	18 M 10 Y 10 Y 18 M	
<b>H1BC -BC-HV-F027A</b> OP/V112 RHR LP A SUP POOL SPRY 52-212083	2	N	B	A	6	Globe	MO	M51-1 SH. 2 (E3)	Closed/en/Clos	NA	FSX PIT PVT STC	18 M 10 Y 10 Y 18 M	
<b>H1BC -BC-HV-F027B</b> OP/V015 RHR LP B SUP POOL SPRY 52-222083	2	N	B	A	6	Globe	MO	M51-1 SH. 1 (E6)	Closed/en/Clos	NA	FSX PIT PVT STC	18 M 10 Y 10 Y 18 M	
<b>H1BC -BC-HV-F041A</b> OP/V114 RHR LP A INJ LN CHK V 52-451062	1	N	AC	A	12	Testable Check	SE	M51-1 SH. 2 (F2)	Closed Open	NA	EXC EXO LT-H2O PIT	CS CS 18 M 2 Y	CS - 08 CS - 08
<b>H1BC -BC-HV-F041B</b> *LPCI INJECT LINE B TEST CHECK	1	N	AC	A	12	Testable Check	SE	M51-1 SH. 1 (F7)	Closed Open	NA	EXC EXO LT-H2O PIT	CS CS 18 M 2 Y	CS - 08 CS - 08
<b>H1BC -BC-HV-F041C</b> *LPCI INJECT LINE C TEST CHECK	1	N	AC	A	12	Testable Check	SE	M51-1 SH. 2 (F2)	Closed Open	NA	EXC EXO LT-H2O PIT	CS CS 18 M 2 Y	CS - 08 CS - 08
<b>H1BC -BC-HV-F041D</b> OP/V005 RHR D DSCH CK V	1	N	AC	A	12	Testable Check	SE	M51-1 SH. 1 (G7)	Closed Open	NA	EXC EXO LT-H2O PIT	CS CS 18 M 2 Y	CS - 08 CS - 08
<b>H1BC -BC-HV-F047A</b> OP/V107 RHR HX A INLET VLV 52-212091	2	N	B	P	18	Gate	MO	M51-1 SH. 2 (C5)	Open Open	NA	PIT	2 Y	
<b>H1BC -BC-HV-F047B</b> OP/V010 RHR HX B INLET VLV 52-222091	2	N	B	P	18	Gate	MO	M51-1 SH. 1 (D4)	Open Open	NA	PIT	2 Y	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BC - Residual Heat Removal*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BC -BC-HV-F048A</b> OP/V538 RHR HX A SHL SIDE BYP 52-212092	2	N	B	A	18	Butterfly	MO	M51-1 SH. 2 (E5)	Open en/Clos NA	FSX PIT PVT STO	18 M 10 Y 10 Y 18 M		
<b>H1BC -BC-HV-F048B</b> OP/V427 HX B SHELL SIDE BYP 52-222092	2	N	B	A	18	Butterfly	MO	M51-1 SH. 1 (E4)	Open en/Clos NA	FSX PIT PVT STO	18 M 6 Y 6 Y 18 M		
<b>H1BC -BC-HV-F049</b> OP/V042 RHR L B DSCH - LIQ RW 52-411053	2	N	B	A	4	Gate	MO	M51-1 SH. 1 (F3)	Closed Closed NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1BC -BC-HV-F050A</b> OP/V111 RHR HX A DSCH TO RCIRC	1	N	AC	A	12	Testable Check	SE	M51-1 SH. 2 (E2)	Closed Open NA	EXC EXO LT-H2O	CS CS 18 M	CS - 08 CS - 08	
<b>H1BC -BC-HV-F050B</b> OP/V014 RHR HX A DSCH - RCIRC	1	N	AC	A	12	Testable Check	SE	M51-1 SH. 1 (F7)	Closed Open NA	EXC EXO LT-H2O	CS CS 18 M	CS - 08 CS - 08	
<b>H1BC -BC-HV-F075</b> OP/V039 SSWS TO RHR LP B SUP 52-222113	2	N	B	P	6	Gate	MO	M51-1 SH. 1 (E3)	Closed Closed NA	PIT	2 Y		
<b>H1BC -BC-HV-F122A</b> OP/V117 RHR A RET - RECIR A	1	N	A	P	2	Globe	AO	M51-1 SH. 2 (E2)	Closed Closed NA	LT-H2O PIT	18 M 2 Y		
<b>H1BC -BC-HV-F122B</b> OP/V118 RHR B RET - RECIR B	1	N	A	P	2	Globe	AO	M51-1 SH. 1 (E7)	Closed Closed NA	LT-H2O PIT	18 M 2 Y		
<b>H1BC -BC-HV-F146A</b> OP/V119 RHR A LPCI CHK BYP VLV	1	N	A	P	2	Globe	AO	M51-1 SH. 2 (F2)	Closed Closed NA	LT-H2O PIT	18 M 2 Y		
<b>H1BC -BC-HV-F146B</b> OP/V120 RHR B LPCI CHK BYP VLV	1	N	A	P	2	Globe	AO	M51-1 SH. 2 (F2)	Closed Closed NA	LT-H2O PIT	18 M 2 Y		
<b>H1BC -BC-HV-F146C</b> OP/V121 RHR C LPCI CHK BYP VLV	1	N	A	P	2	Globe	AO	M51-1 SH. 2 (F2)	Closed Closed NA	LT-H2O PIT	18 M 2 Y		
<b>H1BC -BC-HV-F146D</b> OP/V122 RHR D LPCI CHK BYP VLV	1	N	A	P	2	Globe	AO	M51-1 SH. 2 (F2)	Closed Closed NA	LT-H2O PIT	18 M 2 Y		

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BC - Residual Heat Removal*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
									Normal	Safety	Fail-Safe				
<b>H1BC -BC-SV-F079A</b> ADDED FOR ILRT HMTR1	2	N	B	A	0.75	Globe	SO	M51-1 SH. 2 (D7)	Closed	Closed	NA	FSC FSTC PIT STC	1 Q 1 Q 2 Y 1 Q		
<b>H1BC -BC-SV-F079B</b> ADDED FOR ILRT HMTR1	2	N	B	A	0.75	Globe	SO	M51-1 SH. 1 (D2)	Closed	Closed	NA	FSC FSTC PIT STC	1 Q 1 Q 2 Y 1 Q		
<b>H1BC -BC-SV-F080A</b> ADDED FOR ILRT HMTR1	2	N	B	A	0.75	Globe	SO	M51-1 SH. 2 (D7)	Closed	Closed	NA	FSC FSTC PIT STC	1 Q 1 Q 2 Y 1 Q		
<b>H1BC -BC-SV-F080B</b> ADDED FOR ILRT HMTR1	2	N	B	A	0.75	Globe	SO	M51-1 SH. 1 (D2)	Closed	Closed	NA	FSC FSTC PIT STC	1 Q 1 Q 2 Y 1 Q		



Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BD - Reactor Core Isolation Cooling*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	----- Position ----- Normal Safety Fail-Safe			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
H1BD -1BDPSV-F017-E5 *RCIC PUMP SUCTION HDR	2	N	C	A	1	Relief	SE	M50-1 SH. 1 (E5)	Closed	en/Clos	NA	RV	N/A		
H1BD -1BDSV-4405 RCIC MIN FLOW BYPASS VALVE	2	N	B	A	2	Globe	SO	M49-1 SH. 1 (C6)	Closed	en/Clos	Closed	FSC FSO FSTC PIT STC STO	1 Q 1 Q 1 Q CS 1 Q 1 Q		
H1BD -1BDSV-F019 *RCIC MIN FLOW BYPASS VALVE	2	N	B	A	2	Globe	SO	M49-1 SH. 1 (C6)	Closed	en/Clos	Closed	FSC FSO FSTC PIT STC STO	1 Q 1 Q 1 Q CS 1 Q 1 Q		
H1BD -1-BD-V002 RCIC PMP SUCT FROM CST CHK VLV	2	N	C	A	6	Modified Check	SE	M49-1 SH. 1 (E3)	Closed	en/Clos	NA	EXC EXO TQ-FOI TQ-LI	Q Q Q Q		
H1BD -1-BD-V004 RCIC PMP SUCT FROM SUPP PL CHK	2	N	C	A	6	Modified Check	SE	M49-1 SH. 1 (B6)	Closed	Open	NA	EXC EXO TQ-FOI TQ-LI	Q Q Q Q		
H1BD -1BDV-010 REACTOR CORE ISOLATION COOLING	2	N	C	A	6	Check	SE	M49-1 SH. 1 (D4)	Closed	Closed	NA	EXC EXO	1 Q 1 Q		
H1BD -1BDV-023 *VALVE CLASS: EBA	2	N	C	A	2	Check	SE	M50-1 SH. 1 (B4)	en/Clos	Closed	NA	EXC EXO	1 Q 1 Q		
H1BD -1BDV-028 RCIC JOCKEY PUMP DSCHG CHECK VALVE	2	N	C	A	1	Check	SE	M49-1 SH. 1 (D4)	Closed	en/Clos	NA	EXC EXO	CM CM	TP - 05	CMP-16
H1BD -1BDV-029 *VALVE CLASS: CBA	2	N	C	A	1	Check	SE	M49-1 SH. 1 (C4)	Open	Open	NA	EXC EXO	CM CM	TP - 05	CMP-16

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BD - Reactor Core Isolation Cooling*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BD -BD-HV-F010</b> OP/V001 RCIC CST SUCT VLV 72-261022	2	N	B	A	6	Gate	MO	M49-1 SH. 1 (F3)	Open en/Clos NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1BD -BD-HV-F012</b> OP/V011 RCIC PMP DSCH VLV 72-261052	2	N	B	P	6	Gate	MO	M49-1 SH. 1 (D4)	Open Open NA	PIT	2 Y		
<b>H1BD -BD-HV-F013</b> OP/V005 RCIC FW ISLN VLV 72-261051	2	N	A	A	6	Gate	MO	M49-1 SH. 1 (D5)	Closed en/Clos NA	FSX LT-H2O PIT PVT STC STO	1 Q 18 M 10 Y 10 Y 1 Q 1 Q		
<b>H1BD -BD-HV-F022</b> OP/V012 RCIC TEST BYP CST VLV 72-261041	2	N	B	A	4	Globe	MO	M49-1 SH. 1 (E5)	Closed Closed NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1BD -BD-HV-F031</b> OP/V003 RCIC -TORUS SUCT VLV 72-261102	2	N	B	A	6	Gate	MO	M49-1 SH. 1 (B7)	Closed en/Clos NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1BD -BD-HV-F046</b> OP/V022 LUBE OIL WTR VLV 72-261072	2	N	B	A	2	Globe	MO	M50-1 SH. 1 (C6)	Closed en/Clos NA	FSX PIT PVT	1 Q 6 Y 6 Y		

Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

BE - Core Spray

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BE -1BEPSV-F012A-E</b> *CORE SPRAY LOOP A RELIEF VALVE	2	N	C	A	1.5	Relief	SE	M52-1 SH. 1 (F4)	Closed/en/Clos	NA	RV	10 Y	
<b>H1BE -1BEPSV-F012B-E</b> *CORE SPRAY LOOP B RELIEF VALVE	2	N	C	A	1.5	Relief	SE	M52-1 SH. 1 (F4)	Closed/en/Clos	NA	RV	10 Y	
<b>H1BE -1BEPSV-F032A-E</b> *CS PMP AP206 SUCTION RELIEF	2	N	C	A	1	Relief	SE	M52-1 SH. 1 (B6)	Closed/en/Clos	NA	RV	10 Y	
<b>H1BE -1BEPSV-F032B-E</b> *CS PMP BP206 SUCTION RELIEF	2	N	C	A	1	Relief	SE	M52-1 SH. 1 (B4)	Closed/en/Clos	NA	RV	10 Y	
<b>H1BE -1BEPSV-F032C-E</b> *CS PMP CP206 SUCTION RELIEF	2	N	C	A	1	Relief	SE	M52-1 SH. 1 (B5)	Closed/en/Clos	NA	RV	10 Y	
<b>H1BE -1BEPSV-F032D-E</b> *CS PMP DP206 SUCTION RELIEF	2	N	C	A	1	Relief	SE	M52-1 SH. 1 (B3)	Closed/en/Clos	NA	RV	10 Y	
<b>H1BE -1-BE-V001</b> CS LOOP B - RV INBDISO VLV	1	N	B	P	12	Gate	MAN	M52-1 SH. 1 (F7)	cked Op Open	NA	PIT	2 Y	
<b>H1BE -1-BE-V005</b> CS LOOP A - RV INBDISO VLV	1	N	B	P	12	Gate	MAN	M52-1 SH. 1 (F7)	cked Op Open	NA	PIT	2 Y	
<b>H1BE -1BEV-013</b> CORE SPRAY PUMP A DISCH CHECK VLV CB	2	N	C	A	12	Check	SE	M52-1 SH. 1 (C5)	Closed/en/Clos	NA	EXC EXO	1 Q 1 Q	
<b>H1BE -1BEV-014</b> CORE SPRAY PUMP C DISCH CHECK VLV CB	2	N	C	A	12	Check	SE	M52-1 SH. 1 (C4)	Closed/en/Clos	NA	EXC EXO	1 Q 1 Q	
<b>H1BE -1BEV-015</b> CORE SPRAY PUMP B DISCH CHECK VLV CB	2	N	C	A	12	Check	SE	M52-1 SH. 1 (B3)	Closed/en/Clos	NA	EXC EXO	1 Q 1 Q	
<b>H1BE -1BEV-016</b> CORE SPRAY PUMP D DISCH CHECK VLV CB	2	N	C	A	12	Check	SE	M52-1 SH. 1 (B2)	Closed/en/Clos	NA	EXC EXO	1 Q 1 Q	

Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

BE - Core Spray

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BE -1-BE-V028</b> CS PMP A MIN FLO CHK VLV	2	N	C	A	3	Modified Check	SE	M52-1 SH. 1 (C6)	Closed/en/Clos	NA	EXC EXO TQ-FOI TQ-LI	CM CM CM CM	CMP-17
<b>H1BE -1-BE-V030</b> CS PMP C MIN FLOW CHK VLV	2	N	C	A	3	Modified Check	SE	M52-1 SH. 1 (C5)	Closed/en/Clos	NA	EXC EXO TQ-FOI TQ-LI	CM CM CM CM	CMP-17
<b>H1BE -1-BE-V032</b> CS PMP B MIN FLO CHK VLV	2	N	C	A	3	Modified Check	SE	M52-1 SH. 1 (C4)	Closed/en/Clos	NA	EXC EXO TQ-FOI TQ-LI	CM CM CM CM	CMP-17
<b>H1BE -1-BE-V034</b> CS PMP D MIN FLOW CHK VLV	2	N	C	A	3	Modified Check	SE	M52-1 SH. 1 (C3)	Closed/en/Clos	NA	EXC EXO TQ-FOI TQ-LI	CM CM CM CM	CMP-17
<b>H1BE -1BEXV-F018A-E2</b> *EXCESS FLOW CK VLV PDT N056	1	N	C	A	1	ccess Flow Che	SE	M52-1 SH. 1 (G6)	Open/en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1BE -1BEXV-F018B-E2</b> *EXCESS FLOW CK VLV PDT N056	1	N	C	A	1	ccess Flow Che	SE	M52-1 SH. 1 (H6)	Open/en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1BE -BE-HV-F001A</b> OP/V017 CS PMP A SUCT VLV	2	N	B	A	16	Gate	MO	M52-1 SH. 1 (B6)	Open	Open	NA	FSX PIT PVT	18 M 10 Y 10 Y
<b>H1BE -BE-HV-F001B</b> OP/V019 CS PMP B SUCT VLV	2	N	B	A	16	Gate	MO	M52-1 SH. 1 (B7)	Open	Open	NA	FSX PIT PVT	18 M 10 Y 10 Y
<b>H1BE -BE-HV-F001C</b> OP/V018 CS PMP C SUCT VLV	2	N	B	A	16	Gate	MO	M52-1 SH. 1 (B7)	Open	Open	NA	FSX PIT PVT	18 M 10 Y 10 Y
<b>H1BE -BE-HV-F001D</b> OP/V020 CS PMP D SUCT VLV	2	N	B	A	16	Gate	MO	M52-1 SH. 1 (B8)	Open	Open	NA	FSX PIT PVT	18 M 10 Y 10 Y

Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

BE - Core Spray

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BE -BE-HV-F004A</b> OP/V008 CS LOOP A OUTBD INJ VL 52-212034	2	N	B	A	12	Gate	MO	M52-1 SH. 1 (F5)	Open Open NA	FSX PIT PVT STO	18 M 10 Y 10 Y 18 M		
<b>H1BE -BE-HV-F004B</b> OP-V004 CS LOOP B OUTBD INJ VL 52-222034	2	N	B	A	12	Gate	MO	M52-1 SH. 1 (F5)	Open Open NA	FSX PIT PVT STO	18 M 10 Y 10 Y 18 M		
<b>H1BE -BE-HV-F005A</b> OP/V007 CS LOOP A INBD INJ VLV 52-212044	1	N	A	A	12	Gate	MO	M52-1 SH. 1 (F6)	Closed/en/Clos NA	FSX LT-H2O PIT PVT STO	18 M 18 M 10 Y 10 Y 18 M		
<b>H1BE -BE-HV-F005B</b> OP/V003 CS LOOP B INBD INJ VLV 52-222044	1	N	A	A	12	Gate	MO	M52-1 SH. 1 (F6)	Closed/en/Clos NA	FSX LT-H2O PIT PVT STO	18 M 18 M 10 Y 10 Y 18 M		
<b>H1BE -BE-HV-F006A</b> CS LOOP A INBD INJ ISO AIR OP CHK CB	1	N	AC	A	12	Testable Check	SE	M52-1 SH. 1 (F6)	Closed Open NA	EXC EXO LT-H2O PIT	CS CS 18 M 2 Y	CS - 08 CS - 08	
<b>H1BE -BE-HV-F006B</b> CS LOOP B INBRD INJ VLV AIR/OP CHK CB	1	N	AC	A	12	Testable Check	SE	M52-1 SH. 1 (F6)	Closed/en/Clos NA	EXC EXO LT-H2O PIT	CS CS 18 M 2 Y	CS - 08 CS - 08	
<b>H1BE -BE-HV-F015A</b> OP/V025 LOOP A TEST RTN MOV 52-212051	2	N	B	A	10	Globe	MO	M52-1 SH. 1 (D6)	Closed Closed NA	FSX PIT PVT STC	18 M 10 Y 10 Y 18 M		
<b>H1BE -BE-HV-F015B</b> OP/V026 LOOP B TEST RETN VLV 52-222051	2	N	B	A	10	Globe	MO	M52-1 SH. 1 (D6)	Closed Closed NA	FSX PIT PVT STC	18 M 10 Y 10 Y 18 M		

Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

BE - Core Spray

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
									Normal	Safety	Fail-Safe				
<b>H1BE</b> <b>-BE-HV-F031A</b> OP/V035 CS LOOP A MIN FLOW VLV 52-212084	2	N	B	A	4	Globe	MO	M52-1 SH. 1 (C6)	Open	Open/Clos	NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1BE</b> <b>-BE-HV-F031B</b> OP/V036 CS LOOP B MIN FLOW VLV 52-222084	2	N	B	A	4	Globe	MO	M52-1 SH. 1 (C6)	Open	Open/Clos	NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1BE</b> <b>-BE-HV-F039A</b> OP/V071 CS LOOP A TST CHK VLV PWR CB	1	N	A	P	2	Globe	AO	M52-1 SH. 1 (E6)	Closed	Closed	NA	LT-H2O PIT	18 M 2 Y		
<b>H1BE</b> <b>-BE-HV-F039B</b> OP/V072 CS LOOP B TST CHK VLV CB	1	N	A	P	2	Globe	AO	M52-1 SH. 1 (F6)	Closed	Closed	NA	LT-H2O PIT	18 M 2 Y		

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BF - Control Rod Drive - Hydraulic*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BF -1BFV-114-000</b> HCU OUTLET TO SCRAM DISCHARGE HEADER	2	N	C	A	0.75	Check	SE	M47-1 SH. 1 (D5)	Closed Open NA	SKID	1 RF		
<b>H1BF -1BFV-115-000</b> HCU CHARGING WATER INLET	3	N	C	A	0.5	Check	SE	M47-1 SH. 1 (C4)	Closed Closed NA	EXC EXO	1 RF 1 RF	RJ - 09 RJ - 09	
<b>H1BF -1BFV-138</b> CONTROL ROD DRIVE-HYD(NITROGEN CHARG. CA	3	N	C	A	0.5	Check	SE	M47-1 SH. 1 (C6)	Open Closed NA	SKID	1 RF		
<b>H1BF -1BFXV-126000C1</b> INLET SCRAM VALVE	3	N	B	A	0.5	Globe	AO	M47-1 SH. 1 (C5)	Closed/en/Clos Open	SKID	N/A		
<b>H1BF -1BFXV-126139C1</b> INLET/OUTLET SCRAM VALVE SOLENOID	NC	Y	B	A	0.5	Globe	AO	M47-1 SH. 1 (C5)	Closed Open Open	SKID	N/A		
<b>H1BF -1BFXV-127000C1</b> OUTLET SCRAM VALVE	NC	Y	B	A	0.75	Globe	AO	M47-1 SH. 1 (D5)	Closed/en/Clos Open	SKID	N/A		
<b>H1BF -BF-HV-3800A</b> OP/V098 RECIR PMP A SEAL PURGE 52-242013	2	N	A	A	2	Globe	MO	M43-1 SH. 1 (C3)	Open Closed NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	CS - 09	
<b>H1BF -BF-HV-3800B</b> OP/V099 RECIR PMP B SEAL PURGE 52-242162	2	N	A	A	2	Globe	MO	M43-1 SH. 1 (B3)	Open Closed NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	CS - 09	
<b>H1BF -BF-HV-F0102</b> OP/V084 SDV INBD VNT ISLN AOV	N	B	A	A	2	Globe	AO	M47-1 SH. 1 (H4)	Open Closed Closed	FSC FSTC PIT STC	1 Q 1 Q 2 Y 1 Q		
<b>H1BF -BF-HV-F0112</b> OP/V077 SDV INBD DRN ISLN AOV	N	B	A	A	2	Globe	AO	M47-1 SH. 1 (E4)	Open Closed Closed	FSC FSTC PIT STC	1 Q 1 Q 2 Y 1 Q		

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BF - Control Rod Drive - Hydraulic*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BF -BF-HV-F1802</b>		N	B	A	2	Globe	AO	M47-1 SH. 1 (H4)	Open	Closed	Closed	FSC	1 Q		
OP/V083 SDV OUTBD VNT ISLN AOV												FSTC	1 Q		
												PIT	2 Y		
												STC	1 Q		
<b>H1BF -BF-HV-F1812</b>		N	B	A	2	Globe	AO	M47-1 SH. 1 (E5)	Open	Closed	Closed	FSC	1 Q		
OP/V076 SDV OUTBD DRN ISLN AOV												FSTC	1 Q		
												PIT	2 Y		
												STC	1 Q		



Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BG - Reactor Water Cleanup*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BG -1BGXV-3882</b> *RV DRAIN EX FLOW CHK VLV	1	N	C	A	1	ccess Flow Che	SE	M44-1 SH. 1 (B7)	Open en/Clos NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BG -1BGXV-3884A</b> *RWCU INLET FLOW EX FL CHK VLV	1	N	C	A	1	ccess Flow Che	SE	M44-1 SH. 1 (E7)	Open en/Clos NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BG -1BGXV-3884B</b> *RWCU INLET FLOW EX FL CHK VLV	1	N	C	A	1	ccess Flow Che	SE	M44-1 SH. 1 (E7)	Open en/Clos NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BG -1BGXV-3884C</b> *RWCU INLET FLOW EX FL CHK VLV	1	N	C	A	1	ccess Flow Che	SE	M44-1 SH. 1 (E7)	Open en/Clos NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BG -1BGXV-3884D</b> *RWCU INLET FLOW EX FL CHK VLV	1	N	C	A	1	ccess Flow Che	SE	M44-1 SH. 1 (D7)	Open en/Clos NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1BG -BG-HV-F001</b> OP/V001 PMP SUC CNT INBDISO 52-212021	1	N	A	A	6	Gate	MO	M44-1 SH. 1 (E7)	Open Closed NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	CS - 22    CS - 22	
<b>H1BG -BG-HV-F004</b> OP/V002 PMP SUCT CNT OTBD 52-242081	1	N	A	A	6	Gate	MO	M44-1 SH. 1 (E6)	Open Closed NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	CS - 22    CS - 22	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BH - Standby Liquid Control*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BH -1BHPSV-F029A-C</b> *SLC PUMP A DISCHARGE RELIEF VALVE	2	N	C	A	1.5	Relief	SE	M48-1 SH. 1 (E5)	Closed/en/Clos	NA	RV	10 Y	
<b>H1BH -1BHPSV-F029B-C</b> *SLC PUMP B DISCHARGE RELIEF VALVE	2	N	C	A	1.5	Relief	SE	M48-1 SH. 1 (C5)	Closed/en/Clos	NA	RV	10 Y	
<b>H1BH -1BHV-004</b> "A" SLIC PUMP DISCHARGE CHECK VALVE	2	N	C	A	1.5	Check	SE	M48-1 SH. 1 (D6)	Closed/en/Clos	NA	EXC EXO	1 RF 1 RF	RJ - 14 RJ - 14
<b>H1BH -1BHV-005</b> "B" SLIC PUMP DISCHARGE CHECK VALVE	2	N	C	A	1.5	Check	SE	M48-1 SH. 1 (C6)	Closed/en/Clos	NA	EXC EXO	1 RF 1 RF	RJ - 14 RJ - 14
<b>H1BH -1-BH-V019</b> SLC PMPS TEST DSCH ISLN VLV	2	N	B	P	1.5	Globe	MAN	M48-1 SH. 1 (D6)	ked Clo:Closed	NA	PIT	2 Y	
<b>H1BH -1BHV-029</b> SLC HDR CHK VALVE, VALVE CLASS CCA	1	N	AC	A	1.5	Check	SE	M48-1 SH. 1 (D8)	Closed/en/Clos	NA	EXC EXO LJ	1 RF 1 RF 2 Y	RJ - 10 RJ - 10
<b>H1BH -1-BH-V053</b> TEST TK OT208 OUTL ISLN VLV	2	N	B	P	4	Globe	MAN	M48-1 SH. 1 (E4)	ked Clo:Closed	NA	PIT	2 Y	
<b>H1BH -1BHXV-F004A-C4</b> *SLC SQUIB VALVE A	2	N	D	A	1.5	Gate	EX	M48-1 SH. 1 (D7)	Closed Open	NA	EX	36 M	
<b>H1BH -1BHXV-F004B-C4</b> *SLC SQUIB VALVE B	2	N	D	A	1.5	Gate	EX	M48-1 SH. 1 (C7)	Closed Open	NA	EX	36 M	
<b>H1BH -BH-HV-F006A</b> OP/V028 SLC A CONT ISO ST CHK 52-212202	1	N	AC	A	2	Stop Check	SE/MO	M48-1 SH. 1 (D8)	Closed/en/Clos	NA	EXC EXO FSC LJ PIT PVT	1 RF 1 RF 18 M Opt B 10 Y 10 Y	RJ - 10 RJ - 10

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BH - Standby Liquid Control*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
									Normal	Safety	Fail-Safe				
<b>H1BH</b>	1	N	AC	A	2	Stop Check	SE/MO	M48-1 SH. 1	Closed	Open/Clos	NA	EXC	1 RF	RJ - 10	
<b>-BH-HV-F006B</b>								(D8)				EXO	1 RF	RJ - 10	
OP/V054 SLC B CONT ISO ST CHK 52-242203												FSC	18 M		
												LJ	Opt B		
												PIT	10 Y		
												PVT	10 Y		

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BJ - High Pressure Coolant Injection*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BJ -1BJPSV-F020-E41</b> *HPCI PUMP SUCT HDR RELIEF	2	N	C	A	1.5	Relief	SE	M56-1 SH. 1 (G6)	Closed/en/Clos	NA	RV	10 Y	
<b>H1BJ -1BJV-003</b> HPCI PUMP DISCHARGE CHECK VALVE	2	N	C	A	14	Check	SE	M55-1 SH. 1 (D5)	Closed/en/Clos	NA	EXC EXO	1 Q 1 Q	
<b>H1BJ -1-BJ-V006</b> PMP SUCT LN FROM CST CHK VLV	2	N	C	A	16	Modified Check	SE	M55-1 SH. 1 (E3)	Closed/en/Clos	NA	EXC EXO TQ-FOF TQ-LF	Q Q Q Q	
<b>H1BJ -1-BJ-V008</b> PMP SUCT FROM SUPP CHAMB CHK V	2	N	C	A	16	Modified Check	SE	M55-1 SH. 1 (A6)	Closed Open	NA	EXC EXO TQ-FOF TQ-LI	Q Q Q Q	
<b>H1BJ -1BJV-014</b> HPCI JOCKEY PUMP DISCHARGE CHECK	2	N	C	A	1	Check	SE	M55-1 SH. 1 (E4)	Open/en/Clos	NA	EXC EXO	CM CM	CMP-16
<b>H1BJ -1-BJ-V015</b> MIN FLOW BYP CHK VLV	2	N	C	A	4	Modified Check	SE	M55-1 SH. 1 (C4)	Closed Open	NA	EXC EXO TQ-FOI TQ-LI	CM CM CM CM	CMP-20
<b>H1BJ -1BJV-023</b> *VALVE CLASS: CBA	2	N	C	A	1	Check	SE	M55-1 SH. 1 (E4)	Open Open	NA	EXC EXO	CM CM	TP - 05 CMP-16
<b>H1BJ -1BJV-027</b> HPCI CONDENSATE PUMP DSCHG CHK	2	N	C	A	2	Check	SE	M56-1 SH. 1 (B5)	Closed/en/Clos	NA	EXC EXO	1 Q 1 Q	
<b>H1BJ -BJ-HV-4803</b> OP/V500 SUPP CHMBR LVL INST LN 52-212242	2	N	B	A	2	Gate	MO	M55-1 SH. 1 (B6)	Open/en/Clos	NA	FSX PIT PVT	18 M 10 Y 10 Y	
<b>H1BJ -BJ-HV-4804</b> OP/V501 SUPP CHMBR LVL INST LN 52-212243	2	N	B	A	2	Gate	MO	M55-1 SH. 1 (B6)	Open/en/Clos	NA	FSX PIT PVT	18 M 10 Y 10 Y	
<b>H1BJ -BJ-HV-4865</b> OP/V502 SUPP CHMBR LVL INST LN 52-232063	2	N	B	A	2	Globe	MO	M55-1 SH. 1 (B8)	Open/en/Clos	NA	FSX PIT PVT	18 M 10 Y 10 Y	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*BJ - High Pressure Coolant Injection*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1BJ -BJ-HV-4866</b> 2	N	B	A	2		Globe	MO	M55-1 SH. 1 (B8)	Open en/Clos	NA	FSX PIT PVT	18 M 10 Y 10 Y	
OP/V503 SUPP CHMBR LVL INST LN 52-232064													
<b>H1BJ -BJ-HV-8278</b> 2	N	A	A	8		Gate	MO	M55-1 SH. 1 (C6)	Closed en/Clos	NA	FSX LT-H2O PIT PVT STC STO	18 M 18 M 6 Y 6 Y 18 M 18 M	
OP/V059 HPCI PMP DSCH ISLN MOV 72-251091													
<b>H1BJ -BJ-HV-F004</b> 2	N	B	A	16		Gate	MO	M55-1 SH. 1 (F3)	Open en/Clos	NA	FSX PIT PVT	18 M 10 Y 10 Y	
OP/V005 PMP SUCT FROM CST 72-251092													
<b>H1BJ -BJ-HV-F006</b> 1	N	B	A	14		Gate	MO	M55-1 SH. 1 (D6)	Closed en/Clos	NA	FSX PIT PVT STO	18 M 10 Y 10 Y 18 M	
OP/V001 PMP DSCH OTBD ISLN 72-251051													
<b>H1BJ -BJ-HV-F007</b> 2	N	B	P	14		Gate	MO	M55-1 SH. 1 (D5)	Open Open	NA	PIT	2 Y	
OP/V002 PMP DSCH ISLN 72-251071													
<b>H1BJ -BJ-HV-F008</b> 2	N	B	A	10		Globe	MO	M55-1 SH. 1 (E5)	Closed Closed	NA	FSX PIT PVT	18 M 10 Y 10 Y	
OP/V010 TEST BYP TO CST MOV 72-251103													
<b>H1BJ -BJ-HV-F012</b> 2	N	B	A	4		Globe	MO	M55-1 SH. 1 (C6)	Closed en/Clos	NA	FSX PIT PVT STC STO	1 Q 10 Y 10 Y 1 Q 1 Q	
OP/V016 MIN FLO BYP MOV 72-251112													
<b>H1BJ -BJ-HV-F042</b> 2	N	B	A	16		Gate	MO	M55-1 SH. 1 (A8)	Closed en/Clos	NA	FSX PIT PVT	18 M 10 Y 10 Y	
OP/V009 PMP SUC FRM SUP CHB 72-251131													
<b>H1BJ -BJ-HV-F059</b> 2	N	B	A	2		Globe	MO	M56-1 SH. 1 (C5)	Closed en/Clos	NA	FSX PIT PVT	1 Q 6 Y 6 Y	
OP/V028 LUBE OIL CLG WTR MOV 72-251111													

Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

EA - Service Water

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1EA -1EAHV-2235</b> EMERG WTR M/U LOOP A ISO DRN	3	N	B	A	1	Globe	AO	M10-1 SH. 2 (B6)	Open Closed Closed	FSC FSTC STC	1 Q 1 Q 1 Q		
<b>H1EA -1EAHV-2237</b> EMERG WTR M/U LOOP A DRN	3	N	B	A	1	Globe	AO	M10-1 SH. 2 (B6)	Open Closed Closed	FSC FSTC STC	1 Q 1 Q 1 Q		
<b>H1EA -1EAHV-2239</b> EMERG WTR M/U LOOP B ISO DRN	3	N	B	A	1	Globe	AO	M10-1 SH. 2 (B3)	Open Closed Closed	FSC FSTC STC	1 Q 1 Q 1 Q		
<b>H1EA -1EAPSE-2210A</b> *SAFETY RELIEF AT LPA EXIT	3	N	D	A	20	Rupture Disk	SE	M10-1 SH. 2 (G5)	Closed Open NA	RD	5 Y		
<b>H1EA -1EAPSE-2210B</b> *SAFETY RELIEF AT LP B EXIT	3	N	D	A	20	Rupture Disk	SE	M10-1 SH. 2 (G3)	Closed Open NA	RD	5 Y		
<b>H1EA -1EAPSV-2351A</b> *SACS HTX A2E201 SSW SIDE PRESS RELIEF V	3	N	C	A	0.75	Relief	SE	M10-1 SH. 2 (F5)	Closed/en/Clos	RV	10 Y		
<b>H1EA -1EAPSV-2351B</b> *SACS HTX B2E201 TUBESIDE SSW PRESS RELI	3	N	C	A	0.75	Relief	SE	M10-1 SH. 2 (F3)	Closed/en/Clos	RV	10 Y		
<b>H1EA -1EAPSV-2366A</b> *SACS HTX A1E201 PRESS RELIEF	3	N	C	A	0.75	Relief	SE	M10-1 SH. 2 (D5)	Closed/en/Clos	RV	10 Y		
<b>H1EA -1EAPSV-2366B</b> *SACS HTX B1E201 PRESS RELIEF	3	N	C	A	0.75	Relief	SE	M10-1 SH. 2 (D3)	Closed/en/Clos	RV	10 Y		
<b>H1EA -1EAV-359</b> "A" SERVICE WATER PUMP DISCHARGE CHECK V	3	N	C	A	28	Check	SE	M10-1 SH. 1 (F7)	Automati Open	EXC EXO	1 Q 1 Q		
<b>H1EA -1EAV-361</b> "C" SERVICE WATER PUMP DISCHARGE CHECK V	3	N	C	A	28	Check	SE	M10-1 SH. 1 (F5)	Automati Open	EXC EXO	1 Q 1 Q		
<b>H1EA -1EAV-363</b> "B" SERVICE WATER PUMP DISCHARGE CHECK V	3	N	C	A	28	Check	SE	M10-1 SH. 1 (F4)	Automati Open	EXC EXO	1 Q 1 Q		

Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

EA - Service Water

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
H1EA -1EAV-365	3	N	C	A	28	Check	SE	M10-1 SH. 1 (F3)	Automati Open NA	EXC EXO	1 Q 1 Q		
"D" SERVICE WATER PUMP DISCHARGE CHECK V													
H1EA -1-EA-V453	3	Y	B	A	24	Butterfly	MAN	M10-1 SH. 2 (G6)	Open Closed NA	FSC	2 Y		
SSW TO RACS OUTBD ISLN VLV													
H1EA -1EAV-557	3	N	C	A	2	Check	SE	M10-1 SH. 2 (B7)	Closed Open NA	DI-S	CM		CMP-13
A SACS/FUEL POOL SSW EMERG MU CHK VLV													
H1EA -EA-HV-2197A	3	N	B	A	6	Butterfly	MO	M10-1 SH. 1 (F7)	Automati Open NA	FSX PIT PVT	18 M 10 Y 10 Y		
OP/V416 BACKWASH VLV A 52-553021													
H1EA -EA-HV-2197B	3	N	B	A	6	Butterfly	MO	M10-1 SH. 1 (F4)	Automati Open NA	FSX PIT PVT	18 M 10 Y 10 Y		
OP/V418 BACKWASH VLV B 52-563021													
H1EA -EA-HV-2197C	3	N	B	A	6	Butterfly	MO	M10-1 SH. 1 (F5)	Automati Open NA	FSX PIT PVT	18 M 10 Y 10 Y		
OP/V417 BACKWASH VLV C 52-573021													
H1EA -EA-HV-2197D	3	N	B	A	6	Butterfly	MO	M10-1 SH. 1 (F2)	Automati Open NA	FSX PIT PVT	18 M 10 Y 10 Y		
OP/V419 BACKWASH VLV D 52-583021													
H1EA -EA-HV-2198A	3	N	B	A	28	Butterfly	MO	M10-1 SH. 1 (G7)	Automati Open NA	FSX PIT PVT	18 M 10 Y 10 Y		
OP/V473 SSWS PMP A DISCH VLV 52-553041													
H1EA -EA-HV-2198B	3	N	B	A	28	Butterfly	MO	M10-1 SH. 1 (G4)	Automati Open NA	FSX PIT PVT	18 M 10 Y 10 Y		
OP/V475 SSWS PMP B DISCH VLV 52-563041													
H1EA -EA-HV-2198C	3	N	B	A	28	Butterfly	MO	M10-1 SH. 1 (G5)	Automati Open NA	FSX PIT PVT	18 M 10 Y 10 Y		
OP/V474 SSWS PMP C DISCH VLV 52-573041													
H1EA -EA-HV-2198D	3	N	B	A	28	Butterfly	MO	M10-1 SH. 1 (G3)	Automati Open NA	FSX PIT PVT	18 M 10 Y 10 Y		
OP/V476 SSWS PMP D DISCH VLV 52-583041													
H1EA -EA-HV-22033		N	B	A	30	Butterfly	MO	M10-1 SH. 2 (A5)	Open Closed NA	FSX PIT PVT	18 M 10 Y 10 Y		
OP-V357 LOOP A RACS HX HDR SUP 52-212232													

Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

EA - Service Water

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1EA -EA-HV-22043</b>		N	B	A	30	Butterfly	MO	M10-1 SH. 2 (A4)	Open	Closed	NA	FSX PIT PVT	18 M 10 Y 10 Y		
OP/V358 LOOP B RACS HX HDR SUP 52-222191															
<b>H1EA -EA-HV-22073</b>		N	B	A	24	Butterfly	MO	M10-1 SH. 2 (B5)	Open	Closed	NA	FSX PIT PVT	18 M 10 Y 10 Y	CS - 10	
OP/V381 RACS HX HDR INLET VLV 52-232081															
<b>H1EA -EA-HV-22343</b>		N	B	A	3	Butterfly	MO	M10-1 SH. 2 (A6)	Closed	Open	NA	FSX PIT PVT	18 M 10 Y 10 Y		
OP/V553 LOOP A EMER M/U OUTBD 52-212221															
<b>H1EA -EA-HV-22363</b>		N	B	A	3	Butterfly	MO	M10-1 SH. 2 (B6)	Closed	Open	NA	FSX PIT PVT	18 M 10 Y 10 Y		
OP/V552 LOOP A EMER M/U INBD 52-212222															
<b>H1EA -EA-HV-22383</b>		N	B	A	6	Butterfly	MO	M10-1 SH. 2 (B3)	Closed	Open	NA	FSX PIT PVT	18 M 10 Y 10 Y		
OP/V554 LOOP B EMER M/U OUTBD 52-222224															
<b>H1EA -EA-HV-23463</b>		N	B	A	24	Butterfly	MO	M10-1 SH. 2 (G6)	Open	Closed	NA	FSX PIT PVT	18 M 10 Y 10 Y	CS - 10	
OP/V452 RACS HX HDR OUTLET VLV 52-232082															
<b>H1EA -EA-HV-2355A</b>	3	N	B	A	24	Butterfly	MO	M10-1 SH. 2 (F5)	Automati	Open	NA	FSX PIT PVT	18 M 10 Y 10 Y		
OP/V346 SACS HX A2 OUT 52-232032															
<b>H1EA -EA-HV-2355B</b>	3	N	B	A	24	Butterfly	MO	M10-1 SH. 2 (F3)	Automati	Open	NA	FSX PIT PVT	18 M 10 Y 10 Y		
OP/V352 SACS HX B2 OUT 52-242032															
<b>H1EA -EA-HV-2356A</b>	3	N	B	A	20	Butterfly	MO	M10-1 SH. 2 (G5)	Closed	Open	NA	FSX PIT PVT	18 M 10 Y 10 Y		
OP/V450 LOOP A YARD DUMP VLV 52-212131															
<b>H1EA -EA-HV-2356B</b>	3	N	B	A	20	Butterfly	MO	M10-1 SH. 2 (G3)	Closed	Open	NA	FSX PIT PVT	18 M 10 Y 10 Y		
OP/V451 LOOP B YARD DUMP VLV 52-222131															
<b>H1EA -EA-HV-2357A</b>	3	N	B	A	36	Butterfly	MO	M10-1 SH. 2 (H4)	Open	Closed	NA	FSX PIT PVT	18 M 10 Y 10 Y	CS - 11	
OP/V377 LOOP A OUT TO CLG TWR 52-212132															
<b>H1EA -EA-HV-2357B</b>	3	N	B	A	36	Butterfly	MO	M10-1 SH. 2 (G2)	Open	Closed	NA	FSX PIT PVT	18 M 10 Y 10 Y	CS - 11	
OP/V378 LOOP B OUT TO CLG TWR 52-222132															



Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

EA - Service Water

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1EA</b> <b>-EA-HV-2371A</b> OP/V349 SACS HX A1 OUT	3	N	B	A	24	Butterfly	MO	M10-1 SH. 2 (D5)	Automati Open	NA	FSX PIT PVT	18 M 10 Y 10 Y	
<b>H1EA</b> <b>-EA-HV-2371B</b> OP/V355 SACS HX B1 OUT	3	N	B	A	24	Butterfly	MO	M10-1 SH. 2 (D3)	Automati Open	NA	FSX PIT PVT	18 M 10 Y 10 Y	
<b>H1EA -EA-HV-F0733</b> OP/V340 LOOP B EMER M/U INBD		N	B	A	6	Butterfly	MO	M10-1 SH. 2 (B4)	Closed Open	NA	FSX PIT PVT	18 M 10 Y 10 Y	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*EC - Fuel Pool Clg & Cleanup*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1EC -1-EC-V016</b>	3	N	B	A	6	Globe	MAN	M53-1 SH. 1 (H4)	Open	Closed	NA	EXC	2 Y		
FUEL STOR POOL DIFF ISLN VLV															
<b>H1EC -1-EC-V017</b>	3	N	B	A	6	Globe	MAN	M53-1 SH. 1 (H4)	Open	Closed	NA	EXC	2 Y		
FUEL STOR POOL DIFF ISLN VLV															
<b>H1EC -EC-HV-46473</b>		N	B	A	2	Globe	MO	M10-1 SH. 2 (B7)	Closed	Open/Clos	NA	FSX PIT PVT	18 M 10 Y 10 Y		
OP/1-V169 SPNT FUEL STOR PL FL 52-212254															
<b>H1EC -EC-HV-46483</b>		N	B	A	2	Globe	MO	M10-1 SH. 2 (B3)	Closed	Open	NA	FSX PIT PVT	18 M 10 Y 10 Y		
OP/1-V170 SPNT FUEL STOR PL FL 52-222154															

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*ED - Reactor Aux Cooling*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1ED -1EDPSV-11699</b> 1 CONTMT ISO VLVS (ED) OVER PRESSURE PRO	3	N	AC	A	0.75	Relief	SE	M13-1 SH. 1 (D4)	Closed	Open/Clos	NA	LJ RV	Opt B 10 Y		
<b>H1ED -1EDPSV-11700</b> 1 CONTMT ISO VLVS (ED) OVER PRESSURE PRO	3	N	C	A	0.75	Relief	SE	M13-1 SH. 1 (D3)	Closed	Open/Clos	NA	LJ RV	Opt B 10 Y		
<b>H1ED -ED-HV-25532</b> OP/V019 RECIR PMP RAC OUTB SUP 52-222202	N	A	A	A	4	Gate	MO	M13-1 SH. 1 (D5)	Open	Closed	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	CS - 12	
<b>H1ED -ED-HV-25542</b> OP/V020 RECIR PMP RAC INBD SUP 52-242172	N	A	A	A	4	Gate	MO	M13-1 SH. 1 (C5)	Open	Closed	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	CS - 12	
<b>H1ED -ED-HV-25552</b> OP/V021 RECIR PMP RAC OTBD RTN 52-222211	N	A	A	A	4	Gate	MO	M13-1 SH. 1 (D3)	Open	Closed	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	CS - 12	
<b>H1ED -ED-HV-25562</b> OP/V022 RECIR PMP RAC INBD RET 52-242173	N	A	A	A	4	Gate	MO	M13-1 SH. 1 (C3)	Open	Closed	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	CS - 12	
<b>H1ED -ED-HV-2598NC</b> OP/V003 RX BLD RACS RTN ISLN 52-212071	Y	B	A	A	18	Butterfly	MO	M13-1 SH. 1 (G2)	Open	Closed	NA	FSC PIT STC	CS 2 Y CS	CS - 13	
<b>H1ED -ED-HV-2599NC</b> OP/1-V004 RX BLD RACS SUP ISLN 52-212072	Y	B	A	A	18	Butterfly	MO	M13-1 SH. 1 (G2)	Open	Closed	NA	FSC PIT STC	CS 2 Y CS	CS - 13	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*EE - Torus Water Cleanup*

Valve ID	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position	Normal	Safety	Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1EE -EE-HV-4652</b> 2	N	A	A	6	Gate	MO	M53-1 SH. 2 (D6)	Closed	Closed	NA	FSX	18 M	LT-H2O	18 M		
OP/V002 SUP POOL RET INBD ISLN 52-212233											PIT	10 Y	PVT	10 Y		
											STC	18 M				
<b>H1EE -EE-HV-4679</b> 2	N	A	A	6	Gate	MO	M53-1 SH. 2 (D5)	Closed	Closed	NA	FSX	18 M	LT-H2O	18 M		
OP/V001 SUP POOL RET OTBD ISLN 52-222212											PIT	10 Y	PVT	10 Y		
											STC	18 M				
<b>H1EE -EE-HV-4680</b> 2	N	A	A	6	Gate	MO	M53-1 SH. 2 (B6)	Closed	Closed	NA	FSX	18 M	LT-H2O	18 M		
OP/V003 SUP POOL SPLY INB ISLN 52-212241											PIT	10 Y	PVT	10 Y		
											STC	18 M				
<b>H1EE -EE-HV-4681</b> 2	N	A	A	6	Gate	MO	M53-1 SH. 2 (B6)	Closed	Closed	NA	FSX	18 M	LT-H2O	18 M		
OP/V004 SUP POOL SPLY OTBD ILN 52-222221											PIT	10 Y	PVT	10 Y		
											STC	18 M				

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant**  
**Valve Table**  
*EG - Safety & Turbine Aux Clg*

Unit 1

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1EG</b> <b>-1EGPSV-2409A</b> *DG A HXS CLG WTR OUTLET	3	N	C	A	1	Relief	SE	M12-1 SH. 1 (E6)	Closed/en/Clos	NA	RV	10 Y	
<b>H1EG</b> <b>-1EGPSV-2409B</b> *DG B HXS CLG WTR OUTLET	3	N	C	A	1	Relief	SE	M12-1 SH. 1 (E3)	Closed/en/Clos	NA	RV	10 Y	
<b>H1EG</b> <b>-1EGPSV-2409C</b> *DG C HXS CLG WTR OUTLET	3	N	C	A	1	Relief	SE	M12-1 SH. 1 (E5)	Closed/en/Clos	NA	RV	10 Y	
<b>H1EG</b> <b>-1EGPSV-2409D</b> *DG D HXS CLG WTR OUTLET	3	N	C	A	1	Relief	SE	M12-1 SH. 1 (E2)	Closed/en/Clos	NA	RV	10 Y	
<b>H1EG</b> <b>-1EGPSV-2490A</b> *SACS HX A1E201	3	N	C	A	0.75	Relief	SE	M11-1 SH. 1 (G7)	Closed/en/Clos	NA	RV	10 Y	
<b>H1EG</b> <b>-1EGPSV-2490B</b> *SACS HX B1E201 SACS SIDE RELIEF VALVE	3	N	C	A	0.75	Relief	SE	M11-1 SH. 1 (D7)	Closed/en/Clos	NA	RV	10 Y	
<b>H1EG</b> <b>-1EGPSV-2495A</b> *SACS HX A2E201	3	N	C	A	0.75	Relief	SE	M11-1 SH. 1 (F7)	Closed/en/Clos	NA	RV	10 Y	
<b>H1EG</b> <b>-1EGPSV-2495B</b> *SACS HX B2E201	3	N	C	A	0.75	Relief	SE	M11-1 SH. 1 (C7)	Closed/en/Clos	NA	RV	10 Y	
<b>H1EG</b> <b>-1EGPSV-2513A-E</b> *RHR HEAT EXCHANGER AE205	3	N	C	A	0.75	Relief	SE	M11-1 SH. 1 (G3)	Closed/en/Clos	NA	RV	10 Y	
<b>H1EG</b> <b>-1EGPSV-2513B-E</b> *RHR HEAT EXCHANGER BE205	3	N	C	A	0.75	Relief	SE	M11-1 SH. 1 (A3)	Closed/en/Clos	NA	RV	10 Y	
<b>H1EG</b> <b>-1EGPSV-2530A</b> *FUEL POOL HX AE202	3	N	C	A	1	Relief	SE	M11-1 SH. 2 (D4)	Closed/en/Clos	NA	RV	10 Y	
<b>H1EG</b> <b>-1EGPSV-2530B</b> *FUEL POOL HX BE202 SACS SIDE RELIEF VLV	3	N	C	A	1	Relief	SE	M11-1 SH. 2 (B4)	Closed/en/Clos	NA	RV	10 Y	
<b>H1EG</b> <b>-1EGPSV-6220A</b> *RHR HX AE205 OUTLET	3	N	C	A	4	Relief	SE	M11-1 SH. 1 (G3)	Closed/en/Clos	NA	RV	10 Y	

Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

EG - Safety & Turbine Aux Clg

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1EG -1EGPSV-6220B</b> *RHR HX BE205 OUTLET	3	N	C	A	4	Relief	SE	M11-1 SH. 1 (B3)	Closed/en/Clos	NA	RV	10 Y	
<b>H1EG -1EGTV-2517A</b> *SAC HX A1/A2E201 BYPASS	3	N	NA	A	20	Butterfly	AO	M11-1 SH. 1 (G6)	Automatic/Closed	Closed	FSC FSTC PIT	1 Q 1 Q 2 Y	
<b>H1EG -1EGTV-2517B</b> *SACS HX B1/B2E201 BYPASS	3	N	B	A	20	Butterfly	AO	M11-1 SH. 1 (B6)	Automatic/Closed	Closed	FSC FSTC PIT	1 Q 1 Q 2 Y	
<b>H1EG -1EGV-010</b> *VALVE CLASS: HBC	3	N	C	A	20	Check	SE	M11-1 SH. 1 (F4)	Automatic/en/Clos	NA	EXC EXO	1 Q 1 Q	
<b>H1EG -1EGV-013</b> *VALVE CLASS: HBC	3	N	C	A	20	Check	SE	M11-1 SH. 1 (E4)	Automatic/en/Clos	NA	EXC EXO	1 Q 1 Q	
<b>H1EG -1EGV-016</b> *VALVE CLASS: HBC	3	N	C	A	20	Check	SE	M11-1 SH. 1 (D4)	Automatic/en/Clos	NA	EXC EXO	1 Q 1 Q	
<b>H1EG -1EGV-019</b> *VALVE CLASS: HBC	3	N	C	A	20	Check	SE	M11-1 SH. 1 (C4)	Automatic/en/Clos	NA	EXC EXO	1 Q 1 Q	
<b>H1EG -1EGV-029</b> *VALVE CLASS: HBC	3	N	C	A	30	Check	SE	M11-1 SH. 3 (D4)	Open Closed	NA	EXC EXO	1 RF 1 RF	RJ - 11 RJ - 11
<b>H1EG -1EGV-031</b> *VALVE CLASS: HBC	3	N	C	A	30	Check	SE	M11-1 SH. 3 (D4)	Open Closed	NA	EXC EXO	1 RF 1 RF	RJ - 11 RJ - 11
<b>H1EG -1EGV-1167</b> 600# CHECK VALVE 1 1/2" Y-TYPE ASTM A105	3	N	C	A	1.5	Check	SE	M11-1 SH. 3 (C8)	Open Closed	NA	EXC EXO	CM CM	CMP-25
<b>H1EG -1EGV-1168</b> CHECK VALVE 600# CS SW Y-TYPE SA-105	3	N	C	A	1.5	Check	SE	M11-1 SH. 3 (A8)	Open Closed	NA	EXC EXO	CM CM	CMP-25
<b>H1EG -1EGV-1169</b> 600# CHECK VALVE 1 1/2" ASTM A105, Y-TYP	3	Y	C	A	1.5	Check	SE	M11-1 SH. 3 (C7)	Open Closed	NA	EXC EXO	CM CM	CMP-25
<b>H1EG -1EGV-1170</b> CHECK VALVE 600# CS, SW, SA-105, Y-TYPE	3	Y	C	A	1.5	Check	SE	M11-1 SH. 3 (A7)	Open Closed	NA	EXC EXO	CM CM	CMP-25

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*EG - Safety & Turbine Aux Clg*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1EG -1EGV-704</b>	3	N	C	A	2	Check	SE	M11-1 SH. 1 (G2)	Closed	Open	NA	SKID	1 Q		
*VALVE CLASS: EBA															
<b>H1EG -1EGV-705</b>	3	N	C	A	2	Check	SE	M11-1 SH. 1 (G1)	Closed	Open	NA	SKID	1 Q		
*VALVE CLASS: EBA															
<b>H1EG -1EGV-706</b>	3	N	C	A	2	Check	SE	M11-1 SH. 1 (C1)	Closed	Open	NA	SKID	1 Q		
*VALVE CLASS: EBA															
<b>H1EG -1EGV-707</b>	3	N	C	A	2	Check	SE	M11-1 SH. 1 (B2)	Closed	Open	NA	SKID	1 Q		
*VALVE CLASS: EBA															
<b>H1EG -1EGXV-1163</b>	3	N	C	A	2.0	Process Flow Che	SE	M11-1 SH. 3 (C5)	Open	Closed	NA	EXC	1 Q		
EFCV FOR 'A' SACS DEMIN															
<b>H1EG -1EGXV-1164</b>	3	N	C	A	2.0	Process Flow Che	SE	M11-1 SH. 3 (A5)	Open	Closed	NA	EXC	1 Q		
EFCV FOR 'B' SACS DEMIN															
<b>H1EG -EG-HV-2290A</b>	3	N	B	A	3	Ball	AO	M11-1 SH. 2 (F8)	Closed	Open	Open	FSO	1 Q		
OP/V065 RHR RM CLR A SUP															
												FSTO	1 Q		
												PIT	2 Y		
												STO	1 Q		
<b>H1EG -EG-HV-2290B</b>	3	N	B	A	3	Ball	AO	M11-1 SH. 2 (C8)	Closed	Open	Open	FSO	1 Q		
OP/V068 RHR RM CLR B SUP															
												FSTO	1 Q		
												PIT	2 Y		
												STO	1 Q		
<b>H1EG -EG-HV-2290C</b>	3	N	B	A	3	Ball	AO	M11-1 SH. 2 (G8)	Closed	Open	Open	FSO	1 Q		
OP/V064 RHR RM CLR C SUP															
												FSTO	1 Q		
												PIT	2 Y		
												STO	1 Q		
<b>H1EG -EG-HV-2290D</b>	3	N	B	A	3	Ball	AO	M11-1 SH. 2 (B8)	Closed	Open	Open	FSO	1 Q		
OP/V069 RHR RM CLR D SUP															
												FSTO	1 Q		
												PIT	2 Y		
												STO	1 Q		

Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

EG - Safety & Turbine Aux Clg

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1EG</b> <b>-EG-HV-2290E</b> OP/V071 RHR RM CLR E SUP	3	N	B	A	3	Ball	AO	M11-1 SH. 2 (F8)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG</b> <b>-EG-HV-2290F</b> OP/V074 RHR RM CLR F SUP	3	N	B	A	3	Ball	AO	M11-1 SH. 2 (C8)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG</b> <b>-EG-HV-2290G</b> OP/V070 RHR RM CLR G SUP	3	N	B	A	3	Ball	AO	M11-1 SH. 2 (G8)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG</b> <b>-EG-HV-2290H</b> OP/V075 RHR RM CLR H SUP	3	N	B	A	3	Ball	AO	M11-1 SH. 2 (B8)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG</b> <b>-EG-HV-2292A</b> OP/V072 HPCI RM CLR A SUP	3	N	B	A	3	Ball	AO	M11-1 SH. 2 (E8)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG</b> <b>-EG-HV-2292B</b> OP/V073 HPCI RM CLR B SUP	3	N	B	A	3	Ball	AO	M11-1 SH. 2 (E8)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG</b> <b>-EG-HV-2293A</b> OP/V066 RCIC RM CLR A SUP	3	N	B	A	2	Gate	AO	M11-1 SH. 2 (D8)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG</b> <b>-EG-HV-2293B</b> OP/V067 RCIC RM CLR B SUP	3	N	B	A	2	Gate	AO	M11-1 SH. 2 (D8)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG</b> <b>-EG-HV-2302A</b> OP/V104 FRVS CLG COIL SUP ISLN	3	N	B	A	4	Ball	AO	M11-1 SH. 2 (G6)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		



Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

EG - Safety & Turbine Aux Clg

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1EG -EG-HV-2302B</b> OP/V106 FRVS CLG COIL SUP ISLN	3	N	B	A	4	Ball	AO	M11-1 SH. 2 (E6)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2302C</b> OP/V107 FRVS CLG COIL SUP ISLN	3	N	B	A	4	Ball	AO	M11-1 SH. 2 (D6)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2302D</b> OP/V108 FRVS CLG COIL SUP ISLN	3	N	B	A	4	Ball	AO	M11-1 SH. 2 (C6)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2302E</b> OP/V109 FRVS CLG COIL SUP ISLN	3	N	B	A	4	Ball	AO	M11-1 SH. 2 (B6)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2302F</b> OP/V105 FRVS CLG COIL SUP ISLN	3	N	B	A	4	Ball	AO	M11-1 SH. 2 (F6)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2317A</b> OP/V544 FUEL POOL HX A X-CONN 52-212123	3	N	B	A	8	Butterfly	MO	M11-1 SH. 2 (D4)	Automatic Closed NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1EG -EG-HV-2317B</b> OP/V545 FUEL POOL HX B X-CONN 52-222123	3	N	B	A	8	Butterfly	MO	M11-1 SH. 2 (D4)	Automatic Closed NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1EG -EG-HV-2320A</b> OP/V722 COMP CLR 1AK202 RTN V 52-232034	3	N	B	A	2	Globe	MO	M11-1 SH. 2 (G4)	Automatic Open NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1EG -EG-HV-2320B</b> OP/V723 COMP CLR 1BK202 RTN V 52-242034	3	N	B	A	2	Globe	MO	M11-1 SH. 2 (G4)	Automatic Open NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1EG -EG-HV-2321A</b> OP/V727 COMP CLR A RTN XCONN V 52-232051	3	N	B	A	2	Globe	MO	M11-1 SH. 2 (G3)	Automatic Closed NA	FSX PIT PVT	18 M 10 Y 10 Y		

Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

EG - Safety & Turbine Aux Clg

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1EG -EG-HV-2321B</b> OP/V726 COMP CLR B RTN XCONN V 52-242051	3	N	B	A	2	Globe	MO	M11-1 SH. 2 (G3)	AutomatiClosed	NA	FSX PIT PVT	18 M 10 Y 10 Y	
<b>H1EG -EG-HV-2325A</b> OP/V144 CS PMP RM UNIT CLR ISO	3	N	B	A	3	Ball	AO	M11-1 SH. 2 (F3)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2325B</b> OP/V146 CS PMP RM UNIT CLR ISO	3	N	B	A	3	Ball	AO	M11-1 SH. 2 (D3)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2325C</b> OP/V142 CS PMP RM UNIT CLR ISO	3	N	B	A	3	Ball	AO	M11-1 SH. 2 (G3)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2325D</b> OP/V148 CS PMP RM UNIT CLR ISO	3	N	B	A	3	Ball	AO	M11-1 SH. 2 (C3)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2325E</b> OP/V145 CS PMP RM UNIT CLR ISO	3	N	B	A	3	Ball	AO	M11-1 SH. 2 (E3)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2325F</b> OP/V147 CS PMP RM UNIT CLR ISO	3	N	B	A	3	Ball	AO	M11-1 SH. 2 (D3)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2325G</b> OP/V143 CS PMP RM UNIT CLR ISO	3	N	B	A	3	Ball	AO	M11-1 SH. 2 (F3)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2325H</b> OP/V149 CS PMP RM UNIT CLR ISO	3	N	B	A	3	Ball	AO	M11-1 SH. 2 (B3)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*EG - Safety & Turbine Aux Clg*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1EG -EG-HV-2395A</b> OP/V231 DG A AUX HXS RTN ISLN	3	N	B	A	8	Butterfly	AO	M12-1 SH. 1 (D7)	Closed Open Open	SKID	1 Q		
<b>H1EG -EG-HV-2395B</b> OP/V235 DG B AUX HXS RTN ISLN	3	N	B	A	8	Butterfly	AO	M12-1 SH. 1 (D4)	Closed Open Open	SKID	1 Q		
<b>H1EG -EG-HV-2395C</b> OP/V233 DG C AUX HXS RTN ISLN	3	N	B	A	8	Butterfly	AO	M12-1 SH. 1 (D5)	Closed Open Open	SKID	1 Q		
<b>H1EG -EG-HV-2395D</b> OP/V237 DG D AUX HXS RTN ISLN	3	N	B	A	8	Butterfly	AO	M12-1 SH. 1 (D2)	Closed Open Open	SKID	1 Q		
<b>H1EG -EG-HV-2398A</b> OP/V238 DG A RM CLR SUP ISLN V	3	N	B	A	6	Ball	AO	M12-1 SH. 1 (D7)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2398B</b> OP/V250 DG B RM CLR SUP ISLN V	3	N	B	A	6	Ball	AO	M12-1 SH. 1 (D5)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2398C</b> OP/V244 DG C RM CLR SUP ISLN V	3	N	B	A	6	Ball	AO	M12-1 SH. 1 (D6)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2398D</b> OP/V256 DG D RM CLR SUP ISLN V	3	N	B	A	6	Ball	AO	M12-1 SH. 1 (D3)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2398E</b> OP/V241 DG A RM CLR SUP ISLN V	3	N	B	A	6	Ball	AO	M12-1 SH. 1 (C7)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2398F</b> OP/V253 DG B RM CLR SUP ISLN V	3	N	B	A	6	Ball	AO	M12-1 SH. 1 (F4)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*EG - Safety & Turbine Aux Clg*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1EG -EG-HV-2398G</b> OP/V247 DG C RM CLR SUP ISLN V	3	N	B	A	6	Ball	AO	M12-1 SH. 1 (C6)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2398H</b> OP/V259 DG D RM CLR SUP ISLN V	3	N	B	A	6	Ball	AO	M12-1 SH. 1 (C3)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2446</b> OP/V1032 1AT205 LOOP A M/U 52-212271	3	N	B	A	2	Globe	MO	M10-1 SH. 2 (B7)	Closed Open NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1EG -EG-HV-2447</b> OP/V1033 1BT205 LOOP B M/U 52-222214	3	N	B	A	2	Globe	MO	M10-1 SH. 2 (B3)	Closed Open NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1EG -EG-HV-2452A</b> OP/V720 COMP CLR 1AK202 SUP V 52-232033	3	N	B	A	2	Globe	MO	M11-1 SH. 2 (G4)	Automati Open NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1EG -EG-HV-2452B</b> OP/V721 COMP CLR 1BK202 SUP V 52-242033	3	N	B	A	2	Globe	MO	M11-1 SH. 2 (G4)	Automati Open NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1EG -EG-HV-2453A</b> OP/V725 COMP CLR A SUP XCONN V 52-232042	3	N	B	A	2	Globe	MO	M11-1 SH. 2 (G4)	Automati Closed NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1EG -EG-HV-2453B</b> OP/V724 COMP CLR 1BK202 SUP V 52-242042	3	N	B	A	2	Globe	MO	M11-1 SH. 2 (G4)	Automati Closed NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1EG -EG-HV-2457A</b> OP/V709 SACS HX A1E/A2E201 BYP	3	N	B	A	20	Butterfly	AO	M11-1 SH. 1 (H7)	Open Closed Closed	FSC FSTC PIT STC	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2457B</b> OP/V708 SACS HX B1E/B2E201 BYP	3	N	B	A	20	Butterfly	AO	M11-1 SH. 1 (B7)	Open Closed Closed	FSC FSTC PIT STC	1 Q 1 Q 2 Y 1 Q		

Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

EG - Safety & Turbine Aux Clg

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1EG -EG-HV-2491A</b> OP/V003 SACS LOOP A HX INL ISO 52-212141	3	N	B	A	30	Butterfly	MO	M11-1 SH. 1 (F7)	Automati Open	NA	FSX PIT PVT	18 M 10 Y 10 Y	
<b>H1EG -EG-HV-2491B</b> OP/V007 SACS LOOP B HX INL ISO 52-222141	3	N	B	A	30	Butterfly	MO	M11-1 SH. 1 (C7)	Automati Open	NA	FSX PIT PVT	18 M 10 Y 10 Y	
<b>H1EG -EG-HV-2494A</b> OP/V004 SACS LOOP A HX INL ISO 52-232053	3	N	B	A	30	Butterfly	MO	M11-1 SH. 1 (E7)	Automati Open	NA	FSX PIT PVT	18 M 10 Y 10 Y	
<b>H1EG -EG-HV-2494B</b> OP/V008 SACS LOOP B HX INL ISO 52-242053	3	N	B	A	30	Butterfly	MO	M11-1 SH. 1 (B7)	Automati Open	NA	FSX PIT PVT	18 M 10 Y 10 Y	
<b>H1EG -EG-HV-2496A</b> OP/V028 TACS CLG LP A INBD RTN 52-212142	3	N	B	A	30	Butterfly	MO	M11-1 SH. 1 (E8)	Automati Closed	NA	FSX PIT PVT	1 Q 10 Y 10 Y	Valve stroked w/EG-HV-2522A
<b>H1EG -EG-HV-2496B</b> OP/V030 TACS CLG LP B INBD RTN 52-222142	3	N	B	A	30	Butterfly	MO	M11-1 SH. 1 (D8)	Automati Closed	NA	FSX PIT PVT	1 Q 10 Y 10 Y	Valve stroked w/EG-HV-2522B
<b>H1EG -EG-HV-2496C</b> OP/V714 TACS CLG LP A OTBD RTN 52-232142	3	N	B	A	30	Butterfly	MO	M11-1 SH. 1 (E8)	Automati Closed	NA	FSX PIT PVT	1 Q 10 Y 10 Y	Valve stroked w/EG-HV-2522C
<b>H1EG -EG-HV-2496D</b> OP/V715 TACS CLG LP B OTBD RTN 52-242142	3	N	B	A	30	Butterfly	MO	M11-1 SH. 1 (D8)	Automati Closed	NA	FSX PIT PVT	1 Q 10 Y 10 Y	Valve stroked w/EG-HV-2522D
<b>H1EG -EG-HV-2512A</b> OP/V023 RHR HX SACS RTN ISLN 52-212143	3	N	B	A	20	Butterfly	MO	M11-1 SH. 1 (G3)	Closed/en/Clos	NA	FSX PIT PVT	18 M 10 Y 10 Y	
<b>H1EG -EG-HV-2512B</b> OP/V026 RHR HX SACS RTN ISLN 52-222143	3	N	B	A	20	Butterfly	MO	M11-1 SH. 1 (B3)	Closed/en/Clos	NA	FSX PIT PVT	18 M 10 Y 10 Y	
<b>H1EG -EG-HV-2520A</b> OP/V378 RHR PMP CLR SUP ISLN V	3	N	B	A	2	Globe	AO	M11-1 SH. 1 (F2)	Closed Open Open		FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*EG - Safety & Turbine Aux Clg*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1EG -EG-HV-2520B</b> OP/V382 RHR PMP CLR SACS SUP V	3	N	B	A	2	Globe	AO	M11-1 SH. 1 (C2)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2520C</b> OP/V379 RHR PMP CLR SACS SUP V	3	N	B	A	2	Globe	AO	M11-1 SH. 1 (F1)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2520D</b> OP/V383 RHR PMP CLR SACS SUP V	3	N	B	A	2	Globe	AO	M11-1 SH. 1 (E1)	Closed Open Open	FSO FSTO PIT STO	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2522A</b> OP/V021 TACS CLG LP A INBD SUP 52-212234	3	N	B	A	30	Butterfly	HO	M11-1 SH. 1 (E3)	Automatic Closed Closed	FSC FSTC PIT STC	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2522B</b> OP/V022 TACS LP B INBD SUP ISO 52-222201	3	N	B	A	30	Butterfly	HO	M11-1 SH. 1 (D2)	Automatic Closed Closed	FSC FSTC PIT STC	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2522C</b> OP/V532 CLG LP A OTBD SUP HDR 52-232013	3	N	B	A	30	Butterfly	HO	M11-1 SH. 1 (E2)	Automatic Closed Closed	FSC FSTC PIT STC	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-2522D</b> OP/V531 CLG LP B OTBD SUP HDR 52-242054	3	N	B	A	30	Butterfly	HO	M11-1 SH. 1 (D2)	Automatic Closed Closed	FSC FSTC PIT STC	1 Q 1 Q 2 Y 1 Q		
<b>H1EG -EG-HV-7922A</b> OP/V546 FUEL POOL HX A X-CONN 52-212124	3	N	B	A	8	Butterfly	MO	M11-1 SH. 2 (C4)	Automatic Closed NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1EG -EG-HV-7922B</b> OP/V547 FUEL POOL HX B X-CONN 52-222124	3	N	B	A	8	Butterfly	MO	M11-1 SH. 2 (C4)	Automatic Closed NA	FSX PIT PVT	18 M 10 Y 10 Y		

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*EP - Service Water Screens & Backwash*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1EP -1EPV-003</b>	3	N	C	A	6	Check	SE	M10-1 SH. 1 (D7)	Automatien/Clos	NA	EXC EXO	CM CM	CMP-26
A SPRAY WASH PUMP DISCH CHECK VALVE													
<b>H1EP -1-EP-V007</b>	3	N	B	A	6	Butterfly	MAN	M10-1 SH. 1 (D6)	Closed Open	NA	EXO	2 Y	
SERV WTR SCR N WSH PMP S XTIE V													
<b>H1EP -1EPV-010</b>	3	N	C	A	6	Check	SE	M10-1 SH. 1 (D5)	Automatien/Clos	NA	EXC EXO	CM CM	CMP-26
C SPRAY WASH PUMP DISCH CHECK VALVE													
<b>H1EP -1EPV-016</b>	3	N	C	A	6	Check	SE	M10-1 SH. 1 (D4)	Automatien/Clos	NA	EXC EXO	CM CM	
B SPRAY WASH PUMP DISCH CHECK VALVE													
<b>H1EP -1-EP-V020</b>	3	N	B	A	6	Butterfly	MAN	M10-1 SH. 1 (D3)	Closed/en/Clos	NA	EXO	2 Y	
SERV WTR SCR N WSH PMP XTIE VLV													
<b>H1EP -1EPV-023</b>	3	N	C	A	6	Check	SE	M10-1 SH. 1 (D3)	Automatien/Clos	NA	EXC EXO	CM CM	CMP-26
D SPRAY WASH PUMP DISCH CHECK VALVE													
<b>H1EP -EP-HV-2225A</b>	3	N	B	A	6	Butterfly	MO	M10-1 SH. 1 (D7)	Automati Open	NA	FSX PIT PVT	18 M 10 Y 10 Y	
OP/V001 SCR N WSH PMP A DSCH VL 52-553042													
<b>H1EP -EP-HV-2225B</b>	3	N	B	A	6	Butterfly	MO	M10-1 SH. 1 (D4)	Automati Open	NA	FSX PIT PVT	18 M 10 Y 10 Y	
OP/V014 SCR N WSH PMP B DSCH VL 52-563042													
<b>H1EP -EP-HV-2225C</b>	3	N	B	A	6	Butterfly	MO	M10-1 SH. 1 (D6)	Automati Open	NA	FSX PIT PVT	18 M 10 Y 10 Y	
OP/V008 SCR N WSH PMP C DSCH V 52-573042													
<b>H1EP -EP-HV-2225D</b>	3	N	B	A	6	Butterfly	MO	M10-1 SH. 1 (D3)	Automati Open	NA	FSX PIT PVT	18 M 10 Y 10 Y	
OP/V021 SCR N WSH PMP D DSCH VL 52-583042													

Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

FC - RCIC Turbine Steam

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1FC -1FCPSE-D001-E5</b> *RCIC PMP TURB EXHAUST VENT	2	N	D	A	8	Rupture Disk	SE	M50-1 SH. 1 (E4)	Closed/en/Clos	NA	RD	5 Y	
<b>H1FC -1FCPSE-D002-E5</b> *RCIC TURB EXH LINE VENT	2	N	D	A	8	Rupture Disk	SE	M50-1 SH. 1 (G4)	Closed/en/Clos	NA	RD	5 Y	
<b>H1FC -1FCPSV-F018-E51</b> *RCIC CLG WATER SUPPLY HDR	2	N	C	A	1	Relief	SE	M56-1 SH. 1 (C2)	Closed/en/Clos	NA	RV	10 Y	
<b>H1FC -1FCPSV-F033-E51</b> RCIC GLAND SEAL COND VAC TANK	2	N	C	A	1.5	Relief	SE	M50-1 SH. 1 (C3)	Closed/en/Clos	NA	RV	10 Y	
<b>H1FC -1FCPSV-F063-E51</b> *RCIC TURBINE EXHAUST VALVE	2	N	C	A	2	Relief	SE	M49-1 SH. 1 (C7)	Closed Open	NA	RV	10 Y	
<b>H1FC -1FCPSV-F064-E51</b> *RCIC TURBINE EXHAUST VALVE	2	N	C	A	2	Relief	SE	M49-1 SH. 1 (C7)	Closed Open	NA	RV	10 Y	
<b>H1FC -1-FC-V003</b> RCIC STM EXC CHK VLV	2	N	AC	A	10	Modified Check	SE	M49-1 SH. 1 (C4)	Closed/en/Clos	NA	EXC EXO LT-H2O TQ-FOI TQ-LI	Q Q 18 M Q Q	
<b>H1FC -1FCV-010</b> *VALVE CLASS: EBA	2	N	AC	A	2	Check	SE	M49-1 SH. 1 (C4)	Closed Closed	NA	EXC EXO LT-H2O	CM CM 18 M	CMP-28
<b>H1FC -1FCXV-4150A</b> *RCIC TURB STM EXC FL CHK VLV	1	N	C	A	1	ccess Flow Che	SE	M49-1 SH. 1 (F6)	Open/en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1FC -1FCXV-4150B</b> *RCIC TURB STM EXC FL CHK VLV	1	N	C	A	1	ccess Flow Che	SE	M49-1 SH. 1 (D6)	Open/en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1FC -1FCXV-4150C</b> *RCIC TURB EXC FL CHK VLV	1	N	C	A	1	ccess Flow Che	SE	M49-1 SH. 1 (F6)	Open/en/Clos	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01



Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*FC - RCIC Turbine Steam*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1FC</b> <b>-1FCXV-4150D</b> *RCIC TURB STM EXC FL CHK VLV	1	N	C	A	1	Process Flow Che	SE	M49-1 SH. 1 (D6)	Open en/Clos NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01	
<b>H1FC -FC-HV-4282 2</b>	N	B	A	A	3	Globe	MO	M50-1 SH. 1 (E3)	Open en/Clos NA	SKID	1 Q		
OP/V022 RCIC TURB TRIP/THROT V 72-261062													
<b>H1FC -FC-HV-F004 2</b>	N	B	A	A	2	Globe	AO	M50-1 SH. 1 (B4)	Open Closed Closed	PIT SKID	2 Y 1 Q		
OP/V033 VAC PP TO CRW ISLN VLV													
<b>H1FC -FC-HV-F007 1</b>	N	A	A	A	4	Gate	MO	M49-1 SH. 1 (E6)	Open en/Clos NA	FSX LJ PIT PVT	18 M Opt B 10 Y 10 Y	CS - 24	
OP/V001 RCIC STM INBD ISO VLV 52-242102													
<b>H1FC -FC-HV-F008 1</b>	N	A	A	A	4	Gate	MO	M49-1 SH. 1 (E6)	Open en/Clos NA	FSX LJ PIT PVT	18 M Opt B 10 Y 10 Y		
OP/V002 RCIC STM OTBD ISLN VLV 52-222022													
<b>H1FC -FC-HV-F025 2</b>	N	B	A	A	2	Globe	AO	M49-1 SH. 1 (C2)	Open Closed Closed	FSC FSTC PIT STC	1 Q 1 Q 2 Y 1 Q		
OP/V015 RCIC STM LN DRN VLV													
<b>H1FC -FC-HV-F026 2</b>	N	B	A	A	2	Globe	AO	M49-1 SH. 1 (B2)	Open Closed Closed	FSC FSTC PIT STC	1 Q 1 Q 2 Y 1 Q		
OP/V016 RCIC STM LN DRN VLV													
<b>H1FC -FC-HV-F045 2</b>	N	B	A	A	4	Globe	MO	M50-1 SH. 1 (E3)	Closed en/Clos NA	FSX PIT PVT STC STO	1 Q 6 Y 6 Y 1 Q 1 Q		
OP/V021 TURB MN STM SUP ISLN V 72-261091													
<b>H1FC -FC-HV-F059 2</b>	N	A	A	A	10	Gate	MO	M49-1 SH. 1 (C6)	Open en/Clos NA	FSX LT-H2O PIT PVT	18 M 18 M 10 Y 10 Y		
OP/V005 RCIC STM EXHISO VLV 72-261031													

