KANSAS GAS AND ELECTRIC COMPANY
WOLF CREEK GENERATING STATION

INSERVICE TESTING PROGRAM
FOR
PUMPS AND VALVES

REV. 4
July 19, 1985

PREPARED BY Rocky A. Schultz
Rocky A. Schultz, IST Engineer

REVIEWED BY C. M. Estes
C. Michael Estes, Operations Coordinator-Projects & Planning

APPROVAL C. M. Estes for
James A. Zell, Superintendent of Operations

LIST OF TABLES

TABLE OF CONTENTS

1.0 INTRODUCTION

The Wolf Creek Generating Station ASME Inservice Testing Program for Pumps and Valves will be in effect through the first 120 month inspection period and will be updated in accordance with the requirements of 10CFR 50.55a(g).

This document outlines the inservice testing (IST) program based on the requirements of Section XI of the ASME Boiler & Pressure Vessel Code, 1980 Edition through the Winter 1981 Addenda. All references to IWP or IWV, respectively, of ASME Section XI, reflect the 1980 Edition through the Winter 1981 Addenda, unless otherwise noted.

The inservice inspection (ISI) classification boundaries are identical to the design classification or quality group boundaries shown on the plant piping and instrument diagrams (P&IDs) listed in Table 1.1. Some pumps and valves within the ISI boundaries are identified as non-classed (NC). This IST program was developed using the ISI classification boundaries and the following documents:

Title 10, Code of Federal Regulations, Part 50, paragraph 50.55a(g).

NRC Regulatory Guides Division 1

Standard Review Plan 3.9.6, "Inservice Testing of Pumps and Valves"

Division 1 (draft) Regulatory Guide and Value/ Impact Statement, "Identification of Valves for Inclusion in Inservice Test Programs"

"NRC Staff Guidance for Preparing Pump and Valve Testing Programs and Associated Relief Request," January 1978

Fin l Safety Analysis Report, Wolf Creek Generating Station

Technical Specifications, Wolf Creek Generating Station

The inservice tests identified in this program will verify the operational readiness of pumps and valves whose functions are required to mitigate the consequences of an accident or to bring the reactor to a cold shutdown condition.

Table 1.1

PIPING AND INSTRUMENTATION DIAGRAMS

SYSTEM	P&ID	
MAIN STEAM SYSTEM	M-12AB01 M-12AB02	3
MAIN FEEDWATER SYSTEM	M-02AE01 M-02AE02	
AUXILIARY FEEDWATER SYSTEM	M-12AL01	3
REACTOR COOLANT SYSTEM	M-12BB01 M-12BB02 M-02BB03	3
	M-12BB04	3
CHEMICAL & VOLUME CONTROL SYSTEM	M-12BG01 M-12BG02 M-12BG03 M-12BG04 M-12BG05	3
REACTOR MAKE-UP WATER SYSTEM	M-12BL01	3
STEAM GENERATOR BLOWDOWN SYSTEM	M-02BM01	
BORATED REFUELING WATER STORAGE SYSTEM	M-12BN01	3
FUEL POOL COOLING AND CLEAN-UP SYSTEM	M-12EC01 M-02EC02	3
ESSENTIAL SERVICE WATER SYSTEM	M-K2EF01 M-02EF01 M-02EF02	
COMPONENT COOLING WATER SYSTEM	M-12EG01 M-12EG02 M-02EG03	3
RESIDUAL HEAT REMOVAL SYSTEM	M-12EJ01	3
HIGH PRESSURE COOLANT INJECTION SYSTEM	M-02EM01 M-12EM02	3
CONTAINMENT SPRAY SYSTEM	M-02EN01	
ACCUMULATOR SAFETY INJECTION SYSTEM	M-02EP01	
AUXILIARY TURBINES-AUXILIARY FEEDWATER PUMP TURBINE	M-12FC02	3

Table 1.1

PIPING AND INSTRUMENTATION DIAGRAMS (continued)

SYSTEM	P&ID	
CONTAINMENT HYDROGEN CONTROL SYSTEM	M-12GS01	3
CONTAINMENT PURGE SYSTEM	M-12GT01	3
LIQUID RADWASTE SYSTEM	M-12HB01	3
DECONTAMINATION SYSTEM	M-02HD01	
EMERGENCY FUEL OIL SYSTEM	M-12JE01	3
COMPRESSED AIR SYSTEM	M-02KA01 M-02KA02 M-02KA05	
CONTAINMENT BREATHING AIR	M-12KB01	3
FIRE PROTECTION SYSTEM	M-02KC02	
STANDBY DIESEL GENERATOR	M-02KJ01 M-12KJ02 M-02KJ03 M-02KJ04 M-12KJ05 M-02KJ06	3 3
REACTOR BUILDING AND HOT MACHINE SHOP FLOOR AND EQUIPMENT DRAIN SYSTEM	M-12LF03 M-02LF09	3
NUCLEAR SAMPLING SYSTEM	M-12SJ01 M-12SJ04	3

2.0 INSERVICE TESTING PROGRAM FOR PUMPS

2.1 General Information

2.1.1 Applicable Code

This testing program for ISI Class 1, 2 and 3 pumps meets the requirements of Subsection IWP of Section XI of the ASME Boiler and Pressure Vessel Code, 1980 Edition through the Winter of 1981 Addenda. Where these requirements are determined to be impractical, specific requests for relief have been written and included in Section 2.2.

2.1.2 Pump Program Tables

The tables in Appendix A list all pumps included in the Wolf Creek Generating Station (WCGS) IST Program. Data contained in these tables identifies those pumps subject to inservice testing, the inservice test quantities to be measured, the inservice testing frequency, and any applicable remarks. The column headings are listed and explained below:

PUMP IDENTIFICATION

PUMP NUMBER: The pump identification number.

SYSTEM: The system of which the pump is a component.

ISI CLASS: The ISI classification of the pump.

P&ID NUMBER: The WCGS drawing number for the P&ID referring to the pump.

P&ID COORD: The drawing coordinate location of the pump on the P&ID.

ISI REQUIREMENTS

PUMP SPEED, INLET (SUCTION) PRESSURE, DIFFERENTIAL PRESSURE (ΔP), FLOW RATE, VIBRATION, BEARING TEMPERATURE AND LUBRICANT LEVEL OR PRESSURE: When the word "YES" appears in a particular test quantity column, that quantity will be measured during inservice testing in accordance with Subsection IWP. If a modified test is planned or a test is being waived, a request for relief number will appear in the test quantity column referencing the pump relief request. Requests for relief are identified as PR-X, where X is the sequential number of the relief. The requests for relief are included in Section 2.2.

2.1.3 Measurement of Test Quantities

SPEED: Per IWP-4400, shaft speed need not be measured for pumps directly coupled to synchronous or induction type motor drivers. For variable speed pumps, the pump speed is set at the reference speed per IWP-3100.

INLET (SUCTION) PRESSURE: For submerged pumps, inlet pressure will be calculated (using appropriate correction factors) from a measured tank or basin level. All other inlet pressure measurements will be taken using pressure instruments at or near the pump inlet.

DIFFERENTIAL PRESSURE: Differential pressure will be calculated from inlet and discharge pressure measurements or by direct differential pressure measurement.

FLOW RATE: Flow rate will be measured using a rate or quantity meter installed in the pump test circuit.

VIBRATION: Pump vibration will be measured with one of the instruments referenced in IWP-4520.

BEARING TEMPERATURE: Pump bearing temperature(s) will not be measured. (Relief Request PR-1)

LUBRICANT LEVEL OR PRESSURE: Pump lubricant level or pressure will be observed during each inservice test when applicable.

2.1.4 Allowable Ranges of Test Quantities

The allowable ranges specified in Table IWP-3100-2 will be used for differential pressure, flow and vibration measurements with the following exceptions. The Acceptable Range (on the high side) for differential pressure (DP) and flow (Q) shall be 1.05 times the reference value. The Alert Range (High Values) shall be > 1.05 times the reference value for differential pressure and flow. Also for DP and Q the Required Action Range (High Values) will not be used. Should a measured test quantity fall outside the allowable range, the possibility of defining an expanded allowable range, in accordance with ASME Code interpretation XI-1-79-19, will be investigated. 3

2.1.5 Instrument Accuracy

Allowable instrument accuracies are given in Table IWP-4110-1. If the accuracies of the station's instruments are not acceptable, temporary instruments meeting those requirements in Table IWP-4110-1 will be used.

SECTION 2.2

RELIEF REQUESTS FOR PUMP TESTING PROGRAM

RELIEF REQUEST NO. PR-1

PUMPS:

PAL01 A and B, Motor Driven Aux. Feedwater Pumps; PAL02, Turbine Driven Aux. Feedwater Pump; PBG02 A and B, Boric Acid Transfer Pumps; PBG05 A and B, Centrifugal Charging Pumps; PEC01 A and B, Fuel Pool Cooling Pumps; PEF01 A and B, Essential Service Water Pumps; PEG01 A, B, C and D, Component Cooling Water Pumps; PEJ01 A and B, Residual Heat Removal Pumps; PEM01 A and B, Safety Injection Pumps; PEN01 A and B, Containment Spray Pumps; PJE01 A and B, Emergency Fuel Oil Transfer Pumps.

CLASS:

ISI Class 2 and 3

TEST REQUIREMENT:

The temperature of all centrifugal pump bearings outside the main flow path shall be measured at points selected to be responsive to changes in the temperature of the bearing. (IWP-4310)

BASIS FOR RELIEF:

a) Bearings of certain pumps addressed in this relief request are cooled by their respective process fluid. Thus, bearing temperature measurements would be highly dependent on the temperature of the cooling medium.

b) Bearing temperature taken at one-year intervals provide little data toward determining the incremental degradation of a bearing or providing any meaningful trend information.

c) All pumps addressed by this relief request, except for the Emergency Fuel Oil Transfer Pumps, are subjected to vibration measurements on a quarterly basis in accordance with Subsection IWP-4500. Vibration measurements are a significantly more reliable indication of pump bearing degradation that are temperature measurements.

In summary, other measurable parameters are more indicative of pump performance and in some instances the measured temperature does not represent the actual bearing temperature. Therefore, pump bearing temperature will not be measured.

ALTERNATE TESTING:

None

RELIEF REQUEST NO. PR-2

PUMPS:

PAL01 A and B, Motor Driven Aux. Feedwater Pumps; PAL02, Turbine Driven Aux. Feedwater Pump; PBG02 A and B, Boric Acid Transfer Pumps; PBG05 A and B, Centrifugal Charging Pumps; PEC01 A and B, Fuel Pool Cooling Pumps; PEF01 A and B, Essential Service Water Pumps; PEG01 A, B, C and D, Component Cooling Water Pumps; PEJ01 A and B, Residual Heat Removal Pumps; PEM01 A and B, Safety Injection Pumps; PEN01 A and B, Containment Spray Pumps; PJE01 A and B, Emergency Fuel Oil Transfer Pumps.

CLASS:

ISI Class 2 and 3

TEST REQUIREMENT:

After completion of a pump test, test results shall be analyzed within 96 hours. (IWP-3220)

BASIS FOR RELIEF:

Test results are initially approved by on shift personnel using the acceptance criteria contained in the test to prove equipment operability. The analyzation of results for degradation requiring increased testing or engineering evaluation will then occur when the appropriate people are available for reviewing the IST. Appropriate personnel are not readily available for reviewing IST test results.

ALTERNATE TESTING:

Test data will be reviewed within four (4) working days following the test. Weekends (starting at 4:00 p.m. on the proceeding and ending at 8:00 a.m. the day following the weekend) and holidays will be excluded from the 96 hour time frame. | 3

RELIEF REQUEST NO. PR-3

PUMPS:

PEF01 A and B, Essential Service Water Pumps; PJE01 A and B, Emergency Fuel Oil Transfer Pumps.

CLASS:

ISI Class 3

TEST REQUIREMENT:

Measure pump inlet pressure before starting the pump and during the test. (Table IWP-3100-1)

BASIS FOR RELIEF:

The essential service water and emergency fuel oil pumps are submerged and the pump inlet pressures are assumed to correspond to that of the static head of the medium in which the pumps reside. Since these levels remain essentially constant through the duration of the tests, only one measurement is required.

ALTERNATE TESTING:

For the ESW and emergency fuel oil transfer pumps, a single suction pressure will be calculated for each test based on the submergence of the pump.

RELIEF REQUEST NO. PR-4

PUMPS:

PJE01 A and B, Emergency Fuel Oil Transfer Pumps

CLASS:

ISI Class 3

TEST REQUIREMENT:

Pump vibration shall be measured during each Inservice Test. (IWP-3100)

BASIS FOR RELIEF:

The emergency fuel oil transfer pumps are submerged within the diesel fuel oil tanks, thus are inaccessible. Therefore, vibration measurement is impractical.

ALTERNATE TESTING:

None

RELIEF REQUEST NO. PR-5

PUMPS:

PBG02 A and B, Boric Acid Transfer Pumps; PJE01 A and B, Emergency Fuel Oil Transfer Pumps.

CLASS:

ISI Class 3

TEST REQUIREMENT:

Proper lubricant level or pressure shall be observed during each Inservice Test. (IWP-3100)

BASIS FOR RELIEF:

The Boric Acid Transfer Pumps and the Emergency Fuel Oil Transfer Pumps are canned motor-pumps. These pumps are continuously lubricated by their process fluid when the pump is running. There are no gauges installed to indicate lubricant level or pressure and it would be impractical to do so. Therefore, lubricant level or pressure will not be observed.

ALTERNATE TESTING:

None

RELIEF REQUEST NO. PR-6

PUMPS:

PBG02 A and B, Boric Acid Transfer Pumps

CLASS:

ISI Class 3

TEST REQUIREMENT:

Pump vibration shall be measured during each Inservice Test. On close-coupled pumps, the measurement point shall be as close as possible to the inboard bearing. (IWP-4510)

BASIS FOR RELIEF:

These are canned motor-pumps which have process fluid lubricated sleeve bearings. The process fluid has a damping effect such that vibration measurement, taken on the pump casing at the bearing sleeves, will not give true indication of actual vibration.

ALTERNATE TESTING:

Vibration measurements will be taken on the pumps' suction and discharge piping for indication of pump bearing degradation.

RELIEF REQUEST NO. PR-7

PUMPS:

PJE01 A and B, Emergency Fuel Oil Transfer Pumps

CLASS:

ISI Class 3

TEST REQUIREMENT:

Pump test results shall be analyzed per IWP-3200.

BASIS FOR RELIEF:

The ASME recognizes that the characteristics of systems containing other than steam or water (e.g. fuel oil) may not necessarily lend themselves to the type and detailed requirements of the testing as specified by Subsection IWP. This is so stated in the ASME response to WPPSS inquiry, File No. BC 77-666/NI 77-371 dated 1/8/79. In cases where test data is erractic or questionable, strict compliance with IWP-3200 could result in excessive testing of the pumps or needless maintenance.

ALTERNATE TESTING:

Analysis of quarterly test data will be based on IWP-3200. In those cases where the test results are erractic or could be misleading, the vendor will be contacted and an engineering evaluation made as to the necessity to develop new acceptance criteria.

RELIEF REQUEST PR-8

PUMPS:

PAL01 A and B, Motor Driven Aux. Feedwater Pumps; PAL02, Turbine Driven Aux. Feedwater Pump; PBG02 A and B, Boric Acid Transfer Pumps; PBG05 A and B, Centrifugal Charging Pumps; PJE01 A and B, Emergency Fuel Oil Transfer Pumps.

CLASS:

ISI Class 2 and 3

TEST REQUIREMENT:

Flow rate shall be measured using a rate or quantity meter installed in the pump test circuit. (IWP-4600)

BASIS FOR RELIEF:

a) There is no flow instrumentation installed in the test flow path for the pumps listed above.

b) All of the pump tests will be performed with the system lined up in a recirculation flow path or fixed resistance flow path. Therefore, system flow characteristics will be the same for each test.

c) In a fixed resistance system (pump running in a recirculation test flow path) pump differential pressure is indicative of pump performance.

For the reasons stated above flow rates will not be measured.

ALTERNATE TESTING:

Pump suction and discharge pressure will be measured and differential pressure calculated instead of flow rate measurement for the Motor Driven and Turbine Driven Aux. Feedwater Pumps, Boric Acid Transfer Pumps, Centrifugal Charging Pumps, and the Emergency Fuel Oil Transfer Pumps.

RELIEF REQUEST NO. PR-9

PUMPS:

PEF01 A and B, Essential Service Water Pumps

CLASS:

ISI Class 3

TEST REQUIREMENT:

On a pump coupled to the driver the vibration measurement shall be taken on the bearing housing near the coupling. (IWP-4510)

BASIS FOR RELIEF:

The essential service water pumps are vertical, multistage pumps submerged in their process fluid and thus are inaccessible. Therefore, vibration measurement is impractical.

ALTERNATE TESTING:

Vibration measurements will be taken on the pumps' associated motor bearing housing for indication of pump bearing degradation.

RELIEF REQUEST NO. PR-10

PUMPS:

PJE01 A and B, Emergency Fuel Oil Transfer Pumps

CLASS:

ISI Class 3

TEST REQUIREMENT:

When measurement of bearing temperature is not required, each pump shall be run at least 5 min under conditions as stable as the system permits. [IWP-3500(a)]

BASIS FOR RELIEF:

The Emergency Fuel Oil Day Tanks have an automatic pump shutoff corresponding to a certain level of oil. The pumps would have reached the level of automatic pump shutoff before the 5 minutes had elapsed. Therefore a 5 min. pump run time is impractical.

ALTERNATE TESTING:

The Emergency Fuel Oil Transfer Pumps will be run for 30 seconds before specified measurements are recorded.

RELIEF REQUEST NO. PR-11

PUMPS:

All pumps

CLASS:

ISI Class 2 and 3

TEST REQUIREMENT:

The allowable ranges of inservice test quantities in relation to the reference values are tabulated in Table IWP-3100-2. This table limits the acceptable performance of each pump dependent variable (flowrate or differential pressure) to a maximum of 103 percent of the respective reference value. If the test parameter should exceed this limit, it shall be declared inoperative and removed from service. (IWP-3200)

BASIS FOR RELIEF:

The requirement to declare a pump inoperative when a test parameter exceeds the reference value by 3 percent is not technically justified, sound engineering judgement, nor acceptable plant operating practice for the following reasons:

- Indiscriminately declaring safety system pumps inoperative results in excessive and unneeded testing of other plant safeguard systems and components. Such testing could ultimately detract from the overall reliability of the plant safety systems. In addition, unwarranted testing unnecessarily adds to the burden of the operations force and dilutes efforts focused on the performance of their primary duties. Also, operators are subjected to additional, and unnecessary radiation exposure.