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*FC - RCIC Turbine Steam*

Valve ID	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
Description									Normal	Safety	Fail-Safe				
<b>H1FC -FC-HV-F060</b> 2		N	A	A	2	Globe	MO	M49-1 SH. 1 (B5)	Open	Closed	NA	FSX	18 M		
												LT-H2O	18 M		
OP/V011 RCIC VAC PMP DSCH VLV 72-261042												PIT	10 Y		
												PVT	10 Y		
<b>H1FC -FC-HV-F062</b> 2		N	A	A	3	Gate	MO	M49-1 SH. 1 (C7)	Open	Open/Clos	NA	FSX	18 M		
OP/V006 RCIC VAC BRKR ISO VLV 52-222181												LT-H2O	18 M		
												PIT	10 Y		
												PVT	10 Y		
<b>H1FC -FC-HV-F076</b> 1		N	A	A	2	Globe	MO	M49-1 SH. 1 (E6)	Closed	Closed	NA	FSX	18 M	CS - 24	
OP/V048 RCIC STM LN WARMUP VLV 52-242103												LJ	Opt B		
												PIT	10 Y		
												PVT	10 Y		
<b>H1FC -FC-HV-F084</b> 2		N	A	A	3	Gate	MO	M49-1 SH. 1 (C8)	Open	Open/Clos	NA	FSX	18 M		
OP/V007 RCIC VAC BRKRISO VLV 52-242211												LJ	Opt B		
												PIT	10 Y		
												PVT	10 Y		
<b>H1FC -FC-LV-F005</b> 2		N	B	A	1	Globe	AO	M50-1 SH. 1 (A4)	Open/Clos	Closed	Closed	SKID	1 Q		
RCIC COND PMP DSCH TO CRW ISLN															

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*FD - HPCI Turbine Steam*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1FD -1FDFV-4879-E41</b> HPCI TURB CONT VALVE	2	N	B	A	10	Gate	HO	M56-1 SH. 1 (F3)	Closed/en/Clos	Closed	SKID	1 Q	
<b>H1FD -1FDFV-4880-E41</b> HPCI TURB STOP VALVE & ACTTR	2	N	B	A	10	Globe	HO	M56-1 SH. 1 (F3)	Closed	Open	NA	SKID	1 Q
<b>H1FD -1FDPSE-D003-E4</b> *HPCI TURB EXH LINE VENT	2	N	D	A	16	Rupture Disk	SE	M56-1 SH. 1 (E4)	Closed/en/Clos	NA	RD	5 Y	
<b>H1FD -1FDPSE-D004-E4</b> *HPCI TURB EXH LINE VENT	2	N	D	A	16	Rupture Disk	SE	M56-1 SH. 1 (G4)	Closed/en/Clos	NA	RD	5 Y	
<b>H1FD -1FDPSV-F018-E41</b> *GLND SEAL COND RELIEF	2	N	C	A	1.5	Relief	SE	M56-1 SH. 1 (C2)	Closed/en/Clos	NA	RV	10 Y	
<b>H1FD -1FDPSV-F050-E41</b> *HPCI CLG WATER SUPPLY HDR	2	N	C	A	1	Relief	SE	M56-1 SH. 1 (B5)	Closed/en/Clos	NA	RV	10 Y	
<b>H1FD -1FDPSV-F076-E41</b> *HPCI VAC BKR LINE	2	N	C	A	3	Relief	SE	M55-1 SH. 1 (C7)	Closed	Open	NA	RV	10 Y
<b>H1FD -1FDPSV-F077-E41</b> *HPCI VAC BKR LINE	2	N	C	A	3	Relief	SE	M55-1 SH. 1 (C8)	Closed	Open	NA	RV	10 Y
<b>H1FD -1-FD-V004</b> HPCI TURB EXC CHK VLV	2	N	AC	A	20	Modified Check	SE	M55-1 SH. 1 (C4)	Closed/en/Clos	NA	EXC EXO LT-H2O TQ-FOF TQ-LF	Q Q 18 M Q Q	
<b>H1FD -1FDV-032</b> HPCI condensate pump discharge check vlv	2	N	C	A	2	Check	SE	M56-1 SH. 1 (B4)	en/Clos	Closed	NA	EXC EXO	1 Q 1 Q
<b>H1FD -1FDV-038</b> *VALVE CLASS: EBA	2	N	C	A	2	Check	SE	M56-1 SH. 1 (C4)	Closed	Open	NA	SKID	1 Q
<b>H1FD -1FDV-076</b> HPCI Aux Oil Pump Disch CV	NC	Y	C	A	1.5	Check	SE	PN1-E41-C00 2-0050 (G1)	en/Closen/Clos	NA	SKID	1 Q	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*FD - HPCI Turbine Steam*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1FD -1FDV-077</b> HPCI Aux Oil Pump Disch CV	NC	Y	C	A	1.5	Check	SE	PN1-E41-C00 2-0050 (G1)	Open/Closed/Closed	NA	SKID	1 Q	
<b>H1FD -1FDV-078</b> HPCI Aux Oil Pump Disch CV	NC	Y	C	A	1	Check	SE	PN1-E41-C00 2-0050 (G1)	Closed Open	NA	SKID	1 Q	
<b>H1FD -1FDV-079</b> HPCI Aux Oil Pump Disch CV	NC	Y	C	A	2	Check	SE	PN1-E41-C00 2-0050 (G1)	Open/Closed/Closed	NA	SKID	1 Q	
<b>H1FD -1FDXV-4800A</b> *HPCI STM SUPP INSTR. LINE	1	N	C	A	1	Process Flow Check	SE	M55-1 SH. 1 (E6)	Open Open/Closed	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1FD -1FDXV-4800B</b> *HPCI STM SUPP INSTR. LINE	1	N	C	A	1	Process Flow Check	SE	M55-1 SH. 1 (E6)	Open Open/Closed	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1FD -1FDXV-4800C</b> *HPCI STM SUPP INSTR. LINE	1	N	C	A	1	Process Flow Check	SE	M55-1 SH. 1 (E6)	Open Open/Closed	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1FD -1FDXV-4800D</b> *HPCI STM SUPP INSTR. LINE	1	N	C	A	1	Process Flow Check	SE	M55-1 SH. 1 (E6)	Open Open/Closed	NA	EXC EXO PIT	18 M 18 M 18 M	VR - 01 VR - 01 VR - 01
<b>H1FD -FD-HV-F0012</b> OP/V003 HPCI TURB STM SPLY 72-251081	N	B	A	A	10	Gate	MO	M55-1 SH. 1 (D3)	Closed Open	NA	FSX PIT PVT STO	1 Q 10 Y 10 Y 1 Q	
<b>H1FD -FD-HV-F0021</b> OP/V001 HPCI STM INBD ISLN MOV 52-232203	N	A	A	A	10	Gate	MO	M55-1 SH. 1 (F6)	Open Open/Closed	NA	FSX LJ PIT PVT	18 M Opt B 10 Y 10 Y	CS - 23
<b>H1FD -FD-HV-F0031</b> OP/V002 HPCI STM OTBD ISLN MOV 52-212053	N	A	A	A	10	Gate	MO	M55-1 SH. 1 (F6)	Open Open/Closed	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*FD - HPCI Turbine Steam*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1FD -FD-HV-F0262</b>		N	B	A	2	Globe	AO	M56-1 SH. 1 (B5)	Open	Closed	Closed	FSC	1 Q		
OP/V034 VAC TK ISLN													FSTC	1 Q	
													PIT	2 Y	
													STC	1 Q	
<b>H1FD -FD-HV-F0282</b>		N	B	A	2	Globe	AO	M55-1 SH. 1 (C3)	Open	Closed	Closed	FSC	1 Q		
OP/V017 STM TRAP ISLN VLV													FSTC	1 Q	
													PIT	2 Y	
													STC	1 Q	
<b>H1FD -FD-HV-F0292</b>		N	B	A	2	Globe	AO	M55-1 SH. 1 (C3)	Open	Closed	Closed	FSC	1 Q		
OP/V018 STM TRAP ISLN VLV													FSTC	1 Q	
													PIT	2 Y	
													STC	1 Q	
<b>H1FD -FD-HV-F0712</b>		N		A	20	Gate	MO	M55-1 SH. 1 (C7)	Open	Open/Clos	NA	FSX	18 M		
OP/V006 TURB EXH ISLN 72-251022													LT-H2O	18 M	
													PIT	10 Y	
													PVT	10 Y	
													STC	18 M	
<b>H1FD -FD-HV-F0752</b>		N		A	3	Gate	MO	M55-1 SH. 1 (C7)	Open	Open/Clos	NA	FSX	18 M		
OP/V007 VAC BRKR ISLN 52-212231													LT-H2O	18 M	
													PIT	10 Y	
													PVT	10 Y	
<b>H1FD -FD-HV-F0792</b>		N		A	3	Gate	MO	M55-1 SH. 1 (C8)	Open	Open/Clos	NA	FSX	18 M		
OP/V010 VAC BRKRISO 52-232022_CATWLK													LJ	Opt B	
													PIT	10 Y	
													PVT	10 Y	
													STC	18 M	
<b>H1FD -FD-HV-F1001</b>		N		A	2	Globe	MO	M55-1 SH. 1 (F6)	Closed	Closed	NA	FSX	18 M	CS - 23	
OP/V051 HPCI W/U VLV 52-232104													LJ	Opt B	
													PIT	10 Y	
													PVT	10 Y	

Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

GB - Chilled Water

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
									Normal	Safety	Fail-Safe				
<b>H1GB -1GBPSV-9522A</b> *CH WTR LOOP A SUPPLY	2	N	AC	A	1	Relief	SE	M87-1 SH. 2 (B3)	Closed	en/Clos	NA	LJ RV	2 Y 10 Y		
<b>H1GB -1GBPSV-9522B</b> *CH WTR LOOP B SUPPLY	2	N	AC	A	1	Relief	SE	M87-1 SH. 2 (A3)	Closed	en/Clos	NA	LJ RV	5 Y 10 Y		
<b>H1GB -1GBPSV-9523A</b> *CH WTR LOOP A RTN	2	N	AC	A	1	Relief	SE	M87-1 SH. 2 (B3)	Closed	en/Clos	NA	LJ RV	5 Y 10 Y		
<b>H1GB -1GBPSV-9523B</b> *CH WTR LOOP B RTN	2	N	AC	A	1	Relief	SE	M87-1 SH. 2 (A3)	Closed	en/Clos	NA	LJ RV	Opt B 10 Y		
<b>H1GB -GB-HV-9531A1</b> OP/V048 LP A SUP OUTBD CNTMT 52-242181	2	N	A	A	8	Gate	MO	M87-1 SH. 2 (B4)	Open	Closed	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	CS - 17	
<b>H1GB -GB-HV-9531A2</b> OP/V046 LP A RET OUTBD CNTMT 52-242182	2	N	A	A	8	Gate	MO	M87-1 SH. 2 (B4)	Open	Closed	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	CS - 17	
<b>H1GB -GB-HV-9531A3</b> OP/V070 LP B SUP OUTBD CNTMT 52-242183	2	N	A	A	8	Gate	MO	M87-1 SH. 2 (A4)	Open	Closed	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	CS - 17	
<b>H1GB -GB-HV-9531A4</b> OP/V071 LP B RET OUTBD CNTMT 52-242184	2	N	A	A	8	Gate	MO	M87-1 SH. 2 (A4)	Open	Closed	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	CS - 17	
<b>H1GB -GB-HV-9531B1</b> OP/V081 LP A SUP INBD CNTMT 52-232181	2	N	A	A	8	Gate	MO	M87-1 SH. 2 (B3)	Open	Closed	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	CS - 17	

Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

GB - Chilled Water

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1GB</b> <b>-GB-HV-9531B2</b> OP/V082 LP A RET INBD CNTMT 52-232182	2	N	A	A	8	Gate	MO	M87-1 SH. 2 (B3)	Open	Closed	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	CS - 17	
<b>H1GB</b> <b>-GB-HV-9531B3</b> OP/V083 LP B SUP INBD CNTMT 52-232183	2	N	A	A	8	Gate	MO	M87-1 SH. 2 (A3)	Open	Closed	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	CS - 17	
<b>H1GB</b> <b>-GB-HV-9531B4</b> OP/V084 LP B RET INBD CNTMT 52-232193	2	N	A	A	8	Gate	MO	M87-1 SH. 2 (A3)	Open	Closed	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	CS - 17	

Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

GJ - Aux Bldg Chilled Water - Cntrl Rm

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1GJ -1GJPSV-9634A</b> *CONTR EQUIP RM CLR AVH407 OUT	3	N	C	A	1	Relief	SE	M90-1 SH. 1 (G4)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9634B</b> *CONT EQUIP RM CLR BVH407 OUT	3	N	C	A	1	Relief	SE	M90-1 SH. 2 (G6)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9637A</b> *CONTROL RM CLR AVH403 OUT	3	N	C	A	1	Relief	SE	M90-1 SH. 1 (F3)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9637B</b> *CONT ROOM CLR BVH403 OUT	3	N	C	A	1	Relief	SE	M90-1 SH. 2 (F3)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9644A</b> CONT RM CHW DEMIN TANK AT402 RELIEF VLV	3	N	C	A	1" x 1"	Relief	SE	M90-1 SH. 1 (E5)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9644B</b> CONT RM CHW DEMIN TANK BT402 RELIEF VLV	3	N	C	A	1" x 1"	Relief	SE	M90-1 SH. 2 (D5)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9652A</b> *WTR CHILLER AK400 RTN	3	N	C	A	1	Relief	SE	M90-1 SH. 1 (A5)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9652A1</b> AK400 LUBE OIL COOLER R-12 RELIEF VLV	3	N	C	A	1	Relief	SE	M90-1 SH. 1 (B5)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9652A2</b> AK400 CH WTR COOLER R-12 PSV (MIDDLE)	3	N	C	A	1	Relief	SE	M90-1 SH. 1 (A5)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9652A3</b> AK400 CH WTR COOLER R-12 PSV (WEST)	3	N	C	A	1	Relief	SE	M90-1 SH. 1 (A6)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9652A4</b> AK400 CH WTR COOLER R-12 PSV (EAST)	3	N	C	A	1	Relief	SE	M90-1 SH. 1 (B5)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9652B</b> *WTR CHILLER BK400 RTN	3	N	C	A	1	Relief	SE	M90-1 SH. 2 (B5)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9652B1</b> BK400 LUBE OIL COOLER R-12 RELIEF VLV	3	N	C	A	1	Relief	SE	M90-1 SH. 2 (B5)	Closed/en/Clos	NA	RV	10 Y	



Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*GJ - Aux Bldg Chilled Water - Cntrl Rm*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1GJ -1GJPSV-9652B2</b> BK400 CH WTR COOLER R-12 PSV (MIDDLE)	3	N	C	A	1	Relief	SE	M90-1 SH. 2 (A5)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9652B3</b> BK400 CH WTR COOLER R-12 PSV (WEST)	3	N	C	A	1	Relief	SE	M90-1 SH. 2 (B6)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9652B4</b> BK400 CH WTR COOLER R-12 PSV (EAST)	3	N	C	A	1	Relief	SE	M90-1 SH. 2 (B5)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9666A</b> *WTR CHILLER AK403 OUTLET	3	N	C	A	1	Relief	SE	M90-1 SH. 3 (G7)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9666A1</b> AK403 LUBE OIL COOLER R-114 RELIEF VLV	3	N	C	A	1	Relief	SE	M90-1 SH. 3 (G8)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9666A2</b> AK403 CH WTR COOLER R-114 PSV (MIDDLE)	3	N	C	A	1	Relief	SE	M90-1 SH. 3 (F8)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9666A3</b> AK403 CH WTR COOLER R-114 PSV (EAST)	3	N	C	A	1	Relief	SE	M90-1 SH. 3 (F8)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9666A4</b> AK403 CH WTR COOLER R-114 PSV (WEST)	3	N	C	A	1	Relief	SE	M90-1 SH. 3 (F8)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9666B</b> *WATER CHILLER BK403 OUTLET	3	N	C	A	1	Relief	SE	M90-1 SH. 3 (B7)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9666B1</b> BK403 LUBE OIL COOLER R-114 RELIEF VLV	3	N	C	A	1	Relief	SE	M90-1 SH. 3 (B8)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9666B2</b> BK403 CH WTR COOLER R-114 PSV (MIDDLE)	3	N	C	A	1	Relief	SE	M90-1 SH. 3 (A8)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9666B3</b> BK403 CH WTR COOLER R-114 PSV (WEST)	3	N	C	A	1	Relief	SE	M90-1 SH. 3 (B8)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ -1GJPSV-9666B4</b> BK403 CH WTR COOLER R-114 PSV (EAST)	3	N	C	A	1	Relief	SE	M90-1 SH. 3 (A8)	Closed/en/Clos	NA	RV	10 Y	

Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

GJ - Aux Bldg Chilled Water - Cntrl Rm

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1GJ</b> <b>-1GJPSV-9667A</b> *1E PNL RM SPLY CLR AVH408 OUT	3	N	C	A	1	Relief	SE	M90-1 SH. 3 (H4)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ</b> <b>-1GJPSV-9667B</b> *1E PNL RM SPLY CLR BVH408 OUT	3	N	C	A	1	Relief	SE	M90-1 SH. 3 (C4)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ</b> <b>-1GJPSV-9668A</b> *TSC AC UNIT 00VH314 COIL A OUT	3	N	C	A	1	Relief	SE	M90-1 SH. 3 (H3)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ</b> <b>-1GJPSV-9668B</b> *TSC AC UNIT 00VH314 COIL B OUT	3	N	C	A	1	Relief	SE	M90-1 SH. 3 (C3)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ</b> <b>-1GJPSV-9689A</b> CL1E PNL CHW DEMIN TANK AT416 RELIEF VLV	3	N	C	A	1" x 1"	Relief	SE	M90-1 SH. 3 (F3)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ</b> <b>-1GJPSV-9689B</b> CL1E PNL CHW DEMIN TANK BT416 RELIEF VLV	3	N	C	A	1" x 1"	Relief	SE	M90-1 SH. 3 (E3)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GJ</b> <b>-1GJTV-9634A</b> *CONT EQUIP RM CLR AVH407 BYP	3	N	B	A	6	Threeway	AO	M90-1 SH. 1 (G4)	Automatic/Closed	Closed	FSC FSTC	1 Q 1 Q	
<b>H1GJ</b> <b>-1GJTV-9634B</b> *CONT EQUIP RM CLR BVH407 BYP	3	N	B	A	6	Threeway	AO	M90-1 SH. 2 (G6)	Automatic/Closed	Closed	FSC FSTC	1 Q 1 Q	
<b>H1GJ</b> <b>-1GJTV-9637A</b> *CONTROL RM CLR AVH403 BYP	3	N	B	A	4	Threeway	AO	M90-1 SH. 1 (G3)	Automatic/Open	Open	FSO FSTO	1 Q 1 Q	
<b>H1GJ</b> <b>-1GJTV-9637B</b> *CONT RM CLR BVH403 BYP	3	N	B	A	4	Threeway	AO	M90-1 SH. 2 (G3)	Automatic/Open	Open	FSO FSTO	1 Q 1 Q	
<b>H1GJ</b> <b>-1GJTV-9667A</b> 1E PNL RM SPLY CLR AVH408 BYP	3	N	B	A	4	Threeway	AO	M90-1 SH. 3 (G4)	Automatic/Closed	Closed	FSC FSTC	1 Q 1 Q	
<b>H1GJ</b> <b>-1GJTV-9667B</b> *1E PNL RM SPLY CLR BVH408 BYP	3	N	B	A	4	Threeway	AO	M90-1 SH. 3 (B4)	Automatic/Closed	Closed	FSC FSTC	1 Q 1 Q	
<b>H1GJ</b> <b>-1GJTV-9762A</b> TSC AC UNIT 00VH314 COIL A BYP	3	N	B	A	3	Threeway	AO	M90-1 SH. 3 (G3)	Automatic/Closed	Closed	FSC FSTC	1 Q 1 Q	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

Unit 1

*GJ - Aux Bldg Chilled Water - Cntrl Rm*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	----- Position ----- Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1GJ -1GJTV-9762B</b> TSC AC UNIT 00VH314 COIL B	3	N	B	A	3	Threeway	AO	M90-1 SH. 3 (B3)	AutomatiClosed Closed	FSC FSTC	1 Q 1 Q		
<b>H1GJ -GJ-TV-9768A</b> RSP 00VH316 A COIL TEMP CTL TBPE	3	N	B	A	1.5	Gate	AO	M90-1 SH. 3 (F4)	AutomatiOpen Open	FSO FSTO	1 Q 1 Q		
<b>H1GJ -GJ-TV-9768B</b> RSP 00VH316 B COIL TEMP CTL TBPE	3	N	B	A	1.5	Gate	AO	M90-1 SH. 3 (A4)	AutomatiOpen Open	FSO FSTO	1 Q 1 Q		

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*GP - Pri Cont Leak Rate Test*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1GP -1-GP-V001</b>	2	N	A	P	1	Globe	MAN	M60-1 SH. 1 (C4)	Closed	Closed	NA	LJ	Opt B		
ILRT SENS LNISO VLV _AZ=45															
<b>H1GP -1-GP-V002</b>	2	N	A	P	1	Globe	MAN	M60-1 SH. 1 (C4)	Closed	Closed	NA	LJ	Opt B		
ILRT SENS LNISO VLV _PEN J36															
<b>H1GP -1-GP-V004</b>	2	N	A	P	1	Globe	MAN	M60-1 SH. 1 (C4)	Closed	Closed	NA	LJ	Opt B		
ILRT SENSING LINE ISO VLV															
<b>H1GP -1-GP-V005</b>	2	N	A	P	1	Globe	MAN	M60-1 SH. 1 (C4)	Closed	Closed	NA	LJ	Opt B		
ILRT SENSING LINE ISLN VLV AZ=250															
<b>H1GP -1-GP-V120</b>	2	N	A	P	1	Globe	MAN	M60-1 SH. 1 (E5)	Closed	Closed	NA	LJ	Opt B		
ILRT SENS LNISO VLV _AZ=45															
<b>H1GP -1-GP-V122</b>	2	N	A	P	1	Globe	MAN	M60-1 SH. 1 (E4)	Closed	Closed	NA	LJ	Opt B		
ILRT SENS LNISO VLV _PEN J36															

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*GS - Containment Atmosphere Control*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	----- Position ----- Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1GS -1GSPSV-4946A</b> *SUPPRN CHMBR VAC BRKR NW QDRNT	2	N	AC	A	12	Relief	SE	M57-1 SH. 1 (C5)	Closed/en/Clos	NA	EXC EXO LT-P/F PIT SPTV	Q Q 18 M 18 M 18 M	70195597
<b>H1GS -1GSPSV-4946B</b> *SUPPRN CHMBR VAC BRKR NW QDRNT	2	N	AC	A	12	Relief	SE	M57-1 SH. 1 (C5)	Closed/en/Clos	NA	EXC EXO LT-P/F PIT SPTV	Q Q 1 RF 18 M 18 M	70195597
<b>H1GS -1GSPSV-4946C</b> *SUPPRN CHMBR VAC BRKR SE QDRNT	2	N	AC	A	12	Relief	SE	M57-1 SH. 1 (C5)	Closed/en/Clos	NA	EXC EXO LT-P/F PIT SPTV	Q Q 18 M 18 M 18 M	70195597
<b>H1GS -1GSPSV-4946D</b> *SUPPRN CHMBR VAC BRKR SE QDRNT	2	N	AC	A	12	Relief	SE	M57-1 SH. 1 (C5)	Closed/en/Clos	NA	EXC EXO LT-P/F PIT SPTV	Q Q 18 M 18 M 18 M	70195597
<b>H1GS -1GSPSV-4946E</b> *SUPPRN CHMBR VAC BRKR SW QDRNT	2	N	AC	A	12	Relief	SE	M57-1 SH. 1 (C5)	Closed/en/Clos	NA	EXC EXO LT-P/F PIT SPTV	Q Q 18 M 18 M 18 M	70195597
<b>H1GS -1GSPSV-4946F</b> *SUPPR CHMBR VAC BRKR SW QDRNT	2	N	AC	A	12	Relief	SE	M57-1 SH. 1 (C5)	Closed/en/Clos	NA	EXC EXO LT-P/F PIT SPTV	Q Q 18 M 18 M 18 M	70195597
<b>H1GS -1GSPSV-4946G</b> *SUPPR CHMBR VAC BRKR NE QDRNT	2	N	AC	A	12	Relief	SE	M57-1 SH. 1 (C5)	Closed/en/Clos	NA	EXC EXO LT-P/F PIT SPTV	Q Q 18 M 18 M 18 M	70195597

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*GS - Containment Atmosphere Control*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1GS -1GSPSV-4946H</b> *SUPPR CHMBR VAC BRKR NE QDRNT	2	N	AC	A	12	Relief	SE	M57-1 SH. 1 (C5)	Closed/en/Clos	NA	EXC EXO LT-P/F PIT SPTV	Q Q 18 M 18 M 18 M	70195597
<b>H1GS -1GSPSV-4986A1</b> *5% HYDROGEN RELIEF VALVE	3	N	C	A	1.5	Relief	SE	M57-1 SH. 1 (B6)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GS -1GSPSV-4986A2</b> *20% OXYGEN RELIEF VALVE	3	N	C	A	1.5	Relief	SE	M57-1 SH. 1 (B6)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GS -1GSPSV-4986A3</b> *5% OXYGEN RELIEF VALVE	3	N	C	A	1.5	Relief	SE	M57-1 SH. 1 (B5)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GS -1GSPSV-4986B1</b> *5% HYDROGEN RELIEF VALVE	3	N	C	A	1.5	Relief	SE	M57-1 SH. 1 (B3)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GS -1GSPSV-4986B2</b> *20% OXYGEN RELIEF VALVE	3	N	C	A	1.5	Relief	SE	M57-1 SH. 1 (B3)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GS -1GSPSV-4986B3</b> *5% OXYGEN RELIEF VALVE	3	N	C	A	1.5	Relief	SE	M57-1 SH. 1 (B2)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GS -1GSPSV-5030</b> RX BLDG TO TORUS RELIEF VACUUM BREAKER (	2	N	AC	A	24	Relief	SE	M57-1 SH. 1 (D7)	Closed/en/Clos	NA	EXC EXO LJ PIT SPTV	1 Q 1 Q 2 Y 18 M 18 M	
<b>H1GS -1GSPSV-5032</b> RX BLDG TO TORUS RELIEF VACUUM BREAKER (	2	N	AC	A	24	Relief	SE	M57-1 SH. 1 (D3)	Closed/en/Clos	NA	EXC EXO LJ PIT SPTV	1 Q 1 Q 2 Y 18 M 18 M	
<b>H1GS -1GSPSV-5745A1</b> *20% HYDROGEN RELIEF VALVE	3	N	C	A	1.5	Relief	SE	M57-1 SH. 1 (G3)	Closed/en/Clos	NA	RV	10 Y	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

Unit 1

*GS - Containment Atmosphere Control*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1GS -1GSPSV-5745B1</b> *20% HYDROGEN RELIEF VALVE	3	N	C	A	1.5	Relief	SE	M57-1 SH. 1 (G2)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GS -1GSPSV-6292A</b> *CNTNMNT ATM VLV OP ACCUM AT277	3	N	C	A	1	Relief	SE	M57-1 SH. 1 (D7)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GS -1GSPSV-6292B</b> *CNTNMNT ATM VLV OP ACCUM BT277	3	N	C	A	1	Relief	SE	M57-1 SH. 1 (C3)	Closed/en/Clos	NA	RV	10 Y	
<b>H1GS -1GSV-054</b> CONTAINMENT ATMOSPHERE CONTROL	2	N	C	A	1	Check	SE	M57-1 SH. 1 (E4)	en/Clos Closed	NA	EXC EXO	1 RF 1 RF	RJ - 13 RJ - 13
<b>H1GS -1GSV-055</b> CONTAINMENT ATMOSPHERE CONTROL	2	N	C	A	1	Check	SE	M57-1 SH. 1 (D4)	en/Clos Closed	NA	EXC EXO	1 RF 1 RF	RJ - 13 RJ - 13
<b>H1GS -1GSV-081</b> INSTRUMENT AIR SUPPLY TO 1A-T-277 CHECK	3	N	AC	A	1	Check	SE	M57-1 SH. 1 (D7)	Open Closed	NA	EXC EXO LT-Air	CM CM 2 Y	CMP-29
<b>H1GS -1GSV-093</b> INST AIR TO TORUS VACUUM BREAKER ACCUMUL	3	N	AC	A	1	Check	SE	M57-1 SH. 1 (C2)	Open Closed	NA	EXC EXO LT-Air	CM CM 2 Y	CMP-29
<b>H1GS -1GSV-138</b> INSTRUMENT GAS TO VACUUM BREAKER VALVE A	3	N	AC	A	1	Check	SE	M57-1 SH. 1 (C2)	Open Closed	NA	EXC EXO LT-Air	CM CM 2 Y	CMP-29
<b>H1GS -1GSV-139</b> CONTAINMENT COMBUSTIBLE GAS CONTROL	3	N	AC	A	1	Check	SE	M57-1 SH. 1 (D7)	Open Closed	NA	EXC EXO LT-Air	CM CM 2 Y	CMP-29
<b>H1GS -GS-HV-11541</b> TORUS VENT ISOL HYD OPER	2	N	A	P	12.0	Butterfly	AO	M57-1 SH. 1 (D1)	Closed Closed Closed		LJ PIT	2 Y 2 Y	
<b>H1GS -GS-HV-4950</b> OP/V026 CNTMT-CPCS OUTB DMP 1YF404-FU05	2	N	A	A	26	Butterfly	AO	M57-1 SH. 1 (G7)	Closed Closed Closed		FSC FSTC LJ PIT STC	1 Q 1 Q 2 Y 2 Y 1 Q	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*GS - Containment Atmosphere Control*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	----- Position ----- Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1GS</b> <b>-GS-HV-4951</b> OP/V025 CNTMT TO CPCS BYPASS	2	N	A	A	2	Globe	AO	M57-1 SH. 1 (F7)	Closed Closed Closed	FSC FSTC LJ PIT STC	1 Q 1 Q 2 Y 2 Y 1 Q		
<b>H1GS</b> <b>-GS-HV-4952</b> OP/V024 CNTMT-CPCS INBD DMP 1YF401-FU08	2	N	A	A	26	Butterfly	AO	M57-1 SH. 1 (E6)	Closed Closed Closed	FSC FSTC LJ PIT STC	1 Q 1 Q 2 Y 2 Y 1 Q		
<b>H1GS</b> <b>-GS-HV-4955A</b> OP/V045 H2O2 ANLZR DRYWL SUCT 52-212152	2	N	A	A	2	Globe	MO	M57-1 SH. 1 (E6)	Closed/en/Clos NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M		
<b>H1GS</b> <b>-GS-HV-4955B</b> OP/V031 H2O2 ANLZR DRYWL SUCT 52-222152	2	N	A	A	2	Globe	MO	M57-1 SH. 1 (E5)	Closed/en/Clos NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M		
<b>H1GS</b> <b>-GS-HV-4956</b> OP/V009 CPCS RET-CNTMT DMPR 1YF401-FU09	2	N	A	A	26	Butterfly	AO	M57-1 SH. 1 (D5)	Closed Closed Closed	FSC FSTC LJ PIT STC	1 Q 1 Q 2 Y 2 Y 1 Q		
<b>H1GS</b> <b>-GS-HV-4958</b> OP/V022 CPCS RET - SUP CHMBR 1YF401-FU09	2	N	A	A	24	Butterfly	AO	M57-1 SH. 1 (D4)	Closed Closed Closed	FSC FSTC LJ PIT STC	1 Q 1 Q 2 Y 2 Y 1 Q		
<b>H1GS</b> <b>-GS-HV-4959A</b> OP/V049 H2O2 ANLZR SUPP CHMBR 52-212153	2	N	A	A	2	Globe	MO	M57-1 SH. 1 (C6)	Closed/en/Clos NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M		



Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*GS - Containment Atmosphere Control*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	----- Position ----- Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1GS -GS-HV-4959B</b> OP/V040 H2O2 ANLZR SUPP CHMBR 52-222153	2	N	A	A	2	Globe	MO	M57-1 SH. 1 (C5)	Closed/en/Clos	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	
<b>H1GS -GS-HV-4962</b> OP/V027 SUP CHMBR - CPCS OUT	2	N	A	A	24	Butterfly	AO	M57-1 SH. 1 (E7)	Closed Closed	Closed	FSC FSTC LJ PIT STC	1 Q 1 Q 2 Y 2 Y 1 Q	
<b>H1GS -GS-HV-4963</b> OP/V076 SUP CHMBR - CPCS BYP _AZ-50	2	N	A	A	2	Globe	AO	M57-1 SH. 1 (E7)	Closed Closed	Closed	FSC FSTC LJ PIT STC	1 Q 1 Q Opt B 2 Y 1 Q	
<b>H1GS -GS-HV-4964</b> OP/V028 SUP CHMBR - CPCS DMP	2	N	A	A	24	Butterfly	AO	M57-1 SH. 1 (D7)	Closed Closed	Closed	FSC FSTC LJ PIT STC	1 Q 1 Q 2 Y 2 Y 1 Q	
<b>H1GS -GS-HV-4965A</b> OP/V050 H2O2 ANLZR SUP CHMBR 52-232073	2	N	A	A	2	Globe	MO	M57-1 SH. 1 (C7)	Closed/en/Clos	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	
<b>H1GS -GS-HV-4965B</b> OP/V041 H2O2 ANLZR SUPP CHMBR 52-242073	2	N	A	A	2	Globe	MO	M57-1 SH. 1 (C4)	Closed/en/Clos	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	
<b>H1GS -GS-HV-4966A</b> OP/V051 H2O2 ANLZR RET INBD 52-212161	2	N	A	A	2	Globe	MO	M57-1 SH. 1 (C7)	Closed/en/Clos	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*GS - Containment Atmosphere Control*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1GS -GS-HV-4966B</b> OP/V042 H2-02 ANLZR RET INBD 52-222161	2	N	A	A	2	Globe	MO	M57-1 SH. 1 (C4)	Closed/en/Clos	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	
<b>H1GS -GS-HV-4974</b> OP/V053 N2 M/U SUP ISLN MOV 52-242202	2	N	A	A	2	Globe	MO	M57-1 SH. 1 (F5)	Closed Closed	NA	FSX LJ PIT PVT	18 M Opt B 10 Y 10 Y	
<b>H1GS -GS-HV-4978</b> OP/V023 N2 SUP HDR ISLN VLV 1YF404-FU7	2	N	A	A	6	Butterfly	AO	M57-1 SH. 1 (E4)	Closed Closed Closed		FSC FSTC LJ PIT STC	1 Q 1 Q 2 Y 2 Y 1 Q	
<b>H1GS -GS-HV-4979</b> OP/V021 CPCS RET- CNTMT DMPR 1YF404-FU08	2	N	A	A	26	Butterfly	AO	M57-1 SH. 1 (D3)	Closed Closed Closed		FSC FSTC LJ PIT STC	1 Q 1 Q 2 Y 2 Y 1 Q	
<b>H1GS -GS-HV-4980</b> OP/V020 CPCS RT - SUP CHMBR 1YF404-FU08	2	N	A	A	24	Butterfly	AO	M57-1 SH. 1 (D3)	Closed Closed Closed		FSC FSTC LJ PIT STC	1 Q 1 Q 2 Y 2 Y 1 Q	
<b>H1GS -GS-HV-4983A</b> OP/V046 H2O2 ANLZR DRYWL OTBD 52-232091	2	N	A	A	2	Globe	MO	M57-1 SH. 1 (E8)	Closed/en/Clos	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	
<b>H1GS -GS-HV-4983B</b> OP/V032 H2O2 ANLZR DRYWL OUTB 52-242091	2	N	A	A	2	Globe	MO	M57-1 SH. 1 (E4)	Closed/en/Clos	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*GS - Containment Atmosphere Control*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	----- Position ----- Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1GS -GS-HV-4984A</b> OP/V048 H2O2 ANLZR DRYWL SUCT 52-232092	2	N	A	A	2	Globe	MO	M57-1 SH. 1 (E8)	Closed/en/Clos	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	
<b>H1GS -GS-HV-4984B</b> OP/V034 H2O2 ANLZR DRYWL SUCT 52-242092	2	N	A	A	2	Globe	MO	M57-1 SH. 1 (E4)	Closed/en/Clos	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	
<b>H1GS -GS-HV-5019A</b> OP/V047 H2O2 ANLZR DRYWL SUCT 52-212162	2	N	A	A	2	Globe	MO	M57-1 SH. 1 (E6)	Closed/en/Clos	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	
<b>H1GS -GS-HV-5019B</b> OP/V033 H2O2 ANLZR DRYWL SUCT 52-222162	2	N	A	A	2	Globe	MO	M57-1 SH. 1 (E5)	Closed/en/Clos	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	
<b>H1GS -GS-HV-5022A</b> OP/V052 H2O2 ANLZR RET OUTBD 52-232093	2	N	A	A	2	Globe	MO	M57-1 SH. 1 (C7)	Closed/en/Clos	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	
<b>H1GS -GS-HV-5022B</b> OP/V043 H2O2 ANLZR RET OUTBD 52-242093	2	N	A	A	2	Globe	MO	M57-1 SH. 1 (B4)	Closed/en/Clos	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*GS - Containment Atmosphere Control*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1GS -GS-HV-5029</b> OP/V080 RB/TORUS VAC BRK ISO1 YF401-FU06	2	N	A	A	24	Butterfly	AO	M57-1 SH. 1 (C7)	Closed/en/Clos Closed	FSC FSO FSTC LJ PIT STC STO	1 Q 1 Q 1 Q 2 Y 2 Y 1 Q 1 Q		
<b>H1GS -GS-HV-5031</b> OP/V038 RB/-RUS VAC BRKRISO 1YF402-FU04	2	N	A	A	24	Butterfly	AO	M57-1 SH. 1 (C3)	Closed/en/Clos Closed	FSC FSO FSTC LJ PIT STC STO	1 Q 1 Q 1 Q 2 Y 2 Y 1 Q 1 Q		
<b>H1GS -GS-HV-5050A</b> OP/V002 H2 RECOMB AS205 SUCT 52-212171	2	N	A	A	4	Gate	MO	M58-1 SH. 1 (E8)	Closed Closed NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M		
<b>H1GS -GS-HV-5050B</b> OP/V004 H2 RECOMB BS205 SUCT 52-222171	2	N	A	A	4	Gate	MO	M58-1 SH. 1 (B7)	Closed Closed NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M		
<b>H1GS -GS-HV-5052A</b> OP/V003 H2 RECOMB A SUCT OUTB 52-232112	2	N	A	A	4	Gate	MO	M58-1 SH. 1 (E7)	Closed Closed NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M		
<b>H1GS -GS-HV-5052B</b> OP/V005 H2 RECOMB SUCT OTBD 52-242112	2	N	A	A	4	Gate	MO	M58-1 SH. 1 (B7)	Closed Closed NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M		

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*GS - Containment Atmosphere Control*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	----- Position ----- Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1GS</b> <b>-GS-HV-5053A</b> OP/V008 H2 RECOMB AS205 RT HDR 52-232121	2	N	A	A	6	Gate	MO	M58-1 SH. 1 (C2)	Closed Closed NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M		
<b>H1GS</b> <b>-GS-HV-5053B</b> OP/V006 H2 RECOMB BS205 RET HD 52-242121	2	N	A	A	6	Gate	MO	M58-1 SH. 1 (A3)	Closed Closed NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M		
<b>H1GS</b> <b>-GS-HV-5054A</b> OP/V010 H2 RECOMB AS205 RT HDR 52-212172	2	N	A	A	6	Gate	MO	M58-1 SH. 1 (C2)	Closed Closed NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M		
<b>H1GS</b> <b>-GS-HV-5054B</b> OP/V007 H2 RECOMB BS205 RT SUC 52-222172	2	N	A	A	6	Gate	MO	M58-1 SH. 1 (A3)	Closed Closed NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M		

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*HB - Liquid Radwaste*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1HB -1HBPSV-11701</b> 1 CONTMT ISO VLVS (HB) OVER PRESSURE PRO	3	N	AC	A	0.75	Relief	SE	M61-1 SH. 1 (H7)	Closed	Open/Clos	NA	LJ RV	Opt B 10 Y		
<b>H1HB -1HBPSV-11702</b> 1 CONTMT ISO VLVS (HB) OVER PRESSURE PRO	3	N	AC	A	0.75	Relief	SE	M61-1 SH. 2 (G6)	Closed	Open/Clos	NA	LJ RV	Opt B 10 Y		
<b>H1HB -1HBPSV-11703</b> 1 CONTMT OVERPRESS. PROT RLF VLV BTWN VA	3	N	C	A	0.75	Relief	SE	M61-1 SH. 2 (G7)	Closed	Open	NA	RV	10 Y		
<b>H1HB -1HBPSV-11704</b> 1 CONTMT OVERPRESS. PROT RLF VLV BTWN VA	3	N	C	A	0.75	Relief	SE	M61-1 SH. 1 (G7)	Closed	Open	NA	RV	10 Y		
<b>H1HB -HB-HV-F003</b> OP/V005 DW FLR DR SMP INBD 52-242021	2	N	A	A	3	Gate	MO	M61-1 SH. 1 (H7)	Open	Closed	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M		
<b>H1HB -HB-HV-F004</b> OP/V006 DW FLR DRN SUMP OTBD 52-222021	2	N	A	A	3	Gate	MO	M61-1 SH. 1 (H6)	Open	Closed	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M		
<b>H1HB -HB-HV-F019</b> OP/V045 DW EQUIP DR SMP INBD 52-232103	2	N	A	A	3	Gate	MO	M61-1 SH. 2 (G6)	Open	Closed	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M		
<b>H1HB -HB-HV-F020</b> OP/V046 DW EQUIP DRN SUMP OTBD 52-222023	2	N	A	A	3	Gate	MO	M61-1 SH. 2 (G6)	Open	Closed	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M		

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

Unit 1

*JE - Diesel Fuel Oil Storage & Trsfr*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1JE -1JEV-001</b>	3	N	C	A	2	Check	SE	M30-1 SH. 1 (B7)	Closed/en/Clos	NA	EXC EXO	1 Q 1 Q	
*FUEL OIL TRANSFER PUMP OUTLET CHECK VLV													
<b>H1JE -1JEV-002</b>	3	N	C	A	2	Check	SE	M30-1 SH. 1 (D7)	Closed/en/Clos	NA	EXC EXO	1 Q 1 Q	
*FUEL OIL TRANSFER PUMP OUTLET CHECK VLV													
<b>H1JE -1JEV-003</b>	3	N	C	A	2	Check	SE	M30-1 SH. 1 (B4)	Closed/en/Clos	NA	EXC EXO	1 Q 1 Q	
*FUEL OIL TRANSFER PUMP OUTLET CHECK VLV													
<b>H1JE -1JEV-004</b>	3	N	C	A	2	Check	SE	M30-1 SH. 1 (D4)	Closed/en/Clos	NA	EXC EXO	1 Q 1 Q	
*FUEL OIL TRANSFER PUMP OUTLET CHECK VLV													
<b>H1JE -1JEV-005</b>	3	N	C	A	2	Check	SE	M30-1 SH. 1 (B5)	Closed/en/Clos	NA	EXC EXO	1 Q 1 Q	
*FUEL OIL TRANSFER PUMP OUTLET CHECK VLV													
<b>H1JE -1JEV-006</b>	3	N	C	A	2	Check	SE	M30-1 SH. 1 (D5)	Closed/en/Clos	NA	EXC EXO	1 Q 1 Q	
*FUEL OIL TRANSFER PUMP OUTLET CHECK VLV													
<b>H1JE -1JEV-007</b>	3	N	C	A	2	Check	SE	M30-1 SH. 1 (B2)	Closed/en/Clos	NA	EXC EXO	1 Q 1 Q	
*FUEL OIL TRANSFER PUMP OUTLET CHECK VLV													
<b>H1JE -1JEV-008</b>	3	N	C	A	2	Check	SE	M30-1 SH. 1 (D2)	Closed/en/Clos	NA	EXC EXO	1 Q 1 Q	
*FUEL OIL TRANSFER PUMP OUTLET CHECK VLV													
<b>H1JE -1JEV-017</b>	3	N	B	A	2	Globe	MAN	M30-1 SH. 1 (E6)	ked Clo/en/Clos	NA	EXO	2 Y	
DRAIN													
<b>H1JE -1JEV-018</b>	3	N	B	A	2	Globe	MAN	M30-1 SH. 1 (E6)	ked Clo/en/Clos	NA	EXO	2 Y	
DRAIN													
<b>H1JE -1JEV-019</b>	3	N	B	A	2	Globe	MAN	M30-1 SH. 1 (E3)	ked Clo/en/Clos	NA	EXO	2 Y	
DRAIN													
<b>H1JE -1JEV-020</b>	3	N	B	A	2	Globe	MAN	M30-1 SH. 1 (E3)	ked Clo/en/Clos	NA	EXO	2 Y	
DRAIN													
<b>H1JE -1JEV-021</b>	3	N	B	A	2	Globe	MAN	M30-1 SH. 1 (E5)	ked Clo/en/Clos	NA	EXO	2 Y	
DRAIN													

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant**  
**Valve Table**  
*JE - Diesel Fuel Oil Storage & Trsfr*

Unit 1

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
H1JE -1JEV-022 DRAIN	3	N	B	A	2	Globe	MAN	M30-1 SH. 1 (E5)	cked Cloen/Clos	NA	EXO	2 Y	
H1JE -1JEV-023 DRAIN	3	N	B	A	2	Globe	MAN	M30-1 SH. 1 (E2)	cked Cloen/Clos	NA	EXO	2 Y	
H1JE -1JEV-024 DRAIN	3	N	B	A	2	Globe	MAN	M30-1 SH. 1 (E2)	cked Cloen/Clos	NA	EXO	2 Y	
H1JE -1JEV-037 DRAIN	3	N	B	A	1.5	Globe	MAN	M30-1 SH. 1 (F7)	cked Open/Clos	NA	EXC	2 Y	
H1JE -1JEV-038 DRAIN	3	N	B	A	1.5	Globe	MAN	M30-1 SH. 1 (F7)	cked Open/Clos	NA	EXC	2 Y	
H1JE -1JEV-039 DRAIN	3	N	B	A	1.5	Globe	MAN	M30-1 SH. 1 (F3)	cked Open/Clos	NA	EXC	2 Y	
H1JE -1JEV-040 DRAIN	3	N	B	A	1.5	Globe	MAN	M30-1 SH. 1 (F3)	cked Open/Clos	NA	EXC	2 Y	
H1JE -1JEV-041 DRAIN	3	N	B	A	1.5	Globe	MAN	M30-1 SH. 1 (F5)	cked Open/Clos	NA	EXC	2 Y	
H1JE -1JEV-042 DRAIN	3	N	B	A	1.5	Globe	MAN	M30-1 SH. 1 (F5)	cked Open/Clos	NA	EXC	2 Y	
H1JE -1JEV-043 DRAIN	3	N	B	A	1.5	Globe	MAN	M30-1 SH. 1 (F2)	cked Open/Clos	NA	EXC	2 Y	
H1JE -1JEV-044 DRAIN	3	N	B	A	1.5	Globe	MAN	M30-1 SH. 1 (F2)	cked Open/Clos	NA	EXC	2 Y	



Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*KA - Service Compressed Air*

Valve ID						Valve	Actuator	Drawing	----- Position -----			Required			
Description	Class	Aug.	Cat.	A/P	Size	Type	Type	& Coord	Normal	Safety	Fail-Safe	Test	Frequency	RR/CSJ/ROJ	Comments / Notes
H1KA -1-KA-V038	2	N	A	P	3	Gate	MAN	M15-0 SH. 4 (B3)	ked Clo:	Closed	NA	LJ	Opt B		
DRWL SERV AIR PIPING OUTBD ISL															
H1KA -1-KA-V039	2	N	A	P	3	Gate	MAN	M15-0 SH. 4 (B3)	ked Clo:	Closed	NA	LJ	Opt B		
DRWL SRV AIR PIPING INBDISO __AZ=270															

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*KB - Instrument (control) Air*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1KB -1KBPSV-1175</b> RELIEF VALVE FOR SACS CONTROL VALVE BACK	3	N	C	A	.250	Relief	SE	M12-1 SH. 2 (B-6)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KB -1KBPSV-1176</b> RELIEF VALVE FOR SACS CONTROL VALVE BACK	3	N	C	A	.250	Relief	SE	M12-1 SH. 2 (B-6)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KB -1KBPSV-1177</b> RELIEF VALVE FOR SACS CONTROL VALVE BACK	3	N	C	A	.250	Relief	SE	M11-1 SH. 4 (B-6)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KB -1KBPSV-1178</b> RELIEF VALVE FOR SACS CONTROL VALVE BACK	3	N	C	A	.250	Relief	SE	M11-1 SH. 4 (B-6)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KB -1KBV-1243</b> CHECK VALVE FOR SACS CONTROL VALVE BACKU	3	Y	AC	A	0.375	Check	SE	M12-1 SH. 2 (B-6)	en/Clos Closed	NA	EXC EXO LT-Air	CM CM 2 Y	CMP-32
<b>H1KB -1KBV-1244</b> CHECK VALVE FOR SACS CONTROL VALVE BACKU	3	N	AC	A	0.375	Check	SE	M12-1 SH. 2 (B-6)	en/Clos Closed	NA	EXC EXO LT-Air	CM CM 2 Y	CMP-32
<b>H1KB -1KBV-1245</b> CHECK VALVE FOR SACS CONTROL VALVE BACKU	3	Y	AC	A	0.375	Check	SE	M12-1 SH. 2 (B-6)	en/Clos Closed	NA	EXC EXO LT-Air	CM CM 2 Y	CMP-32
<b>H1KB -1KBV-1246</b> CHECK VALVE FOR SACS CONTROL VALVE BACKU	3	N	AC	A	0.375	Check	SE	M12-1 SH. 2 (B-6)	en/Clos Closed	NA	EXC EXO LT-Air	CM CM 2 Y	CMP-32
<b>H1KB -1KBV-1247</b> CHECK VALVE FOR SACS CONTROL VALVE BACKU	3	Y	AC	A	0.375	Check	SE	M11-1 SH. 4 (B-6)	en/Clos Closed	NA	EXC EXO LT-Air	CM CM 2 Y	CMP-32
<b>H1KB -1KBV-1248</b> CHECK VALVE FOR SACS CONTROL VALVE BACKU	3	N	AC	A	0.375	Check	SE	M11-1 SH. 4 (B-6)	en/Clos Closed	NA	EXC EXO LT-Air	CM CM 2 Y	CMP-32
<b>H1KB -1KBV-1249</b> CHECK VALVE FOR SACS CONTROL VALVE BACKU	3	Y	AC	A	0.375	Check	SE	M11-1 SH. 4 (B-6)	en/Clos Closed	NA	EXC EXO LT-Air	CM CM 2 Y	CMP-32
<b>H1KB -1KBV-1250</b> CHECK VALVE FOR SACS CONTROL VALVE BACKU	3	N	AC	A	0.375	Check	SE	M11-1 SH. 4 (B-6)	en/Clos Closed	NA	EXC EXO LT-Air	CM CM 2 Y	CMP-32

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*KB - Instrument (control) Air*

Valve ID	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
Description									Normal Safety Fail-Safe				
<b>H1KB -1KBV-300</b>	NC	Y	C	A	1"	Check	SE	M15-0 SH. 5	Open/Closed/Closed	EXC	1 Q		
								(D3)	NA	EXO	1 Q		
INSTRUMENT AIR SUPPLY CHECK VALVE										LT-Air	2 Y		

Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

KG - Breathing Air

Valve ID	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
Description									Normal	Safety	Fail-Safe				
H1KG -1-KG-V016	2	N	A	P	2	Globe	MAN	M15-1 SH. 1 (B5)	Closed	Closed	NA	LJ	Opt B		
RX BLDG DRWL AIR STA INBD ISLN															
H1KG -1-KG-V034	2	N	A	P	3	Gate	MAN	M15-1 SH. 1 (B6)	Closed	Closed	NA	LJ	Opt B		
DRWL AIR STA OTBD DNSTRM ISLN															

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

Unit 1

*KJ - Emergency Diesel Generators*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1KJ -1KJPSV-7553A</b> A EDG STARTING AIR RECEIVER RELIEF VALVE	3	N	C	A	0.75	Relief	SE	M30-1 SH. 3 (F8)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KJ -1KJPSV-7553B</b> *IN-LINE COMPONENT	3	N	C	A	0.75	Relief	SE	M30-1 SH. 3 (F8)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KJ -1KJPSV-7553C</b> *IN-LINE COMPONENT	3	N	C	A	0.75	Relief	SE	M30-1 SH. 3 (F4)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KJ -1KJPSV-7553D</b> *IN-LINE COMPONENT	3	N	C	A	0.75	Relief	SE	M30-1 SH. 3 (F4)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KJ -1KJPSV-7553E</b> *IN-LINE COMPONENT	3	N	C	A	0.75	Relief	SE	M30-1 SH. 3 (F6)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KJ -1KJPSV-7553F</b> *IN-LINE COMPONENT	3	N	C	A	0.75	Relief	SE	M30-1 SH. 3 (F6)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KJ -1KJPSV-7553G</b> *IN-LINE COMPONENT	3	N	C	A	0.75	Relief	SE	M30-1 SH. 3 (F3)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KJ -1KJPSV-7553H</b> *IN-LINE COMPONENT	3	N	C	A	0.75	Relief	SE	M30-1 SH. 3 (F3)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KJ -1KJPSV-7831A</b> *DG A JACKET WATER PRESS RELIEF	3	Y	C	A	0.75	Relief	SE	M30-1 SH. 2 (D7)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KJ -1KJPSV-7831B</b> DG B JACKET WATER PRESS RELIEF	3	N	C	A	0.75	Relief	SE	M30-1 SH. 2 (D4)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KJ -1KJPSV-7831C</b> DG C JACKET WATER PRESS RELIEF	3	N	C	A	0.75	Relief	SE	M30-1 SH. 2 (D6)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KJ -1KJPSV-7831D</b> DG D JACKET WATER PRESS RELIEF	3	N	C	A	0.75	Relief	SE	M30-1 SH. 2 (D3)	Closed/en/Clos	NA	RV	10 Y	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*KJ - Emergency Diesel Generators*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1KJ -1KJSV-7534A</b> *DG A LUBE OIL MAKEUP SOLENOID	3	N	B	A	0.5	Globe	SO	M30-1 SH. 3 (D7)	Closed/en/Clos Closed	FSC FSO FSTC STC STO	1 Q 1 Q 1 Q 1 Q 1 Q		
<b>H1KJ -1KJSV-7534B</b> *DG B LUBE OIL MAKEUP SOLENOID	3	N	B	A	0.5	Globe	SO	M30-1 SH. 3 (F5)	Closed/en/Clos Closed	FSC FSO FSTC STC STO	1 Q 1 Q 1 Q 1 Q 1 Q		
<b>H1KJ -1KJSV-7534C</b> *DG C LUBE OIL MAKEUP SOLENOID	3	N	B	A	0.5	Globe	SO	M30-1 SH. 3 (F6)	Closed/en/Clos Closed	FSC FSO FSTC STC STO	1 Q 1 Q 1 Q 1 Q 1 Q		
<b>H1KJ -1KJSV-7534D</b> *DG D LUBE OIL MAKEUP SOLENOID	3	N	B	A	0.5	Globe	SO	M30-1 SH. 3 (F3)	Closed/en/Clos Closed	FSC FSO FSTC STC STO	1 Q 1 Q 1 Q 1 Q 1 Q		
<b>H1KJ -1KJSV-7535A</b> *DG A AIR START SOLENOID VLV	3	N	B	A	0.375	Threeway	SO	M30-1 SH. 3 (D7)	Closed/en/Clos Closed	FSC FSO FSTC	1 Q 1 Q 1 Q		
<b>H1KJ -1KJSV-7535B</b> *DG B AIR START SOLENOID VLV	3	N	B	A	0.375	Threeway	SO	M30-1 SH. 3 (D4)	Closed/en/Clos Closed	FSC FSO FSTC	1 Q 1 Q 1 Q		
<b>H1KJ -1KJSV-7535C</b> *DG C AIR START SOLENOID VLV	3	N	B	A	0.375	Threeway	SO	M30-1 SH. 3 (D6)	Closed/en/Clos Closed	FSC FSO FSTC	1 Q 1 Q 1 Q		
<b>H1KJ -1KJSV-7535D</b> *DG D AIR START SOLENOID VLV	3	N	B	A	0.375	Threeway	SO	M30-1 SH. 3 (D3)	Closed/en/Clos Closed	FSC FSO FSTC	1 Q 1 Q 1 Q		
<b>H1KJ -1KJSV-7536A</b> *DG A AIR START SOLENOID VLV	3	N	B	A	0.375	Threeway	SO	M30-1 SH. 3 (D7)	Closed/en/Clos Closed	FSC FSO FSTC	1 Q 1 Q 1 Q		

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

Unit 1

*KJ - Emergency Diesel Generators*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1KJ -1KJSV-7536B</b> *DG B AIR START SOLENOID VLV	3	N	B	A	0.375	Threeway	SO	M30-1 SH. 3 (D4)	Closed/en/Clos Closed	FSC FSO FSTC	1 Q 1 Q 1 Q		
<b>H1KJ -1KJSV-7536C</b> *DG C AIR START SOLENOID VLV	3	N	B	A	0.375	Threeway	SO	M30-1 SH. 3 (D6)	Closed/en/Clos Closed	FSC FSO FSTC	1 Q 1 Q 1 Q		
<b>H1KJ -1KJSV-7536D</b> *DG D AIR START SOLENOID VLV	3	N	B	A	0.375	Threeway	SO	M30-1 SH. 3 (D3)	Closed/en/Clos Closed	FSC FSO FSTC	1 Q 1 Q 1 Q		
<b>H1KJ -1KJTCV-6618A</b> *DG A INTRCLR HX THRMSTC VLV	3	N	B	A	5	Threeway	AO	M30-1 SH. 2 (D7)	Automati Open	Open	SKID	1 Q	
<b>H1KJ -1KJTCV-6618B</b> *DG B INTRCLR HX THRMSTC VLV	3	N	B	A	5	Threeway	AO	M30-1 SH. 2 (D4)	Automati Open	Open	SKID	1 Q	
<b>H1KJ -1KJTCV-6618C</b> *DG C INTRCLR HX THRMSTC VLV	3	N	B	A	5	Threeway	AO	M30-1 SH. 2 (D6)	Automati Open	Open	SKID	1 Q	
<b>H1KJ -1KJTCV-6618D</b> *DG INTRCLR HX THERMOSTATIC VLV	3	N	B	A	5	Threeway	AO	M30-1 SH. 2 (D3)	Automati Open	Open	SKID	1 Q	
<b>H1KJ -1KJTCV-7722A</b> DG A LO HX THRMSTC CONT VLV	3	N	B	A	4	Threeway	AO	M30-1 SH. 3 (D7)	Automati Open	Open	SKID	1 Q	
<b>H1KJ -1KJTCV-7722B</b> *DG B LO HX THRMSTC CONT VLV	3	N	B	A	4	Threeway	AO	M30-1 SH. 3 (D4)	Automati Open	Open	SKID	1 Q	
<b>H1KJ -1KJTCV-7722C</b> *DG C LO HX THRMSTC CONT VLV	3	N	B	A	4	Threeway	AO	M30-1 SH. 3 (D6)	Automati Open	Open	SKID	1 Q	
<b>H1KJ -1KJTCV-7722D</b> *DG D LO HX THRMSTC CONT VLV	3	N	B	A	4	Threeway	AO	M30-1 SH. 3 (D3)	Automati Open	Open	SKID	1 Q	
<b>H1KJ -1KJTV-6606A</b> *DG A J.W. THRMSTATIC CTRL VLV	3	N	B	A	5	Threeway	AO	M30-1 SH. 2 (D7)	Automati Open	Open	SKID	1 Q	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

Unit 1

*KJ - Emergency Diesel Generators*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1KJ -1KJTV-6606B</b> *DG B J.W. THRMOSTATIC CTRL VLV	3	N	B	A	5	Threeway	AO	M30-1 SH. 2 (D4)	Automati Open	Open	SKID	1 Q	
<b>H1KJ -1KJTV-6606C</b> *DG C J.W. THRMOSTATIC CTRL VLV	3	N	B	A	5	Threeway	AO	M30-1 SH. 2 (D6)	Automati Open	Open	SKID	1 Q	
<b>H1KJ -1KJTV-6606D</b> *DG D J.W. THRMOSTATIC CTRL VLV	3	N	B	A	5	Threeway	AO	M30-1 SH. 2 (D3)	Automati Open	Open	SKID	1 Q	
<b>H1KJ -1KJV-189</b> A AIR RCVR INLET CHK VLV	3	N	C	A	0.75	Check	SE	M30-1 SH. 3 (F8)	Automati Closed	NA	EXC EXO	1 Q 1 Q	
<b>H1KJ -1KJV-192</b> B AIR RCVR INLET CHK VLV	3	N	C	A	0.75	Check	SE	M30-1 SH. 3 (F8)	Automati Closed	NA	EXC EXO	1 Q 1 Q	
<b>H1KJ -1KJV-194</b> C AIR RCVR INLET CHK VLV	3	N	C	A	0.75	Check	SE	M30-1 SH. 3 (F4)	Automati Closed	NA	EXC EXO	1 Q 1 Q	
<b>H1KJ -1KJV-197</b> D AIR RCVR INLET CHK VLV	3	N	C	A	0.75	Check	SE	M30-1 SH. 3 (F4)	Automati Closed	NA	EXC EXO	1 Q 1 Q	
<b>H1KJ -1KJV-199</b> E AIR RCVR INLET CHK VLV	3	N	C	A	0.75	Check	SE	M30-1 SH. 3 (F6)	Automati Closed	NA	EXC EXO	1 Q 1 Q	
<b>H1KJ -1KJV-202</b> F AIR RCVR INLET CHK VLV	3	N	C	A	0.75	Check	SE	M30-1 SH. 3 (F6)	Automati Closed	NA	EXC EXO	1 Q 1 Q	
<b>H1KJ -1KJV-204</b> G AIR RCVR INLET CHK VLV	3	N	C	A	0.75	Check	SE	M30-1 SH. 3 (F3)	Automati Closed	NA	EXC EXO	1 Q 1 Q	
<b>H1KJ -1KJV-207</b> H AIR RCVR INLET CHK VLV	3	N	C	A	0.75	Check	SE	M30-1 SH. 3 (F3)	Automati Closed	NA	EXC EXO	1 Q 1 Q	
<b>H1KJ -1KJV-336</b> MOTOR DRIVEN FUEL OIL PUMP DISCHARGE CHE	3	N	C	A	1.5	Check	SE	M30-1 SH. 1 (F8)	Automati en/Clos	NA	SKID	1 Q	
<b>H1KJ -1KJV-338</b> MOTOR DRIVEN FUEL OIL PUMP DISCHARGE CHE	3	N	C	A	1.5	Check	SE	M30-1 SH. 1 (F5)	Automati en/Clos	NA	SKID	1 Q	



Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*KJ - Emergency Diesel Generators*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1KJ -1KJV-340</b>	3	N	C	A	1.5	Check	SE	M30-1 SH. 1	Automati/en/Clos	NA	SKID	1 Q	
MOTOR DRIVEN FUEL OIL PUMP DISCHARGE CHE													
<b>H1KJ -1KJV-342</b>	3	N	C	A	1.5	Check	SE	M30-1 SH. 1	Automati/en/Clos	NA	SKID	1 Q	
MOTOR DRIVEN FUEL OIL PUMP DISCHARGE CHE													
<b>H1KJ -1KJV-364</b>	3	N	C	A	1	Check	SE	M30-1 SH. 1	Automati/en/Open	NA	SKID	1 Q	
FUEL OIL PRESSURE RETURN CHECK VALVE													
<b>H1KJ -1KJV-365</b>	3	N	C	A	1	Check	SE	M30-1 SH. 1	Automati/en/Open	NA	SKID	1 Q	
FUEL OIL PRESSURE RETURN CHECK VALVE													
<b>H1KJ -1KJV-366</b>	3	N	C	A	1	Check	SE	M30-1 SH. 1	Automati/en/Open	NA	SKID	1 Q	
FUEL OIL PRESSURE RETURN CHECK VALVE													
<b>H1KJ -1KJV-367</b>	3	N	C	A	1	Check	SE	M30-1 SH. 1	Automati/en/Open	NA	SKID	1 Q	
FUEL OIL PRESSURE RETURN CHECK VALVE													
<b>H1KJ -1KJV-368</b>	3	N	C	A	1	Check	SE	M30-1 SH. 1	Automati/en/Open	NA	SKID	1 Q	
FUEL OIL PRESSURE RETURN CHECK VALVE													
<b>H1KJ -1KJV-369</b>	3	N	C	A	1	Check	SE	M30-1 SH. 1	Automati/en/Open	NA	SKID	1 Q	
FUEL OIL PRESSURE RETURN CHECK VALVE													
<b>H1KJ -1KJV-370</b>	3	N	C	A	1	Check	SE	M30-1 SH. 1	Automati/en/Open	NA	SKID	1 Q	
FUEL OIL PRESSURE RETURN CHECK VALVE													
<b>H1KJ -1KJV-371</b>	3	N	C	A	1	Check	SE	M30-1 SH. 1	Automati/en/Open	NA	SKID	1 Q	
FUEL OIL PRESSURE RETURN CHECK VALVE													
<b>H1KJ -1KJV-376</b>	3	N	C	A	6	Check	SE	M30-1 SH. 2	Closed Open	NA	SKID	1 Q	
A EDG JACKET WTR PMP SUCTION CHECK VALVE													
<b>H1KJ -1KJV-377</b>	3	N	C	A	6	Check	SE	M30-1 SH. 2	Closed Open	NA	SKID	1 Q	
B EDG JACKET WTR PMP SUCTION CHECK VALVE													
<b>H1KJ -1KJV-378</b>	3	N	C	A	6	Check	SE	M30-1 SH. 2	Closed Open	NA	SKID	1 Q	
C EDG JACKET WTR PMP SUCTION CHECK VALVE													

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*KJ - Emergency Diesel Generators*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1KJ -1KJV-379</b>	3	N	C	A	6	Check	SE	M30-1 SH. 2 (D3)	Closed Open NA	SKID	1 Q		
D EDG JACKET WTR PMP SUCTION CHECK VALVE													
<b>H1KJ -1KJV-404</b>	3	N	C	A	1.5	Check	SE	M30-1 SH. 2 (D7)	Open Closed NA	SKID	1 Q		
JACKET WATER HEATER OUTLET CHECK VALVE													
<b>H1KJ -1KJV-405</b>	3	N	C	A	1.5	Check	SE	M30-1 SH. 2 (D4)	Open Closed NA	SKID	1 Q		
JACKET WATER HEATER OUTLET CHECK VALVE													
<b>H1KJ -1KJV-406</b>	3	N	C	A	1.5	Check	SE	M30-1 SH. 2 (D6)	Open Closed NA	SKID	1 Q		
JACKET WATER HEATER OUTLET CHECK VALVE													
<b>H1KJ -1KJV-407</b>	3	N	C	A	1.5	Check	SE	M30-1 SH. 2 (D3)	Open Closed NA	SKID	1 Q		
JACKET WATER HEATER OUTLET CHECK VALVE													
<b>H1KJ -1KJV-569</b>	NC	Y	C	A	0.5	Check	SE	PM018Q-0056\utomatici SH. 1 (F8)	Open NA	SKID	1 Q		
Motor Driven Rocker Arm LO Pump Disch CV													
<b>H1KJ -1KJV-570</b>	NC	Y	C	A	0.5	Check	SE	PM018Q-0056\utomatici SH. 1 (F8)	Open NA	SKID	1 Q		
Motor Driven Rocker Arm LO Pump Disch CV													
<b>H1KJ -1KJV-571</b>	NC	Y	C	A	0.5	Check	SE	PM018Q-0056\utomatici SH. 1 (F8)	Open NA	SKID	1 Q		
Motor Driven Rocker Arm LO Pump Disch CV													
<b>H1KJ -1KJV-572</b>	NC	Y	C	A	0.5	Check	SE	PM018Q-0056\utomatici SH. 1 (F8)	Open NA	SKID	1 Q		
Motor Driven Rocker Arm LO Pump Disch CV													
<b>H1KJ -1KJXV-7788A</b>	3	N	C	A	0.375	ccess Flow Che	SE	M30-1 SH. 3 (D7)	Open en/Clos NA	EXC EXO	1 Q 1 Q		
EFCV FOR PAL-7555A1													
<b>H1KJ -1KJXV-7788B</b>	3	N	C	A	0.375	ccess Flow Che	SE	M30-1 SH. 3 (D7)	Open en/Clos NA	EXC EXO	1 Q 1 Q		
EFCV FOR PAL-7555A2													
<b>H1KJ -1KJXV-7788C</b>	3	N	C	A	0.375	ccess Flow Che	SE	M30-1 SH. 3 (D4)	Open en/Clos NA	EXC EXO	1 Q 1 Q		
EFCV FOR PAL-7555B2													
<b>H1KJ -1KJXV-7788D</b>	3	N	C	A	0.375	ccess Flow Che	SE	M30-1 SH. 3 (D4)	Open en/Clos NA	EXC EXO	1 Q 1 Q		
EFCV FOR PAL-7555B2													

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

Unit 1

*KJ - Emergency Diesel Generators*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1KJ -1KJXV-7788E</b> EFCV FOR PAL-7555C1	3	N	C	A	0.375	ccess Flow Che	SE	M30-1 SH. 3 (D6)	Open en/Clos NA	EXC EXO	1 Q 1 Q		
<b>H1KJ -1KJXV-7788F</b> EFCV FOR PAL-7555C2	3	N	C	A	0.375	ccess Flow Che	SE	M30-1 SH. 3 (D6)	Open en/Clos NA	EXC EXO	1 Q 1 Q		
<b>H1KJ -1KJXV-7788G</b> EFCV FOR PAL-7555D1	3	N	C	A	0.375	ccess Flow Che	SE	M30-1 SH. 3 (D3)	Open en/Clos NA	EXC EXO	1 Q 1 Q		
<b>H1KJ -1KJXV-7788H</b> EFCV FOR PAL-7555D2	3	N	C	A	0.375	ccess Flow Che	SE	M30-1 SH. 3 (D3)	Open en/Clos NA	EXC EXO	1 Q 1 Q		
<b>H1KJ -1KJXV-7789A</b> EFCV,A EDG SKID INSTRUMENT AIR	3	N	C	A	0.375	ccess Flow Che	SE	M30-1 SH. 3 (D7)	Open Closed NA	EXC EXO	1 Q 1 Q		
<b>H1KJ -1KJXV-7789B</b> EFCV,B EDG SKID INSTRUMENT AIR	3	N	C	A	0.375	ccess Flow Che	SE	M30-1 SH. 3 (D4)	Open Closed NA	EXC EXO	1 Q 1 Q		
<b>H1KJ -1KJXV-7789C</b> EFCV,C EDG SKID INSTRUMENT AIR	3	N	C	A	0.375	ccess Flow Che	SE	M30-1 SH. 3 (D6)	Open Closed NA	EXC EXO	1 Q 1 Q		
<b>H1KJ -1KJXV-7789D</b> EFCV,D EDG SKID INSTRUMENT AIR	3	N	C	A	0.375	ccess Flow Che	SE	M30-1 SH. 3 (D3)	Open Closed NA	EXO	1 Q		

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*KL - Containment Instrument Gas*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1KL -1KLPSV-5032A</b> *INSTR GAS CPRSR A 2ND STG INL	2	N	C	A	1	Relief	SE	M59-1 SH. 1 (D6)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KL -1KLPSV-5032B</b> *INSTR GAS CPRSR B	2	N	C	A	1	Relief	SE	M59-1 SH. 1 (B6)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KL -1KLPSV-5127A</b> INSTR GAS RCVR A	2	N	C	A	0.75	Relief	SE	M59-1 SH. 1 (F7)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KL -1KLPSV-5127B</b> INSTR GAS RCVR B	2	N	C	A	0.75	Relief	SE	M59-1 SH. 1 (G7)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KL -1KLPSV-5135A</b> INSTR GAS CPRSR A CLG WTR.	3	N	C	A	1	Relief	SE	M59-1 SH. 1 (C5)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KL -1KLPSV-5135B</b> INSTR GAS CPRSR B CLG WTR.	3	N	C	A	1	Relief	SE	M59-1 SH. 1 (A5)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KL -1KLPSV-5136A</b> INSTR GAS CPRSR A OUT	2	N	C	A	1	Relief	SE	M59-1 SH. 1 (D6)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KL -1KLPSV-5136B</b> INSTR GAS CPRSR B OUT	2	N	C	A	1	Relief	SE	M59-1 SH. 1 (B6)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KL -1KLPSV-5228A</b> *INSTR GAS DRYER A	2	N	C	A	0.5	Relief	SE	M59-1 SH. 1 (D7)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KL -1KLPSV-5228B</b> *INSTR GAS DRYER B	2	N	C	A	0.5	Relief	SE	M59-1 SH. 1 (B7)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KL -1KLPSV-5230A</b> *INSTR GAS DRYER A	2	N	C	A	0.5	Relief	SE	M59-1 SH. 1 (D7)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KL -1KLPSV-5230B</b> *INSTR GAS DRYER B	2	N	C	A	0.5	Relief	SE	M59-1 SH. 1 (B7)	Closed/en/Clos	NA	RV	10 Y	
<b>H1KL -1KLSV-5164A</b> PCIG CPRSR A UNL SOV	2	N	B	A	1	Gate	SO	M59-1 SH. 1 (D6)	AutomatiClosed	Closed	FSC FSTC	Q Q	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*KL - Containment Instrument Gas*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1KL -1KLSV-5164B</b> PCIG CPRSR B UNL SOV	2	N	B	A	1	Gate	SO	M59-1 SH. 1 (B5)	AutomatiClosed Closed	FSC FSTC	Q Q		
<b>H1KL -1KLV-005</b>	2	N	C	A	1	Check	SE	M59-1 SH. 1 (D7)	Open/Closen/Clos	EXC EXO	Q Q		
CONTAINMENT INSTRUMENT GAS													
<b>H1KL -1KLV-006</b>	2	N	C	A	1	Check	SE	M59-1 SH. 1 (B7)	Open/Closen/Clos	EXC EXO	Q Q		
B CONTAINMENT INSTRUMENT GAS COMP OUTLET													
<b>H1KL -1KLV-023</b>	2	N	C	A	2	Check	SE	M59-1 SH. 1 (F4)	Open/Clos Open	EXC EXO	CS CS	CS - 16 CS - 16	
*VALVE CLASS: EBA													
<b>H1KL -1KLV-024</b>	2	N	C	A	2	Check	SE	M59-1 SH. 1 (G3)	Open/Clos Open	EXC EXO	CS CS	CS - 16 CS - 16	
*VALVE CLASS: EBA													
<b>H1KL -1KLV-217</b>	2	N	C	A	1	Check	SE	M59-1 SH. 1 (D7)	Open/Clos Open	EXC EXO	Q Q		
CONTAINMENT INSTRUMENT GAS													
<b>H1KL -1-KL-V219</b>	2	N	C	A	1	Check	SE	M59-1 SH. 1 (B7)	Open/Clos Open	EXC EXO	Q Q		
"B" PCIG DRYER INLET CHECK VALVE													
<b>H1KL -1KLV-223</b>	2	N	C	A	1	Check	SE	M59-1 SH. 1 (D7)	Open/Clos Open	EXC EXO	Q Q		
CONTAINMENT INST. GAS COMPRESSOR													
<b>H1KL -1KLV-224</b>	2	N	C	A	1	Check	SE	M59-1 SH. 1 (B7)	Open/Clos Open	EXC EXO	Q Q		
"B" PCIG DRYER OUTLET CHECK VALVE													
<b>H1KL -KL-HV-5124A</b> OP/V184 A INST GAS HDR S/OFF V 52-232061	3	N	B	A	2	Globe	MO	M59-1 SH. 2 (C6)	Open Closed	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1KL -KL-HV-5124B</b> OP/V182 B INST GAS HDR S/OFF V 52-242061	3	N	B	A	2	Globe	MO	M59-1 SH. 2 (C4)	Open Closed	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1KL -KL-HV-5126A</b> OP/V027 A INST GAS HDR OTBD V 52-232014	2	N	A	A	2	Globe	MO	M59-1 SH. 1 (F3)	Open Open/Clos	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M		

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*KL - Containment Instrument Gas*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1KL -KL-HV-5126B</b> OP/V025 B INST GAS HDR OTBD V 52-222014	2	N	A	A	2	Globe	MO	M59-1 SH. 1 (G3)	Open ren/Clos	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	
<b>H1KL -KL-HV-5147 2</b> OP/V002 COMP AK202 SUCT HDR V 52-232153		N	A	A	2	Globe	MO	M59-1 SH. 1 (D3)	Open ren/Clos	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	
<b>H1KL -KL-HV-5148 2</b> OP/V001 INST GAS COMP SUC HDR 52-212183		N	A	A	2	Globe	MO	M59-1 SH. 1 (D3)	Open ren/Clos	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	CS - 15   CS - 15
<b>H1KL -KL-HV-5152A</b> OP/V028 A INST GAS HDR INBD V 52-212101	2	N	A	A	2	Globe	MO	M59-1 SH. 1 (F2)	Open ren/Clos	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	
<b>H1KL -KL-HV-5152B</b> OP/V026 B INST GAS HDR INBD V 52-242101	2	N	A	A	2	Globe	MO	M59-1 SH. 1 (G2)	Open ren/Clos	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M	
<b>H1KL -KL-HV-5154 2</b> OP/V018 VAC REL V OTBD SUP		N	A	A	2	Globe	AO	M59-1 SH. 1 (B3)	Open Closed Closed		FSC FSTC LJ PIT STC	1 Q 1 Q Opt B 2 Y 1 Q	
<b>H1KL -KL-HV-5155 2</b> OP/V019 VAC REL VLV SUP		N	A	A	2	Globe	AO	M59-1 SH. 1 (B3)	Open Closed Closed		FSC FSTC LJ PIT STC	1 Q 1 Q Opt B 2 Y 1 Q	

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*KL - Containment Instrument Gas*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
									Normal	Safety	Fail-Safe				
<b>H1KL -KL-HV-5156A</b> OP/V010 SUP HDRS X-CONN ISLN V	2	N	B	A	2	Globe	AO	M59-1 SH. 1 (F5)	Open	Closed	Closed	FSC FSTC PIT STC	1 Q 1 Q 2 Y 1 Q		
<b>H1KL -KL-HV-5156B</b> OP/V009 SUP HDRS X-CONN ISLN V	2	N	B	A	2	Globe	AO	M59-1 SH. 1 (G5)	Open	Closed	Closed	FSC FSTC PIT STC	1 Q 1 Q 2 Y 1 Q		
<b>H1KL -KL-HV-5160A</b> OP/V003 POST ACCIDNT COMP SUCT 52-232122	2	N	B	A	2	Globe	MO	M59-1 SH. 1 (D4)	Closed	Open	NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1KL -KL-HV-5160B</b> OP/V004 POST ACCIDNT COMP SUCT 52-242122	2	N	B	A	2	Globe	MO	M59-1 SH. 1 (C4)	Closed	Open	NA	FSX PIT PVT	18 M 10 Y 10 Y		
<b>H1KL -KL-HV-5162 2</b> OP/V049 COMP BK202 SUCT HDR VL 52-242213		N	A	A	2	Globe	MO	M59-1 SH. 1 (C3)	Open	Open/Clos	NA	FSX LJ PIT PVT STC	18 M Opt B 10 Y 10 Y 18 M		
<b>H1KL -KL-HV-5172A</b> OP/V196 A INST GAS EMER SUP V 52-212224	2	N	B	P	2	Globe	MO	M59-1 SH. 1 (F4)	Closed	Closed	NA	PIT	2 Y		
<b>H1KL -KL-HV-5172B</b> OP/V195 B INST GAS EMER SUP V 52-222233	2	N	B	P	2	Globe	MO	M59-1 SH. 1 (H3)	Closed	Closed	NA	PIT	2 Y		

# Hope Creek Inservice Testing Plan

## Hope Creek Nuclear Plant Valve Table

Unit 1

### QM - Special Facilities

Valve ID						Valve	Actuator	Drawing	Position			Required			
Description	Class	Aug.	Cat.	A/P	Size	Type	Type	& Coord	Normal	Safety	Fail-Safe	Test	Frequency	RR/CSJ/ROJ	Comments / Notes
H1QM -1-QM-V101	3	N	A	P	2 inch	Ball	MAN	M60-1 SH. 1 (D6)	Closed	Closed	NA	LJ	18 M		
Containment Airlock Inboard Equilizing V															



Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

RC - Reactor Coolant

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1RC -1RC-SV-0643A</b> LIQ SMPL INBD RTN /SUPP CHMBR FROM PASS	2	N	A	P	1	Globe	SO	M38-0 SH. 1 (C7)	Closed Closed Closed	LJ PIT	Opt B 2 Y		
<b>H1RC -1RC-SV-0643B</b> LIQ SMPL OTBD RTN/SUPP CHMBR FROM PASS	2	N	A	P	1	Globe	SO	M38-0 SH. 1 (C7)	Closed Closed Closed	LJ PIT	Opt B 2 Y		
<b>H1RC -1RC-SV-0645A</b> LIQ SMPL INBR/RHR B TO PASS CB	2	N	B	P	1	Globe	SO	M38-0 SH. 1 (F7)	Closed Closed Closed	PIT	2 Y		
<b>H1RC -1RC-SV-0645B</b> LIQ SMPL OTBD/RHR B TO PASS	2	N	B	P	1	Globe	SO	M38-0 SH. 1 (F7)	Closed Closed Closed	PIT	2 Y		
<b>H1RC -1RC-SV-0646A</b> LIQ SMPL INBRD/RHR A TO PASS CB	2	N	B	P	1	Globe	SO	M38-0 SH. 1 (E7)	Closed Closed Closed	PIT	2 Y		
<b>H1RC -1RC-SV-0646B</b> LIQ SMPL OTBD /RHR A TO PASS	2	N	B	P	1	Globe	SO	M38-0 SH. 1 (E7)	Closed Closed Closed	PIT	2 Y		
<b>H1RC -RC-SV-0707A</b> INTERIM ABAND.PASS SAMPLE SV ISOL AZ 200	2	N	A	P	1	Globe	SO	M38-0 SH. 2 (F7)	Closed Closed Closed	LJ PIT	Opt B 2 Y		
<b>H1RC -RC-SV-0707B</b> INTERIM ABAND.PASS SAMPLE SV ISOL AZ 205	2	N	A	P	1	Globe	SO	M38-0 SH. 2 (F7)	Closed Closed Closed	LJ PIT	Opt B 2 Y		
<b>H1RC -RC-SV-0728A</b> INTRTIM ABAND.PASS GAS SAMPLEISOL AZ 25	2	N	A	P	1	Globe	SO	M38-0 SH. 2 (F7)	Closed Closed Closed	LJ PIT	Opt B 2 Y		
<b>H1RC -RC-SV-0728B</b> INTERIM ABAND. PASS GAS SV ISOL AZ 25	2	N	A	P	1	Globe	SO	M38-0 SH. 2 (F7)	Closed Closed Closed	LJ PIT	Opt B 2 Y		
<b>H1RC -RC-SV-0729A</b> INTERIM ABAND. PASS SAMPLE SV ISOL AZ 75	2	N	A	P	1	Globe	SO	M38-0 SH. 2 (E7)	Closed Closed Closed	LJ PIT	Opt B 2 Y		
<b>H1RC -RC-SV-0729B</b> INTERIM ABANDONPASS SAMPLE SV ISOL AZ 75	2	N	A	P	1	Globe	SO	M38-0 SH. 2 (E7)	Closed Closed Closed	LJ PIT	Opt B 2 Y		
<b>H1RC -RC-SV-0730A</b> INTERIM ABAND.PASS SAMPLE SV ISOL AZ 150	2	N	A	P	1	Globe	SO	M38-0 SH. 2 (C7)	Closed Closed Closed	LJ PIT	Opt B 2 Y		

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*RC - Reactor Coolant*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1RC -RC-SV-0730B</b> INTERIM ABAND. PASS SAMPLE SV ISOL AZ 150	2	N	A	P	1	Globe	SO	M38-0 SH. 2 (C7)	Closed	Closed	Closed	LJ PIT	Opt B 2 Y		
<b>H1RC -RC-SV-0731A</b> INTERIM ABAND. PASS SAMPLE SV ISOL AZ 30	2	N	A	P	1	Globe	SO	M38-0 SH. 2 (C7)	Closed	Closed	Closed	LJ PIT	Opt B 2 Y		
<b>H1RC -RC-SV-0731B</b> INTERIM ABAND. PASS SAMPLE SV ISOL AZ 30	2	N	A	P	1	Globe	SO	M38-0 SH. 2 (C7)	Closed	Closed	Closed	LJ PIT	Opt B 2 Y		
<b>H1RC -RC-SV-8903A</b> JET PUMP PASS SAMPLE ISOLATION AZ 250	1	N	A	P	1	Globe	SO	M38-0 SH. 1 (G7)	Closed	Closed	Closed	LJ PIT	Opt B 1 RF		
<b>H1RC -RC-SV-8903B</b> JRT PUMP PASS SAMPLE ISOLATION AZ 250	2	N	A	P	1	Globe	SO	M38-0 SH. 1 (G7)	Closed	Closed	Closed	LJ PIT	Opt B 1 RF		

Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Valve Table

SE - Neutron Monitoring

Unit 1

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1SE</b> <b>-1SESV-J004A1C5</b> A TIP SHEAR BALL VALVE V026 ACTTR /P-34B	2	N	A	A	O.375	Ball	SO	M59-1 SH. 3 (E4)	Closed	Closed	Closed	FSC FSTC LJ PIT STC	1 Q 1 Q 2 Y 2 Y 1 Q		
<b>H1SE</b> <b>-1SESV-J004A2C5</b> B TIP SHEAR BALL VALVE V027 ACTTR /P-34A	2	N	A	A	O.375	Ball	SO	M59-1 SH. 3 (E4)	Closed	Closed	Closed	FSC FSTC LJ PIT STC	1 Q 1 Q 2 Y 2 Y 1 Q		
<b>H1SE</b> <b>-1SESV-J004A3C5</b> C TIP SHEAR BALL VALVE V028 ACTTR /P-34D	2	N	A	A	O.375	Ball	SO	M59-1 SH. 3 (E4)	Closed	Closed	Closed	FSC FSTC LJ PIT STC	1 Q 1 Q 2 Y 2 Y 1 Q		
<b>H1SE</b> <b>-1SESV-J004A4C5</b> D TIP SHEAR BALL VALVE V029 ACTTR /P-34C	2	N	A	A	O.375	Ball	SO	M59-1 SH. 3 (E4)	Closed	Closed	Closed	FSC FSTC LJ PIT STC	1 Q 1 Q 2 Y 2 Y 1 Q		
<b>H1SE</b> <b>-1SESV-J004A5C5</b> E TIP SHEAR BALL VALVE V030 ACTTR /P-34E	2	N	A	A	O.375	Ball	SO	M59-1 SH. 3 (E4)	Closed	Closed	Closed	FSC FSTC LJ PIT STC	1 Q 1 Q 2 Y 2 Y 1 Q		
<b>H1SE -1SEV-006</b> TIP PURGE INBOARD CHECK VALVE	2	N	AC	A	O.375	Check	SE	M59-1 SH. 3 (D3)	Open	Closed	NA	EXC EXO LJ	CM CM Opt B	RJ - 12 RJ - 12	CMP-30
<b>H1SE</b> <b>-1SEXV-J004B1C5</b> A TIP SHEAR EXPLOS VLV V021 ACTTR /P-34B	2	N	D	A	O.375	Gate	EX	M59-1 SH. 3 (E4)	Open	Closed	NA	EX	90 M		
<b>H1SE</b> <b>-1SEXV-J004B2C5</b> B TIP SHEAR EXPLOS VLV V022 ACTTR /P-34A	2	N	D	A	O.375	Gate	EX	M59-1 SH. 3 (E4)	Open	Closed	NA	EX	90 M		
<b>H1SE</b> <b>-1SEXV-J004B3C5</b> C TIP SHEAR EXPLOS VLV V023 ACTTR /P-34D	2	N	D	A	O.375	Gate	EX	M59-1 SH. 3 (E4)	Open	Closed	NA	EX	90 M		

Hope Creek Inservice Testing Plan

Hope Creek Nuclear Plant

Unit 1

Valve Table

SE - Neutron Monitoring

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1SE</b> <b>-1SEXV-J004B4C5</b> D TIP SHEAR EXPLOS VLV V024 ACTTR /P-34C	2	N	D	A	O.375	Gate	EX	M59-1 SH. 3 (E4)	Open	Closed	NA	EX	90 M		
<b>H1SE</b> <b>-1SEXV-J004B5C5</b> E TIP SHEAR EXPLOS VLV V025 ACTTR /P-34E	2	N	D	A	O.375	Gate	EX	M59-1 SH. 3 (E4)	Open	Closed	NA	EX	90 M		
<b>H1SE -SE-HV-5161</b> 2 OP/V004 TIP PURGE EQPT OTL ISO		N	A	A	2	Globe	AO	M59-1 SH. 3 (D3)	Open	Closed	Closed	FSC FSTC LJ PIT STC	1 Q 1 Q Opt B 2 Y 1 Q		

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*SK - Plant Leak Detection*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	Position			Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1SK -SK-HV-49532</b>  OP/V006 LK DET CNTMT OUTB ISLN 52-242153	N	A	A	2	Globe	MO	M25-1 SH. 1 (F3)	Open	Closed	NA		FSX	18 M		
												LJ	Opt B		
												PIT	10 Y		
												PVT	10 Y		
												STC	18 M		
<b>H1SK -SK-HV-49572</b>  OP/V008 LK DET CNTMT INBRD ISL 52-212252	N	A	A	2	Globe	MO	M25-1 SH. 1 (F3)	Open	Closed	NA		FSX	18 M		
												LJ	Opt B		
												PIT	10 Y		
												PVT	10 Y		
												STC	18 M		
<b>H1SK -SK-HV-49812</b>  OP/V009 LK DET CNTMT OTBD ISLN 52-242212	N	A	A	2	Globe	MO	M25-1 SH. 1 (F3)	Open	Closed	NA		FSX	18 M		
												LJ	Opt B		
												PIT	10 Y		
												PVT	10 Y		
												STC	18 M		
<b>H1SK -SK-HV-50182</b>  OP/V005 LK CNTMT INBRD ISLN 52-212253	N	A	A	2	Globe	MO	M25-1 SH. 1 (G4)	Open	Closed	NA		FSX	18 M		
												LJ	Opt B		
												PIT	10 Y		
												PVT	10 Y		
												STC	18 M		

Hope Creek Inservice Testing Plan

**Hope Creek Nuclear Plant  
Valve Table**

**Unit 1**

*SN - Automatic Depressurization*

Valve ID Description	Class	Aug.	Cat.	A/P	Size	Valve Type	Actuator Type	Drawing & Coord	----- Position ----- Normal Safety Fail-Safe	Required Test	Frequency	RR/CSJ/ROJ	Comments / Notes
<b>H1SN</b> <b>-1SNPSV-F013A-B</b> *MS LINE A SRV (ADS VALVE) -1130 PSI	1	N	C	A	8	Safety Relief	SE	M41-1 SH. 2 (C8)	Closed/en/Clos	NA	RV	5 Y	VR - 02
<b>H1SN</b> <b>-1SNPSV-F013B-B</b> *MS LINE B SRV (ADS VALVE) -1130 PSI	1	N	C	A	8	Safety Relief	SE	M41-1 SH. 2 (C8)	Closed/en/Clos	NA	RV	5 Y	VR - 02
<b>H1SN</b> <b>-1SNPSV-F013C-B</b> *MS LINE C SRV (ADS VALVE) -1130 PSI	1	N	C	A	8	Safety Relief	SE	M41-1 SH. 2 (C8)	Closed/en/Clos	NA	RV	5 Y	VR - 02
<b>H1SN</b> <b>-1SNPSV-F013D-B</b> *MS LINE D SRV (ADS VALVE) -1130 PSI	1	N	C	A	8	Safety Relief	SE	M41-1 SH. 2 (C8)	Closed/en/Clos	NA	RV	5 Y	VR - 02
<b>H1SN</b> <b>-1SNPSV-F013E-B</b> *MS LINE C SRV (ADS VALVE) -1130 PSI	1	N	C	A	8	Safety Relief	SE	M41-1 SH. 2 (B8)	Closed/en/Clos	NA	RV	5 Y	VR - 02

## Hope Creek Inservice Testing Plan

**TABLE 4: CHECK VALVE CONDITION MONITORING GROUPS**  
(Page 1 of 3)

Group Number	Components	Description	Implemented (Y/N)
CMP-01	1APV-045 1APV-046 1APV-057 1APV-058	"4" LPCI Condensate Transfer Keep-Fill	Y
CMP-02	1ABV-051 1ABV-052 1ABV-053 1ABV-054	1" Inboard MSIV Accumulators	Y
CMP-03	1ABV-055 1ABV-056 1ABV-057 1ABV-058	1" Outboard MSIV Accumulators	Y
CMP-04	1AEHV-F039	4" Reactor Water Cleanup IV	Y
CMP-05	1AEV-127 1AEV-128	4" Reactor Water Cleanup – Return to Feedwater CV's	Y
CMP-06	1APV-050 1APV-051	"3" HPCI/RCIC Condensate Transfer Keep-Fill	Y
CMP-07	1APV-039 1APV-040 1APV-060 1APV-061	"3" Core Spray Condensate Transfer Keep-Fill	Y
CMP-08	1APV-042 1APV-043 1APV-054 1APV-055	"4" RHR "A" & "B" Condensate Transfer Keep-Fill	Y
CMP-09	1BBV-043 1BBV-047	0.75" Recirc Pump Seal	Y
CMP-10	1BBV-232 1BBV-233 1BBV-239 1BBV-240 1BBV-246 1BBV-247 1BBV-253 1BBV-254	0.375" CRD Ref LEG	Y
CMP-11	1BCV-089 1BCV-194 1BCV-208 1BCV-211	1" Keep Fill Pump Discharge – RHR	Y

## Hope Creek Inservice Testing Plan

**TABLE 4: CHECK VALVE CONDITION MONITORING GROUPS**  
(Page 2 of 3)

<b>Group Number</b>	<b>Components</b>	<b>Description</b>	<b>Implemented (Y/N)</b>
CMP-12	1BCV-206 1BCV-260	1" Keep Fill Min - Flow (RHR)	Y
CMP-13	1BCV-423 1EAV-557	2" SW To Spent Fuel	Y
CMP-14	1BDV-002 1BDV-004	6" RCIC Testable Check Valves	N
CMP-15	1BJV-006 1BJV-008	6" HPCI Testable Check Valves	N
CMP-16	1BDV-028 1BDV-029 1BJV-014 1BJV-023	1" RCIC/HPCI Keep Fill Discharge	Y
CMP-17	1BEV-028 1BEV-030 1BEV-032 1BEV-034	3" Core Spray Min-Flow	Y
CMP-18	1BHHV-F006A 1BHHV-F006B	2" SLS Outbd Testable CV's	N
CMP-19	1BHV-029	1.5" SLS Inbd CIV	N
CMP-20	1BJV-015	4" HPCI Min Flow	Y
CMP-21	1APV-036 1APV-037	"3" HPCI/RCIC Condensate Transfer Keep-Fill	Y
CMP-22		Not Used	
CMP-23		Not Used	
CMP-24		Not Used	
CMP-25	1EGV-1167 1EGV-1168 1EGV-1169 1EGV-1170	1.5" SACS Demin Outlet	
CMP-26	1EPV-003 1EPV-010 1EPV-016 1EPV-023	6" SW Traveling Screen pump Discharge	Y
CMP-27	1FDV-004	20" Turbine Exhaust (HPCI)	N
CMP-28	1FCV-010	2" RCIC Vac Pump Discharge	Y
CMP-29	1GSV-081 1GSV-093 1GSV-138 1GSV-139	1" Nitrogen Supply to Vac RLF	Y



## Hope Creek Inservice Testing Plan

**TABLE 4: CHECK VALVE CONDITION MONITORING GROUPS**  
(Page 3 of 3)

<b>Group Number</b>	<b>Components</b>	<b>Description</b>	<b>Implemented (Y/N)</b>
CMP-30	1SEV-006	0.375" TIP Purge Supply	Y
CMP-31		Not Used	
CMP-32	1KBV-1243 1KBV-1244 1KBV-1245 1KBV-1246 1KBV-1247 1KBV-1248 1KBV-1249 1KBV-1250	0.375" SACS Control Valve Backup Air Supply	Y
CMP-33	1BCV-308 1BCV-312	2" Keep Fill Pump Discharge - Core Spray	Y

## Hope Creek Inservice Testing Plan

**TABLE 5: LISTING OF MOVs in APPENDIX III**

<b>System</b>	<b>Valve_ID</b>	<b>Label</b>	<b>Class</b>	<b>Cat</b>	<b>Valve Type</b>	<b>Risk Rank</b>	<b>PVT Frequency</b>
AB	H1AB -AB-HV-F016	OP/V039 INBD DRN LN INBD ISLN 52-212181	1	A	Gate	L	10 Y
AB	H1AB -AB-HV-F019	OP/V040 INBD DRN LN OUTBD ISLN 52-242083	1	A	Gate	L	10 Y
AE	H1AE -AE-HV-4144	OP/V138 FW SUP LNS A&B XCONN 52-232054	2	B	Globe	L	10 Y
AE	H1AE -AE-HV-F032A	OP/V005 FW SPLY LINE A INL CHK 52-212102	2	AC	Stop Check	H	10 Y
AE	H1AE -AE-HV-F032B	OP/V001 FW SPLY LINE B INL CHK 52-212102	2	AC	Stop Check	H	10 Y
AE	H1AE -AE-HV-F039	OP/V021 RWCU RTN - RPV	2	AC	Stop Check	L	10 Y
AP	H1AP -AP-HV-F011	OP/1-V004 HPCI/RCIC RET TO CST 72-251032	2	A	Gate	L	10 Y
BC	H1BC -1BCHV-F040-E11	*RHR DISCH TO RDWST ISLN OUTBD CB	2	B	Globe	L	10 Y
BC	H1BC -BC-HV-5055A	OP/V520 RHR LP A TO H2 RECOMB 52-212273	2	B	Globe	L	10 Y
BC	H1BC -BC-HV-5055B	OP/V521 RHR LP B - H2 RECOMB 52-222192	2	B	Globe	L	10 Y
BC	H1BC -BC-HV-F003A	OP/V108 RHR HX A OUTLET MOV 52-212013	2	B	Globe	L	10 Y
BC	H1BC -BC-HV-F003B	OP/V011 RHR HX B OUTLET VLV 52-222013	2	B	Globe	L	6 Y
BC	H1BC -BC-HV-F004A	OP/V103 RHR PMP A SUP POOL SUC 52-212031	2	B	Gate	L	10 Y

## Hope Creek Inservice Testing Plan

System	Valve_ID	Label	Class	Cat	Valve Type	Risk Rank	PVT Frequency
BC	H1BC -BC-HV-F004B	OP/V006 RHR PMP B SUP POOL SUC 52-222031	2	B	Gate	L	10 Y
BC	H1BC -BC-HV-F004C	OP/V098 RHR PMP C SUP POOL SUC 52-232031	2	B	Gate	L	10 Y
BC	H1BC -BC-HV-F004D	OP/V001 RHR PMP D SUP POL SUCT 52-242031	2	B	Gate	L	10 Y
BC	H1BC -BC-HV-F006A	OP/V104 RHR PMP A SUC FM RCIRC 52-451012	2	B	Gate	L	10 Y
BC	H1BC -BC-HV-F006B	OP/V007 RHR PMP B SUC FM RCIRC 52-222032	2	B	Gate	L	10 Y
BC	H1BC -BC-HV-F007A	OP/V128 RHR PMP A MIN FL VLV 52-212041	2	B	Gate	L	10 Y
BC	H1BC -BC-HV-F007B	OP/V031 RHR PMP B MIN FL MOV 52-222041	2	B	Gate	L	10 Y
BC	H1BC -BC-HV-F007C	OP/V131 RHR PMP C MIN FL VLV 52-232041	2	B	Gate	L	10 Y
BC	H1BC -BC-HV-F007D	OP/V034 RHR PMP D MIN FL MOV 52-242041	2	B	Gate	L	10 Y
BC	H1BC -BC-HV-F008	OP/V164 B REC - RHR S/D OTBD 52-242082	1	A	Gate	L	10 Y
BC	H1BC -BC-HV-F009	OP/V071 B RCIRC - RHR S/D CLG 52-451061	1	A	Gate	L	10 Y
BC	H1BC -BC-HV-F010A	OP/V125 RHR LOOP C TEST RET 52-232044	2	B	Globe	L	10 Y
BC	H1BC -BC-HV-F010B	OP/V027 RHR LOOP D TEST RET 52-242044	2	B	Globe	L	10 Y
BC	H1BC -BC-HV-F015A	OP/V110 RHR LP A RET TO RECIRC 52-481062	1	A	Globe	L	10 Y

## Hope Creek Inservice Testing Plan

System	Valve_ID	Label	Class	Cat	Valve Type	Risk Rank	PVT Frequency
BC	H1BC -BC-HV-F015B	OP/V013 RHR LP B RET TO RECIRC 52-242022	1	A	Globe	L	10 Y
BC	H1BC -BC-HV-F016A	OP/V115 RHR LP A OBD CNTMT SPY 52-212061	2	B	Gate	L	10 Y
BC	H1BC -BC-HV-F016B	OP/V018 RHR LP B OBD CNTMT SPY 52-222061	2	B	Gate	L	10 Y
BC	H1BC -BC-HV-F017A	OP/V113 RHR LP A LPCI INJ VLV 52-212052	1	A	Gate	L	10 Y
BC	H1BC -BC-HV-F017B	OP/V016 RHR LP B LPCI INJ VLV 52-222052	1	A	Gate	L	10 Y
BC	H1BC -BC-HV-F017C	OP/V101 RHR LP C LPCI INJ VLV 52-232052	1	A	Gate	L	10 Y
BC	H1BC -BC-HV-F017D	OP/V004 RHR LP D LPCI INJ VLV 52-242052	1	A	Gate	L	10 Y
BC	H1BC -BC-HV-F021A	OP/V116 RHR LP A IBD CNTMT SPY 52-451062	2	B	Gate	L	10 Y
BC	H1BC -BC-HV-F021B	OP/V019 RHR LP B IBD CNTMT SPY 52-222062	2	B	Gate	L	10 Y
BC	H1BC -BC-HV-F024A	OP/V124 RHR LOOP A TST RET VL 52-212192	2	B	Globe	L	10 Y
BC	H1BC -BC-HV-F024B	OP/V028 RHR LOOP B TST RET V 52-222063	2	B	Globe	L	10 Y
BC	H1BC -BC-HV-F027A	OP/V112 RHR LP A SUP POOL SPRY 52-212083	2	B	Globe	L	10 Y
BC	H1BC -BC-HV-F027B	OP/V015 RHR LP B SUP POOL SPRY 52-222083	2	B	Globe	L	10 Y
BC	H1BC -BC-HV-F048A	OP/V538 RHR HX A SHL SIDE BYP 52-212092	2	B	Butterfly	L	10 Y

## Hope Creek Inservice Testing Plan

System	Valve_ID	Label	Class	Cat	Valve Type	Risk Rank	PVT Frequency
BC	H1BC -BC-HV-F048B	OP/V427 HX B SHELL SIDE BYP 52-222092	2	B	Butterfly	L	6 Y
BC	H1BC -BC-HV-F049	OP/V042 RHR L B DSCH - LIQ RW 52-411053	2	B	Gate	L	10 Y
BD	H1BD -BD-HV-F010	OP/V001 RCIC CST SUCT VLV 72-261022	2	B	Gate	L	10 Y
BD	H1BD -BD-HV-F013	OP/V005 RCIC FW ISLN VLV 72-261051	2	A	Gate	H	10 Y
BD	H1BD -BD-HV-F022	OP/V012 RCIC TEST BYP CST VLV 72-261041	2	A	Globe	L	10 Y
BD	H1BD -BD-HV-F031	OP/V003 RCIC -TORUS SUCT VLV 72-261102	2	B	Gate	L	10 Y
BD	H1BD -BD-HV-F046	OP/V022 LUBE OIL WTR VLV 72-261072	2	B	Globe	H	6 Y
BE	H1BE -BE-HV-F001A	OP/V017 CS PMP A SUCT VLV 52-212012	2	B	Gate	L	10 Y
BE	H1BE -BE-HV-F001B	OP/V019 CS PMP B SUCT VLV 52-222012	2	B	Gate	L	10 Y
BE	H1BE -BE-HV-F001C	OP/V018 CS PMP C SUCT VLV 52-232012	2	B	Gate	L	10 Y
BE	H1BE -BE-HV-F001D	OP/V020 CS PMP D SUCT VLV 52-242012	2	B	Gate	L	10 Y
BE	H1BE -BE-HV-F004A	OP/V008 CS LOOP A OUTBD INJ VL 52-212034	2	B	Gate	L	10 Y
BE	H1BE -BE-HV-F004B	OP-V004 CS LOOP B OUTBD INJ VL 52-222034	2	B	Gate	L	10 Y
BE	H1BE -BE-HV-F005A	OP/V007 CS LOOP A INBD INJ VLV 52-212044	1	A	Gate	L	10 Y

## Hope Creek Inservice Testing Plan

System	Valve_ID	Label	Class	Cat	Valve Type	Risk Rank	PVT Frequency
BE	H1BE -BE-HV-F005B	OP/V003 CS LOOP B INBD INJ VLV 52-222044	1	A	Gate	L	10 Y
BE	H1BE -BE-HV-F015A	OP/V025 LOOP A TEST RTN MOV 52-212051	2	B	Globe	L	10 Y
BE	H1BE -BE-HV-F015B	OP/V026 LOOP B TEST RETN VLV 52-222051	2	B	Globe	L	10 Y
BE	H1BE -BE-HV-F031A	OP/V035 CS LOOP A MIN FLOW VLV 52-212084	2	B	Globe	L	10 Y
BE	H1BE -BE-HV-F031B	OP/V036 CS LOOP B MIN FLOW VLV 52-222084	2	B	Globe	L	10 Y
BF	H1BF -BF-HV-3800A	OP/V098 RECIR PMP A SEAL PURGE 52-242013	2	A	Globe	L	10 Y
BF	H1BF -BF-HV-3800B	OP/V099 RECIR PMP B SEAL PURGE 52-242162	2	A	Globe	L	10 Y
BG	H1BG -BG-HV-F001	OP/V001 PMP SUC CNT INBDISO 52-212021	1	A	Gate	L	10 Y
BG	H1BG -BG-HV-F004	OP/V002 PMP SUCT CNT OTBD 52-242081	1	A	Gate	L	10 Y
BH	H1BH -BH-HV-F006A	OP/V028 SLC A CONT ISO ST CHK 52-212202	1	AC	Stop Check	L	10 Y
BH	H1BH -BH-HV-F006B	OP/V054 SLC B CONT ISO ST CHK 52-242203	1	AC	Stop Check	L	10 Y
BJ	H1BJ -BJ-HV-4803	OP/V500 SUPP CHMBR LVL INST LN 52-212242	2	B	Gate	L	10 Y
BJ	H1BJ -BJ-HV-4804	OP/V501 SUPP CHMBR LVL INST LN 52-212243	2	B	Gate	L	10 Y
BJ	H1BJ -BJ-HV-4865	OP/V502 SUPP CHMBR LVL INST LN 52-232063	2	B	Globe	L	10 Y

## Hope Creek Inservice Testing Plan

System	Valve_ID	Label	Class	Cat	Valve Type	Risk Rank	PVT Frequency
BJ	H1BJ -BJ-HV-4866	OP/V503 SUPP CHMBR LVL INST LN 52-232064	2	B	Globe	L	10 Y
BJ	H1BJ -BJ-HV-8278	OP/V059 HPCI PMP DSCH ISLN MOV 72-251091	2	A	Gate	L	6 Y
BJ	H1BJ -BJ-HV-F004	OP/V005 PMP SUCT FROM CST 72-251092	2	B	Gate	L	10 Y
BJ	H1BJ -BJ-HV-F006	OP/V001 PMP DSCH OTBD ISLN 72-251051	1	B	Gate	L	10 Y
BJ	H1BJ -BJ-HV-F008	OP/V010 TEST BYP TO CST MOV 72-251103	2	A	Globe	L	10 Y
BJ	H1BJ -BJ-HV-F012	OP/V016 MIN FLO BYP MOV 72-251112	2	B	Globe	H	10 Y
BJ	H1BJ -BJ-HV-F042	OP/V009 PMP SUC FRM SUP CHB 72-251131	2	B	Gate	L	10 Y
BJ	H1BJ -BJ-HV-F059	OP/V028 LUBE OIL CLG WTR MOV 72-251111	2	B	Globe	H	6 Y
EA	H1EA -EA-HV-2197A	OP/V416 BACKWASH VLV A 52-553021	3	B	Butterfly	L	10 Y
EA	H1EA -EA-HV-2197B	OP/V418 BACKWASH VLV B 52-563021	3	B	Butterfly	L	10 Y
EA	H1EA -EA-HV-2197C	OP/V417 BACKWASH VLV C 52-573021	3	B	Butterfly	L	10 Y
EA	H1EA -EA-HV-2197D	OP/V419 BACKWASH VLV D 52-583021	3	B	Butterfly	L	10 Y
EA	H1EA -EA-HV-2198A	OP/V473 SSWS PMP A DISCH VLV 52-553041	3	B	Butterfly	L	10 Y
EA	H1EA -EA-HV-2198B	OP/V475 SSWS PMP B DISCH VLV 52-563041	3	B	Butterfly	L	10 Y

## Hope Creek Inservice Testing Plan

System	Valve_ID	Label	Class	Cat	Valve Type	Risk Rank	PVT Frequency
EA	H1EA -EA-HV-2198C	OP/V474 SSWS PMP C DISCH VLV 52-573041	3	B	Butterfly	L	10 Y
EA	H1EA -EA-HV-2198D	OP/V476 SSWS PMP D DISCH VLV 52-583041	3	B	Butterfly	L	10 Y
EA	H1EA -EA-HV-2203	OP-V357 LOOP A RACS HX HDR SUP 52-212232	3	B	Butterfly	L	10 Y
EA	H1EA -EA-HV-2204	OP/V358 LOOP B RACS HX HDR SUP 52-222191	3	B	Butterfly	L	10 Y
EA	H1EA -EA-HV-2207	OP/V381 RACS HX HDR INLET VLV 52-232081	3	B	Butterfly	L	10 Y
EA	H1EA -EA-HV-2234	OP/V553 LOOP A EMER M/U OUTBD 52-212221	3	B	Butterfly	L	10 Y
EA	H1EA -EA-HV-2236	OP/V552 LOOP A EMER M/U INBD 52-212222	3	B	Butterfly	L	10 Y
EA	H1EA -EA-HV-2238	OP/V554 LOOP B EMER M/U OUTBD 52-222224	3	B	Butterfly	L	10 Y
EA	H1EA -EA-HV-2346	OP/V452 RACS HX HDR OUTLET VLV 52-232082	3	B	Butterfly	L	10 Y
EA	H1EA -EA-HV-2355A	OP/V346 SACS HX A2 OUT 52-232032	3	B	Butterfly	L	10 Y
EA	H1EA -EA-HV-2355B	OP/V352 SACS HX B2 OUT 52-242032	3	B	Butterfly	L	10 Y
EA	H1EA -EA-HV-2356A	OP/V450 LOOP A YARD DUMP VLV 52-212131	3	B	Butterfly	L	10 Y
EA	H1EA -EA-HV-2356B	OP/V451 LOOP B YARD DUMP VLV 52-222131	3	B	Butterfly	L	10 Y
EA	H1EA -EA-HV-2357A	OP/V377 LOOP A OUT TO CLG TWR 52-212132	3	B	Butterfly	L	10 Y



## Hope Creek Inservice Testing Plan

System	Valve_ID	Label	Class	Cat	Valve Type	Risk Rank	PVT Frequency
EA	H1EA -EA-HV-2357B	OP/V378 LOOP B OUT TO CLG TWR 52-222132	3	B	Butterfly	L	10 Y
EA	H1EA -EA-HV-2371A	OP/V349 SACS HX A1 OUT 52-212133	3	B	Butterfly	L	10 Y
EA	H1EA -EA-HV-2371B	OP/V355 SACS HX B1 OUT 52-222133	3	B	Butterfly	L	10 Y
EA	H1EA -EA-HV-F073	OP/V340 LOOP B EMER M/U INBD 52-222082	3	B	Butterfly	L	10 Y
EC	H1EC -EC-HV-4647	OP/1-V169 SPNT FUEL STOR PL FL 52-212254	3	B	Globe	L	10 Y
EC	H1EC -EC-HV-4648	OP/1-V170 SPNT FUEL STOR PL FL 52-222154	3	B	Globe	L	10 Y
ED	H1ED -ED-HV-2553	OP/V019 RECIR PMP RAC OUTB SUP 52-222202	2	A	Gate	L	10 Y
ED	H1ED -ED-HV-2554	OP/V020 RECIR PMP RAC INBD SUP 52-242172	2	A	Gate	L	10 Y
ED	H1ED -ED-HV-2555	OP/V021 RECIR PMP RAC OTBD RTN 52-222211	2	A	Gate	L	10 Y
ED	H1ED -ED-HV-2556	OP/V022 RECIR PMP RAC INBD RET 52-242173	2	A	Gate	L	10 Y
EE	H1EE -EE-HV-4652	OP/V002 SUP POOL RET INBD ISLN 52-212233	2	A	Gate	L	10 Y
EE	H1EE -EE-HV-4679	OP/V001 SUP POOL RET OTBD ISLN 52-222212	2	A	Gate	L	10 Y
EE	H1EE -EE-HV-4680	OP/V003 SUP POOL SPLY INB ISLN 52-212241	2	A	Gate	L	10 Y
EE	H1EE -EE-HV-4681	OP/V004 SUP POOL SPLY OTBD ILN 52-222221	2	A	Gate	L	10 Y

## Hope Creek Inservice Testing Plan

System	Valve_ID	Label	Class	Cat	Valve Type	Risk Rank	PVT Frequency
EG	H1EG -EG-HV-2317A	OP/V544 FUEL POOL HX A X-CONN 52-212123	3	B	Butterfly	L	10 Y
EG	H1EG -EG-HV-2317B	OP/V545 FUEL POOL HX B X-CONN 52-222123	3	B	Butterfly	L	10 Y
EG	H1EG -EG-HV-2320A	OP/V722 COMP CLR 1AK202 RTN V 52-232034	3	B	Globe	L	10 Y
EG	H1EG -EG-HV-2320B	OP/V723 COMP CLR 1BK202 RTN V 52-242034	3	B	Globe	L	10 Y
EG	H1EG -EG-HV-2321A	OP/V727 COMP CLR A RTN XCONN V 52-232051	3	B	Globe	L	10 Y
EG	H1EG -EG-HV-2321B	OP/V726 COMP CLR B RTN XCONN V 52-242051	3	B	Globe	L	10 Y
EG	H1EG -EG-HV-2446	OP/V1032 1AT205 LOOP A M/U 52-212271	3	B	Globe	L	10 Y
EG	H1EG -EG-HV-2447	OP/V1033 1BT205 LOOP B M/U 52-222214	3	B	Globe	L	10 Y
EG	H1EG -EG-HV-2452A	OP/V720 COMP CLR 1AK202 SUP V 52-232033	3	B	Globe	L	10 Y
EG	H1EG -EG-HV-2452B	OP/V721 COMP CLR 1BK202 SUP V 52-242033	3	B	Globe	L	10 Y
EG	H1EG -EG-HV-2453A	OP/V725 COMP CLR A SUP XCONN V 52-232042	3	B	Globe	L	10 Y
EG	H1EG -EG-HV-2453B	OP/V724 COMP CLR 1BK202 SUP V 52-242042	3	B	Globe	L	10 Y
EG	H1EG -EG-HV-2491A	OP/V003 SACS LOOP A HX INL ISO 52-212141	3	B	Butterfly	L	10 Y
EG	H1EG -EG-HV-2491B	OP/V007 SACS LOOP B HX INL ISO 52-222141	3	B	Butterfly	L	10 Y

## Hope Creek Inservice Testing Plan

System	Valve_ID	Label	Class	Cat	Valve Type	Risk Rank	PVT Frequency
EG	H1EG -EG-HV-2494A	OP/V004 SACS LOOP A HX INL ISO 52-232053	3	B	Butterfly	L	10 Y
EG	H1EG -EG-HV-2494B	OP/V008 SACS LOOP B HX INL ISO 52-242053	3	B	Butterfly	L	10 Y
EG	H1EG -EG-HV-2496A	OP/V028 TACS CLG LP A INBD RTN 52-212142	3	B	Butterfly	L	10 Y
EG	H1EG -EG-HV-2496B	OP/V030 TACS CLG LP B INBD RTN 52-222142	3	B	Butterfly	L	10 Y
EG	H1EG -EG-HV-2496C	OP/V714 TACS CLG LP A OTBD RTN 52-232142	3	B	Butterfly	L	10 Y
EG	H1EG -EG-HV-2496D	OP/V715 TACS CLG LP B OTBD RTN 52-242142	3	B	Butterfly	L	10 Y
EG	H1EG -EG-HV-2512A	OP/V023 RHR HX SACS RTN ISLN 52-212143	3	B	Butterfly	L	10 Y
EG	H1EG -EG-HV-2512B	OP/V026 RHR HX SACS RTN ISLN 52-222143	3	B	Butterfly	L	10 Y
EG	H1EG -EG-HV-7922A	OP/V546 FUEL POOL HX A X-CONN 52-212124	3	B	Butterfly	L	10 Y
EG	H1EG -EG-HV-7922B	OP/V547 FUEL POOL HX B X-CONN 52-222124	3	B	Butterfly	L	10 Y
EP	H1EP -EP-HV-2225A	OP/V001 SCR N WSH PMP A DSCH VL 52-553042	3	B	Butterfly	L	10 Y
EP	H1EP -EP-HV-2225B	OP/V014 SCR N WSH PMP B DSCH VL 52-563042	3	B	Butterfly	L	10 Y
EP	H1EP -EP-HV-2225C	OP/V008 SCR N WSH PMP C DSCH V 52-573042	3	B	Butterfly	L	10 Y
EP	H1EP -EP-HV-2225D	OP/V021 SCR N WSH PMP D DSCH VL 52-583042	3	B	Butterfly	L	10 Y

## Hope Creek Inservice Testing Plan

System	Valve_ID	Label	Class	Cat	Valve Type	Risk Rank	PVT Frequency
FC	H1FC -FC-HV-F007	OP/V001 RCIC STM INBD ISO VLV 52-242102	1	A	Gate	L	10 Y
FC	H1FC -FC-HV-F008	OP/V002 RCIC STM OTBD ISLN VLV 52-222022	1	A	Gate	L	10 Y
FC	H1FC -FC-HV-F045	OP/V021 TURB MN STM SUP ISLN V 72-261091	2	B	Globe	H	10 Y
FC	H1FC -FC-HV-F059	OP/V005 RCIC STM EXHISO VLV 72-261031	2	A	Gate	L	10 Y
FC	H1FC -FC-HV-F060	OP/V011 RCIC VAC PMP DSCH VLV 72-261042	2	A	Globe	L	10 Y
FC	H1FC -FC-HV-F062	OP/V006 RCIC VAC BRKR ISO VLV 52-222181	2	A	Gate	L	10 Y
FC	H1FC -FC-HV-F076	OP/V048 RCIC STM LN WARMUP VLV 52-242103	1	A	Globe	L	10 Y
FC	H1FC -FC-HV-F084	OP/V007 RCIC VAC BRKRISO VLV 52-242211	2	A	Gate	L	10 Y
FD	H1FD -FD-HV-F001	OP/V003 HPCI TURB STM SPLY 72-251081	2	B	Gate	H	10 Y
FD	H1FD -FD-HV-F002	OP/V001 HPCI STM INBD ISLN MOV 52-232203	1	A	Gate	L	10 Y
FD	H1FD -FD-HV-F003	OP/V002 HPCI STM OTBD ISLN MOV 52-212053	1	A	Gate	L	10 Y
FD	H1FD -FD-HV-F071	OP/V006 TURB EXH ISLN 72-251022	2	A	Gate	L	10 Y
FD	H1FD -FD-HV-F075	OP/V007 VAC BRKR ISLN 52-212231	2	A	Gate	L	10 Y
FD	H1FD -FD-HV-F079	OP/V010 VAC BRKRISO 52-232022_CATWLK	2	A	Gate	L	10 Y