- The case where a test parameter exceeds the reference value is not necessarily indicative of pump degradation. It may merely signify that the reference value is probably at the lower side of the statistical scatter of the test data and the specific test in question is on the upper side. Note that the reference values are subject to the same elements of statistical error associated with any other individual test.

- The 3-percent limitation is overly restrictive when compared to the accuracy of the instrumentation used to gather the test data. Analysis has shown that, in order to consistantly remain below the 3-percent limit, instrument loop accuracies in the range 0.5 to 0.75 percent would be required. This represents a significantly more restrictive requirement than that established by Paragraph IWP-4110 (± 2 percent).

- Power plant operating systems are not configured in a manner that provides the laboratory-type conditions demanded to meet the repeatability implied by the 3-percent restriction. Several of the tests require throttling with large gate or butterfly valves using remote manual control. Thus, non-quantifiable system flow conditions are created that are certain to affect measured test quantities.

- To ensure that reference values do not reflect operations at the lower end of the performance spectrum and, thus, ultimately be reflected in frequently exceeding the upper performance limits as a result of instrument drift, all related instrumentation is calibrated on a frequent basis.

- This requirement provides no additional measure of reliability to the equipment.

- When the upper limits are exceeded, the only reasonable way of correcting the inoperative condition is to conduct an analysis to ensure that the pump is indeed operable and capable of meeting its intended function. When this is done, in accordance with Subsubarticle IWP-3230 (c), a new reference value must be established. Due to the test conditions and methods of testing at WCGS, any change in the reference point eliminates the correlation of future test results with past pump performance. Because, the usefulness of any past data in determining a trend for pump performance is essentially eliminated a primary goal and basis for the inservice testing program could be jeopardized.

ALTERNATE TESTING:

Pumps will be tested in accordance with Subsection IWP with the following exceptions:

a) The Required-action range (HIGH) will be eliminated for test quantities flowrate and differential pressure; and

b) The Alert-range (HIGH) will be above a value equal to 105 percent of the reference value for test quantities of flowrate and differential pressure.

3.0 INSERVICE TESTING PROGRAM FOR VALVES

3.1 General Information

3.1.1 Applicable Code

This testing program for ISI Class 1, 2, 3, and NC valves meets the requirements of Subsection IWV of Section XI of the ASME Boiler and Pressure Vessel Code, 1980 Edition through the Winter 1981 Addenda. Where these requirements are determined to be impractical, specific requests for relief have been written and included in Section 3.2.

3.1.2 Valve Program Tables

The tables in Appendix B list all ISI Class 1, 2, 3, and NC valves that have been assigned valve categories. Valves exempt per IWV-1200 are not listed. The following information is included for each valve:

VALVE IDENTIFICATION AND IST REQUIREMENTS

SYSTEM-P&ID: Located in the top right hand corner of the program table as drawing numer (DWG. NO.). This identifies the valve's associated system and P&ID.

VALVE NO: The valve identification number.

P&ID COOR.: The drawing coordinate location on the P&ID for the valve.

ISI CLASS: The ISI classification of the valve.

ISI CAT.: The category(s) assigned to the valve based on the definitions per IWV-2200. Four (4) separate categories are defined in the Code:

CATEGORY A - Valves for which seat leakage is limited to a specific maximum amount in the closed position for fulfillment of their function.

CATEGORY B - Valves for which seat leakage in the closed position is inconsequential for fulfillment of their function.

CATEGORY C - Valves which are self-actuating in response to some system characteristic, such as pressure (relief valves) or flow direction (check valves).

CATEGORY D - Valves which are actuated by an energy source capable of only one operation, such as rupture disks or explosive-actuated valves.

VALVE SIZE: The nominal size of the valve in inches.

VALVE TYPE: The valve body design as indicated by the following abbreviations:

ANGLE	ANG
BALL	BAL
BUTTERFLY	BTF
CHECK	CK
DIAPHRAGM	DIA
GATE	GA
GLOBE	GL
RELIEF	RV
RUPTURE DIAPHRAGM	RPD
SAFETY	SV
STOP CHECK	SCK
THREE WAY	TWY

ACT. TYPE: The type of valve actuator as indicated by the following abbreviations:

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

NORM. POS.: The position of the valve during normal plant operation, specified as follows:

O	Normally Open
C	Normally Closed

TEST RQMT: The test(s) that will be performed to fulfill the requirements of Subsection IWV. The test definitions and abbreviations used are identified in Table 3.1-1.

TEST FREQ.: The frequency at which the above mentioned tests will be performed. Test frequencies are defined in Table 3.1-2.

MAX STRK TIME: The limiting maximum value of full stroke time, in seconds, for power-operated valves in Category A or B.

MAX LEAKG: The maximum leakage allowed during the specified leaktest. The abbreviations for the units of measurement are:

C Standard cubic centimeters per minute.
P Pressure decay in pounds per square inch per minute.
G Gallons per minute.
M Milliliters per minute.

3

RELIEF REQUEST: The reference to a relief request in Section 3.2 for valve testing. Requests for relief are identified as VR-XX.

REMARKS: Remarks in the IST Program are coded as NOTE 1, NOTE 2, etc.

3.1.3 Measurement of Test Quantities

STROKE TIME: Stroke time is that time interval from initiation of the actuating signal to the end of the actuating cycle. Stroke time values for each power operated valve is specified in the valve program table. Stroke time is measured to the nearest second, for times 10 sec. or less, or 10% of the specified limiting stroke time for times longer than 10 sec.

POSITION INDICATION: Valve disk movement is determined by exercising the valve while observing an appropriate indicator which signals the required change of disk position, or observing indirect evidence, such as changes in system pressure, flow rate, level or temperature, which reflect stem or disk position.

SEAT LEAKAGE: Seat leakage is measured by one of the following methods:

(a) draining the line, closing the valve, bringing one side to test pressure, and measuring leakage through a downstream telltale connection, or

(b) by measuring the feed rate required to maintain pressure between two valves or between two seats of a gate valve, provided the total apparent leak rate is charged to the valve or gate valve seat being tested, and that the conditions required by IWV-3423 are satisfied.

3.1.4 Allowable Ranges of Test Quantities

STROKE TIME

(a) If, for power operated valves, an increase in stroke time of 25% or more from the previous test for valves with stroke times greater than 10 sec. or 50% or more for valves with stroke times less than or equal to 10 sec. is observed, test frequency shall be increased to once each month until corrective action is taken. For valves with stroke times less than or equal to five seconds see Relief Request VR-2. 3

(b) Valve stroke time shall not exceed its specified limiting stroke time value.

POSITION INDICATION: The valve disk shall move from the fully open position to the fully closed position or vice versa.

SEAT LEAKAGE: Valve leakage rates shall not exceed either the values specified by Wolf Creek Generating Station or those rates given in IWV-3426. | 4 3

| 4 3

3.1.5 Instrument Accuracy

Instruments used to measure stroke times shall be capable of measurement to the nearest second.

TABLE 3.1-1

INSERVICE VALVE TESTS

TEST	TEST NAME	TEST DESCRIPTION
AT-1	Type C leaktest	Containment isolation valves will be seat leak tested in accordance with WCGS Technical Specification requirements and Appendix J, 10CFR50.
AT-2	Pressure isolation valve leaktest	Those valves so designated will be leak tested in accordance with WCGS Technical Specification 4.4.6.2.2.
AT-3	Accumulator check valve test	Check valves designed to maintain air-accumulator charge upon loss of normal plant service or instrument air will be subjected to air pressure drop.
BT-O	Full-stroke exercise test to the OPEN position (IWV-3412 and 3413)	Exercise testing in the open direction, verified by stroke time measurement, will be performed to confirm the full stroke capability of each valve. The stroke direction tested and timed (open) is based on the direction the valve disk must travel to fulfill a safety function.
BT-C	Full-stroke exercise test to the CLOSED position (IWV-3412 and 3413)	Exercise testing in the closed direction, verified by stroke time measurement, will be performed to confirm the full stroke capability of each valve. The stroke direction tested and timed (close) is based on the direction the valve disk must travel to fulfill a safety function.
BT-P	Partial-stroke exercise test (IWV-3412)	Partial-stroke exercise testing will be performed to confirm partial stroke capability of each valve. The stroke direction tested is based on the direction the valve disk must travel to fulfill a safety function.

TABLE 3.1-1

INSERVICE VALVE TESTS (continued)

TEST	TEST NAME	TEST DESCRIPTION
CVT-O	Check valve exercise test to OPEN position (IWV-3520)	Check valves will be exercised from the fully closed to the fully open positions. Verification of safety basis system flow or full stroke calculated flow through a check valve shall be an adequate demonstration that the valve is full open.
CVT-C	Check valve exercise test to CLOSED position (IWV-3520)	Check valves will be exercised from the fully open to the fully closed positions. The stroke direction tested (closed) is based on the direction the valve disk must travel to fulfill a safety function.
CVP-O	Partial check valve exercise test to OPEN position (IWV-3522)	Partial check valve exercise test to the open position.
RVT	Relief valve set point verification test (IWV-3510)	Relief and safety valve set point will be verified in accordance with IWV-3510.
FST	Fail-safe test (IWV-3415)	Valves with fail-safe actuators will be tested to verify proper fail-safe operation upon loss of actuator electric power.
PIT	Position indication checks (IWV-3300)	Valves with position indicators will be checked to verify that remote valve indicators accurately reflect valve position.
PAS	Indicates passive valve	This is a passive valve and does not require testing.

TABLE 3.1-2

TEST FREQUENCY

(1)

TEST FREQUENCY	OPERATIONAL CONDITION	FREQUENCY OF TESTING
Q	Power operation	At least once per 92 days
CS	Cold Shutdown	See (2) below
RR	Refueling	Not less than once every two years
5Y	No operational condition limitations	Every five years (see Article (IWV-3511). Applies to RVT test.
2Y	No operational condition limitations	Every two years (see Article IWV-3300). Applies to PIT test.

(1) Operational conditions are defined in WCGS Technical Specifications, page 1-9.

(2) Inservice valve testing will commence within 72 hours of reaching the cold shutdown conditions as defined in the WCGS Technical Specifications. Testing not completed before startup may be completed during subsequent cold shutdowns. Valve testing need not be performed more often than once every three months. In the case of extended cold shutdowns, the testing need not be started within the 72 hours limitation. However, in these instances, all valve testing must be completed prior to startup.

NOTE: Completion of all valve testing during cold shutdowns is not required if plant operating conditions do not permit testing of specific valves.

SECTION 3.2

RELIEF REQUESTS FOR INSERVICE VALVE TESTING PROGRAM

RELIEF REQUEST NO. VR-1

VALVE(S):

See Appendix B

CATEGORY:

A and B

FUNCTION:

Various

TEST REQUIREMENT:

When practical, valves with fail-safe actuators shall be tested by observing the operation of the valves upon loss of actuator power. (IWV-3415)

BASIS FOR RELIEF:

Solenoid and air-operated valves that stroke upon loss of actuator power are the only type in the Wolf Creek IST Program. De-energizing the solenoid or pilot valve during normal valve exercising effectively simulates loss of actuator power.

ALTERNATE TESTING:

Valves which must stroke to a specified position upon loss of actuator power will be exercised in accordance with Paragraph IWV-3412 to their respective fail-safe position. This test will constitute the fail-safe test. No additional testing will be conducted.

RELIEF REQUEST NO. VR-2

VALVE(S):

See Appendix B

CATEGORY:

A and B

FUNCTION:

Various

TEST REQUIREMENT:

Stroke time shall be compared to previous test results and if the stroke time has increased by 50% or more since the last test, then the frequency of testing shall be increased to once each month. (IWV-3417(a))

BASIS FOR RELIEF:

It is impractical to apply the strict requirements of Paragraph IWV-3417(a) in any meaningful way without installing sophisticated timing devices. Operator reaction time could easily vary by 0.5 seconds thereby adding considerable error to test results of quick-acting valves.

ALTERNATE TESTING:

The stroke times of all valves with stroke times less than or equal to five (5) seconds will be measured and, when required, corrective action will be taken in accordance with Paragraph IWV-3417(b).

RELIEF REQUEST NO. VR-3

VALVE(S):

BB V-118, BB V-148, BB V-178, BB V-208, BG V-135, BG 8381, BL 8046, EG V-204
EM V-006, EP V-046, KA V-039, KA V-204, KC V-478, SJ V-111

CATEGORY:

A, C

FUNCTION:

Various depending on component and system function.

TEST REQUIREMENT:

Check valves shall be exercised at least once every 3 months, except as provided by IWV-3522. (IWV-3521)

BASIS FOR RELIEF:

When these valves are in operation there is no practical means to test valve closure. Therefore a seat leak test will be conducted to verify valve closure.

ALTERNATE TESTING:

Verification of valve closure will be done in conjunction with the 10 CFR 50 Appendix J Type C leak tests (AT-1) conducted during each refueling outage

RELIEF REQUEST NO. VR-4

VALVE(S):

BB 8948A through D, BB 8949A through D, BB V-001, BB V-022, BB V-040, BB V-059, EJ 8841A, EJ 8841B, EM 8815, EP 8818A through D, EP 8956A through D, EP V-010, EP V-020, EP V-030, EP V-040. | 3

CATEGORY:

A, C and C

FUNCTION:

Reactor coolant system pressure boundary isolation.

TEST REQUIREMENT:

Check valves shall be exercised at least once every 3 months, except as provided by IWV-3522. (IWV-3521)

BASIS FOR RELIEF:

a) Exercising these valves to the open direction during power operation can not be done due to the systems not being able to overcome Reactor Coolant System Pressure. The high pressure coolant injection valves are an exception to this but would cause a power decrease due to the injection of boric acid into the Reactor Coolant System.

b) Testing of these valves during cold shutdown is impractical due to the inherent danger of cold over pressurization of the RCS.

c) The only practical method of verifying valve closure is to conduct a seat leak test.

ALTERNATE TESTING:

Valves will be full-stroked in the open direction during each reactor refueling outage. Verification of valve closure will be done in conjuction with intersystem LOCA leak testing (AT-2) which will be performed at each refueling outage.

RELIEF REQUEST NO. VR-5

VALVE(S):

See Appendix B

CATEGORY:

A and A, C

FUNCTION:

Various

TEST REQUIREMENT:

Category A valves shall be leak tested. (IWV-3420)

BASIS FOR RELIEF:

Section XI testing requirements are essentially the same as those of Appendix J and therefore it would be impractical to perform separate leak tests.

ALTERNATE TESTING:

These valves will be leak tested in accordance with the Appendix J requirements of 10 CFR 50.

RELIEF REQUEST NO. VR-6

VALVE(S):

See Appendix B

CATEGORY:

A and A, C

FUNCTION:

Various

TEST REQUIREMENT:

For valves 6 in. nominal pipe size and larger, if a leakage rate exceeds the rate determined by the previous test by an amount that reduces the margin between measured leakage rate and the maximum permissible rate by 50% or greater, the test frequency shall be doubled. (IWV-3427(b))

BASIS FOR RELIEF:

These valves are located inside containment and testing on an increased frequency would increase exposure for testing personnel. Testing is now being performed during mode 3 to minimize exposure. With increased frequency, operational constraints would be placed upon the plant requiring possible shut down for testing. Therefore, corrective action per IWV-3427(b) will not be used due to ALARA considerations and operational constraints on the plant.

ALTERNATE TESTING:

Valves will be replaced or repaired as required when the leakage rate exceeds the one (1) gpm maximum leakage rate as stated in Wolf Creek Generating Station Technical Specifications.

RELIEF REQUEST NO. VR-7

VALVE(S):

BG 8546A and B

CATEGORY:

C

FUNCTION:

Provide flowpaths to the centrifugal charging pumps from the refueling water storage tank.

TEST REQUIREMENT:

Check valves shall be exercised at least once every 3 months, except as provided by IWV-3522. (IWV-3521)

BASIS FOR RELIEF:

a) Full-stroke or partial-stroke exercising of these valves during normal operation would increase the boron inventory in the reactor coolant system thus increasing the potential for plant shutdown.

b) Exercising of these valves during cold shutdown requires using the safety injection flowpath which could result in potential reactor coolant system overpressurization.

ALTERNATE TESTING:

Valves will be full-stroke exercised open during each refueling outage.

RELIEF REQUEST NO. VR-8

VALVE(S): 4

See Appendix B

CATEGORY:

A and A, C

FUNCTION:

Various

TEST REQUIREMENT:

For valves 6 in. nominal pipe size and larger, if a leakage rate exceeds the rate determined by the previous test by an amount that reduces the margin between measured leakage rate and the maximum permissible rate by 50% or greater, the test frequency shall be doubled; the tests shall be scheduled to coincide with a cold shutdown until corrective action is taken, and a projection based on three or more tests indicates that the leakage rate of the next scheduled test will exceed the maximum permissible leakage rate by greater than 10%, the valve shall be replaced or repaired. [IWV-3427(b)]

BASIS FOR RELIEF:

a) Past experience at other utilities indicates that no reliable trend can be established for leakage rates. Past experience also indicates that the difference between leakage rates from one test to another is more likely due to other factors or plant conditions and usually not valve degradation.

b) A recent draft of the ANSI/ASME OM-10 standard (Inservice Testing of Valves) has deleted these test requirements from the corrective action paragraph for valve leak rate testing.

ALTERNATE TESTING:

None. Valves will be replaced or repaired when the permissible leakage rate is exceeded as stated in IWV-3427(a).

RELIEF REQUEST NO. VR-9

VALVE(S):

EF V-241, EF V-242

CATEGORY:

C

FUNCTION:

Provide flowpaths from service water system A and B trains to the ultimate heat sink and pressure isolation of the service water system from the ultimate heat sink.

TEST REQUIREMENT:

Check valves shall be exercised at least once every 3 months, except as provided by IWV-3522. (IWV-3521)

BASIS FOR RELIEF:

Valve location does not permit adequate reverse flow for check valve stroke testing. Therefore the only positive means to verify that the disk is on its seat is to disassemble and observe valve operability.

ALTERNATE TESTING:

Valves will be disassembled and inspected for operability during each reactor refueling outage.

RELIEF REQUEST NO. VR-10

NOT USED

RELIEF REQUEST NO. VR-11

VALVE(S):

EJ HV-8811 A and B

CATEGORY:

B

FUNCTION:

RHR containment sump isolation valve. Isolate the containment sump from the RHR pumps and open in the recirculation mode to line up RHR pumps to the sump.

TEST REQUIREMENT:

Category A and B valves shall be exercised at least once every 3 months, except as provided by IWV-3412(a), IWV-3415, and IWV-3416. (IWV-3411)

BASIS FOR RELIEF:

Opening these valves during normal operation or cold shutdown will drain the RHR system to the containment sump.

ALTERNATE TESTING:

These valves will be exercised during each reactor refueling outage.

RELIEF REQUEST NO. VR-12

VALVE(S):

EM V-001, EM V-002, EM V-003, EM V-004, EM 8922A and B

CATEGORY:

A, C and C

FUNCTION:

V-001, V-002, V-003, V-004: Pressure boundary isolation valves for safety injection pump hot leg injection.
8922A and B: Safety injection pumps discharge check valves.

TEST REQUIREMENT:

Check valves shall be exercised at least once every 3 months, except as provided by IWV-3522. (IWV-3521)

BASIS FOR RELIEF:

a) During normal operation these valves will not stroke against full RCS pressure.

b) Stroking these valves during cold shutdown could result in overpressurization of the RCS.

ALTERNATE TESTING:

Valves will be full-stroke exercised open during each reactor refueling outage.

RELIEF REQUEST NO. VR-13

VALVE(S):

EM V-001, EM V-002, EM V-003, EM V-004, EM 8815

CATEGORY:

A, C

FUNCTION:

V-001, V-002, V-003 and V-004: Pressure boundary isolation valves for safety injection pump hot leg injection.
8815: Pressure isolation for high pressure coolant injection line.

TEST REQUIREMENT:

Check valves shall be exercised at least once every 3 months, except as provided by IWV-3522. (IWV-3521)

BASIS FOR RELIEF:

The only practical method of verifying valve closure is to conduct a seat leak test.

ALTERNATE TESTING:

Verification of valve closure will be done in conjunction with intersystem LOCA leak testing (AT-2) which will be performed at each refueling outage.

RELIEF REQUEST NO. VR-14

VALVE(S):

EM 8926 A and B

CATEGORY:

C

FUNCTION:

Opens on flow from the Refueling Water Storage Tanks to the suction of the Safety Injection Pumps.

TEST REQUIREMENT:

Check valves shall be exercised at least once every 3 months, except as provided by IWV-3522. (IWV-3521)

BASIS FOR RELIEF:

a) Full-stroke exercising during normal operation cannot be accomplished since safety injection pump discharge pressure is not enough to overcome reactor coolant pressure.

b) Exercising these valves during cold shutdown could result in overpressurization of the reactor coolant system.

ALTERNATE TESTING:

Valves will be partial-stroke exercised quarterly and full-stroke exercised open during each refueling outage.

RELIEF REQUEST NO. VR-15

VALVE(S):

EN V-002, EN V-008, EN V-013, EN V-017

CATEGORY:

C

FUNCTION:

V-002, V-008: Prevent draining RWST and containment spray system to the containment sump.

V-013, V-017: Containment spray containment isolation valves; open to pressurize containment spray headers.

TEST REQUIREMENT:

Check valves shall be exercised at least once every 3 months, except as provided by IWV-3522. (IWV-3521)

BASIS FOR RELIEF:

No means exist for testing these valves open without taking a suction from the containment sump or discharging water through the spray headers.

ALTERNATE TESTING:

Valves will be disassembled and inspected for operability during each refueling outage.

RELIEF REQUEST NO. VR-16

VALVE(S):

EN HV-1, EN HV-7

CATEGORY:

B

FUNCTION:

Provides flow path from containment recirculation sump to containment spray pumps.

TEST REQUIREMENT:

Category A and B valves shall be exercised at least once every 3 months, except as provided by IWV-3412 (a), IWV-3415, and IWV-3416. (IWV-3411)

BASIS FOR RELIEF:

Upon exercising these valves during normal operation or cold shutdown there exists the possibility of draining the containment spray pumps suction lines which could severly effect the containment spray pumps' operation.

ALTERNATE TESTING:

Valves will be full-stroke exercised both open and close during each refueling outage.

RELIEF REQUEST NO. VR-17

VALVE(S):

EN V-003, EN V-004, EN V-009, EN V-010

CATEGORY:

C

FUNCTION:

Provide flow path from refueling water storage tank to the spray headers.

TEST REQUIREMENT:

Check valves shall be exercised at least once every 3 months. except as provided by IWV-3522. (IWV-3521)

BASIS FOR RELIEF:

The flow path that would provide sufficient flow to fully open these valves cannot be utilized since it could result in spraying containment.

ALTERNATE TESTING:

Valves will be partial-stroke exercised open every 3 months.

RELIEF REQUEST NO. VR-18

VALVE(S):

EP HV-8950 A through F

CATEGORY:

B

FUNCTION:

Safety injection accumulator vent valves

TEST REQUIREMENT:

Category A and B valves shall be exercised at least once every 3 months, except as provided by IWV-3412(a), IWV-3415, and IWV-3416. (IWV-3411)

BASIS FOR RELIEF:

Opening these valves could bleed down the associated safety injection accumulators and if the valves failed open it would render a portion of the ECCS inoperable forcing plant shutdown.

ALTERNATE TESTING:

These valves will be fail-safe tested and full-stroke exercised both open and close during each refueling outage.

RELIEF REQUEST NO. VR-19

VALVE(S):

KA FV-29, KA HV-30

CATEGORY:

A and B respectively

FUNCTION:

FV-29 provides containment isolation from the instrument air supply.

HV-30 provides isolation from instrument air supply to the hydrogen control system.

TEST REQUIREMENT:

Category A and B valves shall be exercised at least once every 3 months, except as provided by IWV-3412(a), IWV-345, and IWV-3416. (IWV-3411)

BASIS FOR RELIEF:

a) Stroking FV-29 would interrupt the supply of instrument air to valves and equipment necessary for system control and operation during all phases of plant operation.

b) Stroking HV-30 would reduce the supply of instrument air to valves and equipment necessary for plant operation.

ALTERNATE TESTING:

Valves FV-29 and HV-30 will be fail-safe tested, full-stroke exercised close and full-stroke exercised open, respectively, during each refueling outage.

RELIEF REQUEST NO. VR-20

VALVE(S):

KA V-648, KA V-649, KA V-650, KA V-651

CATEGORY:

A, C

FUNCTION:

These valves maintain the auxiliary feedwater control/main steam atmosphere relief valve accumulators (TKA02 through 05) pressurized in the event that the service air is lost.

TEST REQUIREMENT:

Check valves shall be exercised at least once every 3 months, except as provided by IWV-3522. (IWV-3521)

BASIS FOR RELIEF:

There is no convenient means to verify operation of these valves without adversely affecting the availability of the associated safety-related components.

ALTERNATE TESTING:

Verification of valve closure will be done in conjunction with pressure drop testing (AT-3) which will be performed at each refueling outage.

RELIEF REQUEST NO. VR-21

VALVE(S):

KJ V-711 A and B, KJ V-712 A and B

CATEGORY:

A, C

FUNCTION:

These valves maintain the diesel generator starting air tanks pressurized in the event that the normal starting air supply line is broken.

TEST REQUIREMENT:

Check valves shall be exercised at least once every 3 months, except as provided by IWV-3522. (IWV-3521)

BASIS FOR RELIEF:

There is no convenient means to verify operation of these valves without disabling the diesel generators.

ALTERNATE TESTING:

Verification of valve closure will be done in conjunction with pressure drop testing (AT-3) which will be performed at each refueling outage.

RELIEF REQUEST NO. VR-22

VALVE(S):

EM V-240 and EM V-241

CATEGORY:

C

FUNCTION:

Provides flow from the centrifugal charging pumps to the boron injection tank.

TEST REQUIREMENT:

Check valves shall be exercised at least once every 3 months, except as provided by IWV-3522. (IWV-3521)

BASIS FOR RELIEF:

During normal operation stroking these valves would result in injecting borated water into the RCS and thus could result in a decrease in power and thermal shock the reactor coolant piping. Stroking these valves during cold shutdown could result in overpressurization of the RCS.

ALTERNATE TESTING:

Valves will be full-stroke exercised open during each refueling outage.

APPENDIX A

PUMP TESTING PROGRAM

WOLF CREEK NUCLEAR PLANT
INSERVICE TESTING PROGRAM PUMPS

PUMP IDENTIFICATION					IST REQUIREMENTS								
PUMP NUMBER	SYSTEM	IST CLASS	P&ID NUMBER	P&ID COORD	SPEED	SUCT. PRESS	DIFF. PRESS	FLOW RATE	VIBRA	BRG. TEMP	LUBRICANT LEV OR PRESS	REMARKS	
PAL01 A	AUX FD	3	M-12AL01	E-4	N/A[1]	YES	YES	PR-8	YES	PR-1	YES	PR-2	3
PAL01 B	AUX FD	3	M-12AL01	H-4	N/A[1]	YES	YES	PR-8	YES	PR-1	YES	PR-2	
PAL02	AUX FD	3	M-12AL01	B-4	YES	YES	YES	PR-8	YES	PR-1	YES	PR-2	
PBG02 A	CVCS	3	M-12BG05	B-6	N/A[1]	YES	YES	PR-8	PR-6	PR-1	PR-5	PR-2	
PBG02 B	CVCS	3	M-12BG05	A-6	N/A[1]	YES	YES	PR-8	PR-6	PR-1	PR-5	PR-2	
PBG05 A	CVCS	2	M-12BG03	C-5	N/A[1]	YES	YES	PR-8	YES	PR-1	YES	PR-2	
PBG05 B	CVCS	2	M-12BG03	B-5	N/A[1]	YES	YES	PR-8	YES	PR-1	YES	PR-2	
PEC01 A	FPC	3	M-12EC01	H-6	N/A[1]	YES	YES	YES	YES	PR-1	YES	PR-2	
PEC01 B	FPC	3	M-12EC01	E-6	N/A[1]	YES	YES	YES	YES	PR-1	YES	PR-2	
PEF01 A	ESW	3	M-k2EF01	G-6	N/A[1]	PR-3	YES	YES	PR-9	PR-1	YES	PR-2	
PEF01 B	ESW	3	M-k2EF01	C-6	N/A[1]	PR-3	YES	YES	PR-9	PR-1	YES	PR-2	
PEG01 A	CCW	3	M-12EG01	G-4	N/A[1]	YES	YES	YES	YES	PR-1	YES	PR-2	3
PEG01 B	CCW	3	M-12EG01	D-4	N/A[1]	YES	YES	YES	YES	PR-1	YES	PR-2	

NOTE: 1. IWP-4400 states that for pumps directly coupled to synchronous or induction type motor drivers, pump speed need not be measured.

2. Frequency of testing will be in accordance with IWP-3400 which requires an inservice test to be run every three months during normal operation.

WOLF CREEK NUCLEAR PLANT
INSERVICE TESTING PROGRAM PUMPS

PUMP IDENTIFICATION					IST REQUIREMENTS								
PUMP NUMBER	SYSTEM	ISI CLASS	P&ID NUMBER	P&ID COORD	SPEED	SUCT. PRESS	DIFF. PRESS	FLOW RATE	VIBRA	BRG. TEMP	LUBRICANT LEV OR PRESS	REMARKS	
PEG01 C	CCW	3	M-12EG01	E-4	N/A[1]	YES	YES	YES	YES	PR-1	YES	PR-2	3
PEG01 D	CCW	3	M-12EG01	B-4	N/A[1]	YES	YES	YES	YES	PR-1	YES	PR-2	
PEJ01 A	RHR	2	M-12EJ01	G-6	N/A[1]	YES	YES	YES	YES	PR-1	YES	PR-2	
PEJ01 B	RHR	2	M-12EJ01	C-6	N/A[1]	YES	YES	YES	YES	PR-1	YES	PR-2	
PEM01 A	SIS	2	M-02EM01	E-6	N/A[1]	YES	YES	YES	YES	PR-1	YES	PR-2	
PEM01 B	SIS	2	M-02EM01	D-6	N/A[1]	YES	YES	YES	YES	PR-1	YES	PR-2	
PEN01 A	CS	2	M-02EN01	G-6	N/A[1]	YES	YES	YES	YES	PR-1	YES	PR-2	
PEN01 B	CS	2	M-02EN01	B-6	N/A[1]	YES	YES	YES	YES	PR-1	YES	PR-2	
PJE01 A	FOT	3	M-12JE01	E-7	N/A[1]	PR-3	YES	PR-8	PR-4	PR-1	PR-5	PR-2 PR-7	3
PJE01 B	FOT	3	M-12JE01	A-7	N/A[1]	PR-3	YES	PR-8	PR-4	PR-1	PR-5	PR-2 PR-7	3

NOTE: 1. IWP-4400 states that for pumps directly coupled to synchronous or induction type motor drivers, pump speed need not be measured.

2. Frequency of testing will be in accordance with IWP-3400 which requires an inservice test to be run every three months during normal operation.

APPENDIX B

VALVE TESTING PROGRAM

DATE 07 MAR 85 15:48:05 RID 2 04 MAR 85 LYON

SYSTEM: MAIN STEAM

WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02AB01

VALVE NO.	PLID COOR.	ISI CLASS.	IST CAT.	VALVE SIZE.	VALVE TYPE.	ACT TYPE.	NORM POS.	TEST RQMT	TST FRE.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST.	REMARKS
PV-1	G-3	2	B	10	GL	AO	C	BT-C	CS	20		VR-1	NOTE 1
								BT-O	CS	20			
								FST	CS				
								PIT	2Y				
PV-2	D-3	2	B	10	GL	AO	C	BT-C	CS	20		VR-1	NOTE 1
								BT-O	CS	20			
								FST	CS				
								PIT	2Y				
PV-3	D-6	2	B	10	GL	AO	C	BT-C	CS	20		VR-1	NOTE 1
								BT-O	CS	20			
								FST	CS				
								PIT	2Y				
PV-4	G-6	2	B	10	GL	AO	C	BT-C	CS	20		VR-1	NOTE 1
								BT-O	CS	20			
								FST	CS				
								PIT	2Y				

***** END REPORT *****

•DATE 19 JUN 85 15:42:20 RID 3 04 MAR 85 RAYMOND
•SYSTEM: MAIN STEAM WOGS INSERVICE TESTING PROGRAM DWG. NO.: M-02A802

VALVE NO.	PGID COOR.	ISI CLASS.	IST CAT.	VALVE SIZE	VALVE TYPE	ACT TYPE	NORM POS.	TEST RQMT	TST FRE.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST	REMARKS	
HV-5	D-4	2	B	4	GL	AO	C	BT-O	Q	10			VR-1	
								FST	Q					
								PIT	2Y					
HV-6	C-4	2	B	4	GL	AO	C	BT-O	Q	10			VR-1	
								FST	Q					
								PIT	2Y					
HV-11	H-2	2	B	2B	GA	AO	O	BT-C	CS	5			VR-2	NOTE 2
								BT-P	Q					
								PIT	2Y					
HV-12	G-3	2	B	2	GL	AO	C	BT-C	CS	10				3
								BT-P	Q					
								FST	CS					
								PIT	2Y					
HV-14	F-3	2	B	2B	GA	AO	O	BT-C	CS	5			VR-2	NOTE 2
								BT-P	Q					
								PIT	2Y					
HV-15	F-3	2	B	2	GL	AO	C	BT-C	CS	10				3
								BT-P	Q					
								FST	CS					
								PIT	2Y					
HV-17	D-3	2	B	2B	GA	AO	O	BT-C	CS	5			VR-2	NOTE 2
								BT-P	Q					
								PIT	2Y					
HV-18	D-3	2	B	2	GL	AO	C	BT-C	CS	10				3
								BT-P	Q					
								FST	CS					
								PIT	2Y					
HV-20	C-3	2	B	2B	GA	AO	O	BT-C	CS	5			VR-2	NOTE 2
								BT-P	Q					
								PIT	2Y					
HV-21	C-3	2	B	2	GL	AO	C	BT-C	CS	10				3
								BT-P	Q					
								FST	CS					
								PIT	2Y					
HV-48	D-4	2	B	1	GL	AO	O	BT-C	Q	5			VR-1	
								FST	Q				VR-2	
								PIT	2Y					
HV-49	C-4	2	B	1	GL	AO	O	BT-C	Q	5			VR-1	
								FST	Q				VR-2	
								PIT	2Y					
LV-7	B-4	2	B	2	GL	AO	C	BT-C	Q	5				
								FST	Q					
								PIT	2Y					
LV-8	D-5	2	B	2	GL	AO	C	BT-C	Q	5				
								FST	Q					
								PIT	2Y					
LV-9	E-4	2	B	2	GL	AO	C	BT-C	Q	5				
								FST	Q					
								PIT	2Y					
LV-10	G-4	2	B	2	GL	AO	C	BT-C	Q	5				
								FST	Q					
								PIT	2Y					
VD45	H-7	2	C	6	SV	SA	C	RVT	5Y					
VD46	H-7	2	C	6	SV	SA	C	RVT	5Y					
VD47	H-6	2	C	6	SV	SA	O	RVT	5Y					

V648	H-5	2	C	6	SV	SA	C	RVT	5Y
V649	H-5	2	C	6	SV	SA	C	RVT	5Y
V655	F-7	2	C	6	SV	SA	C	RVT	5Y
V656	F-7	2	C	6	SV	SA	C	RVT	5Y
V657	F-6	2	C	6	SV	SA	C	RVT	5Y
V658	F-5	2	C	6	SV	SA	C	RVT	5Y
V659	F-5	2	C	6	SV	SA	C	RVT	5Y
V663	D-7	2	C	6	SV	SA	C	RVT	5Y
V664	D-7	2	C	6	SV	SA	C	RVT	5Y
V667	D-6	2	C	6	SV	SA	C	RVT	5Y
V668	D-5	2	C	6	SV	SA	C	RVT	5Y
V669	D-5	2	C	6	SV	SA	C	RVT	5Y
V673	C-7	2	C	6	SV	SA	C	RVT	5Y
V674	C-7	2	C	6	SV	SA	C	RVT	5Y
V677	C-6	2	C	6	SV	SA	C	RVT	5Y
V678	C-5	2	C	6	SV	SA	C	RVT	5Y
V679	C-5	2	C	6	SV	SA	C	RVT	5Y