## Hope Creek Inservice Testing Plan

System	Valve_ID	Label	Class	Cat	Valve Type	Risk Rank	PVT Frequency
FD	H1FD -FD-HV-F100	OP/V051 HPCI W/U VLV 52-232104	1	A	Globe	L	10 Y
GB	H1GB -GB-HV-9531A1	OP/V048 LP A SUP OUTBD CNTMT 52-242181	2	A	Gate	L	10 Y
GB	H1GB -GB-HV-9531A2	OP/V046 LP A RET OUTBD CNTMT 52-242182	2	A	Gate	L	10 Y
GB	H1GB -GB-HV-9531A3	OP/V070 LP B SUP OUTBD CNTMT 52-242183	2	A	Gate	L	10 Y
GB	H1GB -GB-HV-9531A4	OP/V071 LP B RET OUTBD CNTMT 52-242184	2	A	Gate	L	10 Y
GB	H1GB -GB-HV-9531B1	OP/V081 LP A SUP INBD CNTMT 52-232181	2	A	Gate	L	10 Y
GB	H1GB -GB-HV-9531B2	OP/V082 LP A RET INBD CNTMT 52-232182	2	A	Gate	L	10 Y
GB	H1GB -GB-HV-9531B3	OP/V083 LP B SUP INBD CNTMT 52-232183	2	A	Gate	L	10 Y
GB	H1GB -GB-HV-9531B4	OP/V084 LP B RET INBD CNTMT 52-232193	2	A	Gate	L	10 Y
GS	H1GS -GS-HV-4955A	OP/V045 H2O2 ANLZR DRYWL SUCT 52-212152	2	A	Globe	L	10 Y
GS	H1GS -GS-HV-4955B	OP/V031 H2O2 ANLZR DRYWL SUCT 52-222152	2	A	Globe	L	10 Y
GS	H1GS -GS-HV-4959A	OP/V049 H2O2 ANLZR SUPP CHMBR 52-212153	2	A	Globe	L	10 Y
GS	H1GS -GS-HV-4959B	OP/V040 H2O2 ANLZR SUPP CHMBR 52-222153	2	A	Globe	L	10 Y
GS	H1GS -GS-HV-4965A	OP/V050 H2O2 ANLZR SUP CHMBR 52-232073	2	A	Globe	L	10 Y

## Hope Creek Inservice Testing Plan

System	Valve_ID	Label	Class	Cat	Valve Type	Risk Rank	PVT Frequency
GS	H1GS -GS-HV-4965B	OP/V041 H2O2 ANLZR SUPP CHMBR 52-242073	2	A	Globe	L	10 Y
GS	H1GS -GS-HV-4966A	OP/V051 H2O2 ANLZR RET INBD 52-212161	2	A	Globe	L	10 Y
GS	H1GS -GS-HV-4966B	OP/V042 H2-02 ANLZR RET INBD 52-222161	2	A	Globe	L	10 Y
GS	H1GS -GS-HV-4974	OP/V053 N2 M/U SUP ISLN MOV 52-242202	2	A	Globe	L	10 Y
GS	H1GS -GS-HV-4983A	OP/V046 H2O2 ANLZR DRYWL OTBD 52-232091	2	A	Globe	L	10 Y
GS	H1GS -GS-HV-4983B	OP/V032 H2O2 ANLZR DRYWL OUTB 52-242091	2	A	Globe	L	10 Y
GS	H1GS -GS-HV-4984A	OP/V048 H2O2 ANLZR DRYWL SUCT 52-232092	2	A	Globe	L	10 Y
GS	H1GS -GS-HV-4984B	OP/V034 H2O2 ANLZR DRYWL SUCT 52-242092	2	A	Globe	L	10 Y
GS	H1GS -GS-HV-5019A	OP/V047 H2O2 ANLZR DRYWL SUCT 52-212162	2	A	Globe	L	10 Y
GS	H1GS -GS-HV-5019B	OP/V033 H2O2 ANLZR DRYWL SUCT 52-222162	2	A	Globe	L	10 Y
GS	H1GS -GS-HV-5022A	OP/V052 H2O2 ANLZR RET OUTBD 52-232093	2	A	Globe	L	10 Y
GS	H1GS -GS-HV-5022B	OP/V043 H2O2 ANLZR RET OUTBD 52-242093	2	A	Globe	L	10 Y
GS	H1GS -GS-HV-5050A	OP/V002 H2 RECOMB AS205 SUCT 52-212171	2	A	Gate	L	10 Y
GS	H1GS -GS-HV-5050B	OP/V004 H2 RECOMB BS205 SUCT 52-222171	2	A	Gate	L	10 Y

## Hope Creek Inservice Testing Plan

System	Valve_ID	Label	Class	Cat	Valve Type	Risk Rank	PVT Frequency
GS	H1GS -GS-HV-5052A	OP/V003 H2 RECOMB A SUCT OUTB 52-232112	2	A	Gate	L	10 Y
GS	H1GS -GS-HV-5052B	OP/V005 H2 RECOMB SUCT OTBD 52-242112	2	A	Gate	L	10 Y
GS	H1GS -GS-HV-5053A	OP/V008 H2 RECOMB AS205 RT HDR 52-232121	2	A	Gate	L	10 Y
GS	H1GS -GS-HV-5053B	OP/V006 H2 RECOMB BS205 RET HD 52-242121	2	A	Gate	L	10 Y
GS	H1GS -GS-HV-5054A	OP/V010 H2 RECOMB AS205 RT HDR 52-212172	2	A	Gate	L	10 Y
GS	H1GS -GS-HV-5054B	OP/V007 H2 RECOMB BS205 RT SUC 52-222172	2	A	Gate	L	10 Y
HB	H1HB -HB-HV-F003	OP/V005 DW FLR DR SMP INBD 52-242021	2	A	Gate	L	10 Y
HB	H1HB -HB-HV-F004	OP/V006 DW FLR DRN SUMP OTBD 52-222021	2	A	Gate	L	10 Y
HB	H1HB -HB-HV-F019	OP/V045 DW EQUIP DR SMP INBD 52-232103	2	A	Gate	L	10 Y
HB	H1HB -HB-HV-F020	OP/V046 DW EQUIP DRN SUMP OTBD 52-222023	2	A	Gate	L	10 Y
KL	H1KL -KL-HV-5124A	OP/V184 A INST GAS HDR S/OFF V 52-232061	3	B	Globe	L	10 Y
KL	H1KL -KL-HV-5124B	OP/V182 B INST GAS HDR S/OFF V 52-242061	3	B	Globe	L	10 Y
KL	H1KL -KL-HV-5126A	OP/V027 A INST GAS HDR OTBD V 52-232014	2	A	Globe	L	10 Y
KL	H1KL -KL-HV-5126B	OP/V025 B INST GAS HDR OTBD V 52-222014	2	A	Globe	L	10 Y

## Hope Creek Inservice Testing Plan

System	Valve_ID	Label	Class	Cat	Valve Type	Risk Rank	PVT Frequency
KL	H1KL -KL-HV-5147	OP/V002 COMP AK202 SUCT HDR V 52-232153	2	A	Globe	L	10 Y
KL	H1KL -KL-HV-5148	OP/V001 INST GAS COMP SUC HDR 52-212183	2	A	Globe	L	10 Y
KL	H1KL -KL-HV-5152A	OP/V028 A INST GAS HDR INBD V 52-212101	2	A	Globe	L	10 Y
KL	H1KL -KL-HV-5152B	OP/V026 B INST GAS HDR INBD V 52-242101	2	A	Globe	L	10 Y
KL	H1KL -KL-HV-5160A	OP/V003 POST ACCIDNT COMP SUCT 52-232122	2	B	Globe	L	10 Y
KL	H1KL -KL-HV-5160B	OP/V004 POST ACCIDNT COMP SUCT 52-242122	2	B	Globe	L	10 Y
KL	H1KL -KL-HV-5162	OP/V049 COMP BK202 SUCT HDR VL 52-242213	2	A	Globe	L	10 Y
SK	H1SK -SK-HV-4953	OP/V006 LK DET CNTMT OUTB ISLN 52-242153	2	A	Globe	L	10 Y
SK	H1SK -SK-HV-4957	OP/V008 LK DET CNTMT INBRD ISL 52-212252	2	A	Globe	L	10 Y
SK	H1SK -SK-HV-4981	OP/V009 LK DET CNTMT OTBD ISLN 52-242212	2	A	Globe	L	10 Y
SK	H1SK -SK-HV-5018	OP/V005 LK CNTMT INBRD ISLN 52-212253	2	A	Globe	L	10 Y



# **Hope Creek Inservice Testing Plan**

## **ATTACHMENT 1**

### **TECHNICAL POSITIONS**

# Hope Creek Inservice Testing Plan

## TECHNICAL POSITION INDEX

<b><u>NUMBER</u></b>	<b><u>APPLICABLE COMPONENTS</u></b>	<b><u>REVISION</u></b>
TP-1	Reference Values and Limiting Values of Full Stroke Times	0
TP-2	Reserved	n/a
TP-3	Reserved	n/a
TP-4	Reserved	n/a
TP-5	ECCS Keep-Fill System Series Check Valves	0
TP-6	ADS/PRV Classification	0

# Hope Creek Inservice Testing Plan

## Technical Position - TP-1

### I. Title

#### Power-Operated Valve Stroke Testing

Reference Values and Limiting Values of Full-Stroke Time

### II. Issue Discussion

- a) ISTC requires that an initial reference value be established for each valve or group of valves. The acceptance criteria is an allowable percentage above or below ( $\pm$ ) the reference value. Per ISTC , Subarticle ISTC-3300, reference values will be determined from the results of past inservice tests. These tests are performed under conditions as near as practicable to those expected during subsequent inservice testing.
- b) ISTC specifies stroke time acceptance criteria in Paragraphs ISTC-5114, 5132, 5142, and 5152. The limiting values of stroke time testing are to be established by the owner according to Subparagraphs ISTC-5113(b), 5131(b), 5141(b), and 5151(b).
- c) Active motor operated valves (MOVs) shall meet the requirements of Mandatory Appendix III of OM Code 2012 (ISTC-5120).

### III. Reference Values (ISTC , Subarticle ISTC-3300 and Paragraph ISTC-3310)

- a) According to ISTC, Paragraph ISTC-3310, when a valve or its control system has been replaced, repaired or has undergone maintenance\* that could affect the valve's performance, a new reference value will be determined or the previous value reconfirmed by an inservice test run prior to the time the valve is returned to service or immediately if not removed from service, to demonstrate that performance parameters which could be affected by replacement, repair, or maintenance are within acceptable limits. Verification that the new values represent acceptable operation will be documented in the record of tests.

\* Adjustment of stem packing, limit switches, or control system valves, and removal of the bonnet, stem assembly, actuator, obturator, or control system components are examples of maintenance that could affect valve performance parameters.

- b) Deviations between the previous and new reference values will be identified and analyzed. This analysis will review the  $\Delta t$  (previous minus new) between the reference values and determine whether this change is consistent with any changes that the valve or its control system has undergone. If the changes in stroke times are consistent with the changes that the valve or its control system has undergone, the new reference value will be applied to the valve. If the changes in stroke times are inconsistent with the changes that the valve or its control system has undergone, the IST Program Manager may elect to perform

## Hope Creek Inservice Testing Plan

### TP-1 (Con't)

further evaluations and determine if the previous value should remain as the reference value.

- c) Safety and relief valves and nonreclosing pressure relief devices shall be tested as required by the replacement, repair, and maintenance requirements of Mandatory Appendix I.
- d) If it is desired to establish an additional set of reference values, the requirements of ISTC , Paragraph ISTC-3320 must be met.

#### **IV. Stroke Time Acceptance Criteria (ISTC, Paragraphs ISTC-5114, 5132, 5142, 5152, Subparagraphs ISTC-5113(b), 5131(b), 5141(b), 5151(b) and Paragraphs ISTC-5115, 5133, 5143, 5153)**

- a) The ISTC standard recognizes that operating characteristics of electric motor operated valves are more consistent than those of other power-operated valves. The acceptance criteria for electric motor operated valves and other power-operated valves are different to reflect the operating characteristics.
- b) Per ISTC, Paragraphs ISTC-5114, 5132, 5142, 5152, stroke time acceptance criteria are calculated based on the reference values established above. The stroke time acceptance criteria calculations are shown below:

<b><u>Operator Type</u></b>	<b><u>Reference Value (RV)</u></b> <b><u>(Notes 1,2,3)</u></b>	<b><u>Acceptance Criteria</u></b> <b><u>(Note 4)</u></b>	<b><u>Limiting Stroke Time (LST)</u></b> <b><u>(Notes 4,5)</u></b>
Other AOV, HOV, SOV, PORV	RV>10.0 RV≤10.0**	0.75RV - 1.25RV 0.50RV - 1.50RV	≤1.5RV ≤2.0RV
All	RV≤2.0**	N/A	≤2.0 sec.

- \*\* Valves that stroke in less than 2 seconds may be exempted from use of the Acceptance Criteria ranges shown for “Other” Operator types. In such cases, the maximum limiting stroke time shall be 2 seconds (Ref. ISTC-5114(c), 5132(c), 5142(c), 5152(c)).

# Hope Creek Inservice Testing Plan

## **TP-1 (Con't)**

### Notes:

- 1) RV is the reference value in seconds for an individual valve or valve groupings.
  - 2) Standard rounding techniques are used when rounding off stopwatch readings during valve stroke timing (e.g. 10.45 rounds to 10.5 and 10.44 rounds to 10.4 seconds). All measured stroke times are rounded to the nearest tenth of a second.
  - 3) When reference stroke time values are affected by other parameters or conditions, then these parameters or conditions must be analyzed and the above factors adjusted.
  - 4) If the above calculated acceptance values exceed a Technical Specification (TS) or Final Safety Analysis Report (FSAR) value, then the TS or FSAR (or UFSAR) value must be used for the Limiting Value of Full-Stroke Time.
  - 5) If a minimum limiting stroke time exists for a given valve, the minimum value shall be used as the Lower Limiting Stroke Time. For valves with no lower limiting number, the Lower Limiting Stroke Time shall be N/A.
- c) According to ISTC , Paragraph ISTC-5115, 5133, 5143, and 5153, if a valve does not meet its acceptance criteria, it will be immediately retested or declared inoperable. If the valve is retested and the second set of data also does not meet the acceptance criteria, either the data shall be analyzed within 96 hours to verify that the new stroke time represents acceptable valve operations, or the valve will be declared inoperable. If the second set of data meets the acceptance criteria, the cause of the initial deviation will be analyzed and the results documented in the record of tests.

## **V. Limiting Stroke Time**

The Limiting Stroke Time (LST) is bounded by the system requirements or values specified in the safety analyses for system performance (FSAR, UFSAR or Technical Specifications). When the identified limiting value is exceeded, the valve shall be declared inoperable and the applicable Technical Specification Limiting Condition for Operation (LCO) shall be entered. Following the declaration that the valve is inoperable, the valve may be repaired, replaced or the data may be analyzed to determine the cause of the deviation and the valve shown to be operating acceptably. Valve operability based upon analysis shall have the results of the analysis recorded in the record of tests. Prior to returning a repaired or replacement valve to service, a test demonstrating satisfactory operation shall be performed.

# Hope Creek Inservice Testing Plan

## TP-1 (Con't)

### **VI. References**

- a) Code of Federal Regulations, Title 10, Part 50.55a
- b) ASME OM-2012 Code Edition, Subsection ISTC
- c) NRC NUREG-1482, Guidelines for Inservice Testing at Nuclear Power Plants
- d) Hope Creek Technical Specification, Surveillance Requirements
- e) NC.NA-AP.ZZ-0012(Q), Technical Specification Surveillance Program
- f) ER-AA-321, Administrative Requirements for Inservice Testing

# Hope Creek Inservice Testing Plan

## Technical Position - TP-5

### I. Title

#### Check Valve Testing

ECCS Keep-Fill System Series Check Valve

### II. Issue Discussion

- a) The function of each Emergency Core Cooling System (ECCS) keep-fill pump is to maintain the associated ECCS pump discharge lines filled and pressurized when ECCS is in standby. Without the keep-fill system, the ECCS pump discharge lines could depressurize and drain. This condition could lead to severe water hammer of the discharge piping in the event the ECCS pump is required to operate. Additionally, maintaining the discharge lines full and pressurized reduces the response time of the ECCS, since the time required for the ECCS pump to fill and pressurize the lines to the reactor vessel/containment is reduced.
- b) The ECCS discharge lines are provided with instrumentation to provide continuous pressure monitoring to ensure that the discharge lines are filled and pressurized within allowable pressure limits as delineated in plant Technical Specifications.
- c) There are no specific flow requirements associated with the ECCS keep-fill pump discharge check valves. The basis of the keep-fill pumps is to maintain the associated ECCS system pressurized within allowable limits. Pressure maintenance is considered adequate to monitor the opening capability of these valves.
- d) UFSAR 1.12.3.1 identifies that the keep-fill network is installed in the ECCS systems to ensure that the ECCS lines remain full of water, that the ECCS pumps will not start pumping into voided lines and that steam will not collect in the ECCS piping. This feature minimizes the possibility of water hammer in the ECCS lines upon ECCS initiation. However, UFSAR 6.3.2.2.6 states that the ECCS discharge line fill network is designed to maintain the ECCS pump discharge lines in a filled condition. It further states that the fill network is safety-related and designed to seismic Category I criteria, but is not considered an integral part of the ECCS and that a single failure of an active component in the fill network will not prevent the ECCS from performing its intended function. Instrumentation is provided in the main control room to assist the operator in ascertaining the proper operation of the fill network. Failure of the fill network will not prevent the ECCS from performing its safety function.

# Hope Creek Inservice Testing Plan

## **TP-5 (Con't)**

- e) Paragraph 4.1.1 of NUREG-1482, Basis for Recommendation, states, in part, that “Keep-fill valves are a special case in that they are in redundant systems in which only one valve of a series is actually necessary to perform a system’s intended function. Licensees have proposed to exclude the upstream valve from the IST Program. However, recognizing that neither valve can be individually demonstrated to shut, the NRC previously determined for the alternative test method discussed that both valves be included in the IST Program and tested as a pair to prevent reverse flow.”

## **III. Implementation**

- a) Since series ECCS keep-fill pump discharge check valves can be individually tested, only the valve closest to the ECCS process piping has a safety function in the closed position and will be tested in the closed direction. The upstream check valve is installed for redundancy.

## **V. References**

- a) Code of Federal Regulations, Title 10, Part 50.55a
- b) ASME OM-2012 Code Edition, Subsection ISTC
- c) NRC NUREG-1482 Guidelines for Inservice Testing at Nuclear Power Plants
- d) NRC Generic Letter 89-04, Guidance on Developing Acceptable Inservice Testing Programs
- e) Hope Creek Technical Specification, Surveillance Requirements
- f) NC.NA-AP.ZZ-0012(Q), Technical Specification Surveillance Program
- g) ER-AA-321, Administrative Requirements for Inservice Testing



# Hope Creek Inservice Testing Plan

## Technical Position - TP-6

### I. Title

Relief Valve Testing  
ADS/PRV Classification

### II. Issue Discussion

- a) The automatic depressurization system (ADS) valves (1SNPSV-F013A-E) are dual action main steam safety valves installed on the main steam headers to provide overpressure protection and to allow the operator to quickly depressurize the reactor vessel in the event of a small break loss of coolant accident (LOCA) coincident with a failure of the high pressure coolant injection system. The valve is capable of action as a simple mechanical relief valve, being remote manually operated from the main control room, or responding to an automatic safety system signal independent of reactor vessel pressure.
- b) When tested in previous Intervals per IWB of ASME Section XI, 1983 Edition, the valve was categorized as B/C to ensure proper testing of all capabilities associated with the valve's safety function.
- c) Paragraph 4.3.2.1 of NUREG-1482, discusses BWR Safety/Relief Valve Stroke Testing and the fact that several utilities have requested relief from the OM Code and TSs pertaining to insitu stroke tests in the plant.
- d) Paragraph I-3410 of Mandatory Appendix I specifies the inservice testing requirements for BWR main steam pressure relief valves with auxiliary actuating devices. Included in the required testing is the determination of stroke capability of the air actuator and the determination of operation of position indicators.
- e) Hope Creek Technical Specifications 4.4.2.2, 4.4.2.3 and 4.5.1.d specify the required testing of the ADS valves. Testing per these sections include:
  - 4.4.2.2 At least 1/2 of the safety relief pilot stage assemblies shall be removed, set pressure tested and reinstalled or replaced with spares that have been previously set pressure tested and stored in accordance with manufacturer's recommendations in accordance with the Surveillance Frequency Control Program (18 months) and they shall be rotated such that all 14 safety relief valve pilot stage assemblies are removed, set pressure tested and reinstalled or replaced with spares that have been previously set pressure tested and stored in accordance with manufacturer's recommendations in accordance with the Surveillance Frequency Control Program (40 months). All safety relief valves will be re-certified to meet  $\pm 1\%$  tolerance prior to returning the valves to service after set point testing.

# Hope Creek Inservice Testing Plan

## TP-6 (Con't)

- 4.4.2.3 The safety relief valve main (mechanical) stage assemblies shall be set pressure tested, reinstalled or replaced with spares that have been previously set pressure tested and stored in accordance with manufacturer's recommendations in accordance with the Surveillance Frequency Control Program (5 years).
- 4.5.1.d For the ADS:
  - 1. In accordance with the Surveillance Frequency Control Program, performing a CHANNEL FUNCTIONAL TEST of the Primary Containment Instrument Gas System low-low pressure alarm system.
  - 2. In accordance with the Surveillance Frequency Control Program (18 months):
    - a) Performing a system functional test which includes simulated automatic actuation of the system throughout its emergency operating sequence, but excluding actual valve actuation.
    - b) Verify that when tested pursuant to the IST Program, that each ADS valve is capable of being opened.
    - c) Performing a CHANNEL CALIBRATION of the Primary Containment Instrument Gas System low-low pressure alarm system and verifying an alarm setpoint of  $85 \pm 2$  psig on decreasing pressure.

## III. Implementation

- a) The ADS valves will be classified as Category C valves and tested in accordance with Mandatory Appendix I and the applicable Technical Specifications. Stroke time measurements and trending will not be performed.

## V. References

- a) Code of Federal Regulations, Title 10, Part 50.55a
- b) ASME OM-2012 Code Edition, Subsection ISTC & Mandatory Appendix I
- c) NRC NUREG-1482 – Rev 2, Guidelines for Inservice Testing at Nuclear Power Plants
- d) NRC Generic Letter 89-04, Guidance on Developing Acceptable Inservice Testing Programs
- e) Hope Creek Technical Specification, Surveillance Requirements
- f) NC.NA-AP.ZZ-0012(Q), Technical Specification Surveillance Program
- g) ER-AA-321, Administrative Requirements for Inservice Testing
- h) LS-HC-1000-1001, Hope Creek Generating Station Surveillance Frequency Control Program List of surveillance Frequencies

# **Hope Creek Inservice Testing Plan**

## **ATTACHMENT 2**

### **COLD SHUTDOWN JUSTIFICATIONS**

## Hope Creek Inservice Testing Plan

### COLD SHUTDOWN JUSTIFICATION INDEX

<b><u>NUMBER</u></b>	<b><u>APPLICABLE COMPONENTS</u></b>	<b><u>REVISION</u></b>
CS-01	1ABHV-F022A/B/C/D, 1ABHV-F028A/B/C/D	0
CS-02	1ABV-055/056/057/058	0
CS-03	1AEHV-4144	0
CS-04	1AEV-127/128	0
CS-05	1AEHV-F032A/F032B	0
CS-06	1AEHV-F074A/F074B	0
CS-07	1BCHV-F008, F009, F015A/B, F017A/B/C/D	0
CS-08	1BCHV-F041A/B/C/D,-F050A/B, 1BEHV-F006A/B	0
CS-09	1BFHV-3800A/B	0
CS-10	1EAHV-2207, 1EAHV-2346	0
CS-11	1EAHV-2357A/B	0
CS-12	1EDHV-2553/2554/2555/2556	0
CS-13	1EDHV-2598/2599	0
CS-14	Deleted (1EGHV-2522E/F removed per DCP 80103199)	n/a
CS-15	1KLHV-5148	0
CS-16	1KLV-023/024	0
CS-17	1GBHV-9531A1/A2/A3/A4/B1/B2/B3/B4	0
CS-18	PLACE HOLDER – Not used for Interval 4	n/a
CS-19	PLACE HOLDER – Not used for Interval 4	n/a
CS-20	PLACE HOLDER – Not used for Interval 4	n/a
CS-21	1AEHV-F039	0
CS-22	1BGHV-F001, F004	0
CS-23	1FDHV-F002, F100	0
CS-24	1FCHV-F007, F076	0

# Hope Creek Inservice Testing Plan

## Cold Shutdown CS-01

### **System:**

Main Steam and Drains

### **ASME Code Components Affected:**

1ABHV-F022A  
1ABHV-F022B  
1ABHV-F022C  
1ABHV-F022D  
1ABHV-F028A  
1ABHV-F028B  
1ABHV-F028C  
1ABHV-F028D

### **Component/System Function:**

These valves are the inboard and outboard main steam isolation valves. The valves have a safety function in the closed position to provide containment isolation for the main steam headers. Additionally, they form the pressure boundary for the main steam isolation valve sealing system, which is operated post-LOCA as required to seal the main steam headers and prevent primary and secondary containment bypass leakage.

### **OM Code Category:**

A

### **ASME Code Class:**

1

### **Applicable Code Requirement:**

Active Category A and B valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, Paragraph ISTC- 3510.

### **Reason for Request:**

Exercising and stroke timing these valves during power operation provides the potential for a reactor scram based on high steam flow in other main steam lines. A high steam flow will generate a main steam isolation valve (MSIV) isolation, followed by a not-full-open reactor protection system logic scram; or at a minimum, force a significant load reduction to permit testing.

The fail-safe testing of the outboard MSIVs (1ABHV-F028A-D) requires entry into the steam tunnel, which is a locked high radiation area during power operation. Due to the design of the MSIV controls, fail-safe testing is an involved process, which would require significant man-rem to perform. Additionally, entry into the steam tunnel during power operation poses a significant personnel hazard due to the high ambient temperature.

## **Hope Creek Inservice Testing Plan**

The fail-safe testing of the inboard MSIVs (1ABHV-F022A-D) requires entry into the drywell, which is nitrogen inerted during power operation and most cold shutdowns. See refueling outage justifications RJ-01 for test deferral justification.

### **Proposed Alternative Testing:**

Full stroke exercising and stroke-timing to the closed position shall be performed on a cold shutdown frequency per paragraph ISTC-3521.

Fail-safe testing of the outboard MSIVs (1ABHV-F028A-D) shall be performed on a cold shutdown frequency per paragraph ISTC-3521.

Reference RJ-01 for inboard MSIV fail-safe testing frequency.

### **References:**

OM-2012 Code Edition, Subsection ISTC

# Hope Creek Inservice Testing Plan

## Cold Shutdown CS-02

### **System:**

Main Steam and Drains

### **ASME Code Components Affected:**

1ABV-055  
1ABV-056  
1ABV-057  
1ABV-058

### **Component/System Function:**

These check valves supply instrument air to the outboard main steam isolation valve accumulators. The valves have a safety function to close to prevent the accumulator from depressurizing in the event of a loss of the non-safety-related instrument air system.

### **OM Code Category:**

C

### **ASME Code Class:**

3

### **Applicable Code Requirement:**

Active Category C check valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC-3510.

### **Reason for Request:**

Testing these check valves during power operation requires entry into the steam tunnel, which is a locked high radiation area during power operation. Due to the design of the MSIV controls, testing is an involved process, which would require significant man-rem to perform. Additionally, entry into the steam tunnel during power operation poses a significant personnel hazard due to the high ambient temperature.

### **Proposed Alternative Testing:**

Full stroke exercising shall be performed on a cold shutdown frequency per paragraph ISTC-3522.

As an alternative to testing each valve during cold shutdowns, the valves may be placed in the Check Valve Condition Monitoring (CVCN) Program and tested at the frequency specified in the applicable CVCN Program Plan as allowed by ISTC-5222.

### **References:**

OM-2012 Code Edition, Subsection ISTC

# Hope Creek Inservice Testing Plan

## Cold Shutdown CS-03

### **System:**

Feedwater Line Water Seal

### **ASME Code Components Affected:**

1AEHV-4144

### **Component/System Function:**

This valve is the Feedwater Header Cross-Tie Valve and has an ACTIVE safety function to the OPEN position to allow redundancy in the feedwater line water seal system. The valve must be opened to provide a seal water flowpath from either the HPCI or RCIC jockey pump to the opposite feedwater header. This function is a redundant function that is only required when either the HPCI or RCIC jockey pump is not available.

This valve has a PASSIVE safety function in the CLOSED position. The portions of the feedwater system cross connected by HV-4144 provide the injection pathway for RCIC (B feedwater line) and a portion of the HPCI injection pathway (A feedwater line) which are redundant and independent High Pressure Injection Systems. Closure of HV-4144 is required to maintain separation of the independent injection systems and prevent diversion of injection from either system into the potentially voided piping of an unavailable system. Cross tying of the two systems could allow a single valve or piping failure to impact both injection systems.

### **OM Code Category:**

B

### **ASME Code Class:**

2

### **Applicable Code Requirement:**

Active Category B valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

NUREG-1482, Section 2.4.5 provides guidance on what the NRC considers impractical conditions which justify deferring of valve testing to Cold Shutdown conditions including "...situations that could result in an unnecessary plant shutdown, cause unnecessary challenges to safety systems, place undue stress on components, or unnecessarily reduce the life expectancy of the plant systems and components...: Additional guidance is provided in Section 3.1.1 which provides examples of valves which should be excluded from cycling during plant operations. The examples include "all valves that would cause a loss of system function if they were to fail in a non-conservative position during the cycling test. Valves in this category include all non-redundant valves..."



## **Hope Creek Inservice Testing Plan**

There is no redundant valve to the 1AEHV-4144 to provide the required separation between the HPCI and RCIC injection pathways. If 1AEHV-4144 were to fail open during the cycle test a loss of this separation function would occur. The PASSIVE Closed function does not require exercise testing on a quarterly frequency. Only Position Verification is required for Passive Functions. The requirement to perform Quarterly exercising per paragraph ISTC-3510 only applies to the ACTIVE Open function as specified in Table ISTC-3500-1.

The Open function of this valve is a redundant function for cross-tying the feedwater sealing system that is only required when either the HPCI or RCIC jockey pumps are not available. The feedwater sealing system is manually aligned for long-term feedwater sealing in a post-LOCA scenario only when HPCI and RCIC are no longer available as an injection source. The 4144 valve is located in the Steam Tunnel and could be manually operated in this scenario, if a problem with the valve motor operator went undiscovered from less frequent testing. This function has much less safety significance than the PASSIVE closed function that could potentially be jeopardized if actuator failure occurred during on-line testing when separation of HPCI and RCIC injection pathways are required for individual system operability. The challenge to the more safety significant PASSIVE Closed function would be equally present with either full or partial valve stroking.

### **Proposed Alternative Testing:**

Full stroke exercising shall be performed at least once per operating cycle during cold shutdown to meet the exercising frequency per Appendix III, III-3610.

### **References:**

OM-2012 Code Edition, Appendix III  
NUREG-1482

# Hope Creek Inservice Testing Plan

## Cold Shutdown CS-04

### **System:**

Feedwater

### **ASME Code Components Affected:**

1AEV-127

1AEV-128

### **Component/System Function:**

These check valves are the reactor water cleanup return to feedwater isolation valves. The valves must close to prevent HPCI/RCIC diversion from the reactor vessel when these systems are required to operate.

### **OM Code Category:**

C

### **ASME Code Class:**

2

### **Applicable Code Requirement:**

Active Category C check valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

Testing these check valves during power operation requires entry into the steam tunnel, which is a locked high radiation area during power operation. Testing is an involved process, which would require significant man-rem to perform. Additionally, entry into the steam tunnel during power operation poses a significant personnel hazard due to the high ambient temperature.

### **Proposed Alternative Testing:**

Full stroke exercising shall be performed on a cold shutdown frequency per paragraph ISTC-3522 of ISTC.

As an alternative to testing each valve during cold shutdowns, the valves may be placed in the Check Valve Condition Monitoring (CVCM) Program and tested at the frequency specified in the applicable CVCM Program Plan as allowed by ISTC-5222.

### **References:**

OM Code-2012 Edition, Subsection ISTC

# Hope Creek Inservice Testing Plan

## Cold Shutdown CS-05

### **System:**

Feedwater

### **ASME Code Components Affected:**

1AEHV-F032A  
1AEHV-F032B

### **Component/System Function:**

These check valves are the main feedwater header stop-check valves. The valves must close to prevent HPCI/RCIC flow diversion from the reactor vessel when these systems are required to operate. Additionally, the valves form a portion of the long-term feedwater sealing system pressure boundary. This system uses the HPCI and RCIC keep-fill pumps to maintain a positive pressure/water seal of the feedwater lines to prevent primary and secondary containment bypass leakage.

### **OM Code Category:**

AC

### **ASME Code Class:**

2

### **Applicable Code Requirement:**

Active Category A, B, and Category C check valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

These valves are located in the flow path for the main feedwater supply to the reactor vessel. Valve exercising during power operation would require cessation of feedwater flow through the associated loop and would cause fluctuations in the feedwater flow to the reactor vessel. Such fluctuations would cause unnecessary and undesirable reactor power transients, including possible reactor scram. Additionally, resumption of feedwater flow at power following valve closure could subject the reactor pressure feedwater nozzles and piping to thermal shock.

### **Proposed Alternative Testing:**

These valves are stop check valves, which operate as normal check valves with a motor operator to assure closure. Full stroke exercising of the check valve portion of these valves shall be performed on a cold shutdown frequency per paragraph ISTC-3522. The motor operator part of these stop check valves is full stroke exercised at a cold shutdown frequency as allowed by Appendix III, III-3610.

### **References:**

OM-2012 Code Edition, Subsection ISTC and Appendix III

# Hope Creek Inservice Testing Plan

## Cold Shutdown CS-06

### **System:**

Feedwater

### **ASME Code Components Affected:**

1AEHV-F074A

1AEHV-F074B

### **Component/System Function:**

These check valves are the reactor vessel feedwater supply header outboard check valves. The valves must open to provide HPCI/RCIC flow to the reactor vessel when these systems are required to operate. Additionally, the valves are containment isolation valves for the feedwater lines penetrating the primary containment boundary and must close in the initial stages of a design basis LOCA until the ECCS system(s) respond.

### **OM Code Category:**

AC

### **ASME Code Class:**

1

### **Applicable Code Requirement:**

Active Category C check valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

These check valves are equipped with pneumatic operators that provide air assist to ensure closure upon reversal of flow, but are not designed to provide the torque required to close the valve against full or partial feedwater flow conditions. The valves are located in the flow path for the main feedwater supply to the reactor vessel. Valve exercising during power operation would require cessation of feedwater flow through the associated loop and would cause fluctuations in the feedwater flow to the reactor vessel. Such fluctuations would cause unnecessary and undesirable reactor power transients, including possible reactor scram. Additionally, resumption of feedwater flow at power following valve closure could subject the reactor pressure feedwater nozzles and piping to thermal shock. The operators do not open the valves due to the dogged hinge pin design. Due to this design, operational readiness assessment and trending utilizing stroke time measurements is not feasible. Finally, testing these check valves during power operation requires entry into the steam tunnel, which is a locked high radiation area during power operation. Testing is an involved process, which would require significant man-rem to perform. Additionally, entry into the steam tunnel during power operation poses a significant personnel hazard due to the high ambient temperature.

## Hope Creek Inservice Testing Plan

### **Proposed Alternative Testing:**

Full stroke exercising shall be performed on a cold shutdown frequency per paragraph ISTC-3522 of ISTC.

### **References:**

OM-2012 Code Edition, Subsection ISTC

# Hope Creek Inservice Testing Plan

## Cold Shutdown CS-07

### **System:**

Residual Heat Removal

### **ASME Code Components Affected:**

1BCHV-F008  
1BCHV-F009  
1BCHV-F015A  
1BCHV-F015B  
1BCHV-F017A  
1BCHV-F017B  
1BCHV-F017C  
1BCHV-F017D

### **Component/System Function:**

These valves are the reactor pressure isolation valves providing the high pressure/low pressure interface between the high pressure reactor coolant piping and the low pressure residual heat removal/low pressure core injection (RHR/LPCI) (BC) systems. Additionally, these valves are containment isolation valves for the associated system containment penetrations. The valves also have a safety function in the open position to provide low pressure core injection during a design basis accident or to provide a residual heat removal flow path for the safe shutdown of the plant.

### **OM Code Category:**

A

### **ASME Code Class:**

1

### **Applicable Code Requirement:**

Active Category A and B valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

These power operated valves are pressure isolation valves which provide the high/low pressure boundary interface between the reactor coolant system and the RHR/LPCI systems. Operating these valves during power operation when the reactor coolant system is at normal operating pressure would expose portions of the low pressure ECCS piping to a high pressure transient, with the potential for damage or failure of the low pressure piping and subsequent unavailability of the ECCS system. Additionally, the valves are interlocked closed during power operation or whenever reactor vessel pressure is greater than 82 psig. (UFSAR 7.6.1.2.2)

## Hope Creek Inservice Testing Plan

### **Proposed Alternative Testing:**

Full stroke exercising and timing to the appropriate position shall be performed at least once per operating cycle during cold shutdown to meet the exercising frequency per Appendix III, III-3610.

### **References:**

OM-2012 Code Edition, Appendix III

UFSAR 7.6.1.2.2

# Hope Creek Inservice Testing Plan

## Cold Shutdown CS-08

### **System:**

Residual Heat Removal / Core Spray

### **ASME Code Components Affected:**

1BCHV-F041A  
1BCHV-F041B  
1BCHV-F041C  
1BCHV-F041D  
1BCHV-F050A  
1BCHV-F050B  
1BEHV-F006A  
1BEHV-F006B

### **Component/System Function:**

These valves are power operated testable check valves in the low pressure core injection (LPCI) (1BCHV\_F041A-D), residual heat removal (RHR) (1BCHV-F050A/B), and core spray (1BEHV-F006A/B) systems. These valves have a safety function in the open position to provide a flow path for LPCI, reactor core decay heat removal and core spray when these systems are required to perform their respective safety functions. Additionally, the valves are reactor pressure isolation valves which provide the high pressure/low pressure interface between the high pressure reactor coolant piping and the low pressure RHR/LPCI (BC) and core spray (BE) systems.

### **OM Code Category:**

AC

### **ASME Code Class:**

1

### **Applicable Code Requirement:**

Active Category C check valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

These power operated check valves are pressure isolation valves which provide the high/low pressure boundary interface between the high pressure reactor coolant system and the low pressure RHR/LPCI and core spray systems. Testing these valves during power operation when the reactor coolant system is at normal operating pressure would expose portions of the low pressure ECCS piping to a high pressure transient, with the potential for damage and failure of the low pressure piping and subsequent unavailability of the ECCS system.



## Hope Creek Inservice Testing Plan

### **Proposed Alternative Testing:**

Full stroke exercising shall be performed on a cold shutdown frequency per paragraph ISTC-3522 of ISTC.

### **References:**

OM-2012 Code Edition, Subsection ISTC

# Hope Creek Inservice Testing Plan

## Cold Shutdown CS-09

### **System:**

Control Rod Drive

### **ASME Code Components Affected:**

1BFHV-3800A  
1BFHV-3800B

### **Component/System Function:**

These motor operated valves are located in the control rod drive to reactor recirculation pump seal purge lines, which provides cooling water to the reactor recirculation pump seals and thermal barriers. These valves are designated as containment isolation valves and perform an active safety function in the closed position to maintain containment integrity.