***** END REPORT *****

DATE 02 MAR 85 08:50:03 RID 46 04 MAR 85 LYON

SYSTEM: MAIN FEEDWATER

WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02AE01

VALVE NO.	P&ID COOR.	ISI CLASS.	IST CAT.	VALVE SIZE.	VALVE TYPE.	ACT TYPE.	NORM POS.	TEST ROMT	TST FRE.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST.	REMARKS
FCV-510	E-7	N	B	14	ANG	AO	O	BT-C	CS	5		VR-1	NOTE 3
								FST	CS			VR-2	
								PIT	2Y				
FCV-520	C-7	N	B	14	ANG	AO	O	BT-C	CS	5		VR-1	NOTE 3
								FST	CS			VR-2	
								PIT	2Y				
FCV-530	A-7	N	B	14	ANG	AO	O	BT-C	CS	5		VR-1	NOTE 3
								FST	CS			VR-2	
								PIT	2Y				
FCV-540	G-7	N	B	14	ANG	AO	O	BT-C	CS	5		VR-1	NOTE 3
								FST	CS			VR-2	
								PIT	2Y				
FCV-550	E-7	N	B	4	GL	AO	C	BT-C	CS	5		VR-1	NOTE 4
								FST	CS			VR-2	
								PIT	2Y				
FCV-560	C-7	N	B	4	GL	AO	C	BT-C	CS	5		VR-1	NOTE 4
								FST	CS			VR-2	
								PIT	2Y				
FCV-570	A-7	N	B	4	GL	AO	C	BT-C	CS	5		VR-1	NOTE 4
								FST	CS			VR-2	
								PIT	2Y				
FCV-580	G-7	N	B	4	GL	AO	C	BT-C	CS	5		VR-1	NOTE 4
								FST	CS			VR-2	
								PIT	2Y				

***** END REPORT *****

.DATE 19 JUN 85 15:44:04 RID 4 04 MAR 85 RAYMOND

*SYSTEM: MAIN FEEDWATER WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02AE02

VALVE NO.	P&ID COOR.	ISI CLASS.	IST CAT.	VALVE SIZE.	VALVE TYPE.	ACT TYPE.	NORM POS.	TEST ROMT	TST FRE.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST.	REMARKS
FW-39	G-3	2	B	14	GA	AO	O	BT-C	CS	5		VR-1	NOTE 5
								BT-P	Q			VR-2	
								FST	CS				
								PIT	2Y				
FW-40	C-3	2	B	14	GA	AO	O	BT-C	CS	5		VR-1	NOTE 5
								BT-P	Q			VR-2	
								FST	CS				
								PIT	2Y				
FW-41	C-6	2	B	14	GA	AO	O	BT-C	CS	5		VR-1	NOTE 5
								BT-P	Q			VR-2	
								FST	CS				
								PIT	2Y				
FW-42	G-6	2	B	14	GA	AO	O	BT-C	CS	5		VR-1	NOTE 5
								BT-P	Q			VR-2	
								FST	CS				
								PIT	2Y				
FW-43	G-4	2	B	1	GL	AO	C	PAS	NA				
FW-44	D-4	2	B	1	GL	AO	C	PAS	NA				
FW-45	D-7	2	B	1	GL	AO	C	PAS	NA				
FW-46	G-7	2	B	1	GL	AO	C	PAS	NA				
V120	C-4	2	C	14	CK	SA	O	CVT-O	Q				NOTE 5
								CVT-C	CS				
V121	F-4	2	C	14	CK	SA	O	CVT-O	Q				NOTE 5
								CVT-C	CS				
V122	F-7	2	C	14	CK	SA	O	CVT-O	Q				NOTE 5
								CVT-C	CS				
V123	C-7	2	C	14	CK	SA	O	CVT-O	Q				NOTE 5
								CVT-C	CS				
V124	C-3	2	C	4	CK	SA	C	CVT-O	CS				NOTE 6
V125	F-3	2	C	4	CK	SA	C	CVT-O	CS				NOTE 6
V126	F-6	2	C	4	CK	SA	C	CVT-O	CS				NOTE 6
V127	C-6	2	C	4	CK	SA	C	CVT-O	CS				NOTE 6
V128	C-3	2	C	1	CK	SA	C	PAS	NA				
V129	C-3	2	C	1	CK	SA	C	PAS	NA				
V134	G-6	2	C	1	CK	SA	C	PAS	NA				
V135	C-6	2	C	1	CK	SA	C	PAS	NA				

***** END REPORT *****

*DATE 20 JUN 85 12:45:50 RID S 29 MAR 85 RAYMOND
*SYSTEM: AUXILIARY FEEDWATER *CGS INSERVICE TESTING PROGRAM DWG. NO.: M-02AL01

* VALVE NO. *	*P&ID COOR.	*ISI CLASS.	*1ST CAT.	*VALVE SIZE.	*VALVE TYPE.	*ACT TYPE.	*NORM POS.	*TEST RQMT	*TST FRE.	*MAX STRK TIME	*MAX LEAKG.	*RELIEF REQUEST.	REMARKS
V4001	E-4	3	C	10	CK	SA	C	CVT-O	Q				
V4002	D-4	3	C	8	CK	SA	C	CVT-O	Q				
V4003	H-4	3	C	8	CK	SA	C	CVT-O	Q				
V4004	F-4	3	C	6	CK	SA	C	CVT-O	Q				
V4009	E-4	3	C	6	CK	SA	C	CVT-O	Q				
V4012	C-4	3	C	8	CK	SA	C	CVT-O	Q				
V4013	B-4	3	C	8	CK	SA	C	CVT-O	Q				
V4014	G-5	3	C	2	CK	SA	C	CVT-O	Q				
V4032	H-5	3	C	6	CK	SA	C	CVT-O	Q				
V4033	F-7	2	C	4	CK	SA	C	CVT-O	CS				NOTE 6
V4036	H-7	2	C	4	CK	SA	C	CVT-O	CS				NOTE 6
V4041	F-5	3	C	2	CK	SA	C	CVT-O	CS				NOTE 6
V4042	D-5	3	C	6	CK	SA	C	CVT-O	Q				
V4043	C-7	2	C	4	CK	SA	C	CVT-O	CS				NOTE 6
V4044	D-7	2	C	4	CK	SA	C	CVT-O	CS				NOTE 6
V4045	B-5	3	C	3	CK	SA	C	CVT-O	Q				NOTE 6
V4054	B-5	3	C	8	CK	SA	C	CVT-O	CS				NOTE 6
V4057	E-7	2	C	4	CK	SA	C	CVT-O	CS				NOTE 6
V4062	C-7	2	C	4	CK	SA	C	CVT-O	CS				NOTE 6
V4067	D-7	2	C	4	CK	SA	C	CVT-O	CS				NOTE 6
V4072	B-7	2	C	4	CK	SA	C	CVT-O	CS				NOTE 6
HV-5	H-7	2	B	4	GL	MO	O	NA	NA				NOTE 7
HV-6	G-6	2	B	4	GL	AO	O	PAS	NA				
HV-7	F-6	2	B	4	GL	MO	O	NA	NA				NOTE 7
HV-8	E-6	2	B	4	GL	AO	O	PAS	NA				
HV-9	D-6	2	B	4	GL	MO	O	NA	NA				NOTE 7
HV-10	D-6	2	B	4	GL	AO	O	PAS	NA				
HV-11	C-6	2	B	4	GL	MO	O	NA	NA				NOTE 7
HV-12	B-6	2	B	4	GL	AO	O	PAS	NA				
HV-30	F-3	3	B	6	BTF	MO	C	BT-O PIT	Q 2Y	15			NOTE 36
HV-31	E-3	3	B	6	BTF	MO	C	BT-O PIT	Q 2Y	15			NOTE 36
HV-32	C-3	3	B	8	BTF	MO	C	BT-O PIT	Q 2Y	15			NOTE 36
HV-33	B-3	3	B	8	BTF	MO	C	BT-O PIT	Q 2Y	15			NOTE 36
HV-34	H-3	3	B	8	GA	MO	O	BT-C PIT	Q 2Y	30			NOTE 36
HV-35	D-3	3	B	8	GA	MO	O	BT-C PIT	Q 2Y	30			NOTE 36
HV-36	B-3	3	B	10	GA	MO	O	BT-C PIT	Q 2Y	30			NOTE 36

***** END REPORT *****

.DATE 20 JUN 85 12:46:29 RID b 29 MAR 85 RAYMOND
SYSTEM: REACTOR COOLANT WOGS INSERVICE TESTING PROGRAM DWG. NO.: M-028801

VALVE NO.	P&ID COOR.	ISI CLASS.	IST CAT.	VALVE SIZE.	VALVE TYPE.	ACT TYPE.	NORM POS.	TEST RQMT		TST FRE.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST.	REMARKS	
8378A	E-4	1	C	3	CK	SA	O	CVT-O	Q						
8378B	E-4	1	C	3	CK	SA	O	CVT-O	Q						
8379A	E-7	1	C	3	CK	SA	O	CVT-O	Q						
8379B	E-7	1	C	3	CK	SA	O	CVT-O	Q						
8946A	E-4	1	A,C	10	CK	SA	C	AT-2	RR		1.0	G	VR-4		3
								CVT-O	RR				VR-6		
								CVT-C	RR						
8946B	D-4	1	A,C	10	CK	SA	C	AT-2	RR		1.0	G	VR-4		3
								CVT-O	RR				VR-6		
								CVT-C	RR						
8946C	D-6	1	A,C	10	CK	SA	C	AT-2	RR		1.0	G	VR-4		3
								CVT-O	RR				VR-6		
								CVT-C	RR						
8946D	E-6	1	A,C	10	CK	SA	C	AT-2	RR		1.0	G	VR-4		3
								CVT-O	RR				VR-6		
								CVT-C	RR						
8949A	E-5	1	A,C	6	CK	SA	C	AT-2	RR		1.0	G	VR-4		3
								CVT-O	RR				VR-6		
								CVT-C	RR						
8949B	C-5	1	A,C	6	CK	SA	C	AT-2	RR		1.0	G	VR-4		3
								CVT-O	RR				VR-6		
								CVT-C	RR						
8949C	E-6	1	A,C	6	CK	SA	C	AT-2	RR		1.0	G	VR-4		3
								CVT-O	RR				VR-6		
								CVT-C	RR						
8949D	G-6	1	A,C	6	CK	SA	C	AT-2	RR		1.0	G	VR-4		3
								CVT-O	RR				VR-6		
								CVT-C	RR						
V001	D-5	1	A,C	1.5	CK	SA	C	AT-2	RR		1.0	G	VR-4		3
								CVT-O	RR				VR-6		
								CVT-C	RR						
V072	D-4	1	A,C	1.5	CK	SA	C	AT-2	RR		1.0	G	VR-4		3
								CVT-O	RR				VR-6		
								CVT-C	RR						
V040	D-6	1	A,C	1.5	CK	SA	C	AT-2	RR		1.0	G	VR-4		3
								CVT-O	RR				VR-6		
								CVT-C	RR						
V059	E-6	1	A,C	1.5	CK	SA	C	AT-2	RR		1.0	G	VR-4		3
								CVT-O	RR				VR-6		
								CVT-C	RR						
PV-6702A	E-4	1	A	12	GA	MO	C	AT-2	RR		1.0	G	VR-6	NOTES 8,36	3
								BT-O	CS	120					
								BT-C	CS	120					
								PIT	2Y						
PV-6702B	H-6	1	A	12	GA	MO	C	AT-2	RR		1.0	G	VR-6	NOTES 8,36	3
								BT-O	CS	120					
								BT-C	CS	120					
								PIT	2Y						

..... END REPORT .....

.DATE 18 JUL 85 16:49:25 RID 7 04 MAR 85 RAYMOND
.SYSTEM: REACTOR COOLANT WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-028802

VALVE NO.	P&ID COOR.	ISI CLASS.	IST CAT.	VALVE SIZE.	VALVE TYPE.	ACT TYPE.	NORM POS.	TEST RQMT	TSI FRE.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST.	REMARKS	
RV10A	H-7	1	C	6	SV	SA	C	RVT	5Y					
RV10B	H-6	1	C	6	SV	SA	C	RVT	5Y					
RV10C	H-5	1	C	6	SV	SA	C	RVT	5Y					
RV14	C-4	1	C	2	CK	SA	C	PAS	NA				NOTE 9	
HV-8000A	E-7	1	B	3	GA	MO	O	BT-O	Q	10			NOTE 36	
								BT-C	Q	10				
								PIT	2Y					
HV-8000B	E-7	1	B	3	GA	MO	O	BT-O	Q	10			NOTE 36	
								BT-C	Q	10				
								PIT	2Y					
HV-8026	E-3	2	A	1	DIA	AO	C	AT-L	RR		650	C VR-1		3
								BT-C	Q	10		VR-5		
								FST	Q			VR-6		4
								PIT	2Y					
HV-8027	E-3	2	A	1	DIA	AO	C	AT-L	RR		650	C VR-1		3
								BT-C	Q	10		VR-5		
								FST	Q			VR-6		4
								PIT	2Y					
HV-8037A	E-5	3	B	4	GA	MO	C	BT-O	Q	15			NOTE 36	3
								BT-C	Q	15				
								PIT	2Y					
HV-8037B	E-5	3	B	4	GA	MO	C	BT-O	Q	15			NOTE 36	3
								BT-C	Q	15				
								PIT	2Y					
RV38A	E-2	3	C	3	CK	SA	C	PAS	NA					
RV38B	E-2	3	C	3	CK	SA	C	PAS	NA					
HV-8157A	E-1	1	B	1	GL	SO	C	BT-O	Q	10				
								FST	Q					
								PIT	2Y					
HV-8157B	E-1	3	B	1	GL	SO	C	BT-O	Q	10				
								FST	Q					
								PIT	2Y					
FCV-4554	E-7	1	B	3	GL	SO	C	BT-O	CS	2		VR-1	NOTE 10	
								BT-C	CS	2		VR-2		
								FST	CS					
								PIT	2Y					
FCV-4555B	A-4	1	B	4	BAL	AO	O/C	PAS	NA					
FCV-4555C	B-4	1	B	4	BAL	AO	O/C	PAS	NA					
FCV-4556A	E-8	1	B	3	GL	SO	C	BT-O	CS	2		VR-1	NOTE 10	
								BT-C	CS	2		VR-2		
								FST	CS					
								PIT	2Y					

..... END REPORT .....

VALVE NO.	COOR.	CLASS.	CAT.	SIZE.	TYPE.	TYPE.	POS.	RQMT	FRE.	TIME	LEAKG.	REQUEST.	REMARKS
V110	C-5	2	A,C	2	CK	SA	0	AT-1	RR		1300 C	VR-3	
								CVT-0	Q			VR-5	
								CVT-C	RR			VR-6	
V140	C-4	1	C	2	CK	SA	0	CVT-0	Q				
V141	C-4	1	C	2	CK	SA	0	CVT-0	Q				
V142	C-4	3	C	3	CK	SA	0	CVT-0	CS				NOTE 31
								CVT-C	CS				
V124	B-3	3	C	.75	RV	SA	C	RVT	SY				
V143	E-6	2	A,C	2	CK	SA	0	AT-1	RR		1300 C	VR-3	
								CVT-0	Q			VR-5	
								CVT-C	RR			VR-6	
V150	E-6	1	C	2	CK	SA	0	CVT-0	Q				
V151	E-6	1	C	2	CK	SA	0	CVT-0	Q				
V152	E-6	3	C	3	CK	SA	0	CVT-0	CS				NOTE 31
								CVT-C	CS				
V154	D-6	3	C	.75	RV	SA	C	RVT	SY				
V173	E-6	2	A,C	2	CK	SA	0	AT-1	RR		1300 C	VR-3	
								CVT-0	Q			VR-5	
								CVT-C	RR			VR-6	
V180	E-6	1	C	2	CK	SA	0	CVT-0	Q				
V181	E-6	1	C	2	CK	SA	0	CVT-0	Q				
V182	E-6	3	C	3	CK	SA	0	CVT-0	CS				NOTE 31
								CVT-C	CS				
V184	D-6	3	C	.75	RV	SA	C	RVT	SY				
V203	E-6	2	A,C	2	CK	SA	0	AT-1	RR		1300 C	VR-3	
								CVT-0	Q			VR-5	
								CVT-C	RR			VR-6	
V210	E-5	1	C	2	CK	SA	0	CVT-0	Q				
V211	E-6	1	C	2	CK	SA	0	CVT-0	Q				
V212	E-6	3	C	3	CK	SA	0	CVT-0	CS				NOTE 31
								CVT-C	CS				
V214	D-6	3	C	.75	RV	SA	C	RVT	SY				
HV-13	C-2	3	B	3	GA	MO	0	BT-0	CS	30			NOTES 11,36
								BT-C	CS	30			
								PIT	2Y				
HV-14	C-6	3	B	3	GA	MO	0	BT-0	CS	30			NOTES 11,36
								BT-C	CS	30			
								PIT	2Y				
HV-15	C-6	3	B	3	GA	MO	0	BT-0	CS	30			NOTES 11,36
								BT-C	CS	30			
								PIT	2Y				
HV-16	C-6	3	B	3	GA	MO	0	BT-0	CS	30			NOTES 11,36
								BT-C	CS	30			
								PIT	2Y				
HV-8141A	E-3	2	B	.75	GL	AO	0	PAS	NA				
HV-8141B	C-6	2	B	.75	GL	AO	0	PAS	NA				
HV-8141C	C-6	2	B	.75	GL	AO	0	PAS	NA				
HV-8141D	C-6	2	B	.75	GL	AO	0	PAS	NA				
HV-83551A	C-5	2	A	2	GL	MO	0	AT-1	RR		1300 C	VR-5	NOTES 12,36
								BT-0	CS	10		VR-6	
								BT-C	CS	10			
								PIT	2Y				
HV-83551B	C-6	2	A	2	GL	MO	0	AT-1	RR		1300 C	VR-5	NOTES 12,36
								BT-0	CS	10		VR-8	
								BT-C	CS	10			