### **OM Code Category:**

A

### **ASME Code Class:**

2

### **Applicable Code Requirement:**

Active Category A and B valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

During normal plant operation, these valves remain open to ensure a continuous supply of cooling water to the thermal barriers of the reactor recirculation pumps. Exercising these valves to the closed position during power operation could jeopardize the integrity of the seal, with potential for unnecessary seal degradation or failure. Inadvertent valve failure in the closed position during testing would require plant shutdown, in addition to causing pump damage. The control circuitry associated with this valve does not provide for partial stroke capability.

### **Proposed Alternative Testing:**

Full stroke exercising and timing to the closed position shall be performed at least once per operating cycle during cold shutdown to meet the exercising frequency per Appendix III, III-3610.

### **References:**

OM-2012 Code Edition, Appendix III

# Hope Creek Inservice Testing Plan

## Cold Shutdown CS-10

### **System:**

Service Water

### **ASME Code Components Affected:**

1EAHV-2207

1EAHV-2346

### **Component/System Function:**

These motor operated valves are the reactor auxiliaries cooling system (RACS) service water supply and discharge to cooling tower basin valves. These valves have a safety function in the closed position to isolate the RACS service water from the safety auxiliaries cooling system (SACS) in the event of a design basis LOCA to ensure maximum cooling availability for safety-related components. The cooling tower basin return valve has a safety function in the closed position to prevent plant flooding due to tower basin draining in the event of a RACS service water piping failure.

### **OM Code Category:**

B

### **ASME Code Class:**

3

### **Applicable Code Requirement:**

Active Category A and B valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

During normal plant operation, these valves remain open to provide a service water cooling water flow path for the RACS heat exchangers. While RACS itself is not safety-related, these valves are ASME Class 3 and do perform a safety function in the closed position. However, closure of either of these valves during normal power operation disables both RACS loops, causing a loss of cooling water to the reactor recirculation pump motor air coolers, pump seal and motor oil coolers, the reactor water cleanup (RWCU) system non-regenerative heat exchangers, the RWCU pump seal coolers and the off-gas system. While not safety-related, this equipment allows for continued normal operation of the plant.

## Hope Creek Inservice Testing Plan

### **Proposed Alternative Testing:**

Full stroke exercising shall be performed at least once per operating cycle during cold shutdown to meet the exercising frequency per Appendix III, III-3610.

### **References:**

OM-2012 Code Edition, Appendix III

# Hope Creek Inservice Testing Plan

## Cold Shutdown CS-11

### **System:**

Service Water

### **ASME Code Components Affected:**

1EAHV-2357A

1EAHV-2357B

### **Component/System Function:**

These motor operated valves are the safety auxiliaries cooling system (SACS) service water discharge to cooling tower basin valves. These valves have a safety function in the closed position to prevent plant flooding due to tower basin draining in the event of a SACS service water piping failure.

### **OM Code Category:**

B

### **ASME Code Class:**

3

### **Applicable Code Requirement:**

Active Category A and B valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

During normal plant operation, these valves remain open to provide a service water cooling water flow path for the SACS heat exchangers. Closure of either of these valves during normal power operation disables the associated SACS loops, causing a loss of cooling water to an entire train of safety-related components. This is an undesirable condition, especially during summertime plant operation, with subsequent warmer ultimate heat sink temperatures. Although the plant is capable of supplying accident cooling loads with one loop of SACS service water, operation in this manner poses an unnecessary challenge to the plant and safety-related equipment during power operation.

### **Proposed Alternative Testing:**

Full stroke exercising shall be performed at least once per operating cycle during cold shutdown to meet the exercising frequency per Appendix III, III-3610.

### **References:**

OM-2012 Code Edition, Appendix III

# Hope Creek Inservice Testing Plan

## Cold Shutdown CS-12

### **System:**

Reactor Auxiliaries Cooling

### **ASME Code Components Affected:**

1EDHV-2553  
1EDHV-2554  
1EDHV-2555  
1EDHV-2556

### **Component/System Function:**

These motor operated valves are located in the reactor auxiliaries cooling system (RACS) to the reactor recirculation pump motor oil and seal coolers. The valves have a safety function in the closed position to provide containment isolation during a design basis LOCA.

### **OM Code Category:**

A

### **ASME Code Class:**

2

### **Applicable Code Requirement:**

Active Category A and B valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

During normal plant operation, these valves remain open to provide a RACS cooling water flow path to the reactor recirculation pump motor oil and seal coolers. Closure of these valves during normal power operation isolates RACS to both reactor recirculation pumps, which could cause pump damage and result in an unnecessary shutdown of the plant.

### **Proposed Alternative Testing:**

Full stroke exercising and timing to the closed position shall be performed at least once per operating cycle during cold shutdown to meet the exercising frequency per Appendix III, III-3610.

### **References:**

OM-2012 Code Edition, Appendix III

# Hope Creek Inservice Testing Plan

## Cold Shutdown CS-13

### **System:**

Reactor Auxiliaries Cooling

### **ASME Code Components Affected:**

1EDHV-2598

1EDHV-2599

### **Component/System Function:**

These motor operated valves are located in the reactor auxiliaries cooling system (RACS) supply and return headers to the off-gas and radwaste systems. The valves have a safety function in the closed position to ensure adequate cooling water flow to the emergency air compressor during a loss of offsite power.

### **OM Code Category:**

B

### **ASME Code Class:**

NC

### **Applicable Code Requirement:**

Active Category A and B valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

During normal plant operation, these valves remain open to provide a RACS cooling water flow path to the offgas and radwaste systems. Closure of either of these valves during normal power operation isolates RACS to both feed gas condensers and the off gas refrigeration machine (glycol cooler). Loss of this cooling would cause increasing charcoal bed (absorber) inlet temperatures to a point where ignition of the charcoal could occur, causing an unplanned radioactive gaseous release.

### **Proposed Alternative Testing:**

Full stroke exercising and timing to the closed position shall be performed on a cold shutdown frequency per paragraph ISTC-3521 of ISTC. These valves are non-class and are included in the IST Program as augmented testing.

### **References:**

OM-2012 Code Edition, Subsection ISTC

# Hope Creek Inservice Testing Plan

Cold Shutdown CS-14 (Deleted)

**System:**

Safety Auxiliaries Cooling (SACS)

**ASME Code Components Affected:**

1EGHV-2522E

1EGHV-2522F

**Component/System Function:**

Valves Removed per DCP 80103199

**OM Code Category:**

N/A

**ASME Code Class:**

N/A

**Applicable Code Requirement:**

N/A

**Reason for Request:**

N/A

**Proposed Alternative Testing:**

N/A

**References:**

DCP 80103199



# Hope Creek Inservice Testing Plan

## Cold Shutdown CS-15

### **System:**

Containment Instrument Gas

### **ASME Code Components Affected:**

1KLHV-5148

### **Component/System Function:**

The motor operated valve is located on the primary containment instrument gas (PCIG) compressor suction piping to allow isolation of the drywell as a suction source (1KLHV-5148). The drywell suction isolation has a safety function in the closed position to provide primary containment isolation in the event of a design basis accident.

### **OM Code Category:**

A

### **ASME Code Class:**

2

### **Applicable Code Requirement:**

Active Category A and B valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

During normal plant operation, valve 1KLHV-5148 remains in the open position. Closure of this valve isolates the PCIG system to primary containment. Isolation of the system increases the probability of the inboard main steam isolation valves (MSIV) drifting partially closed, which would result in a reactor scram based on the MSIV not- full-open logic in the reactor protection system.

### **Proposed Alternative Testing:**

Full stroke exercising and timing to the closed position shall be performed at least once per operating cycle during cold shutdown to meet the exercising frequency per Appendix III, III-3610.

### **References:**

OM-2012 Code Edition, Appendix III

# Hope Creek Inservice Testing Plan

## Cold Shutdown CS-16

### **System:**

Containment Instrument Gas

### **ASME Code Components Affected:**

1KLV-023

1KLV-024

### **Component/System Function:**

These check valves are located in the primary containment instrument gas (PCIG) supply header. The valves have a safety function in the open position to supply instrument gas to the safety-related components in the drywell during normal plant operation and during a design basis accident.

### **OM Code Category:**

C

### **ASME Code Class:**

2

### **Applicable Code Requirement:**

Active Category C check valves shall be exercised nominally every 3 months in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

Testing these check valves during power operation requires entry into the steam tunnel, which is a locked high radiation area during power operation. Testing is an involved process, which would require significant man-rem to perform. Additionally, entry into the steam tunnel during power operation poses a significant personnel hazard due to the high ambient temperature.

### **Proposed Alternative Testing:**

Full stroke exercising shall be performed on a cold shutdown frequency per paragraph ISTC-3522 of ISTC.

### **References:**

OM-2012 Code Edition, Subsection ISTC

# Hope Creek Inservice Testing Plan

## Cold Shutdown CS-17

### **System:**

Chilled Water

### **ASME Code Components Affected:**

1GBHV-9531A1	1GBHV-9531A2	1GBHV-9531A3	1GBHV-9531A4
1GBHV-9531B1	1GBHV-9531B2	1GBHV-9531B3	1GBHV-9531B4

### **Component/System Function:**

These valves have NO safety function in the OPEN position. Operation of the drywell coolers is not required to meet design basis accident assumptions and is not required for safe-shutdown of the plant. UFSAR 6.2 credits containment spray as the drywell heat removal mechanism during a design basis accident. These valves have an ACTIVE safety function in the CLOSED position. They are containment isolation valves for penetration P8B. The valves will automatically close on receipt of a reactor vessel low water level or a drywell high pressure signal.

### **OM Code Category:**

A

### **ASME Code Class:**

2

### **Applicable Code Requirement:**

Active Category A and B valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

During Power Operation the GB-Chilled Water System supplies cooling water to critical components inside the drywell, including the Reactor Recirculation Pump Motors and Drywell Coolers. Full stroke testing of these motor operated valves would interrupt cooling water flow to these critical components. Even temporary interruption of cooling flow to Drywell Coolers could cause localized temperature spikes with potential adverse component impact. Additionally, the flow and pressure perturbations from isolating a cooling water loop could potentially cause damage to Drywell Cooler cooling coils and / or cause packing leaks on the drywell cooler temperature control valves, requiring a plant shutdown for repair.

The Recirc Pump Motor Coolers are aligned such that each pump is cooled by one of the GB cooling loops. Quarterly valve testing would require adding the heat load of both pumps to a single loop and frequent swapping of cooling loop alignment to the recirc pumps. From plant operating experience, frequent manipulation of the recirc pump cooling isolation valves can lead to valve packing leaks, requiring a plant shutdown for repair.

The valve operating logic of these components require full valve and does not allow for partial stroke testing.

## Hope Creek Inservice Testing Plan

### **Proposed Alternative Testing:**

Full stroke exercising and timing to the closed position shall be performed at least once per operating cycle during cold shutdown to meet the exercising frequency per Appendix III, III-3610.

### **References:**

OM-2012 Code Edition, Appendix III

# Hope Creek Inservice Testing Plan

## Cold Shutdown CS-21

### **System:**

Feedwater

### **ASME Code Components Affected:**

1AEHV-F039

### **Component/System Function:**

UFSAR Table 6.2-16 identifies this valve as a containment isolation valve. The valve is the third check valve in series, with valves 1AEHV-074A and 1AEV-007 for feedwater loop A and 1AEHV-074B and 1AEV-003 for feedwater loop B. UFSAR 6.2.4.3.1.2 states that this valve provides redundant isolation and long-term leakage protection upon operator judgment that continued makeup through the feedwater line is unavailable. This long-term seal protection is required to prevent a leakage path of fission products that would bypass the reactor building FRVS during a design basis accident. Long-term leakage protection is provided by the HPCI and RCIC systems, including 10 gpm from the keep-fill systems.

### **OM Code Category:**

AC

### **ASME Code Class:**

2

### **Applicable Code Requirement:**

Active Category A, B and C valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

This valve is normally open during plant operation. Quarterly testing requires the removal of the system from service for a period of time. The process of removal and restoration is an activity with potential for system water hammer, loss of viable filter beds and degradation of plant chemistry. Reactor coolant chemistry control is required during all normal operating modes. Failure to maintain water chemistry control would result in a forced shutdown of the reactor.

## Hope Creek Inservice Testing Plan

### **Proposed Alternative Testing:**

This valve is a stop check valve, which operates as a normal check valve with a motor operator to assure closure. Therefore, it is both a Category A and C valve.

Full stroke exercising to the appropriate position shall be performed on a cold shutdown frequency per paragraph ISTC-3522 of ISTC. Bi-directional testing is accomplished on a Cold Shutdown frequency by the combination of a closed verification test during shutdown and open verification by system flow upon return to service of the RWCU System as documented in the Chemistry Department RWCU Logs.

The motor operator part of this stop check valve is full stroke exercised at least once per operating cycle during cold shutdown to meet exercising frequency per Appendix III, III-3610.

As an alternative to exercising the check valve during cold shutdowns, the valve may be placed in the Check Valve Condition Monitoring (CVCM) Program and tested at the frequency specified in the applicable CVCM Program Plan as allowed by ISTC-5222.

### **References:**

OM-2012 Code Edition, Subsection ISTC and Appendix III

# Hope Creek Inservice Testing Plan

## Cold Shutdown CS-22

### **System:**

Reactor Water Cleanup

### **ASME Code Components Affected:**

1BGHV-F001  
1BGHV-F004

### **Component/System Function:**

These valves are containment isolation valves. The valves will automatically close on receipt of a reactor vessel low water level for containment isolation; or a RWCU system-area high temperature, a RWCU system-area high differential temperature, a RWCU system- high differential flow for isolation of a RWCU process line break. The valves will also automatically close on receipt of a standby liquid control (SLC) system operating signal. The valves must close during a SLC initiation to prevent boron dilution during an ATWS event.

### **OM Code Category:**

A

### **ASME Code Class:**

1

### **Applicable Code Requirement:**

Active Category A and B valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

These valves are normally open during plant operation. Quarterly testing requires the removal of the system from service for a period of time. The process of removal and restoration is an activity with potential for system water hammer, loss of viable filter beds and degradation of plant chemistry. Reactor coolant chemistry control is required during all normal operating modes. Failure to maintain water chemistry control would result in a forced shutdown of the reactor.

In addition, 1BGHV-F001 is located in primary containment, which is inaccessible during power due to high radiation levels and an inerted atmosphere. Failure of this valve in the closed position would result in a complete loss of the reactor water clean up system.

## Hope Creek Inservice Testing Plan

### **Proposed Alternative Testing:**

Full stroke exercising and timing to the closed position shall be performed at least once per operating cycle during cold shutdown to meet the exercising frequency per Appendix III, III-3610.

### **References:**

OM-2012 Code Edition, Appendix III



# Hope Creek Inservice Testing Plan

## Cold Shutdown CS-23

### **System:**

High Pressure Coolant Injection

### **ASME Code Components Affected:**

1FDHV-F002  
1FDHV-F100

### **Component/System Function:**

HPCI STEAM SUPPLY INBD CONT ISOL VALVE  
HPCI WARMUP LINE INBD CONT ISO VALVE

### **OM Code Category:**

A

### **ASME Code Class:**

1

### **Applicable Code Requirement:**

Active Category A and B valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

The HPCI Steam Supply Inboard Containment Isolation valve is normally open during plant operation to provide steam flow to the HPCI turbine upon system initiation. The valve is normally open when the pump is in standby to maintain the steam supply header warm and minimize condensate in the piping which could cause turbine overspeed on rapid startup. The valve is a containment isolation valve for penetration P7 and will automatically close on receipt of a HPCI turbine exhaust pressure high, a HPCI area temperature high, a HPCI steam pressure low or a HPCI steam flow high signal. Such signals are indicative of a HPCI system fault and serve to isolate the system from the reactor vessel. Once the valve closes automatically, operator action is required to correctly restore the system to operation, including verification of system integrity.

The HPCI Warmup Line Inboard Containment Isolation Valve is normally closed during plant operation and is only opened to warm up the HPCI steam supply line and equalize around steam supply valve 1FDHV- F002 during initial system startup. The valve is also a containment isolation valve for penetration P7. The valve is normally closed during plant operation with the HPCI system in a standby lineup. The valve is only opened to bypass around steam supply valve 1FDHV- F002 during initial system startup or following maintenance activities. This bypass allows the steam to enter the HPCI steam supply line to slowly heat up the piping and remove condensate. Once the pressure across 1FDHV-F002 is equalized, the valve is opened and warm up valve 1FDHV-F100 is closed.

## **Hope Creek Inservice Testing Plan**

Quarterly testing requires the removal of the HPCI system from service for a period of time. During normal plant operation these valves are inaccessible due to the inerted containment. Failure of the HPCI Steam Supply Inboard Containment Isolation valve to re-open would result in total loss of the HPCI system safety function. Conversely, failure of the HPCI Warmup Line Inboard Containment Isolation valve to re-close would require the penetration to be isolated and likewise result in a total loss of the HPCI system safety function. Testing under these conditions creates the potential to result in an unnecessary plant shut down.

NUREG 1482, Sections 2.4.5, 3.1.1 and 3.1.2 provide sufficient guidance to conclude that these valves should be tested under cold shutdown conditions.

### **Proposed Alternative Testing:**

Full stroke exercising shall be performed at least once per operating cycle during cold shutdown to meet the exercising frequency per Appendix III, III-3610.

### **References:**

OM-2012 Code Edition, Appendix III

NUREG 1482, Sections 2.4.5, 3.1.1 and 3.1.2

# Hope Creek Inservice Testing Plan

## Cold Shutdown CS-24

### **System:**

Reactor Core Isolation Cooling

### **ASME Code Components Affected:**

1FCHV-F007  
1FCHV-F076

### **Component/System Function:**

RCIC STEAM SUPPLY INBD CONT ISO VALVE  
RCIC WARMUP LINE INBD CONT ISO VALVE

### **OM Code Category:**

A

### **ASME Code Class:**

1

### **Applicable Code Requirement:**

Active Category A and B valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

The RCIC Steam Supply Inboard Containment Isolation valve is normally open during plant operation to provide steam flow to the RCIC turbine upon system initiation. The valve is normally open when the pump is in standby to maintain the steam supply header warm and minimize condensate in the piping which could cause turbine overspeed on rapid startup. The valve is a containment isolation valve for penetration P11 and will automatically close on receipt of a RCIC turbine exhaust pressure high, a RCIC area temperature high, a RCIC steam pressure low or a RCIC steam flow high signal. Such signals are indicative of a RCIC system fault and serve to isolate the system from the reactor vessel. Once the valve closes automatically, operator action is required to correctly restore the system to operation, including verification of system integrity.

The RCIC Warmup Line Inboard Containment Isolation Valve is normally closed during plant operation and is only opened to warm up the RCIC steam supply line and equalize around steam supply valve 1FCHV- F007 during initial system startup. The valve is also a containment isolation valve for penetration P11. The valve is normally closed during plant operation with the RCIC system in a standby lineup. The valve is only opened to bypass around steam supply valve 1FCHV- F007 during initial system startup or following maintenance activities. This bypass allows the steam to enter the RCIC steam supply line to slowly heat up the piping and remove condensate. Once the pressure across 1FCHV-F007 is equalized, the valve is opened and warm up valve 1FCHV-F076 is closed.

## **Hope Creek Inservice Testing Plan**

Quarterly testing requires the removal of the RCIC system from service for a period of time. During normal plant operation these valves are inaccessible due to the inerted containment. Failure of the RCIC Steam Supply Inboard Containment Isolation valve to re-open would result in total loss of the RCIC system safety function. Conversely, failure of the RCIC Warmup Line Inboard Containment Isolation valve to re-close would require the penetration to be isolated and likewise result in a total loss of the RCIC system safety function. Testing under these conditions creates the potential to result in an unnecessary plant shut down.

NUREG 1482, Sections 2.4.5, 3.1.1 and 3.1.2 provide sufficient guidance to conclude that these valves should be tested under cold shutdown conditions.

### **Proposed Alternative Testing:**

Full stroke exercising shall be performed at least once per operating cycle during cold shutdown to meet the exercising frequency per Appendix III, III-3610.

### **References:**

OM-2012 Code Edition, Appendix III

NUREG 1482, Sections 2.4.5, 3.1.1 and 3.1.2

# **Hope Creek Inservice Testing Plan**

## **ATTACHMENT 3**

### **REFUELING OUTAGE JUSTIFICATIONS**

# Hope Creek Inservice Testing Plan

## REFUELING OUTAGE JUSTIFICATION INDEX

<b><u>NUMBER</u></b>	<b><u>APPLICABLE COMPONENTS</u></b>	<b><u>REVISION</u></b>
RJ-01	1ABHV-F022A/B/C/D	0
RJ-02	Main Steam PRV Accumulator Air Supply Check Valves	0
RJ-03	1ABV-051/052/053/054	0
RJ-04	1AEV-003/007	0
RJ-05	PLACE HOLDER – Not used for Interval 4	n/a
RJ-06	1BBV-043/047	0
RJ-07	1BBV-232/233/239/240/246/247/253/254	0
RJ-08	PLACE HOLDER – Not used for Interval 4	n/a
RJ-09	1BFV-115 (Typical of 185 HCU's)	0
RJ-10	1BHV-029, 1BHHV-F006A/F006B	0
RJ-11	1EGV-029/031	0
RJ-12	1SEV-006	0
RJ-13	1GSV-054/055	0
RJ-14	1BHV-004/005	0

# Hope Creek Inservice Testing Plan

## Refueling Outage RJ-01

### **System:**

Main Steam and Drains

### **ASME Code Components Affected:**

1ABHV-F022A  
1ABHV-F022B  
1ABHV-F022C  
1ABHV-F022D

### **Component/System Function:**

These valves are the inboard main steam isolation valves. The valves have a safety function in the closed position to provide containment isolation for the main steam headers. Additionally, they form the pressure boundary for the main steam isolation valve sealing system, which is operated post-LOCA as required to seal the main steam headers and prevent primary and secondary containment bypass leakage.

### **OM Code Category:**

A

### **ASME Code Class:**

1

### **Applicable Code Requirement:**

Active Category A and B valves with fail-safe actuators shall be tested by observing the operation of the actuator upon loss of valve actuating power nominally every 3 months, in accordance with the requirements of ISTC, paragraphs ISTC-3510 and ISTC-3560.

### **Reason for Request:**

The fail-safe testing of these valves requires entry into primary containment, which is inerted with an oxygen deficient atmosphere and is inaccessible during power operation.

Testing during cold shutdown would require extensive preparations, including de-inerting operations, system isolation, realignment for testing, and system restoration. Such actions are impractical for short duration shutdowns and could cause delays in plant recovery solely due to surveillance testing. Section 3.1.1.3 of NUREG-1482 discusses de-inerting containment of boiling water reactors to allow cold shutdown testing. This guidance states that the staff has determined that there are few outages that require deinerting and that maintaining a separate schedule for valve testing was not warranted. NUREG-1482 recommends that valves in inerted containments be tested during refueling outages if they would otherwise be tested during cold shutdown outages that require the containment to be de-inerted for performance of this testing.

# Hope Creek Inservice Testing Plan

## **Proposed Alternative Testing:**

Fail-safe testing of the inboard MSIVs will be performed on a refueling outage frequency per paragraph ISTC-3521 of ISTC.

## **References:**

OM-2012 Code Edition, Subsection ISTC

NUREG 1482, Section 3.1.1.3



# Hope Creek Inservice Testing Plan

## Refueling Outage RJ-02

### **System:**

Main Steam and Drains

### **ASME Code Components Affected:**

1ABV-043  
1ABV-044  
1ABV-045  
1ABV-046  
1ABV-047  
1ABV-048  
1ABV-049  
1ABV-050  
1ABV-109  
1ABV-110  
1ABV-111  
1ABV-112  
1ABV-113  
1ABV-114

### **Component/System Function:**

These check valves supply instrument air (nitrogen) to the main steam safety relief valve accumulators. The valves have a safety function to close to prevent the accumulator from depressurizing when the primary containment instrument gas compressors are isolated during a design basis LOCA. The valves have a safety function in the open position to allow recharging of the accumulators following valve actuations.

### **OM Code Category:**

AC

### **ASME Code Class:**

3

### **Applicable Code Requirement:**

Active Category C check valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

# Hope Creek Inservice Testing Plan

## **Reason for Request:**

Testing of these valves requires entry into primary containment, which is inerted with an oxygen deficient atmosphere and is inaccessible during power operation.

Testing during cold shutdown would require extensive preparations, including de-inerting operations, system isolation, realignment for testing, and system restoration. Such actions are impractical for short duration shutdowns and could cause delays in plant recovery solely due to surveillance testing. Section 3.1.1.3 of NUREG-1482 discusses de-inerting containment of boiling water reactors to allow cold shutdown testing. This guidance states that the staff has determined that there are few outages that require deinerting and that maintaining a separate schedule for valve testing was not warranted. NUREG-1482 recommends that valves in inerted containments be tested during refueling outages if they would otherwise be tested during cold shutdown outages that require the containment to be de-inerted for performance of this testing.

## **Proposed Alternative Testing:**

Full stroke exercising shall be performed on a refueling outage frequency per paragraph ISTC-3522 of ISTC.

## **References:**

OM-2012 Code Edition, Subsection ISTC

NUREG 1482, Section 3.1.1.3

# Hope Creek Inservice Testing Plan

## Refueling Outage RJ-03

### **System:**

Main Steam and Drains

### **ASME Code Components Affected:**

1ABV-051  
1ABV-052  
1ABV-053  
1ABV-054

### **Component/System Function:**

These valves supply instrument air (nitrogen) to the inboard main steam isolation valve accumulators. The valves have a safety function to close to prevent the accumulator from depressurizing when the primary containment instrument gas (PCIG) compressors are isolated during a design basis LOCA.

### **OM Code Category:**

C

### **ASME Code Class:**

2

### **Applicable Code Requirement:**

Active Category C check valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

Testing of these valves requires entry into primary containment, which is inerted with an oxygen deficient atmosphere and is inaccessible during power operation.

Testing during cold shutdown would require extensive preparations, including de-inerting operations, system isolation, realignment for testing, and system restoration. Such actions are impractical for short duration shutdowns and could cause delays in plant recovery solely due to surveillance testing. Section 3.1.1.3 of NUREG-1482 discusses de-inerting containment of boiling water reactors to allow cold shutdown testing. This guidance states that the staff has determined that there are few outages that require deinerting and that maintaining a separate schedule for valve testing was not warranted. NUREG-1482 recommends that valves in inerted containments be tested during refueling outages if they would otherwise be tested during cold shutdown outages that require the containment to be de-inerted for performance of this testing.

# Hope Creek Inservice Testing Plan

## **Proposed Alternative Testing:**

Full stroke exercising shall be performed on a refueling outage frequency per paragraph ISTC-3522 of ISTC.

As an alternative to testing each valve during refueling outages, the valves may be placed in the Check Valve Condition Monitoring (CVCM) Program and tested at the frequency specified in the applicable CVCM Program Plan as allowed by ISTC-5222.

## **References:**

OM-2012 Code Edition, Subsection ISTC

NUREG 1482, Section 3.1.1.3

# Hope Creek Inservice Testing Plan

## Refueling Outage RJ-04

### **System:**

Feedwater

### **ASME Code Components Affected:**

1AEV-003

1AEV-007

### **Component/System Function:**

These valves are the reactor vessel feedwater supply inboard check valves. The valves have an active safety function to open to provide HPCI and RCIC flow to the reactor vessel when these systems are required to operate. Additionally, the valves are containment isolation valves for the feedwater supply lines penetrating the primary containment boundary and must close on the initial stages of a design basis LOCA until the ECCS system(s) respond.

### **OM Code Category:**

AC

### **ASME Code Class:**

2

### **Applicable Code Requirement:**

Active Category C check valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

Testing of these valves requires entry into primary containment, which is inerted with an oxygen deficient atmosphere and is inaccessible during power operation.

Testing during cold shutdown would require extensive preparations, including de-inerting operations, system isolation, realignment for testing, and system restoration. Such actions are impractical for short duration shutdowns and could cause delays in plant recovery solely due to surveillance testing. Section 3.1.1.3 of NUREG-1482 discusses de-inerting containment of boiling water reactors to allow cold shutdown testing. This guidance states that the staff has determined that there are few outages that require deinerting and that maintaining a separate schedule for valve testing was not warranted. NUREG-1482 recommends that valves in inerted containments be tested during refueling outages if they would otherwise be tested during cold shutdown outages that require the containment to be de-inerted for performance of this testing.

# Hope Creek Inservice Testing Plan

## **Proposed Alternative Testing:**

Full stroke exercising shall be performed on a refueling outage frequency per paragraph ISTC-3522 of ISTC.

## **References:**

OM-2012 Code Edition, Subsection ISTC

NUREG 1482, Section 3.1.1.3

# Hope Creek Inservice Testing Plan

## Refueling Outage RJ-06

### **System:**

Reactor Recirculation

### **ASME Code Components Affected:**

1BBV-043

1BBV-047

### **Component/System Function:**

These check valves provide control rod drive (CRD) purge water to the reactor recirculation pump seals. The valves have a safety function to close to provide primary containment isolation during a design basis LOCA when the CRD pumps are secured.

### **OM Code Category:**

AC

### **ASME Code Class:**

1

### **Applicable Code Requirement:**

Active Category C check valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

Testing of these valves requires entry into primary containment, which is inerted with an oxygen deficient atmosphere and is inaccessible during power operation.

Testing during cold shutdown would require extensive preparations, including de-inerting operations, system isolation, realignment for testing, and system restoration. Such actions are impractical for short duration shutdowns and could cause delays in plant recovery solely due to surveillance testing. Section 3.1.1.3 of NUREG-1482 discusses de-inerting containment of boiling water reactors to allow cold shutdown testing. This guidance states that the staff has determined that there are few outages that require deinerting and that maintaining a separate schedule for valve testing was not warranted. NUREG-1482 recommends that valves in inerted containments be tested during refueling outages if they would otherwise be tested during cold shutdown outages that require the containment to be de-inerted for performance of this testing.

# Hope Creek Inservice Testing Plan

## **Proposed Alternative Testing:**

Full stroke exercising shall be performed on a refueling outage frequency per paragraph ISTC-3522 of ISTC. Bi-directional testing is accomplished on a Refueling Outage frequency by the combination of a closed verification test during shutdown and open verification by purge flow upon restoration of the CRD to recirculate. Purge flow is documented in the Equipment Operator Daily Logs.

As an alternative to testing each valve during refueling outages, the valves may be placed in the Check Valve Condition Monitoring (CVCM) Program and tested at the frequency specified in the applicable CVCM Program Plan as allowed by ISTC-5222.

## **References:**

OM-2012 Code Edition, Subsection ISTC

NUREG 1482, Section 3.1.1.3



# Hope Creek Inservice Testing Plan

## Refueling Outage RJ-07

### **System:**

Reactor Recirculation

### **ASME Code Components Affected:**

1BBV-232  
1BBV-233  
1BBV-239  
1BBV-240  
1BBV-246  
1BBV-247  
1BBV-253  
1BBV-254

### **Component/System Function:**

These valves were installed to address NRC Bulletin 93-03 and supply control rod drive (CRD) water to each of the reactor water level instrumentation reference legs. This water supply minimizes void formation in the level instrumentation reference legs in the event of a rapid depressurization event occurring during normal power operation. The valve's have a safety function in the closed position to prevent draining of the instrumentation reference lines when the CRD pumps are secured during a design basis LOCA.

### **OM Code Category:**

C

### **ASME Code Class:**

2

### **Applicable Code Requirement:**

Active Category C check valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

These valves are connected to instrument sensing lines that initiate logic circuits or process control parameters that are required during power operation and during cold shutdown conditions. Testing of these valves at the Code required frequency of 3 months or during cold shutdowns would either disable safety initiation logic or unnecessarily challenge safety systems.

Open and close verification at a refueling outage frequency is adequate, since two redundant check valves are installed in the instrument fill lines. Additionally, the instruments, reference leg fill lines and associated check valves are separated from the reactor vessel by an ASME Class 1 excess flow check valve, which will close to prevent intersystem leakage should both check valves fail simultaneously.

## Hope Creek Inservice Testing Plan

### **Proposed Alternative Testing:**

Full stroke exercising shall be performed on a refueling outage frequency per paragraph ISTC-3522 of ISTC. Bi-directional testing is accomplished on a Refueling Outage frequency by the combination of a closed verification test during shutdown and open verification by backfill flow upon restoration of the Level Instrumentation Backfill System. Backfill flow is documented in the Equipment Operator Daily Logs.

As an alternative to testing each valve during refueling outages, the valves may be placed in the Check Valve Condition Monitoring (CVCM) Program and tested at the frequency specified in the applicable CVCM Program Plan as allowed by ISTC-5222.

### **References:**

OM-2012 Code Edition, Subsection ISTC

# Hope Creek Inservice Testing Plan

## Refueling Outage RJ-09

### **System:**

Control Rod Drive

### **ASME Code Components Affected:**

1BFV-115 (Typical of 185 HCU's)

### **Component/System Function:**

This valve supplies water makeup and pressure from the control rod drive (CRD) pumps to the CRD hydraulic control unit (HCU). In the event that the charging header depressurizes or the CRD pumps are secured, this valve closes to prevent the loss of HCU accumulator inventory/pressure. HCU accumulator pressure is required for a control rod scram at low reactor coolant pressures.

### **OM Code Category:**

C

### **ASME Code Class:**

3

### **Applicable Code Requirement:**

Active Category C check valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

Exercising these valves requires securing both CRD pumps, depressurizing the charging water header and monitoring pressure in the accumulators, which is an extensive test. In addition to supplying the CRD accumulators, the CRD pumps supply cooling water to the CRD mechanisms and to the reactor recirculation pumps. Loss of cooling water to the reactor recirculation pumps during power operation could result in a reactor scram. The testing method (HCU accumulator pressure decay test) is extensive and would be burdensome to perform at a cold shutdown frequency in that it could cause delay in plant recovery solely for surveillance testing.

# Hope Creek Inservice Testing Plan

## **Proposed Alternative Testing:**

Full stroke exercising shall be performed on a refueling outage frequency per paragraph ISTC-3522 of ISTC.

## **References:**

OM-2012 Code Edition, Subsection ISTC

NUREG 1482, Section 4.4.6

NRC Generic Letter 89-04

# Hope Creek Inservice Testing Plan

## Refueling Outage RJ-10

### **System:**

Standby Liquid Control

### **ASME Code Components Affected:**

1BHV-029  
1BHHV-F006A  
1BHHV-F006B

### **Component/System Function:**

These check valves have a safety function to open to allow standby liquid control solution injection into the core in the event that shutdown of the reactor is not possible using normal reactivity control systems. Valves 1BHHV-F006A and -F006B are stop check valves provided with motor operators to allow operator action to positively close the valves when required to maintain primary containment isolation integrity following system actuation. All three valves are credited as containment isolation valves.

### **OM Code Category:**

AC

### **ASME Code Class:**

1

### **Applicable Code Requirement:**

Active Category C check valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

During normal plant operation, these valves are closed and the standby liquid control system is isolated from the reactor vessel by two explosive actuated squib valves. There are no provisions for individual component testing at power or on a cold shutdown frequency. Testing in the open position would require establishing flow conditions through the valves by firing the explosive squib valves, which destroys the valve, and starting the system pumps. The motor operator for the stop check valves are provided to positively close the valves on cessation of flow and will not move the valves to the open position. Extensive flushing is required in preparation for the flow test to ensure that no boron solution is injected into the reactor vessel. Performance of this flushing on a cold shutdown frequency is burdensome and could cause delay in plant recovery solely for surveillance testing.

## Hope Creek Inservice Testing Plan

Performance of the exercise close test for these valves during power operation and cold shutdown would be equally burdensome. Positive obturator position verification for valve 1BHV-029 would require entry into primary containment, which is inerted with an oxygen deficient atmosphere and is inaccessible during power operation.

Testing of check valve 1BHV-029 during cold shutdown would require extensive preparations, including deinerting operations, system isolation, realignment for testing, and system restoration. Such actions are impractical for short duration shutdowns and could cause delays in plant recovery solely due to surveillance testing.

Section 3.1.1.3 of NUREG-1482 discusses deinerting containment of boiling water reactors (BWRs) to allow cold shutdown testing. This guidance states that the staff has determined that there are few outages that require deinerting and that maintaining a separate schedule for valve testing was not warranted. NUREG-1482 recommends that valves in inerted containments be tested during refueling outages if they would otherwise be tested during cold shutdown outages that require the containment to be deinerted for performance of this testing.

Valves 1BHHV-F006A and -F006B are provided with motor operators and can be stroke timed to the closed position to monitor and trend motor operator performance, but actual obturator movement is not observed since the operator cannot open the valve. Stroke timing is performed solely to verify the ability to remote manually close the valve(s). Actual obturator positioning to the closed position is verified during performance of the seat leakage test performed in accordance with 10CFR50, Appendix J.

### **Proposed Alternative Testing:**

Full stroke exercising shall be performed on a refueling outage frequency per paragraph ISTC-3522 of ISTC.

As an alternative to testing each valve during refueling outages, the valves may be placed in the Check Valve Condition Monitoring (CVCM) Program and tested at the frequency specified in the applicable CVCM Program Plan as allowed by ISTC-5222.

### **References:**

OM-2012 Code Edition, Subsection ISTC

Hope Creek Technical Specification 4.1.5.d.1

# Hope Creek Inservice Testing Plan

## Refueling Outage RJ-11

### **System:**

Safety Auxiliaries Cooling (SACS)

### **ASME Code Components Affected:**

1EGV-029

1EGV-031

### **Component/System Function:**

These check valves isolate the nonsafety-related turbine auxiliaries cooling system (TACS) return from the safety-related safety auxiliaries cooling system (SACS). The valves are installed in series for redundant isolation to ensure that a line break in the TACS does not prevent the SACS from performing its safety function. Valve 1EGV-031 is the ASME class break for SACS.

### **OM Code Category:**

C

### **ASME Code Class:**

3

### **Applicable Code Requirement:**

Active Category C check valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

These valves must be open to provide TACS cooling flow. The TACS supplies cooling water to the turbine and main generator, the reactor feedwater pump turbine auxiliaries as well as other balance of plant components. Testing of these valves requires securing and depressurizing the TACS and verifying back flow through the valves. Securing the TACS during power operation could result in a balance of plant reactor scram (i.e. main turbine trip due to high bearing lube oil temperature), as well as cause severe damage to the rotating equipment.

Testing of these valves during cold shutdown is impractical due to the extensive preparations required to perform the closure test. Performance of the test could delay plant recovery solely to complete surveillance testing.

## Hope Creek Inservice Testing Plan

### **Proposed Alternative Testing:**

Full stroke exercising shall be performed on a refueling outage frequency per paragraph ISTC-3522 of ISTC.

### **References:**

OM-2012 Code Edition, Subsection ISTC



# Hope Creek Inservice Testing Plan

## Refueling Outage RJ-12

### **System:**

Neutron Monitoring (TIPS)

### **ASME Code Components Affected:**

1SEV-006

### **Component/System Function:**

This check valve supplies nitrogen to the traversing incore probe (TIP) purge and serves as a containment isolation valve. The valve must close during a design basis LOCA to prevent fission product release through the TIP purge tube should valve 1SEHV-5161 fail to close.

### **OM Code Category:**

AC

### **ASME Code Class:**

1

### **Applicable Code Requirement:**

Active Category C check valves shall be exercised nominally every 3 months, in accordance with the requirements of ISTC, paragraph ISTC-3510.

### **Reason for Request:**

Testing of these valves requires entry into primary containment, which is inerted with an oxygen deficient atmosphere and is inaccessible during power operation.

Testing during cold shutdown would require extensive preparations, including de-inerting operations, system isolation, realignment for testing, and system restoration. Such actions are impractical for short duration shutdowns and could cause delays in plant recovery solely due to surveillance testing. Section 3.1.1.3 of NUREG-1482 discusses de-inerting containment of boiling water reactors to allow cold shutdown testing. This guidance states that the staff has determined that there are few outages that require deinerting and that maintaining a separate schedule for valve testing was not warranted. NUREG-1482 recommends that valves in inerted containments be tested during refueling outages if they would otherwise be tested during cold shutdown outages that require the containment to be de-inerted for performance of this testing.