HV-83510	C-6	2	A	2	GL	MO	0	PIT	2Y					
								AT-1	RR					
								BT-0	CS	10				
								BT-C	CS	10				
								PIT	2Y					
HV-83510	C-6	2	A	2	GL	MO	0	AT-1	RR		1300 C	VR-5	NOTES 12,36	13
								BT-0	CS	10		VR-8		14
								BT-C	CS	10				
								PIT	2Y					

***** END REPORT *****

DATE 22 MAR 85 08:47:50 RID 9 04 MAR 85 LYON
SYSTEM: REACTOR COOLANT WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-028804

VALVE NO.	P&ID COOR.	ISI CLASS.	IST CAT.	VALVE SIZE	VALVE TYPE	ACT TYPE	NORM POS.	TEST RQMT	TST FRE.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST	REMARKS
HV-8001A	F-4	2	B	1	GL	SO	C	BT-O	CS	10		VR-1	NOTE 13
								BT-C	CS	10			
								FST	CS				
								PIT	2Y				
HV-8001B	F-4	2	B	1	GL	SO	C	BT-O	CS	10		VR-1	NOTE 13
								BT-C	CS	10			
								FST	CS				
								PIT	2Y				
HV-8002A	F-3	2	B	1	GL	SO	C	BT-O	CS	10		VR-1	NOTE 13
								BT-C	CS	10			
								FST	CS				
								PIT	2Y				
HV-8002B	F-3	2	B	1	GL	SO	C	BT-O	CS	10		VR-1	NOTE 13
								BT-C	CS	10			
								FST	CS				
								PIT	2Y				

***** END REPORT *****

.DATE 19 JUL 85 08:26:11 RID 10 04 MAR 85 RAYMOND
*SYSTEM: CHEM. & VOL. CONTROL WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-028G01

VALVE NO.	PGID COOR.	CLASS.	CAT.	SIZE	VALVE TYPE	ACT TYPE	NORM POS.	TEST RQMT	TST FRE.	MAX STRK TIME	LEAKG.	RELIEF REQUEST	REMARKS	
*381	F-4	2	A,C	3	CK	SA	O	AT-1	RR		1950 C	VR-3		1 3
								CVT-O	Q			VR-5		
								CVT-C	RR			VR-8		1 4,3
V011	E-7	2	C	.75	CK	SA	O	PAS	NA					
V135	D-2	2	A,C	.75	CK	SA	C	AT-1	RR		487.5C	VR-3		1 3
								CVT-C	RR			VR-5,8		4,3
*117	H-3	2	C	2	RV	SA	C	RVT	SY					
V173	E-7	3	C	.75	RV	SA	C	RVT	SY					
*121	D-3	2	C	2	RV	SA	C	RVT	SY					
HV-8160	D-2	2	A	2	GL	MO	O	AT-1	RR		1300 C	VR-5	NOTES 14,36	1 3
								BT-C	CS	10		VR-8		4
								PIT	2Y					
HV-8112	D-2	2	A	2	GL	MO	O	AT-1	RR		1300 C	VR-5	NOTES 14,36	1 3
								BT-C	CS	10		VR-8		4
								PIT	2Y					
HV-8143	E-3	2	B	1	TW	MO	O	PAS	NA					
HV-8145	G-7	1	B	2	GL	AO	C	PAS	NA					
HV-8146	F-7	2	B	3	GL	AO	O	PAS	NA					
HV-8147	F-7	2	B	3	GL	AO	C	PAS	NA					
HV-8152	G-2	2	A	3	GL	AO	O	AT-1	RR		1950 C	VR-1	NOTE 15	1 3
								BT-C	CS	10		VR-5		
								FST	CS			VR-8		1 4
								PIT	2Y					
HV-8153A	D-7	1	B	1	GL	SO	C	BT-O	Q	10		VR-1		
								BT-C	Q	10				
								FST	Q					
								PIT	2Y					
HV-8153B	D-7	1	B	1	GL	SO	C	BT-O	Q	10		VR-1		
								BT-C	Q	10				
								FST	Q					
								PIT	2Y					
HV-8154A	D-8	1	B	1	GL	SO	C	BT-O	Q	10		VR-1		
								BT-C	Q	10				
								FST	Q					
								PIT	2Y					
HV-8154B	D-8	1	B	1	GL	SO	C	BT-O	Q	10		VR-1		
								BT-C	Q	10				
								FST	Q					
								PIT	2Y					
HV-8160	F-3	2	A	3	GL	SO	O	AT-1	RR		1950 C	VR-1	NOTE 15	1 3
								BT-C	CS	10		VR-5		
								FST	CS			VR-8		14
								PIT	2Y					
HCV-123	E-5	2	B	1	GL	AO	C	BT-C	Q	60		VR-1		
								FST	Q					
								PIT	2Y					
LCV-459	G-7	1	B	3	GL	AO	O	BT-C	CS	>15		VR-1	> OR = TO 15	
								FST	CS				NOTE 16	
								PIT	2Y					
LCV-460	G-7	1	B	3	GL	AO	O	BT-C	CS	>15		VR-1	> OR = TO 15	
								FST	CS				NOTE 16	
								PIT	2Y					

***** END REPORT *****

*DATE 19 JUN 85 16:50:12 RID 11 04 MAR 85 RAYMOND
*SYSTEM: CHEM. & VOL. CONTROL WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-028G02

* VALVE NO.	*P&ID COOR.	*ISI CLASS.	*IST CAT.	* SIZE.	* VALVE TYPE.	*ACT TYPE.	* NORM POS.	*TEST RQMT	*TST FRE.	*MAX STRK TIME	* MAX LEAKG.	*RELIEF REQUEST.	* REMARKS
V0P8	G-6	B	C	.75	RV	SA	C	RVT	5Y				
8149	G-4	B	C	2	RV	SA	C	RVT	5Y				
TV-[illegible]30	H-5	B	B	6	BTF	AO	O	PAS	NA				
LCV-112A	E-7	B	B	3	TWY	AO	NA	PAS	NA				

***** END REPORT *****

*DATE 18 JUL 85 16:50:11 RID 12 04 MAR 85 RAYMOND
*SYSTEM: CHEM. & VOL. CONTROL WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-028G03

VALVE NO.	COOR.	CLASS.	CAT.	SIZE.	TYPE.	TYPE.	POS.	RQMT	FRE.	TIME	LEAKG.	REQUEST.	REMARKS	
8115	E-4	2	C	1.5	RV	SA	C	RVT	5Y					
8123	H-3	2	C	2	RV	SA	C	RVT	5Y					
8440	F-6	2	C	4	CK	SA	O	CVT-O	Q					
8481A	C-4	2	C	4	CK	SA	C	CVT-O	Q					
8481B	B-4	2	C	4	CK	SA	C	CVT-O	Q					
8497	E-4	2	C	3	CK	SA	O	CVT-O	Q					
8546A	C-7	2	C	6	CK	SA	C	CVT-O	RR			VR-7		13
8546B	B-7	2	C	6	CK	SA	C	CVT-O	RR			VR-7		13
V091	E-4	2	C	2	CK	SA	C	CVT-O	Q					
V095	E-4	2	C	2	CK	SA	C	CVT-O	Q					
HV-8105	E-2	2	A	3	GA	MO	O	AT-1	RR		1950 C	VR-5	NOTES 17,36	13
								BT-C	CS	10		VR-6		14
								PIT	2Y					
HV-8106	E-2	2	B	3	GA	MO	O	BT-C	CS	10			NOTES 17,36	
								PIT	2Y					
HV-8109	E-5	2	B	2	GL	MO	C	PAS	NA					
HV-8110	E-4	2	B	2	GL	MO	O	BT-O	Q	10			NOTE 36	
								BT-C	Q	10				
								PIT	2Y					
HV-8111	E-4	2	B	2	GL	MO	O	BT-O	Q	10			NOTE 36	
								BT-C	Q	10				
								PIT	2Y					
FCV-1c1	D-4	2	B	3	GL	MO	O	PAS	NA					
HCV-1c2	E-3	2	B	3	GL	AO	O	PAS	NA					
LCV-1128	F-6	2	B	4	GA	MO	O	BT-C	CS	10			NOTES 18,36	
								PIT	2Y					
LCV-1129	F-6	2	B	4	GA	MO	O	BT-C	CS	10			NOTES 18,36	
								PIT	2Y					
V589	B-4	2	C	1	CK	SA	C	CVT-O	Q					
V590	C-4	2	C	1	CK	SA	C	CVT-C	Q					
								CVT-O	Q					
V591	D-3	2	C	2	CK	SA	C	CVT-C	Q					
HV-8357A	C-4	2	B	1	GL	SO	C	CVT-C	CS				NOTE 38	
								BT-O	Q	10				
								BT-C	Q	10				
HV-8357B	B-4	2	B	1	GL	SO	C	PIT	2Y					
								BT-O	Q	10				
								BT-C	Q	10				
FCV-1118	G-5	2	B	2	DIA	AO	C	PIT	2Y					
V524	C-6	3	C	.8	RV	SA	C	PAS	NA					
V525	A-6	3	C	.8	RV	SA	C	RVT	5Y					
FIOO	G-7	2	C	3	RV	SA	C	RVT	5Y					
FI24	C-7	2	C	.8	RV	SA	C	RVT	5Y					
V207	G-4	3	C	.8	RV	SA	C	RVT	5Y					

***** END REPORT *****

.DATE 21 MAR 85 16:20:47 RID 49 04 MAR 85 LYON
*SYSTEM: CHEM. & VOL. CONTROL WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02BG04

* VALVE NO.	.P&ID. COOR.	.ISI CLASS.	.IST CAT.	.VALVE SIZE.	.VALVE TYPE.	.ACT TYPE.	.NORM. POS.	.TEST RQMT	.TST. FRE.	.MAX STRK. TIME	.MAX LEAKG.	.RELIEF REQUEST.	REMARKS
700&	E-4	2	C	.8	RV	SA	C	RVT	5Y				

..... END REPORT .....

•DATE 20 JUN 85 07:44:33 RID 13 04 MAR 85 RAYMOND
•SYSTEM: CHEM. & VOL. CONTROL •CGS INSERVICE TESTING PROGRAM DWG. NO.: M-028605

VALVE NO.	COOR.	CLASS.	CAT.	SIZE.	TYPE.	TYPE.	POS.	RQMT	FRE.	TIME	LEAKG.	REQUEST.	REMARKS
V185	B-8	3	C	3	CK	SA	C	CVT-O	Q				
V187	B-4	3	C	3	CK	SA	C	CVT-O	Q				
V175	B-6	3	C	.75	CK	SA	C	PAS	NA				
V184	B-2	3	C	3	CK	SA	C	PAS	NA				
V185	A-6	3	C	3	CK	SA	C	CVT-O	Q				
V174	A-4	2	C	3	CK	SA	C	CVT-O	CS				NOTE 19
V183	E-3	3	C	2	CK	SA	C	PAS	NA				
V184	A-4	2	C	2	CK	SA	C	PAS	NA				
HCV-104	A-4	2	B	2	GL	MO	C	BT-O	Q	10			NOTE 36
								PIT	2Y				
FCV-110A	B-3	3	B	2	GL	AO	C	BT-O	Q	10		VR-1	
								FST	Q				
								PIT	2Y				
V167	B-6	3	C	.75	CK	SA	C	PAS	NA				
V178	B-2	2	C	1	CK	SA	C	PAS	NA				

***** END REPORT *****

** INC MARCH SYSTEM **

DATE 071985 PAGE 16

.DATE 18 JUL 85 16:52:56 RID 14 04 MAR 85 RAYMOND
*SYSTEM: REACTOR MAKE-UP WATER WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02BL01

VALVE NO.	P&ID COOR	ISI CLASS	IST CAT	VALVE SIZE	VALVE TYPE	ACT TYPE	NORM POS	TEST RQMT	TST FRE	MAX STRK TIME	MAX LEAKG	RELIEF REQUEST	REMARKS	
CL4=	B-3	2	A,C	3	CK	SA	0	AT-1	RR		1950 C	VR-3		3
								CVI-C	RR			VR-5,8		4,3
1V-047	B-4	2	A	3	DIA	AO	0	AT-1	RR		1950 C	VR-1		3
								BT-C	Q	10		VR-5,8		4
								FST	Q					
								PIT	2Y					

***** END REPORT *****

DATE 18 JUL 85 16:54:05 RID 15 04 MAP 85 RAYMOND
SYSTEM: STEAM GEN. BLOWDOWN CGS INSERVICE TESTING PROGRAM DWG. NO.: M-028M01

VALVE NO.	COOR.	CLASS.	CAT.	SIZE.	TYPE.	TYPE.	POS.	TEST	FRE.	TIME	LEAKG.	REQUEST.	REMARKS
VC43	A-4	2	A	3	GA	M	C	AT-1	RR		1950 C	VR-5,8	
V_45	A-3	c	A	3	GA	M	C	AT-1	RR		1950 C	VR-5,8	
HV-1	F-5	2	B	4	GL	AO	O	BT-C	Q	10		VR-1	NOTE 20
								FST	Q				
								PIT	2Y				
HV-2	E-5	2	B	4	GL	AO	O	BT-C	Q	10		VR-1	NOTE 20
								FST	Q				
								PIT	2Y				
HV-3	C-5	c	B	4	GL	AO	O	BT-C	Q	10		VR-1	NOTE 20
								FST	Q				
								PIT	2Y				
HV-4	A-5	2	B	4	GL	AO	O	BT-C	Q	10		VR-1	NOTE 20
								FST	Q				
								PIT	2Y				
HV-19	G-7	2	B	1	GL	SO	C	BT-C	Q	5		VR-1	
								FST	Q			VR-2	
								PIT	2Y				
HV-20	E-7	2	B	1	GL	SO	C	BT-C	Q	5		VR-1	
								FST	Q			VR-c	
								PIT	2Y				
HV-21	D-7	2	B	1	GL	SO	C	BT-C	Q	5		VR-1	
								FST	Q			VR-2	
								PIT	2Y				
HV-22	B-7	2	B	1	GL	SO	C	BT-C	Q	5		VR-1	
								FST	Q			VR-c	
								PIT	2Y				
HV-23	G-7	2	B	1	GL	SO	C	BT-C	Q	5		VR-1	
								FST	Q			VR-c	
								PIT	2Y				
HV-36	E-7	2	B	1	GL	SO	C	BT-C	Q	5		VR-1	
								FST	Q			VR-c	
								PIT	2Y				
HV-37	C-7	2	B	1	GL	SO	C	BT-C	Q	5		VR-1	
								FST	Q			VR-c	
								PIT	2Y				
HV-38	B-7	2	B	1	GL	SO	C	BT-C	Q	5		VR-1	
								FST	Q			VR-c	
								PIT	2Y				
HV-45	G-6	2	B	1	GL	SO	C	BT-C	Q	5		VR-1	
								FST	Q			VR-c	
								PIT	2Y				
HV-66	F-6	2	B	1	GL	SO	C	BT-C	Q	5		VR-1	
								FST	Q			VR-c	
								PIT	2Y				
HV-67	C-6	2	B	1	GL	SO	C	BT-C	Q	5		VR-1	
								FST	Q			VR-2	
								PIT	2Y				
HV-68	B-6	2	B	1	GL	SO	C	BT-C	Q	5		VR-1	
								FST	Q			VR-c	
								PIT	2Y				

***** END REPORT *****

4.3

DATE 07 JUN 85 09:25:03 RID 16 04 MAR 85 RAYMOND

SYSTEM: BOR. REF. WTR. STOR. WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-028N01

VALVE NO.	P&ID COOR.	ISI CLASS.	IST CAT.	VALVE SIZE.	VALVE TYPE.	ACT TYPE.	NORM POS.	TEST RQMT	TST FRE.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST.	REMARKS	
HV-3	C-3	2	B	12	GA	MO	O	BT-O	Q	65			NOTE 36	
								BT-C	Q	65				
								PIT	2Y					
HV-4	A-3	2	B	12	GA	MO	O	BT-O	Q	65			NOTE 3	
								BT-C	Q	65				
								PIT	2Y					
HV-8806A	B-5	2	B	8	GA	MO	O	BT-O	Q	15			NOTE 36	1 3
								BT-C	Q	15				
								PIT	2Y					
HV-8806B	E-3	2	B	8	GA	MO	O	BT-O	Q	15			NOTE 36	1 3
								BT-C	Q	15				
								PIT	2Y					
HV-8813A	B-3	2	B	14	GA	MO	O	BT-O	Q	17			NOTE 36	1 3
								BT-C	Q	17				
								PIT	2Y					
HV-8813B	D-3	2	B	14	GA	MO	O	BT-O	Q	17			NOTE 36	1 3
								BT-C	Q	17				
								PIT	2Y					
HV-8813	B-7	2	B	2	GL	MO	O	BT-C	CS	10			NOTE 21,36	
								PIT	2Y					
LCV-8800A	E-5	2	B	3	GL	AO	C	PAS	NA					
LCV-8800B	E-5	2	B	3	GL	AO	C	PAS	NA					
LCV-1120	A-5	2	B	8	GA	MO	C	BT-O	CS	15			NOTE 22,36	
								BT-C	CS	15				1 3
								PIT	2Y					
LCV-1120E	E-3	2	B	8	GA	MO	C	BT-O	CS	15			NOTE 22,36	
								BT-C	CS	15				1 3
								PIT	2Y					

***** END REPORT *****

.DATE 20 JUN 85 07:48:36 RID 17 04 MAR 85 RAYMOND
*SYSTEM: FUEL POOL COOL. & CL. WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02EC01

VALVE NO.	PGID COOR	ISI CLASS	IST CAT	VALVE SIZE	VALVE TYPE	ACT TYPE	NORM POS	TEST ROMT	TST FRE	MAX STRK TIME	MAX LEAKG	RELIEF REQUEST	REMARKS
HV-11	H-5	3	B	12	BTF	MO	O	BT-C	Q	60			NOTE 36
								PIT	2Y				
HV-12	F-5	3	B	12	BTF	MO	O	BT-C	Q	60			NOTE 36
								PIT	2Y				
V004	H-6	3	C	10	CK	SA	C	CVT-O	Q				
V013	E-6	3	C	10	CK	SA	C	CVT-O	Q				
V196	E-4	3	C	.8	RV	SA	C	RVT	5Y				
V197	G-6	3	C	.8	RV	SA	C	RVT	5Y				
V198	E-5	3	C	.8	RV	SA	C	RVT	5Y				
V199	G-5	3	C	.8	RV	SA	C	RVT	5Y				

..... END REPORT .....

.DATE 18 JUL 85 16:55:01 RID 18 04 MAR 85 RAYMOND
.SYSTEM: FUEL POOL COOL. & CL. WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02EC02

VALVE NO.	P&ID COOR.	ISI CLASS.	IST CAT.	VALVE SIZE.	VALVE TYPE.	ACT TYPE.	NORM. POS.	TEST RQMT	TST FRE.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST.	REMARKS
VQ[illegible]3	C-5	2	A	6	GA	M	C	AT-1	RR		3900	C	VR-5,8
VQ[illegible]4	C-5	2	A	6	GA	M	C	AT-1	RR		3900	C	VR-5,6
VQ[illegible]7	D-7	2	A	6	GA	M	C	AT-1	RR		3900	C	VR-5,8
VQ[illegible]8	D-7	2	A	6	GA	M	C	AT-1	RR		3900	C	VR-5,8
VQ[illegible]5	B-5	2	A	3	GA	M	C	AT-1	RR		1950	C	VR-5,8
VQ[illegible]6	B-5	2	A	3	GA	M	C	AT-1	RR		1950	C	VR-5,8

4.3

.... END REPORT .....

DATE 20 JUN 85 07:51:32 RID 19 04 MAR 85 RAYMOND

SYSTEM: ESSENTIAL SERV. WTR. WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02EF01

VALVE NO.	COOR.	CLASS.	CAT.	SIZE.	VALVE TYPE.	ACT TYPE.	NORM POS.	TEST RQMT	TSI FRE.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST.	REMARKS
VCC1	F-4	3	C	30	CK	SA	C	CVT-O	Q				
								CVT-C	Q				
VCC4	C-4	3	C	30	CK	SA	C	CVT-O	Q				
								CVT-C	Q				
V241	F-2	3	C	30	CK	SA	C	CVT-O	Q			VR-4	
								CVT-C	RR				
V242	C-2	3	C	30	CK	SA	C	CVT-O	Q			VR-5	
								CVT-C	RR				
HV-25	F-2	3	B	30	BTF	MO	O	BT-C	Q	30			NOTE 36
								PIT	2Y				
HV-26	C-2	3	B	30	BTF	MO	O	BT-C	Q	30			NOTE 36
								PIT	2Y				
HV-91	F-6	3	B	3	GA	MO	C	BT-O	Q	30			NOTE 36
								PIT	2Y				
HV-92	C-6	3	B	3	GA	MO	C	BT-O	Q	30			NOTE 36
								PIT	2Y				
HV-97	E-5	3	B	3	GA	MO	O	BT-C	Q	30			NOTE 36
								PIT	2Y				
HV-98	B-5	3	B	3	GA	MO	O	BT-C	Q	30			NOTE 36
								PIT	2Y				
PDV-19	F-4	3	B	3	GA	MO	C	BT-O	Q	30			NOTE 36
								PIT	2Y				
PDV-20	B-4	3	B	3	GA	MO	C	BT-O	Q	30			NOTE 36
								PIT	2Y				

***** END REPORT *****

** IHL MAPPER SYSTEM **

DATE 071985 PAGE 22

DATE 20 JUN 85 07:51:56 RID 20 04 MAR 85 RAYMOND

SYSTEM: ESSENTIAL SERV. WTR. WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02EF01

VALVE NO.	P&ID COOR.	ISI CLASS.	IST CAT.	VALVE SIZE.	VALVE TYPE.	ACT TYPE.	NORM POS.	TEST RQMT	TST FRE.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST.	REMARKS
HV-23	F-7	3	B	30	BTF	MO	O	BT-C	Q	30			NOTE 36
								PIT	2Y				
HV-24	E-7	3	B	30	BTF	MO	O	BT-C	Q	30			NOTE 36
								PIT	2Y				
HV-25	F-7	3	B	30	BTF	MO	O	BT-C	Q	30			NOTE 36
								PIT	2Y				
HV-26	E-7	3	B	30	BTF	MO	O	BT-C	Q	30			NOTE 36
								PIT	2Y				
HV-44	P-7	3	B	2	GL	AO	O	BT-C	Q	5		VR-1	
								FST	Q			VR-2	
								PIT	2Y				
V076	B-6	3	C	2.5	CK	SA	C	CVT-C	Q				

***** END REPORT *****

VALVE NO.	COOR.	CLASS.	CAT.	SIZE.	TYPE.	TYPE.	POS.	RQMT	FRE.	TIME	LEAKG.	REQUEST.	REMARKS
HV-31	G-7	2	A	14	BTF	MO	O	AT-1	RR		7.0 M	VR-5	NOTE 36 13
								BT-C	Q	30		VR-6	14
								PIT	2Y				
HV-32	B-7	2	A	14	BTF	MO	O	AT-1	RR		7.0 M	VR-5	NOTE 36 13
								BT-C	Q	30		VR-6	14
								PIT	2Y				
HV-33	G-7	2	A	14	BTF	MO	O	AT-1	RR		7.0 M	VR-5	NOTE 36 13
								BT-C	Q	30		VR-6	14
								PIT	2Y				
HV-34	B-7	2	A	14	BTF	MO	O	AT-1	RR		7.0 M	VR-5	NOTE 36 13
								BT-C	Q	30		VR-6	14
								PIT	2Y				
HV-37	G-2	3	B	30	BTF	MO	C	BT-C	Q	30			NOTE 36
								PIT	2Y				
HV-38	C-2	3	B	30	BTF	MO	C	BT-C	Q	30			NOTE 36
								PIT	2Y				
HV-39	F-2	3	B	30	BTF	MO	O	BT-C	Q	30			NOTE 36
								PIT	2Y				
HV-40	D-2	3	B	30	BTF	MO	O	BT-C	Q	30			NOTE 36
								PIT	2Y				
HV-41	F-2	3	B	30	BTF	MO	O	BT-C	Q	30			NOTE 36
								PIT	2Y				
HV-42	D-2	3	B	30	BTF	MO	O	BT-C	Q	30			NOTE 36
								PIT	2Y				
HV-43	E-7	3	B	2	GL	AO	O	BT-C	Q	5		VR-1	
								FST	Q			VR-2	
								PIT	2Y				
HV-45	G-6	2	A	14	BTF	MO	O	AT-1	RR		7.0 M	VR-5	NOTE 36 13
								BT-C	Q	30		VR-6	14
								PIT	2Y				
HV-46	B-6	2	A	14	BTF	MO	O	AT-1	RR		7.0 M	VR-5	NOTE 36 13
								BT-C	Q	30		VR-6	14
								PIT	2Y				
HV-47	G-6	2	A	10	BTF	MO	O	AT-1	RR		5.0 M	VR-5	NOTE 36 13
								BT-C	Q	30		VR-6	14
								PIT	2Y				
HV-48	C-6	2	A	10	BTF	MO	O	AT-1	RR		5.0 M	VR-5	NOTE 36 13
								BT-C	Q	30		VR-6	14
								PIT	2Y				
HV-49	G-6	2	A	14	BTF	MO	C	AT-1	RR		7.0 M	VR-5	NOTE 36 13
								BT-C	Q	30		VR-8	14
								PIT	2Y				
HV-57	B-6	2	A	14	BTF	MO	O	AT-1	RR		7.0 M	VR-5	NOTE 36 13
								BT-C	Q	30		VR-6	14
								PIT	2Y				
HV-51	G-4	3	B	24	BTF	MO	O/C	BT-O	Q	60			NOTE 36
								PIT	2Y				
HV-52	C-4	3	B	24	BTF	MO	O/C	BT-O	Q	60			NOTE 36
								PIT	2Y				
HV-59	G-3	3	B	24	BTF	MO	O/C	BT-C	Q	60			NOTE 36
								PIT	2Y				
HV-60	C-3	3	B	24	BTF	MO	O/C	BT-C	Q	60			NOTE 36
								PIT	2Y				
HV-37	E-3	3	B	1	GA	SO	O	BT-C	Q	5		VR-2	NOTE 23

```
                                                   FST     Q
                                                   PIT     2Y
HV-88      D-3   3    B   1    GA    SO    0     BT-C    Q    5        VR-2    NOTE 23
                                                   FST     Q
                                                   PIT     2Y
          ..... END REPORT .....
```

DATE 20 JUN 85 07:56:36 RID 22 04 MAR 85 RAYMOND

SYSTEM: COMPONENT COOLING WTR. WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02EG01

VALVE NO.	COOR.	CLASS.	CAT.	SIZE.	TYPE.	TYPE.	POS.	RQMT	FRE.	TIME	LEAKG.	REQUEST.	REMARKS
V001	G-3	3	C	20	CK	SA	C	CVT-O	Q				
								CVT-C	Q				
V007	F-3	3	C	20	CK	SA	C	CVT-O	Q				
								CVT-C	Q				
V012	D-3	3	C	20	CK	SA	C	CVT-O	Q				
								CVT-C	Q				
V018	C-3	3	C	20	CK	SA	C	CVT-O	Q				
								CVT-C	Q				
V[illegible]	D-6	3	C	18	CK	SA	O/C	CVT-O	CS				NOTE 24
V[illegible]	D-6	3	C	18	CK	SA	O/C	CVT-O	CS				NOTE 24
V[illegible]	G-6	3	C	2	RV	SA	C	RVT	5Y				
V[illegible]	C-6	3	C	2	RV	SA	C	RVT	5Y				
V[illegible]	G-6	3	C	1	RV	SA	C	RVT	5Y				
V[illegible]	C-6	3	C	1	RV	SA	C	RVT	5Y				
HV-11	F-7	3	B	1.5	GL	MO	C	BT-O	Q	23			NOTE 36
								PIT	2Y				
HV-12	C-7	3	B	1.5	GL	MO	C	BT-O	Q	23			NOTE 36
								PIT	2Y				
HV-13	F-7	3	B	1.5	GL	MO	C	BT-O	Q	23			NOTE 36
								PIT	2Y				
HV-14	C-7	3	B	1.5	GL	MO	C	BT-O	Q	23			NOTE 36
								PIT	2Y				
HV-15	D-6	3	B	18	BTF	MO	O	BT-C	CS	60			NOTES 24,36
								PIT	2Y				
HV-16	D-6	3	B	18	BTF	MO	O	BT-C	CS	60			NOTES 24,36
								PIT	2Y				
LV-1	G-7	3	B	3	GL	AO	C	PAS	NA				
LV-2	C-7	3	B	3	GL	AO	C	PAS	NA				
FV-9	G-6	3	B	2	GL	AO	O	BT-C	Q	5		VR-1	
								FST	Q			VR-2	
								PIT	2Y				
FV-10	C-6	3	B	2	GL	AO	O	BT-C	Q	5		VR-1	
								FST	Q			VR-2	
								PIT	2Y				

***** END REPORT *****

DATE 20 JUN 85 08:16:48 RID 23 04 MAR 85 RAYMOND
SYSTEM: COMPONENT COOLING WTR. WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02EG02

VALVE NO.	PLID. COOR.	ISI CLASS.	IST CAT.	VALVE SIZE.	VALVE TYPE.	ACT TYPE.	NORM. POS.	TEST RQMT	TST FRE.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST.	REMARKS
V036	G-5	3	C	18	CK	SA	O	CVT-O	Q				
V049	C-4	3	C	.8	RV	SA	C	RVT	5Y				
V052	C-6	3	C	.8	RV	SA	C	RVT	5Y				
V061	F-5	3	C	18	CK	M	O	CVT-O	Q				
V024	G-6	3	C	.8	RV	SA	C	RVT	5Y				
V027	G-6	3	C	.8	RV	SA	C	RVT	5Y				
HV-33	G-5	3	B	18	BTF	MO	O	PAS	NA				
HV-34	E-5	3	B	18	BTF	MO	O	PAS	NA				
HV-101	G-4	3	B	18	BTF	MO	C	BT-O	Q	60			NOTE 36
								PIT	2Y				
HV-102	C-4	3	B	18	BTF	MO	C	BT-O	Q	60			NOTE 36
								PIT	2Y				
TV-29	G-6	3	B	20	BTF	AO	O	BT-C	Q	50		VR-1	
								FST	Q				
								PIT	2Y				
TV-30	C-6	3	B	20	BTF	AO	O	BT-C	Q	50		VR-1	
								FST	Q				
								PIT	2Y				
HV-72	G-2	3	B	2	GL	MO	O	BT-O	Q	23			NOTE 36
								BT-C	Q	23			
								PIT	2Y				
HV-73	G-2	3	B	2	GL	MO	O	BT-O	Q	23			NOTE 36
								BT-C	Q	23			
								PIT	2Y				
HV-74	G-1	3	B	2	GL	MO	O	BT-O	Q	23			NOTE 36
								BT-C	Q	23			
								PIT	2Y				
HV-75	G-1	3	B	2	GL	MO	O	BT-O	Q	23			NOTE 36
								BT-C	Q	23			
								PIT	2Y				

***** END REPORT *****

.DATE 19 JUL 85 07:10:33 RID 24 04 MAR 85 RAYMOND
.SYSTEM: COMPONENT COOLING WTR. WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02EG03

VALVE NO.	COOR.	CLASS.	CAT.	SIZE.	TYPE.	TYPE.	POS.	RQMT.	FRE.	TIME	LEAKG.	REQUEST.	REMARKS	
V1?4	D-4	3	C	4	CK	SA	O	PAS	NA					
V1?7	D-5	3	C	12	CK	SA	O	PAS	NA					
V2?4	H-4	2	A,C	12	CK	SA	O	AT-1	RR		7800 C	VR-5	NOTE 25	3
								CVT-O	Q			VR-5		
								CVT-C	RR			VR-6		4,3
HV-58	A-5	2	A	12	GA	MO	O	AT-1	RR		7800 C	VR-5	NOTE 36	3
								BT-C	Q	30		VR-6		4
								PIT	2Y					
HV-59	C-5	2	A	12	GA	MO	O	AT-1	RR		7800 C	VR-5	NOTE 36	3
								BT-C	Q	30		VR-6		4
								PIT	2Y					
HV-60	A-5	2	A	12	GA	MO	O	AT-1	RR		7800 C	VR-5	NOTE 36	3
								BT-C	Q	30		VR-6		4
								PIT	2Y					
HV-61	C-4	2	A	4	GA	MO	O	AT-1	RR		2600 C	VR-5	NOTE 36	3
								BT-C	Q	30		VR-6		4
								PIT	2Y					
HV-62	A-4	2	A	4	GA	MO	O	AT-1	RR		2600 C	VR-5	NOTE 36	3
								BT-C	Q	30		VR-6		4
								PIT	2Y					
HV-69A	F-8	3	B	14	BTF	AO	O/C	BT-C	Q	10		VR-1		3
								FST	Q					
HV-69B	F-6	3	B	14	BTF	AO	O/C	PIT	2Y					
								BT-C	Q	10		VR-1		3
								FST	Q					
HV-70A	F-8	3	B	14	BTF	AO	O/C	PIT	2Y					
								BT-C	Q	10		VR-1		3
								FST	Q					
HV-70B	F-6	3	B	14	BTF	AO	O/C	PIT	2Y					
								BT-C	Q	10		VR-1		3
								FST	Q					
HV-71	H-5	3	B	12	GA	MO	O	PIT	2Y					
								BT-C	Q	30			NOTE 36	
HV-126	G-5	3	B	12	GA	MO	C	PIT	2Y					
								BT-O	Q	30			NOTE 36	
								BT-C	Q	30				
HV-127	G-5	2	A	12	GA	MO	C	PIT	2Y					
								AT-1	RR		7800 C	VR-5	NOTE 36	3
								BT-O	Q	30		VR-6		4
								BT-C	Q	30				
HV-130	B-5	2	A	12	GA	MO	C	PIT	2Y					
								AT-1	RR		7800 C	VR-5	NOTE 36	3
								BT-O	Q	30		VR-6		4
								BT-C	Q	30				
HV-131	C-5	2	A	12	GA	MO	C	PIT	2Y					
								AT-1	RR		7800 C	VR-5	NOTE 36	3
								BT-O	Q	30		VR-6		4
								BT-C	Q	30				
HV-132	B-4	2	A	4	GA	MO	C	PIT	2Y					
								AT-1	RR		2600 C	VR-5	NOTE 36	3
								BT-O	Q	30		VR-6		4
								BT-C	Q	30				
HV-133	C-5	2	A	4	GA	MO	C	PIT	2Y					
								AT-1	RR		2600 C	VR-5	NOTE 36	3
								BT-O	Q	30		VR-6		4

dT-C Q 30
PIT 2Y

***** END REPORT *****

DATE 19 JUL 85 07:11:58 RID 25 04 MAR 85 RAYMOND
SYSTEM: RESIDUAL HEAT REMOVAL WOGS INSERVICE TESTING PROGRAM DWG. NO.: M-02EJ01