# Hope Creek Inservice Testing Plan

## **Proposed Alternative Testing:**

Full stroke exercising shall be performed on a refueling outage frequency per paragraph ISTC-3522 of ISTC. Bi-directional testing is accomplished on a Refueling Outage frequency by the combination of a closed verification test during shutdown and open verification by TIPs purge flow upon restoration of TIPs Purge System. TIPs purge flow is documented in the Equipment Operator Daily Logs.

As an alternative to testing each valve during refueling outages, the valves may be placed in the Check Valve Condition Monitoring (CVCM) Program and tested at the frequency specified in the applicable CVCM Program Plan as allowed by ISTC-5222.

## **References:**

OM-2012 Code Edition, Subsection ISTC

NUREG 1482, Section 3.1.1.3

# Hope Creek Inservice Testing Plan

## Refueling Outage RJ-13

### **System:**

Containment Atmospheric Control

### **ASME Code Components Affected:**

1GSV-054

1GSV-055

### **Component/System Function:**

These check valves are located in the drywell nitrogen makeup lines around containment isolation valves 1GSHV-4974, 1GSHV-4984B and 1GSHV-5019B for 1GSV-054 and 1GSHV-4974, 1GSHV-4966B and 1GSHV-5022B for 1GSV-055. The valves perform an active safety function in the closed position to prevent the H<sub>2</sub>/O<sub>2</sub> drywell sample from bypassing the analyzer to the suppression pool through the nitrogen purge lines. Such a bypass flow could result in erroneous sample readings during a design basis LOCA.

### **OM Code Category:**

C

### **ASME Code Class:**

2

### **Applicable Code Requirement:**

Active Category C Check valves shall be exercised at least once every 3 months, in accordance with the requirements of ISTC-3510.

### **Reason for Request:**

During normal plant operation these valves can be either open or closed, depending on the need for nitrogen in the drywell. Individually exercising these check valves to the closed position would require securing the "B" H<sub>2</sub>O<sub>2</sub> analyzer supply and return lines and applying a temporary pressure source between the containment isolation valves and the check valve to verify closure. This activity, during power operation, would challenge the integrity of the containment isolation valves, due to the need to perform a pressure test on the penetrations containing the check valves every 92 days versus the normal Appendix J leak rate test performed every 18 months on the penetrations. To perform the test, the analyzer will be out of service and in a LCO. Additionally, the challenge to containment integrity every 92 days would outweigh the benefit achieved with a quarterly test.

## Hope Creek Inservice Testing Plan

### **Proposed Alternative Testing:**

Full stroke exercising shall be performed on a refueling outage frequency per paragraph ISTC-3522 of ISTC.

### **References:**

OM-2012 Code Edition, Subsection ISTC

NUREG 1482

# Hope Creek Inservice Testing Plan

## Refueling Outage RJ-14

### **System:**

Standby Liquid Control

### **ASME Code Components Affected:**

1BHV-004

1BHV-005

### **Component/System Function:**

These check valves must close to prevent failure of the pump discharge relief valve in the open position from affecting the performance of both pumps and thereby preventing design SLC injection into the core.

### **OM Code Category:**

C

### **ASME Code Class:**

2

### **Applicable Code Requirement:**

Active Category C Check valves shall be exercised at least once every 3 months, in accordance with the requirements of ISTC – ISTC-3510.

### **Reason for Request:**

During normal plant operation these valves are exercised during normal quarterly pump surveillances. There is no problem with testing the valves in the open direction; however there is no means of verifying actual valve exercising or valve closure. Verification of valve closure requires either extensive intrusive maintenance activity to break system integrity or the use of radiography, as there are no test connections between the pump discharge and the check valves. Due to radiography being considered a potentially high-risk evolution and the fact that the radiography source is being removed from the site, performance of this test on a quarterly basis would prove to be a hardship.

## Hope Creek Inservice Testing Plan

### **Proposed Alternative Testing:**

Full stroke exercising shall be performed on a refueling outage frequency per paragraph ISTC-3522 of ISTC. Valve close exercising is verified by the combination of the last quarterly pump test showing the valve to be open and the close verification during the refueling outage either by radiography or reverse flow testing. Valve open exercising is verified by the combination of the refueling outage test showing the valve to be closed and the open verification by the first quarterly pump test following the refueling outage.

### **References:**

OM-2012 Code Edition, Subsection ISTC

NUREG 1482

**ATTACHMENT 4**

**GENERAL AND PUMP 10CFR50.55a REQUESTS**

# Hope Creek Inservice Testing Plan

## PUMP 10CFR50.55a REQUEST INDEX INDEX

<u>NUMBER</u>	<u>APPLICABLE COMPONENTS</u>	<u>REVISION</u>
GR-01	IST Frequency Grace (OMN-20) (Withdrawn)	0
PR-01 <sup>1</sup>	HPCI Pump Flow Instrument 1BJFIC-R600-E41	0
PR-02 <sup>1</sup>	RCIC Pump Flow Instrument 1BDFIC-R600-E51	0

<sup>1</sup> These Proposed Alter native Requests have been approved for use as documented in NRC safety Evaluations dated 12/20/2016 (ML16343A057) and 11/28/2017 (ML17321B106).



# Hope Creek Inservice Testing Plan

## 10 CFR 50.55a Request PR-01

### HPCI Pump Flow Instrument Accuracy

#### Proposed Alternative in Accordance with 10 CFR 50.55a(z)(1)

#### --Alternative Provides Acceptable Level of Quality and Safety--

#### 1. ASME Code Components Affected:

High Pressure Coolant Injection (HPCI) Pump – 10P204 (Class 2 Group B)

HPCI Booster Pump – 10P217 (Class 2 Group B)

The HPCI pump is an Emergency Core Cooling System (ECCS) component that is also used to maintain reactor vessel inventory following reactor isolation with coincident failure of the non-ECCS reactor core isolation cooling (RCIC) system.

The HPCI Booster pump is integral with the HPCI pump in that they are driven off the same turbine. The Booster pump ensures that the minimum net positive suction head requirements of the HPCI pump are maintained for the design accident flow rates.

#### 2. Applicable Code Edition and Addenda:

ASME OM-2012 Edition, No Addenda

#### 3. Applicable Code Requirement:

Subsection ISTB, Paragraph ISTB-3510, General, Subparagraph (a), Accuracy, “Instrument accuracy shall be within the limits of Table ISTB-3510-1. If a parameter is determined by analytical methods instead of measurement, then the determination shall meet the parameter accuracy requirement of Table ISTB-3510-1 (e.g., flow rate determination shall be accurate to within +/- 2% of actual). For individual analog instruments, the required accuracy is percent of full scale...”

#### 4. Reason for Request:

Pursuant to 10 CFR 50.55a, "Codes and Standards," paragraph (z)(1), relief is requested from the requirement of ASME OM Code ISTB-3510(a).

In addition to ISTB-3510(a), instrumentation is addressed in ISTB-3510(b)(1) which requires that the full-scale range of each analog instrument be not greater than three times the reference value. For instruments to be in compliance with the Code, both of these requirements must be met, individually, for each instrument. The combination of the two requirements (i.e. accuracy equal to +/- 2 % of full scale and full scale being up to 3 times the reference value) yields a permissible inaccuracy of +/- 6% of the reference value.

The permanently installed flow instrument 1 FDFIC-R600-E41 does not meet the 2 percent acceptable instrument accuracy specified in Table ISTB-3510-1.

# Hope Creek Inservice Testing Plan

## Relief Request PR-01 HPCI Pump Flow Instrument Accuracy (Continued)

### 5. Proposed Alternative and Basis for Use:

As a proposed alternative, HCGS proposes to use the currently installed analog instruments for measurement of flow for the identified equipment. Although this instrument does not explicitly meet the requirements of ISTB-3510(a), it provides better indication accuracy at the reference value than that which is permitted by the Code when taking the requirements of ISTB-3510(a) and ISTB-3510(b)(1) together as a whole.

The supporting data table below lists the actual instrument loop accuracy. This loop accuracy has been calculated from the transmitter to the indicator in the main control room.

As indicated in the table below, the installed instrumentation has a full-scale range of 6000 gpm, which only slightly exceeds the pump flow reference value of 5600 gpm (full scale equals 1.07 times reference) with an accuracy of +3.83% and -0.67% of full scale. This results in flow rate measurements accurate to +4.1% or -0.72% of indicated flow at reference conditions (5600 gpm), which is more conservative than the 6% minimum accuracy allowed by the combination of instrument full-scale range and accuracy allowed in Subsection ISTB. The current instrumentation provides sufficient repeatability to allow for an evaluation of the pump hydraulic condition and detect pump degradation.

### Supporting Data Table

Instrument Number: 1FDFIC-R600-E41

Actual Instrument Range: 0-6000 gpm

Actual Gauge (Loop) Accuracy: +3.83 / -0.67% of full scale

Test Reference Value: 5600 gpm

Code Allowable Instrument Range: 16,800 gpm (3X ref. value)

Code Allowable Instrument Tolerance: +/-336 gpm (2% full scale at 3X reference value)

Actual Instrument Tolerance +229.8 gpm/ -40.2 gpm

Actual Indicated Accuracy: +4.1 / -0.72% (at reference value)

# Hope Creek Inservice Testing Plan

## Relief Request PR-01 HPCI Pump Flow Instrument Accuracy (Continued)

### 5. Proposed Alternative and Basis for Use (Cont.):

NUREG-1482, Rev.2, Section 5.5.1, "Range and Accuracy of Analog Instruments", states; in part: "...the staff may grant relief when the combination of the range and accuracy yields a reading that is as at least equivalent to that achieved using instruments that meet the Code requirements (i.e., up to +/-6 percent for Group A and B tests,...)" and "...the use of any available instruments that meet the intent of the Code requirements for the actual reading would yield an acceptable level of quality and safety for testing." Based on Section 5.5.1 of NUREG-1482, Rev.2, and the information provided herein, the existing permanently installed pump flow instrumentation is considered acceptable in meeting the intent of the ASME OM Code -2012 Paragraphs ISTB 3510(a) and ISTB-3510(b)(1).

### 6. Duration of Proposed Alternative:

The proposed alternative identified will be utilized during the entire fourth IST interval, which is scheduled to begin December 21, 2016<sup>1</sup> and conclude on December 20, 2026.

### 7. Precedents:

1. Letter from T. Boyce (U.S. Nuclear Regulatory Commission) to R. Duncan II (Carolina Power & Light Company), "Shearon Harris Nuclear Plant, Unit 1-Relief Request AF-PR-1 for the Third 10-Year Inservice Inspection Interval (TAC NO. MD3894)," dated July 16, 2007 (ADAMS Accession No. ML071660054).
2. Letter from H. Chernoff (U.S. Nuclear Regulatory Commission) to W. Levis (PSEG Nuclear LLC), "Safety Evaluation of Relief Requests for the Third 10-Year Interval of the Inservice Testing Program for Hope Creek Generating Station (TAC NOS. MD3300, MD3301, MD3337, MD3338, MD3353, and MD3354)," dated April 5, 2007 (ADAMS Accession No. ML070740371).
3. Letter from H. Chernoff (U.S. Nuclear Regulatory Commission) to C. Pardee (Exelon Nuclear), "Limerick Generating Station, Units 1 and 2 – Evaluation of Relief Requests Associated with the Third Inservice Testing Interval (TAC NOS. ME0742 - ME0751)," dated November 17, 2009 (ADAMS Accession No. ML093080382).

### 8. References:

1. NUREG-1482, Revision 2, "Guidelines for Inservice Testing at Nuclear Power Plants"
2. SC-BJ-0001, Rev. 3, Loop Tolerance Calculation for HPCI Flow Controller 1-FD-FIC-R600-E41.

<sup>1</sup>Hope Creek extended the 3<sup>rd</sup> interval one year such that the 4<sup>th</sup> interval now begins on December 21, 2017 (Reference letter LR-N17-0127, dated 8/17/2017)

# Hope Creek Inservice Testing Plan

## 10 CFR 50.55a Request PR-02

### RCIC Pump Flow Instrument Accuracy

#### Proposed Alternative in Accordance with 10 CFR 50.55a(z)(1)

#### --Alternative Provides Acceptable Level of Quality and Safety--

**1. ASME Code Components Affected:**

Reactor Core Isolation Cooling (RCIC) Pump, 10P203 (Class 2 Group B)

While not credited as an ECCS component, the RCIC pump is safety-related and provides demineralized make-up water to the reactor vessel in the event that the reactor vessel is isolated.

**2. Applicable Code Edition and Addenda:**

ASME OM-2012 Edition, No Addenda

**3. Applicable Code Requirement:**

Subsection ISTB, Paragraph ISTB-3510, General, Subparagraph (a), Accuracy, "Instrument accuracy shall be within the limits of Table ISTB-3510-1. If a parameter is determined by analytical methods instead of measurement, then the determination shall meet the parameter accuracy requirement of Table ISTB-3510-1 (e.g., flow rate determination shall be accurate to within +/- 2% of actual). For individual analog instruments, the required accuracy is percent of full scale..."

**4. Reason for Request:**

Pursuant to 10 CFR 50.55a, "Codes and Standards," paragraph (z)(1), relief is requested from the requirement of ASME OM Code ISTB-3510(a).

In addition to ISTB-3510(a), instrumentation is addressed in ISTB-3510(b)(1) which requires that the full-scale range of each analog instrument be not greater than three times the reference value. For instruments to be in compliance with the Code, both of these requirements must be met, individually, for each instrument. The combination of the two requirements (i.e. accuracy equal to +/- 2 % of full scale and full scale being up to 3 times the reference value) yields a permissible inaccuracy of +/- 6% of the reference value.

The permanently installed flow instrument 1 FCFIC-R600-E51 does not meet the 2 percent acceptable instrument accuracy specified in Table ISTB- 3510-1.

# **Hope Creek Inservice Testing Plan**

## **Relief Request PR-02 RCIC Pump Flow Instrument Accuracy (Continued)**

### **5. Proposed Alternative and Basis for Use:**

As a proposed alternative, HCGS proposes to use the currently installed analog instruments for measurement of flow for the identified equipment. Although this instrument does not explicitly meet the requirements of ISTB-3510(a), it provides better indication accuracy at the reference value than that which is permitted by the Code when taking the requirements of ISTB-3510(a) and ISTB-3510(b)(1) together as a whole.

The supporting data table below lists the actual instrument loop accuracy. This loop accuracy has been calculated from the transmitter to the indicator in the main control room.

As indicated in the table below, the installed instrumentation has a full-scale range of 700 gpm, which only slightly exceeds the pump flow reference valve of 600 gpm (full scale equals 1.17 times reference) with an accuracy of +2.49% and -2.49% of full scale. This results in flow rate measurements accurate to +2.9% or -2.9% of indicated flow at reference conditions (600 gpm), which is more conservative than the 6% minimum accuracy allowed by the combination of instrument full-scale range and accuracy allowed in Subsection ISTB. The current instrumentation provides sufficient repeatability to allow for an evaluation of the pump hydraulic condition and detect pump degradation.

### **Supporting Data Table**

Instrument Number: 1 FCFIC-R600-E51

Actual Instrument Range: 0-700 gpm

Actual Gauge (Loop) Accuracy: +2.49 / -2.49%

Test Reference Value: 600 gpm

Code Allowable Instrument Range: 1,800 gpm (3X ref. value)

Code Allowable Instrument Tolerance: +/-36 gpm (2% of full scale at 3X reference value)

Actual Instrument Tolerance: 17.43 gpm / -17.43 gpm

Actual Indicated Accuracy: +2.9/ -2.9% (at reference value)

# Hope Creek Inservice Testing Plan

## Relief Request PR-02 RCIC Pump Flow Instrument Accuracy (Continued)

### 5. Proposed Alternative and Basis for Use (Cont.):

NUREG-1482, Rev.2, Section 5.5.1, "Range and Accuracy of Analog Instruments", states; in part: "...the staff may grant relief when the combination of the range and accuracy yields a reading that is as at least equivalent to that achieved using instruments that meet the Code requirements (i.e., up to +/-6 percent for Group A and B tests,...)" and "...the use of any available instruments that meet the intent of the Code requirements for the actual reading would yield an acceptable level of quality and safety for testing." Based on Section 5.5.1 of NUREG-1482, Rev.2, and the information provided herein, the existing permanently installed pump flow instrumentation is considered acceptable in meeting the intent of the ASME OM Code -2012 Paragraphs ISTB 3510(a) and ISTB-3510(b)(1).

### 6. Duration of Proposed Alternative:

The proposed alternative identified will be utilized during the entire fourth IST interval which is scheduled to begin December 21, 2016<sup>1</sup> and conclude on December 20, 2026.

### 7. Precedents:

1. Letter from T. Boyce (U.S. Nuclear Regulatory Commission) to R. Duncan II (Carolina Power & Light Company), "Shearon Harris Nuclear Plant, Unit 1-Relief Request AF-PR-1 for the Third 10-Year Inservice Inspection Interval (TAC NO. MD3894)," dated July 16, 2007 (ADAMS Accession No. ML071660054).
2. Letter from H. Chernoff (U.S. Nuclear Regulatory Commission) to W. Levis (PSEG Nuclear LLC), "Safety Evaluation of Relief Requests for the Third 10-Year Interval of the Inservice Testing Program for Hope Creek Generating Station (TAC NOS. MD3300, MD3301, MD3337, MD3338, MD3353, and MD3354)," dated April 5, 2007 (ADAMS Accession No. ML070740371).
3. Letter from H. Chernoff (U.S. Nuclear Regulatory Commission) to C. Pardee (Exelon Nuclear), "Limerick Generating Station, Units 1 and 2 – Evaluation of Relief Requests Associated with the Third Inservice Testing Interval (TAC NOS. ME0742 - ME0751)," dated November 17, 2009 (ADAMS Accession No. ML093080382).

### 8. References:

1. NUREG-1482, Revision 2, "Guidelines for Inservice Testing at Nuclear Power Plants"
2. SC-BD-0039, Rev. 3, Loop Tolerance Calculation for RCIC Flow Controller 1-FC-FIC-R600-E51.

<sup>1</sup>Hope Creek extended the 3<sup>rd</sup> interval one year such that the 4<sup>th</sup> interval now begins on December 21, 2017 (Reference letter LR-N17-0127, dated 8/17/2017)

# **Hope Creek Inservice Testing Plan**

## **ATTACHMENT 5**

### **VALVE 10CFR50.55a REQUESTS**

# Hope Creek Inservice Testing Plan

## VALVE 10CFR50.55a REQUESTS INDEX

<u>NUMBER</u>	<u>APPLICABLE COMPONENTS</u>	<u>REVISION</u>
VR-01 <sup>1</sup>	Excess Flow Check Valves Test Frequency	0
VR-02 <sup>1</sup>	Main Steam Safety Relief Valves	0

<sup>1</sup> These Proposed Alternative Requests have been approved for use as documented in NRC safety Evaluations dated 12/20/2016 (ML16343A057) and 11/28/2017 (ML17321B106).



**Hope Creek Inservice Testing Plan**  
**10 CFR 50.55a Request VR-01**  
**Excess Flow Check Valves Test Frequency**  
**Proposed Alternative In Accordance with 10CFR50.55a(z)(1)**  
**--Alternative Provides Acceptable Level of Quality and Safety--**

**1. ASME Code Components affected:**

Excess flow check valves (EFCVs) in the following table:

<b>Component ID.</b>	<b>ASME Class</b>	<b>Category</b>	<b>P&amp;ID (Sh #)</b>
1ABXV-3666A	1	C	M41-1(1)
1ABXV-3666B	1	C	M41-1(2)
1ABXV-3666C	1	C	M41-1(2)
1ABXV-3666D	1	C	M41-1(2)
1ABXV-3667A	1	C	M41-1(1)
1ABXV-3667B	1	C	M41-1(2)
1ABXV-3667C	1	C	M41-1(2)
1ABXV-3667D	1	C	M41-1(2)
1ABXV-3668A	1	C	M41-1(1)
1ABXV-3668B	1	C	M41-1(2)
1ABXV-3668C	1	C	M41-1(2)
1ABXV-3668D	1	C	M41-1(2)
1ABXV-3669A	1	C	M41-1(1)
1ABXV-3669B	1	C	M41-1(2)
1ABXV-3669C	1	C	M41-1(2)
1ABXV-3669D	1	C	M41-1(2)
1BBXV-3621	1	C	M42-1(1)
1BBXV-3649	1	C	M42-1(1)
1BBXV-3725	1	C	M42-1(1)
1BBXV-3726A	1	C	M42-1(1)
1BBXV-3726B	1	C	M42-1(1)
1BBXV-3727A	1	C	M42-1(1)
1BBXV-3727B	1	C	M42-1(1)
1BBXV-3728A	1	C	M42-1(1)
1BBXV-3728B	1	C	M42-1(1)
1BBXV-3729A	1	C	M42-1(1)
1BBXV-3729B	1	C	M42-1(1)
1BBXV-3730A	1	C	M42-1(1)
1BBXV-3730B	1	C	M42-1(1)
1BBXV-3731A	1	C	M42-1(1)
1BBXV-3731B	1	C	M42-1(1)
1BBXV-3732A	1	C	M42-1(1)
1BBXV-3732B	1	C	M42-1(1)

**Hope Creek Inservice Testing Plan**  
**10 CFR 50.55a Request VR-01**  
**Excess Flow Check Valves Test Frequency**  
**(Continued)**

**1. ASME Code Components affected (Cont):**

<b>Component ID.</b>	<b>ASME Class</b>	<b>Category</b>	<b>P&amp;ID(Sh)</b>
1BBXV-3732C	1	C	M42-1(1)
1BBXV-3732D	1	C	M42-1(1)
1BBXV-3732E	1	C	M42-1(1)
1BBXV-3732F	1	C	M42-1(1)
1BBXV-3732G	1	C	M42-1(1)
1BBXV-3732H	1	C	M42-1(1)
1BBXV-3732J	1	C	M42-1(1)
1BBXV-3732K	1	C	M42-1(1)
1BBXV-3732L	1	C	M42-1(1)
1BBXV-3732M	1	C	M42-1(1)
1BBXV-3732N	1	C	M42-1(1)
1BBXV-3732P	1	C	M42-1(1)
1BBXV-3732R	1	C	M42-1(1)
1BBXV-3732S	1	C	M42-1(1)
1BBXV-3732T	1	C	M42-1(1)
1BBXV-3732U	1	C	M42-1(1)
1BBXV-3732V	1	C	M42-1(1)
1BBXV-3732W	1	C	M42-1(1)
1BBXV-3734A	1	C	M42-1(1)
1BBXV-3734B	1	C	M42-1(1)
1BBXV-3734C	1	C	M42-1(1)
1BBXV-3734D	1	C	M42-1(1)
1BBXV-3737A	1	C	M42-1(1)
1BBXV-3737B	1	C	M42-1(1)
1BBXV-3738A	1	C	M42-1(1)
1BBXV-3738B	1	C	M42-1(1)
1BBXV-3783	1	C	M43-1(1)
1BBXV-3785	1	C	M43-1(1)
1BBXV-3787	1	C	M43-1(1)
1BBXV-3789	1	C	M43-1(1)
1BBXV-3801A	1	C	M43-1(1)
1BBXV-3801B	1	C	M43-1(1)
1BBXV-3801C	1	C	M43-1(1)
1BBXV-3801D	1	C	M43-1(1)
1BBXV-3802A	1	C	M43-1(1)
1BBXV-3802B	1	C	M43-1(1)
1BBXV-3802C	1	C	M43-1(1)
1BBXV-3802D	1	C	M43-1(1)

**Hope Creek Inservice Testing Plan**  
**10 CFR 50.55a Request VR-01**  
**Excess Flow Check Valves Test Frequency**  
**(Continued)**

**1. ASME Code Components affected (Cont):**

<b>Component ID.</b>	<b>ASME Class</b>	<b>Category</b>	<b>P&amp;ID(Sh)</b>
1BBXV-3803A	1	C	M43-1(1)
1BBXV-3803B	1	C	M43-1(1)
1BBXV-3803C	1	C	M43-1(1)
1BBXV-3803D	1	C	M43-1(1)
1BBXV-3804A	1	C	M43-1(1)
1BBXV-3804B	1	C	M43-1(1)
1BBXV-3804C	1	C	M43-1(1)
1BBXV-3804D	1	C	M43-1(1)
1BBXV-3820	1	C	M43-1(1)
1BBXV-3821	1	C	M43-1(1)
1BBXV-3826	1	C	M43-1(1)
1BBXV-3827	1	C	M43-1(1)
1BCXV-4411A	1	C	M51-1(2)
1BCXV-4411B	1	C	M51-1(1)
1BCXV-4411C	1	C	M51-1(2)
1BCXV-4411D	1	C	M51-1(1)
1BCXV-4429A	1	C	M51-1(2)
1BCXV-4429B	1	C	M51-1(1)
1BCXV-4429C	1	C	M51-1(2)
1BCXV-4429D	1	C	M51-1(1)
1BEXV-F018A	1	C	M52-1(1)
1BEXV-F018B	1	C	M52-1(1)
1BGXV-3882	1	C	M44-1(1)
1BGXV-3884A	1	C	M44-1(1)
1BGXV-3884B	1	C	M44-1(1)
1BGXV-3884C	1	C	M44-1(1)
1BGXV-3884D	1	C	M44-1(1)
1BGXV-3884A	1	C	M44-1(1)
1FCXV-4150A	1	C	M49-1(1)
1FCXV-4150B	1	C	M49-1(1)
1FCXV-4150C	1	C	M49-1(1)
1FCXV-4150D	1	C	M49-1(1)
1FDXV-4800A	1	C	M55-1(1)
1FDXV-4800B	1	C	M55-1(1)
1FDXV-4800C	1	C	M55-1(1)
1FDXV-4800D	1	C	M55-1(1)

**Hope Creek Inservice Testing Plan**  
**10 CFR 50.55a Request VR-01**  
**Excess Flow Check Valves Test Frequency**  
**(Continued)**

**2. Applicable Code Edition and Addenda:**

ASME OM Code 2012 Edition, No Addenda

**3. Applicable Code Requirement:**

ISTC-3522(c), Category C Check Valves, “If exercising is not practicable during operation at power and cold shutdown, it shall be performed during refueling outages.”

ISTC-3700, Position Verification Testing, “Valves with remote position indicators shall be observed locally at least once every 2 yr to verify that valve operation is accurately indicated...”

**4. Reason for Request:**

Pursuant to 10 CFR 50.55a, “Codes and Standards,” paragraph (z)(1), relief is requested from the requirements of ASME OM Code ISTC-3522(c) and ISTC-3700 for the subject valves. The basis of the relief request is that the proposed alternative would provide an acceptable level of quality and safety.

The OM Code requires check valves to be exercised quarterly during plant operation, or if valve exercising is not practicable during plant operation and cold shutdown, it shall be performed during refueling outages. The OM Code also requires verification of valve position indication at least once every 2 years. HCGS tests a representative sample of EFCVs every 18 months such that all valves (except for 1BBXV-3469, as exempted by TS note) are tested once in 10 years per TS SR 4.6.3.4 (reference 8.4).

The EFCVs have position indication at local panels in the reactor building. Check valve remote position indication is excluded from Regulatory Guide 1.97, Revision 2, dated, May 1983, as a required parameter for evaluating containment isolation. The remote position indication is verified accurate at the same frequency as the exercise test prescribed in TS SR 4.6.3.4.

The testing described above requires removal of the associated instrument or instruments from service. Since these instruments are in use during plant operation, removal of any of these instruments from service may cause a spurious signal, which could result in a plant trip or an unnecessary challenge to safety systems.

Additionally, process fluid will be contaminated to some degree, requiring special measures to collect flow from the vented instrument side and also contribute to an increase in personnel radiation exposure.

**Hope Creek Inservice Testing Plan**  
**10 CFR 50.55a Request VR-01**  
**Excess Flow Check Valves Test Frequency**  
**(Continued)**

**4. Reason for Request (Cont):**

The EFCVs are classified as ASME Code Category C and are also containment isolation valves. However, these valves are excluded from 10CFR50, Appendix J, Type C leak rate testing, due to the size of the instrument lines and upstream orifices. Therefore, they have no safety-related seat leakage criterion.

**5. Proposed Alternative and Basis for Use:**

Excess flow check valves will be tested on a representative sample basis at the frequency specified in TS SR 4.6.3.4.

Industry experience as documented in NEDO-32977-A (reference 8.3), indicates that EFCVs have a very low failure rate. A review of the maintenance history for Hope Creek EFCVs has shown that they have been extremely reliable over the life of the plant, showing less than 1% failure rate associated with testing of these valves. Examples of causes for the failures include alarm problems, position indication (limit switch adjustment), and bent instrument tubing. Review of surveillance test history shows no evidence of time based failure mechanisms or common mode failures associated with EFCVs. The Hope Creek test experience is consistent with the findings in the NEDO document. The NEDO document indicates similarly that many reported test failures at other plants were related to test methodologies and not actual EFCV failures. Thus, the EFCVs at Hope Creek, consistent with the industry, have exhibited a high degree of reliability, availability, and provide an acceptable level of quality and safety.

Surveillance 4.6.3.4 requires demonstration that a representative sample of reactor instrumentation line excess flow check valves are tested to demonstrate that the valve actuates to check flow on a simulated instrument line break. This surveillance requirement provides assurance that the instrument line EFCVs will perform so that the predicted radiological consequences will not be exceeded during a postulated instrument line break event as evaluated in the Updated Final Safety Analysis Report (UFSAR). The Surveillance Frequency is based on operating experience, equipment reliability, and plant risk and is controlled under the Surveillance Frequency Control Program (TS 6.8.4.j). Operating experience has demonstrated that these components are highly reliable and that failures to isolate are very infrequent. Therefore, testing of a representative sample was concluded to be acceptable from a reliability standpoint.

**Hope Creek Inservice Testing Plan**  
**10 CFR 50.55a Request VR-01**  
**Excess Flow Check Valves Test Frequency**  
**(Continued)**

**5. Proposed Alternative and Basis for Use (Cont):**

The remote position indication will be verified accurate at the same frequency as the exercise test prescribed in TS SR 4.6.3.4. Although inadvertent actuation of an EFCV during operation is highly unlikely due to the spring poppet design, corrective action documents are initiated for any EFCV with abnormal position indication displays.

**6. Duration of proposed alternative:**

The proposed alternative identified will be utilized during the fourth IST interval, which is scheduled to begin December 21, 2016<sup>1</sup>, and conclude on December 20, 2026.

**7. Precedents:**

1. Susquehanna Steam Electric Station, Request No. RR-03, as discussed in NRC SER: Susquehanna Steam Electric Station, Units 1 and 2, Third 10-Year Interval Inservice Testing (IST) Program Plans (TAC Nos. MC3382, MC3383, MC3384, MC3385, MC3386, MC3387, MC3388, MC3389, MC4421, MC4422), dated March 10, 2005. (ADAMS Accession No. ML050690239).
2. Nine Mile Point Nuclear Station - Safety Evaluation of Relief Requests for the Unit No. 1 Fourth 10-Year and Unit No. 2 Third 10-Year Pump and Valve Inservice Testing Program (TAC Nos. MD9202 AND MD9203) re-iterated approval of similar relief request GV-RR-08 for Nine Mile Point Unit 2 for duration of the operating license (ADAMS Accession No. ML083500039). The NRC previously authorized the alternative regarding EFCV testing frequency in GV-RR-08 (TAC No. MB1491) via the safety evaluation dated September 17, 2001 (ADAMS Accession No. ML012340462).
3. Hope Creek Generating Station – Safety Evaluation of Inservice Testing Program Relief Request V-005 for Excess Flow Check Valves (TAC No. MB1724), dated August 27, 2001 (ADAMS Accession No. ML012210185)
4. Fermi 2 – Evaluation of In-Service Testing Program Relief Requests VRR-011, VRR-012, and VRR-013 (TAC No. ME2558, ME2557, and ME2556, dated September 28, 2010 (ADAMS Accession No. ML102360570).

<sup>1</sup>Hope Creek extended the 3<sup>rd</sup> interval one year such that the 4<sup>th</sup> interval now begins on December 21, 2017 (Reference letter LR-N17-0127, dated 8/17/2017)

**Hope Creek Inservice Testing Plan**  
**10 CFR 50.55a Request VR-01**  
**Excess Flow Check Valves Test Frequency**  
**(Continued)**

**8. References:**

1. Hope Creek Technical Specifications (SR 4.6.3.4 and 6.8.4.j).
2. LS-HC-1000-1001, Hope Creek Generating Station Surveillance Frequency Control Program List of Surveillance Frequencies.
3. GE Nuclear Energy, NEDO-32977-A, DRF B21-00658-01, Class I, Excess Flow Check Valve Testing Relaxation, June 2000.
4. HCGS License Amendment No. 132, "Issuance of Amendment re: Excess Flow Check Valve Testing Requirements (TAC No. MB1723)," dated August 28, 2001 (ADAMS Accession No, ML012130156).
5. RG 1.97, Criteria for Accident Monitoring Instrumentation for Nuclear Power Plants, Revision 2.

**Hope Creek Inservice Testing Plan**  
**10 CFR 50.55a Request VR-02**  
**Main Steam Safety Relief Valves**  
**Proposed Alternative In Accordance with 10CFR50.55a(z)(1)**  
**--Alternative Provides Acceptable Level of Quality and Safety--**

**1. ASME Code Components Affected:**

Main Steam and Automatic Depressurization System (ADS) Valves:

1SNPSV-F013A, B, C, D, E (Class 1 Category C)

1ABPSV-F013F, G, H, J, K, L, M, P, R (Class 1 Category C)

These valves have a safety function in the open position to provide overpressure protection for the main steam header and the reactor vessel. Additionally, valves 1SNPSV-F013A-E also serve an ECCS function in the ADS to depressurize the reactor vessel in the event of a small break LOCA coincident with a failure of the HPCI system.

**2. Applicable Code Edition and Addenda:**

ASME OM-2012 Edition, no Addenda

**3. Applicable Code Requirement:**

Paragraph I-3310 of Mandatory Appendix I specifies the periodic testing requirements of ASME Class 1 main steam pressure relief valves with auxiliary actuating devices. The Code required periodic testing for these valves includes, in part: seat tightness determination; set pressure determination; determination of electrical characteristics and pressure integrity of solenoid valve(s); determination of pressure integrity and stroke capability of air actuator; and determination of operation and electrical characteristics of position indicators..

The frequency of the required testing is specified in paragraph I-1320(a) which requires that these main steam relief valves be periodically tested at least once every five years, with a minimum of 20% of the valves tested within any 24 months, where the 20% shall be previously untested valves, if they exist.

**4. Reason for Request:**

Pursuant to 10 CFR 50.55a, "Codes and Standards," paragraph (z)(1), relief is requested from the requirements of ASME OM Code I-1320(a) for the subject valves. The basis of the relief request is that the proposed alternative would provide an acceptable level of quality and safety.



**Hope Creek Inservice Testing Plan**  
**10 CFR 50.55a Request VR-02**  
**Main Steam Safety Relief Valves**  
**(Continued)**

**4. Reason for Request (Cont.):**

Hope Creek UFSAR 5.2.2.4.2.1.3 discusses the testing frequency of the safety relief valves (SRVs). This section states that Hope Creek “can achieve optimum SRV operability by disassembly of the pilot section of at least 50 percent of the operating SRVs after each cycle.” PSEG implements the appropriate inspection guidance specified in General Electric Service Information Letter (SIL) No. 196.

Based on valve design, proper SRV operation and its ability to perform its intended function at the required set point are primarily determined by the pilot stage assembly of the valve. Target Rock Safety / Relief Valve Technical Manuals (Hope Creek VTD Documents PN1-B21-F013-0162 for 2-stage, and 432429 for 3-stage) describe the pilot stage assembly as the "pressure sensing and control element" of the valve. A review of NRC Information Notices 82-41, 83-39, 83-82, 86-12 and 88-30 supports the conclusion that it is the pilot stage assemblies that require the most diligent testing.

Hope Creek TS SR 4.4.2.2 requires that at least one half (1/2) of the safety relief valve pilot stage assemblies be removed, set pressure tested and reinstalled or replaced with spares that have been previously set pressure tested and stored per manufacturer's recommendations in accordance with the Surveillance Frequency Control Program (18 months), and they shall be rotated such that all 14 SRV pilot stage assemblies are removed, set pressure tested and reinstalled or replaced with spares that have been previously set pressure tested and stored in accordance with the manufacturer's recommendations in accordance with the Surveillance Frequency Control Program (40 months). All safety relief valves will be re-certified to meet a  $\pm 1\%$  tolerance prior to returning the valves to service after set point testing.

Hope Creek TS SR 4.4.2.3 requires that the safety relief valve main (mechanical) stage assemblies shall be set pressure tested and reinstalled or replaced with spares that have been previously set pressure tested and stored in accordance with manufacturer's recommendations in accordance with the Surveillance Frequency Control Program (5 years)..

**Hope Creek Inservice Testing Plan**  
**10 CFR 50.55a Request VR-02**  
**Main Steam Safety Relief Valves**  
**(Continued)**

**5. Proposed Alternative and Basis for Use:**

The Hope Creek Main Steam SRVs will be tested in accordance with TS SR 4.4.2.2 and 4.4.2.3. One-half (1/2) of the SRVs pilot stages will be removed and set pressure tested or replaced with previously tested assemblies every 18 months. In the event the “as-found” setpoint fails the setpoint testing, sample expansion of the other pilot valves will be conducted in accordance with paragraph I- 1320(c) of Mandatory Appendix I. All 14 main stages (with the entire assembly) will be removed, tested and reinstalled or replaced every 5 years.

The true setpoint adjustment (and operability determination) of the valve is contained within the pilot portion of the SRV. By applying the SRV testing frequency required by Mandatory Appendix I to the pilot portion (achieved by meeting TS SR 4.4.2.2), set point accuracy and pilot sticking verification can be maintained, providing an acceptable level of safety. Testing of the main body (mechanical portion), which contains only the main disc, piston rings and a preload spring that is non-adjustable, at the Mandatory Appendix I specified frequency will not result in a significant increase in the level of safety. Testing of the mechanical portion of all 14 SRVs to provide verification of blowdown and flow rates is conducted every 5 years when the valves are tested as a complete assembly per TS SR 4.4.2.3.

**6. Duration of Proposed Alternative:**

The proposed alternative identified will be utilized during the fourth IST interval, which is scheduled to begin December 21, 2016<sup>1</sup>, and conclude on December 20, 2026.

**7. Precedents:**

The proposed alternative was previously authorized pursuant to 10CFR50.55a(a)(3)(i) (currently 10CFR50.55a(z)(2)) for Hope Creek:

1. Third 10-Year Interval per NRC SER dated April 5, 2007 (TAC Nos. MD3300, MD3301, MD3337, MD3338, MD3353, and MD3354) (ADAMS Accession No. ML070740371),
2. Second 10-Year Interval per NRC SER dated March 18, 1999 (TAC Nos. MA0425 and MA1430) (ADAMS Accession No. ML003680090)
3. First 10-Year Interval per NRC SER dated January 27, 1994. (TAC No. M86733) (ADAMS Accession No. ML011760536).

<sup>1</sup>Hope Creek extended the 3<sup>rd</sup> interval one year such that the 4<sup>th</sup> interval now begins on December 21, 2017 (Reference letter LR-N17-0127, dated 8/17/2017)

**Hope Creek Inservice Testing Plan**  
**10 CFR 50.55a Request VR-02**  
**Main Steam Safety Relief Valves**  
**(Continued)**

**8. References:**

1. Hope Creek UFSAR 5.2.2.4.2.1.3.
2. General Electric Service Information Letter 196 (SIL 196).
3. NRC Information Notices 82-41, 83-39, 83-82, 86-12 and 88-30.
4. Hope Creek Technical Specification SRs 4.4.2.2 and 4.4.2.3.
5. LS-HC-1000-1001, Hope Creek Generating Station Surveillance Frequency Control Program List of Surveillance Frequencies.
6. VTD PN1-B21-F013-0162, Sheet 0, Rev. 9, Target Rock Safety / Relief Valve Model 7567F Technical Manual.
7. VTD 432429, Sheet 1, Rev. 1, Target Rock Safety / Relief Valve Model 0867F-001 Technical Manual.