VALVE NO.	P&ID COOR.	CLASS.	CAT.	SIZE.	TYPE.	TYPE.	POS.	ACT NORM.	TEST TST.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST.	REMARKS	
[illegible]	F-7	C	C	3	RV	SA	C	RVT	5Y					
[illegible]	C-7	C	C	3	RV	SA	C	RVT	5Y					
F73[illegible]A	G-4	2	C	10	CK	SA	C	CVT-O	Q					
F73[illegible]B	C-4	2	C	10	CK	SA	C	CVT-O	Q					
F641A	E-2	1	C	6	CK	SA	C	AT-2	RR		1.0 G	VR-6		3
								CVT-O	CS			VR-4	NOTE 37	
								CVT-C	RR					
F641B	D-2	1	C	6	CK	SA	C	AT-2	RR		1.0 G	VR-6		
								CVT-O	CS			VR-4	NOTE 37	
								CVT-C	RR					
F958A	F-6	2	C	14	CK	SA	C	CVT-O	Q					
F958B	B-6	2	C	14	CK	SA	C	CVT-O	Q					
F[illegible]A	G-3	C	C	8	CK	SA	C	CVT-O	CS				NOTE 26	
F[illegible]B	A-4	C	C	8	CK	SA	C	CVT-O	CS				NOTE 26	
HV-14	H-5	2	B	1	GL	SO	C	PAS	NA					
HV-15	A-5	2	B	1	GL	SO	C	PAS	NA					
HV-8701A	F-8	1	A	12	GA	MO	C	AT-2	RR		1.0 G	VR-6	NOTES 8,36	3
								BT-O	CS	120				
								BT-C	CS	120				
								PIT	2Y					
HV-8701B	B-8	1	A	12	GA	MO	C	AT-2	RR		1.0 G	VR-6	NOTES 8,36	3
								BT-O	CS	120				
								BT-C	CS	120				
								PIT	2Y					
HV-8716A	E-3	2	B	10	GA	MO	O	BT-O	CS	12			NOTE 36,20	3
								BT-C	CS	12				
								PIT	2Y					
HV-8716B	D-3	2	B	10	GA	MO	O	BT-O	CS	12			NOTE 36,20	3
								BT-C	CS	12				
								PIT	2Y					
HV-8804A	G-4	2	B	8	GA	MO	C	BT-O	CS	10			NOTES 27,36	
								PIT	2Y					
HV-8804B	A-4	2	B	8	GA	MO	C	BT-O	CS	10			NOTES 27,36	
								PIT	2Y					
HV-8809A	G-3	2	B	10	GA	MO	O	BT-O	CS	15			NOTES 28,36	
								BT-C	CS	15				
								PIT	2Y					
HV-8809B	C-3	2	B	10	GA	MO	O	BT-O	CS	15			NOTES 28,36	
								BT-C	CS	15				
								PIT	2Y					
HV-8811A	E-7	2	B	14	GA	MO	C	BT-O	RR	18		VR-11	NOTE 36	
								BT-C	RR	18				
								PIT	2Y					
HV-8811B	D-7	2	B	14	GA	MO	C	BT-O	RR	18		VR-11	NOTE 36	
	Q							BT-C	RR	18				
								PIT	2Y					
HV-8840	E-3	2	B	10	GA	MO	C	BT-O	CS	15			NOTES 28,36	
								BT-C	CS	15				
								PIT	2Y					
FCV-610	H-6	2	B	2	GA	MO	O	BT-C	Q	10			NOTE 36	
								PIT	2Y					
FCV-611	A-5	2	B	2	GA	MO	O	BT-C	Q	10			NOTE 36	
								PIT	2Y					
FCV-618	F-5	2	B	8	BTF	AO	C	PAS	NA					
FCV-619	B-5	2	B	8	BTF	AO	C	PAS	NA					

HCV-606	G-4	2	B	10	BTF	AO	O	PAS	NA					
HCV-607	C-4	2	B	10	BTF	AO	O	PAS	NA					
HCV-8825	E-2	2	B	.75	GL	AO	C	BT-C	Q	10		VR-1		
								FST	Q					
								PIT	2Y					
HCV-8890A	F-2	2	B	.75	GL	AO	C	BT-C	Q	10		VR-1		
								FST	Q					
								PIT	2Y					
HCV-8890B	C-2	2	B	.75	GL	AO	C	BT-C	Q	10		VR-1		
								FST	Q					
								PIT	2Y					
HV-21	E-7	2	B	1	GL	SO	C	BT-C	Q	5		VR-1		
								FST	4			VR-2		
								PIT	2Y					
HV-22	D-7	2	B	1	GL	SO	C	BT-C	Q	5		VR-1		
								FST	Q			VR-2		
								PIT	2Y					
HV-23	F-7	2	A	1	GA	SO	C	AT-1	RR		650 C	VR-1		3
								BT-C	Q	5		VR-2		
								FST	Q			VR-5		
								PIT	2Y			VR-8		4
HV-24	D-6	2	A	1	GA	SO	C	AT-1	RR		650 C	VR-1		3
								BT-C	Q	5		VR-2		
								FST	Q			VR-5		
								PIT	2Y			VR-8		4
HV-25	F-6	2	A	1	GA	SO	C	AT-1	RR		650 C	VR-1		3
								BT-C	Q	5		VR-2		
								FST	Q			VR-5		
								PIT	2Y			VR-8		4
HV-26	D-6	2	A	1	GL	SO	C	AT-1	RR		650 C	VR-1		3
								BT-C	Q	5		VR-2		
								FST	Q			VR-5		
								PIT	2Y			VR-8		4
V084	H-5	3	C	1.5	RV	SA	C	RVT	5Y					
V085	D-5	3	C	1.5	RV	SA	C	RVT	5Y					
V156	G-5	3	C	.8	RV	SA	C	RVT	5Y					
V157	D-6	3	C	.8	RV	SA	C	RVT	5Y					

..... END REPORT .....

.DATE 19 JUL 85 07:13:58 RID 26 04 MAR 85 RAYMOND

*SYSTEM: HIGH PRESSURE COOLANT INJECTN. *CGS INSERVICE TESTING PROGRAM DWG. NO.: M-02EM01

VALVE NO.	P&ID COOR.	ISI CLASS.	IST CAT.	VALVE SIZE	VALVE TYPE	ACT TYPE	NORM POS.	TEST ROMT	TSI FRE.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST.	REMARKS	
8812A	E-5	2	C	4	CK	SA	C	CVT-O	RR			VR-12		
8812B	D-5	2	C	4	CK	SA	C	CVT-O	RR			VR-12		
8813A	E-7	2	C	8	CK	SA	C	CVP-O	Q			VR-14		
								CVT-O	RR					
8813B	D-7	2	C	8	CK	SA	C	CVP-O	Q			VR-14		
								CVT-O	RR					
V600	F-3	1	A,C	2	CK	SA	C	AT-2	RR		1.0 G	VR-6		1,3
								CVT-O	RR			VR-12		
								CVT-C	RR			VR-13		
V601	E-3	1	A,C	2	CK	SA	C	AT-2	RR		1.0 G	VR-6		1,3
								CVT-O	RR			VR-12		
								CVT-C	RR			VR-13		
V603	D-3	1	A,C	2	CK	SA	C	AT-2	RR		1.0 G	VR-6		1,3
								CVT-O	RR			VR-12		
								CVT-C	RR			VR-13		
V604	C-3	1	A,C	2	CK	SA	C	AT-2	RR		1.0 G	VR-6		1,3
								CVT-O	RR			VR-12		
								CVT-C	RR			VR-13		
V605	A-6	2	C	1.5	CK	SA	C	CVT-O	Q					
V606	F-6	2	A,C	1	CK	SA	C	AT-1	RR		650 C	VR-3		1,3
								CVT-C	RR			VR-5,8		3,4
V607	A-5	2	C	1.5	CK	SA	C	CVT-O	Q					
HV-8802A	E-4	2	B	4	GA	MO	C	BT-O	Q	10			NOTE 36	
								BT-C	Q	10				
								PIT	2Y					
HV-8802B	D-4	2	B	4	GA	MO	C	BT-O	Q	10			NOTE 36	
								BT-C	Q	10				
								PIT	2Y					
V156	D-6	3	C	.8	RV	SA	C	RVT	5Y					
V159	F-6	3	C	.8	RV	SA	C	RVT	5Y					
HV-8807A	G-7	2	B	6	GA	MO	C	BT-O	Q	15			NOTE 36	
								PIT	2Y					
HV-8807B	F-7	2	B	6	GA	MO	C	BT-O	Q	15			NOTE 36	
								PIT	2Y					
HV-8814A	B-6	2	B	1.5	GL	MO	O	BT-C	Q	10			NOTE 36	
								PIT	2Y					
HV-8814B	B-5	2	B	1.5	GL	MO	O	BT-C	Q	10			NOTE 36	
								PIT	2Y					
HV-8821A	E-4	2	B	4	GA	MO	O	BT-C	Q	10			NOTE 36	
								PIT	2Y					
HV-8821B	D-4	2	B	4	GA	MO	O	BT-C	Q	10			NOTE 36	
								PIT	2Y					
HV-8823	C-4	2	B	.75	GL	AO	C	BT-C	Q	10		VR-1		
								FST	Q					
								PIT	2Y					
HV-8824	D-3	2	B	.75	GL	AO	C	BT-C	Q	10		VR-1		
								FST	Q					
								PIT	2Y					
HV-8835	B-4	2	B	4	GA	MO	O	BT-O	CS	10			NOTES 30,36	
								BT-C	CS	10				
								PIT	2Y					
HV-8871	H-5	2	A	.75	GL	AO	C	AT-1	RR		487.5 C	VR-1		1,3
								BT-C	Q	10		VR-5		
								FST	Q			VR-8		1,4
								PIT	2Y					

HV-8861	G-4	2	B	.75	GL	AO	C	BT-C	Q	10	VR-1	
								FST	Q			
								PIT	2Y			
HV-8869	F-6	2	A	1	GL	AO	C	AT-1	RR	650 C	VR-2	1 3
								BT-C	Q	5	VR-5	
								FST	Q		VR-6	1 3,4
								PIT	2Y			
HV-8869A	G-3	1	B	.75	GL	AO	C	PAS	NA			
HV-8869B	G-3	1	B	.75	GL	AO	C	PAS	NA			
HV-8869C	G-2	1	B	.75	GL	AO	C	PAS	NA			
HV-8869D	G-2	1	B	.75	GL	AO	C	PAS	NA			
HV-8923A	E-7	2	B	6	GA	MO	O	PAS	NA			
HV-8923B	D-7	2	B	6	GA	MO	O	PAS	NA			
HV-8924	G-8	2	B	6	GA	MO	O	PAS	NA			
HV-8964	H-5	2	A	.75	GL	AO	C	AT-1	RR	487.5 C	VR-1	1 3
								BT-C	Q	10	VR-5	
								FST	Q		VR-6	1 4
								PIT	2Y			

***** END REPORT *****

.DATE 20 JUN 85 08:30:10 RID 27 04 MAR 85 RAYMOND
*SYSTEM: HIGH PRESSURE COOLANT INJECTN. WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02EM02

VALVE NO.	COOR.	CLASS.	ISI CAT.	IST SIZE.	VALVE TYPE.	VALVE TYPE.	ACT POS.	NORM. POS.	TEST ROMT	TST. FRE.	MAX STRK. TIME	MAX LEAKG.	RELIEF REQUEST.	REMARKS	
[illegible]	D-3	4	A,C	3	CK	SA	C	AT-2	RR		1.0 G		VR-6		3
								CVT-O	RR				VR-13		
								CVT-C	RR				VR-4		
V014	E-6	2	C	1	CK	SA	O	NA	NA					NOTE 32	
V017	D-6	2	C	1	CK	SA	O	NA	NA					NOTE 32	
V240	C-7	2	C	1	CK	SA	O	CVT-O	RR				VR-22		
V241	B-7	2	C	1	CK	SA	O	CVT-O	RR				VR-22		
HV-8801A	D-4	2	B	4	GA	MO	C	BT-O	Q	10				NOTE 36	3
								BT-C	Q	10					
								PIT	2Y						
HV-8801B	D-4	2	B	4	GA	MO	C	BT-O	Q	10				NOTE 36	3
								BT-C	Q	10					
								PIT	2Y						
[illegible]	E-4	2	C	.8	RV	SA	C	RVT	5Y						
HV-8803A	C-7	2	B	4	GA	MO	C	BT-O	Q	10				NOTE 36	3
								BT-C	Q	10					
								PIT	2Y						
HV-8803B	A-7	2	B	4	GA	MO	C	BT-O	Q	10				NOTE 36	3
								BT-C	Q	10					
								PIT	2Y						
HV-8837A	C-7	2	B	1	GL	SO	C	BT-O	Q	10			VR-1		3
								BT-C	Q	10					
								FST	Q						
								PIT	2Y						
HV-8837B	B-7	2	B	1	GL	SO	C	BT-O	Q	10			VR-1		3
								BT-C	Q	10					
								FST	Q						
								PIT	2Y						
HV-8843	C-4	2	B	.75	GL	AO	C	BT-C	Q	10			VR-1		
								FST	Q						
								PIT	2Y						
HV-8870A	E-5	2	B	1	GL	AO	C	PAS	NA						
HV-8870B	E-5	2	B	1	GL	AO	C	PAS	NA						
HV-8882	C-3	2	B	.75	GL	AO	C	PAS	NA						
HV-8883	D-6	2	B	.75	GL	AO	C	PAS	NA						

***** END REPORT *****

•DATE 20 JUN 85 08:31:35 RID 28 04 MAR 85 RAYMOND
•SYSTEM: CONTAINMENT SPRAY WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02EN01

VALVE NO.	P&ID COOR.	ISI CLASS.	IST CAT.	VALVE SIZE.	VALVE TYPE.	ACT TYPE.	NORM POS.	TEST RQMT	TST FRE.	MAX STRK TIME	LEAKG.	RELIEF REQUEST.	REMARKS
V0[illegible]	G-7	2	C	12	CK	SA	C	CVT-O	RR			VR-15	
V0[illegible]	G-7	2	C	12	CK	SA	C	CVP-O	Q			VR-17	
V0[illegible]	G-5	2	C	10	CK	SA	C	CVP-O	Q			VR-17	
V0[illegible]	B-7	2	C	12	CK	SA	C	CVT-O	RR			VR-15	
V0[illegible]	B-7	2	C	12	CK	SA	C	CVP-O	Q			VR-17	
V0[illegible]	B-5	2	C	10	CK	SA	C	CVP-O	Q			VR-17	
V0[illegible]	G-4	2	C	10	CK	SA	C	CVT-O	RR			VR-15	
V0[illegible]	B-4	2	C	10	CK	SA	C	CVT-O	RR			VR-15	
HV-12	B-4	2	B	10	GA	MO	C	BT-O	Q	15			NOTE 36
								BT-C	Q	15			
								PIT	2Y				
HV-15	E-6	2	B	3	GA	MO	C	BT-O	CS	5		VR-2	NOTES 33,36
								PIT	2Y				
HV-16	D-6	2	B	3	GA	MO	C	BT-O	CS	5		VR-2	NOTES 33,36
								PIT	2Y				
V057	F-5	2	C	.75	RV	SA	C	RVT	5Y				
V058	F-5	2	C	1	RV	SA	C	RVT	5Y				
V059	F-6	2	C	3	CK	SA	C	CVT-O	Q				
V101	C-6	2	C	3	CK	SA	C	CVT-O	Q				
V10[illegible]	F-5	2	C	1	RV	SA	C	RVT	5Y				
HV-1	G-7	2	B	12	GA	MO	C	BT-O	RR	30		VR-16	NOTE 36
								BT-C	RR	30			
								PIT	2Y				
HV-6	G-4	2	B	10	GA	MO	C	BT-O	Q	15			NOTE 36
								BT-C	Q	15			
								PIT	2Y				
HV-7	B-7	2	B	12	GA	MO	C	BT-O	RR	30		VR-16	NOTE 36
								BT-C	RR	30			
								PIT	2Y				

***** END REPORT *****

.DATE 19 JUL 85 07:15:10 RID 29 04 MAR 85 RAYMOND
*SYSTEM: ACC. SAFETY INJECTION WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02EP01

VALVE NO.	P&ID COOR.	ISI CLASS.	IST CAT.	VALVE SIZE	VALVE TYPE	ACT TYPE	NORM POS.	TEST RQMT	TST FPE	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST.	REMARKS	
8810A	G-3	1	A,C	6	CK	SA	C	AT-2	RR	1.0	G	VR-4		3
								CVT-O	RR			VR-6		
								CVT-C	RR					
8810B	F-3	1	A,C	6	CK	SA	C	AT-2	RR	1.0	G	VR-4		3
								CVT-O	RR			VR-6		
								CVT-C	RR					
8812C	D-3	1	A,C	6	CK	SA	C	AT-2	RR	1.0	G	VR-4		3
								CVT-O	RR			VR-6		
								CVT-C	RR					
8812D	C-3	1	A,C	6	CK	SA	C	AT-2	RR	1.0	G	VR-4		3
								CVT-O	RR			VR-6		
								CVT-C	RR					
8855A	H-7	2	C	1	RV	SA	C	RVT	SY					
8855B	F-7	2	C	1	RV	SA	C	RVT	SY					
8855C	D-7	2	C	1	RV	SA	C	RVT	SY					
8855D	C-7	2	C	1	RV	SA	C	RVT	SY					
8956A	G-4	1	A,C	10	CK	SA	C	AT-2	RR	1.0	G	VR-6		3
								CVT-O	RR			VR-4		
								CVT-C	RR					
8956B	E-4	1	A,C	10	CK	SA	C	AT-2	RR	1.0	G	VR-6		3
								CVT-O	RR			VR-4		
								CVT-C	RR					
8956C	C-4	1	A,C	10	CK	SA	C	AT-2	RR	1.0	G	VR-6		3
								CVT-O	RR			VR-4		
								CVT-C	RR					
8956D	B-4	1	A,C	10	CK	SA	C	AT-2	RR	1.0	G	VR-6		3
								CVT-O	RR			VR-4		
								CVT-C	RR					
V010	G-3	1	A,C	2	CK	SA	C	AT-2	RR	1.0	G	VR-4		3
								CVT-O	RR			VR-6		
								CVT-C	RR					
V020	F-3	1	A,C	2	CK	SA	C	AT-2	RR	1.0	G	VR-4		3
								CVT-O	RR			VR-6		
								CVT-C	RR					
V030	D-3	1	A,C	2	CK	SA	C	AT-2	RR	1.0	G	VR-4		3
								CVT-O	RR			VR-6		
								CVT-C	RR					
V040	C-3	1	A,C	2	CK	SA	C	AT-2	RR	1.0	G	VR-4		3
								CVT-O	RR			VR-6		
								CVT-C	RR					
V046	A-5	2	A,C	1	CK	SA	C	AT-1	RR	150	C	VR-3		3
								CVT-C	RR			VR-5,8		
HV-8808A	G-5	2	B	10	GA	MO	O	BT-O	CS	12			NOTES 29,36	3,4
								BT-C	CS	12				
								PIT	2Y					
HV-8808B	E-5	2	B	10	GA	MO	O	BT-O	CS	12			NOTES 29,36	
								BT-C	CS	12				
								PIT	2Y					
HV-8808C	C-5	2	B	10	GA	MO	O	BT-O	CS	12			NOTES 29,36	
								BT-C	CS	12				
								PIT	2Y					
HV-8808D	B-5	2	B	10	GA	MO	O	BT-O	CS	12			NOTES 29,36	
								BT-C	CS	12				
								PIT	2Y					
HV-8875A	H-6	2	B	1	GL	AO	C	PAS	NA					

HV-8875B	F-6	2	B	1	GL	AO	C	PAS	NA				
HV-8875C	D-6	2	B	1	GL	AO	C	PAS	NA				
HV-8875D	C-6	2	B	1	GL	AO	C	PAS	NA				
HV-8877A	F-4	2	B	.75	GL	AO	C	PAS	NA				
HV-8877B	E-4	2	B	.75	GL	AO	C	PAS	NA				
HV-8877C	C-4	2	B	.75	GL	AO	C	PAS	NA				
HV-8877D	A-4	2	B	.75	GL	AO	C	PAS	NA				
HV-8878A	G-5	2	B	1	GL	AO	C	PAS	NA				
HV-8878B	E-5	2	B	1	GL	AO	C	PAS	NA				
HV-8878C	D-5	2	B	1	GL	AO	C	PAS	NA				
HV-8878D	C-2	2	B	1	GL	AO	C	PAS	NA				
HV-8879A	G-4	2	B	.75	GL	AO	C	PAS	NA				
HV-8879B	E-4	2	B	.75	GL	AO	C	PAS	NA				
HV-8879C	D-4	2	B	.75	GL	AO	C	PAS	NA				
HV-8879D	C-2	2	B	.75	GL	AO	C	PAS	NA				
HV-8950A	H-7	2	B	1	GL	SO	C	BT-0	RR	10		VR-1	
								BT-C	RR	10		VR-18	
								FST	RR				
								PIT	2Y				
HV-8950B	F-8	2	B	1	GL	SO	C	BT-0	RR	10		VR-1	
								BT-C	RR	10		VR-18	
								FST	RR				
								PIT	2Y				
HV-8950C	F-7	2	B	1	GL	SO	C	BT-0	RR	10		VR-1	
								BT-C	RR	10		VR-18	
								FST	RR				
								PIT	2Y				
HV-8950D	D-8	2	B	1	GL	SO	C	BT-0	RR	10		VR-1	
								BT-C	RR	10		VR-18	
								FST	RR				
								PIT	2Y				
HV-8950E	D-7	2	B	1	GL	SO	C	BT-0	RR	10		VR-1	
								BT-C	RR	10		VR-18	
								FST	RR				
								PIT	2Y				
HV-8950F	C-8	2	B	1	GL	SO	C	BT-0	RR	10		VR-1	
								BT-C	RR	10		VR-18	
								FST	RR				
								PIT	2Y				
HV-8860	A-4	2	A	2	GL	AO	C	AT-1	RR		1300 C	VR-5	13
								BT-C	Q	10		VR-2	14
								FST	Q				
								PIT	2Y				

***** END REPORT *****

.DATE 20 JUN 85 09:38:01 RID 30 04 MAR 85 RAYMOND
*SYSTEM: AUX TURB-AUX FD PMP TURB WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02FC02

VALVE NO.	PLID COOR	ISI CLASS	IST CAT	VALVE SIZE	VALVE TYPE	ACT TYPE	NORM POS	TEST RQMT	TST FRE	MAX STRK TIME	RELIEF LEAKG	REQUEST	REMARKS
V001	G-6	2	C	4	CK	SA	C	CVT-O	Q				
V003	G-6	2	C	4	CK	SA	C	CVT-O	Q				
V023	G-6	3	C	4	CK	SA	C	PAS	NA				
V024	G-6	2	C	4	CK	SA	C	CVT-O	Q				
V025	G-6	2	C	4	CK	SA	C	CVT-O	Q				
FV-310	D-7	3	B	1	GL	AO	O	BT-C	Q	5		VR-1	
								FST	Q			VR-2	
								PIT	2Y				
FV-312	F-5	3	B	4	GA	MO	C	BT-O	Q	10			NOTE 36
								PIT	2Y				
LV-10	D-6	3	B	1	GL	AO	C	PAS	NA				
V994	E-3	N	C	.5	RV	SA	C	RVT	5Y				

***** END REPORT *****

DATE 19 JUL 85 07:18:56 RID 31 04 MAR 85 RAYMOND
SYSTEM: CONTAINMENT HYDROGEN CONTROL *CGS INSERVICE TESTING PROGRAM DWG. NO.: M-02GS01

VALVE NO.	P&ID COOR.	ISI CLASS.	IST CAT.	VALVE SIZE.	VALVE TYPE.	ACT TYPE.	NORM POS.	TEST ROMT	TST FRE.	MAX STRK TIME	LEAKG.	RELIEF REQUEST.	REMARKS	
HV-3	E-6	2	A	1	GA	SO	C	AT-1	RR		650 C	VR-1		1 3
								BT-O	Q	5		VR-2		
								BT-C	Q	5		VR-5		
								FST	Q			VR-6		1 4
								PIT	2Y					
HV-4	E-6	2	A	1	GA	SO	C	AT-1	RR		650 C	VR-1		1 3
								BT-O	Q	5		VR-2		
								BT-C	Q	5		VR-5		
								FST	Q			VR-6		1 4
								PIT	2Y					
HV-5	D-5	2	A	1	GA	SO	C	AT-1	RR		650 C	VR-1		1 3
								BT-O	Q	5		VR-2		
								BT-C	Q	5		VR-5		
								FST	Q			VR-6		1 4
								PIT	2Y					
HV-8	B-6	2	A	1	GA	SO	C	AT-1	RR		650 C	VR-1		1 3
								BT-O	Q	5		VR-2		
								BT-C	Q	5		VR-5		
								FST	Q			VR-6		1 4
								PIT	2Y					
HV-9	B-6	2	A	1	GA	SO	C	AT-1	RR		650 C	VR-1		1 3
								BT-O	Q	5		VR-2		
								BT-C	Q	5		VR-5		
								FST	Q			VR-6		1 4
								PIT	2Y					
HV-12	E-4	2	A	1	GA	SO	C	AT-1	RR		650 C	VR-1		1 3
								BT-O	Q	5		VR-2		
								BT-C	Q	5		VR-5		
								FST	Q			VR-6		1 4
								PIT	2Y					
HV-13	E-5	2	A	1	GA	SO	C	AT-1	RR		650 C	VR-1		1 3
								BT-O	Q	5		VR-2		
								BT-C	Q	5		VR-5		
								FST	Q			VR-6		1 4
								PIT	2Y					
HV-14	D-5	2	A	1	GA	SO	C	AT-1	RR		650 C	VR-1		1 3
								BT-O	Q	5		VR-2		
								BT-C	Q	5		VR-5		
								FST	Q			VR-6		1 4
								PIT	2Y					
HV-17	B-4	2	A	1	GA	SO	C	AT-1	RR		650 C	VR-1		1 3
								BT-O	Q	5		VR-2		
								BT-C	Q	5		VR-5		
								FST	Q			VR-6		1 4
								PIT	2Y					
HV-18	B-5	2	A	1	GA	SO	C	AT-1	RR		650 C	VR-1		1 3
								BT-O	Q	5		VR-2		
								BT-C	Q	5		VR-5		
								FST	Q			VR-6		1 4
								PIT	2Y					
HV-20	F-5	2	A	6	BTF	MO	C	AT-1	RR		3900 C	VR-5	NOTE 36	1 3
								BT-C	Q	5		VR-6		1 4.3
								PIT	2Y					
HV-21	F-4	2	A	6	BTF	MO	C	AT-1	RR		3900 C	VR-5	NOTE 36	1 3
								BT-C	Q	5		VR-6		1 4.3

								PIT	2Y						
HV-30	E-2	2	B	1	GA	SO	C	PAS	NA						
HV-31	D-4	2	A	1	GA	SO	O	AT-1	RR		650 C	VR-1		1	3
								BT-C	Q	5		VR-2			
								FST	Q			VR-5			
								PIT	2Y			VR-8		1	4
HV-32	D-3	2	A	1	GA	SO	O	AT-1	RR		650 C	VR-1		1	3
								BT-C	Q	5		VR-2			
								FST	Q			VR-5			
								PIT	2Y			VR-8		1	4
HV-33	C-4	2	A	1	GA	SO	O	AT-1	RR		650 C	VR-1		1	3
								BT-C	Q	5		VR-2			
								FST	Q			VR-5			
								PIT	2Y			VR-8		1	4
HV-34	C-4	2	A	1	GA	SO	O	AT-1	RR		650 C	VR-1		1	3
								BT-C	Q	5		VR-2			
								FST	Q			VR-5			
								PIT	2Y			VR-8		1	4
HV-35	F-7	2	B	1	GA	SO	C	PAS	NA						
HV-36	D-6	2	A	6	GA	SO	O	AT-1	RR		3900 C	VR-1		1	3
								BT-C	Q	5		VR-2			
								FST	Q			VR-5			
								PIT	2Y			VR-6		1	4
HV-37	D-7	2	A	6	GA	SO	O	AT-1	RR		3900 C	VR-1		1	3
								BT-C	Q	5		VR-2			
								FST	Q			VR-5			
								PIT	2Y			VR-8		1	4
HV-38	C-6	2	A	6	GA	SO	O	AT-1	RR		3900 C	VR-1		1	3
								BT-C	Q	5		VR-2			
								FST	Q			VR-5			
								PIT	2Y			VR-6		1	4
HV-39	C-6	2	A	6	GA	SO	O	AT-1	RR		3900 C	VR-1		1	3
								BT-C	Q	5		VR-2			
								FST	Q			VR-5			
								PIT	2Y			VR-6		1	4
VG54	B-3	2	C	.75	CK	SA	C	PAS	NA						
VG51	B-8	2	C	.75	CK	SA	C	PAS	NA						

***** END REPORT *****

.DATE 19 JUL 85 07:20:14 PID 32 04 MAR 85 RAYMOND
#SYSTEM: CONTAINMENT PURGE WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02GT01

VALVE NO.	COOR.	CLASS.	CAT.	SIZE.	TYPE.	TYPE.	POS.	RQMT	FRE.	TIME	LEAKG.	REQUEST.	REMARKS	
HZ-4	D-4	2	A	18	BTF	AO	O	AT-1	RR		21000C	VR-1		3
								BT-C	Q	3		VR-2		
								FST	Q			VR-5		
								PIT	2Y			VR-8		4
HZ-3	A-5	2	A	18	BTF	AO	O	AT-1	RR		21000C	VR-1		3
								BT-C	Q	3		VR-2		
								FST	Q			VR-5		
								PIT	2Y			VR-8		4
HZ-6	C-4	2	A	36	BTF	AO	C	AT-1	RR		23400C	VR-5		3
								BT-C	Q	10		VR-6		4
								FST	Q					
								PIT	2Y					
HZ-7	C-5	2	A	36	BTF	AO	C	AT-1	RR		23400C	VR-5		3
								BT-C	Q	10		VR-6		4
								FST	Q					
								PIT	2Y					
HZ-8	C-6	2	A	36	BTF	AO	C	AT-1	RR		23400C	VR-5		3
								BT-C	Q	10		VR-6		4
								FST	Q					
								PIT	2Y					
HZ-9	C-7	2	A	36	BTF	AO	C	AT-1	RR		23400C	VR-5		3
								BT-C	Q	10		VR-6		4
								FST	Q					
								PIT	2Y					
HZ-11	A-6	2	A	18	BTF	AO	O	AT-1	RR		21000C	VR-1		3
								BT-C	Q	3		VR-2		
								FST	Q			VR-5		
								PIT	2Y			VR-8		4
HZ-12	A-7	2	A	18	BTF	AO	O	AT-1	RR		21000C	VR-1		3
								BT-C	Q	3		VR-2		
								FST	Q			VR-5		
								PIT	2Y			VR-8		4

..... END REPORT .....

.DATE 19 JUL 85 07:20:51 RID 33 04 MAR 85 RAYMOND
*SYSTEM: LIQUID RADWASTE WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02H801

VALVE NO.	P&ID COOR.	ISI CLASS.	1ST CAT.	VALVE SIZE.	VALVE TYPE.	ACT TYPE.	NORM POS.	TEST ROMT	TST FRE.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST.	REMARKS	
VQ3a	C-3	3	C	.75	RV	SA	C	RVT	5Y					
HV-7136	H-4	2	A	.75	DIA	AO	O	AT-1	RR		487.5C	VR-1		3
								BT-C	Q	10		VR-5		
								FST	Q			VR-6		4
								PIT	2Y					
HV-7135	F-3	2	A	3	DIA	AO	O	AT-1	RR		1950 C	VR-1		3
								BT-C	Q	10		VR-5		
								FST	Q			VR-6		4
								PIT	2Y					
HV-7150	H-5	2	A	.75	DIA	AO	O	AT-1	RR		487.5C	VR-1		3
								BT-C	Q	10		VR-5		
								FST	Q			VR-6		4
								PIT	2Y					
HV-7176	F-3	2	A	3	DIA	AO	O	AT-1	RR		1950 C	VR-1		3
								BT-C	Q	10		VR-5		
								FST	Q			VR-6		4
								PIT	2Y					

***** END F RT *****

.DATE 19 JUL 85 07:21:22 RID 34 04 MAR 85 RAYMOND
*SYSTEM: DECONTAMINATION WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02HD01

VALVE NO.	P&ID COOR.	ISI CLASS.	IST CAT.	VALVE SIZE.	VALVE TYPE.	ACT TYPE.	NORM. POS.	TEST RQMT	TST. FRE.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST.	REMARKS	
V016	B-7	2	A	2	GL	M	C	AT-1	RR		1300 C	VR-5,8		3,4
V017	B-7	2	A	2	GL	M	C	AT-1	RR		1300 C	VR-5,8		3,4

***** END REPORT *****

.CAT 20 JUN 85 08:50:28 RID 35 04 MAR 85 RAYMOND
*SYSTEM: EMERGENCY FUEL OIL *CGS INSERVICE TESTING PROGRAM DWG. NO.: M-02JE01

* VALVE NO.	.PGID. COOR.	ISI CLASS.	IST. CAT.	VALVE. SIZE.	VALVE. TYPE.	ACT . TYPE.	NORM. POS.	TEST . RQMT .	TST. FRE.	MAX STRK. TIME	MAX . LEAKG.	RELIEF . REQUEST.	REMARKS
VQ85	H-4	3	C	2	CK	SA	C	CVT-O	Q				
VQ75	D-4	3	C	2	CK	SA	C	CVT-O	Q				

***** END REPORT *****

DATE 19 JUL 85 07:21:51 RID 36 04 MAR 85 RAYMOND

SYSTEM: COMPRESSED AIR WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02KA01

VALVE NO.	P&ID COOR.	ISI CLASS.	IST CAT.	SIZE	VALVE TYPE	ACT TYPE	NORM POS.	TEST RQMT	TST FRE.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST	REMARKS	
V204	C-2	2	A,C	1.5	CK	SA	O	AT-1	RR		975 C	VR-3		3
								CVT-C	RR			VR-5,8		4,3
FV-19	D-2	2	A	2	GL	AO	O	AT-1	RR		1300 C	VR-1		3
								BT-C	RR	5		VR-2		
								FST	RR			VR-5,8		4
								PIT	2Y			VR-19		
HV-10	C-1	2	B	1.5	GA	MO	C	BT-O	RR	12		VR-19	NOTE 36	
								PIT	2Y					

***** END REPORT *****

.DATE 19 JUL 85 07:22:50 RID 37 04 MAR 85 RAYMOND
*SYSTEM: COMPRESSED AIR WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02KA02

* VALVE NO.	.P&ID COOR.	.IST CLASS.	.IST CAT.	VALVE SIZE.	.VALVE TYPE.	.ACT TYPE.	.NORM POS.	.TEST ROMT	.TST FRE.	.MAX STRK TIME	.LEAKG.	.RELIEF REQUEST.	REMARKS	
V0134	B-6	2	A,C	4	CK	SA	C	AT-1	RR		2600 C	VR-3		3
								CVT-C	RR			VR-5,8		3,4
V0135	D-6	2	A	4	GL	M	C	AT-1	RR		2600 C	VR-5,8		3,4

***** END REPORT *****

.DATE 23 JUN 85 08:53:51 RID 38 04 MAR 85 RAYMOND
**SYSTEM: COMPRESSED AIR WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02KA05

VALVE NO.	PGID COOR.	ISI CLASS.	IST CAT.	VALVE SIZE.	VALVE TYPE.	ACT TYPE.	NORM POS.	TEST ROMT	TST FRE.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST.	REMARKS	
V0[illegible]	G-6	3	A,C	.75	CK	SA	C	AT-3	RR		1.0 P	VR-20		3
								CVT-C	RR					
V0[illegible]	F-5	3	A,C	.75	CK	SA	C	AT-3	RR		1.0 P	VR-20		3
								CVT-C	RR					
V0[illegible]0	D-6	3	A,C	.75	CK	SA	C	AT-3	RR		1.0 P	VR-20		3
								CVT-C	RR					
V0[illegible]1	B-5	3	A,C	.75	CK	SA	C	AT-3	RR		1.0 P	VR-20		3
								CVT-C	RR					
V2[illegible]3	H-7	3	C	.8	RV	SA	C	RVT	SY					
V2[illegible]4	F-6	3	C	.8	RV	SA	C	RVT	SY					
V2[illegible]5	D-7	3	C	.8	RV	SA	C	RVT	SY					
V2[illegible]6	B-6	3	C	.8	RV	SA	C	RVT	SY					

***** END REPORT *****

.DATE 19 JUL 85 07:23:18 RID 39 04 MAR 85 RAYMOND
*SYSTEM: CONTAINMENT BREATH. AIR *CGS INSERVICE TESTING PROGRAM DWG. NO.: M-12K801

* VALVE NO.	PGID.	ISI CLASS.	IST CAT.	VALVE SIZE.	VALVE TYPE.	ACT TYPE.	NORM POS.	TEST RQMT	TST FRE.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST.	REMARKS	
VC01	E-3	2	A	2	GL	M	C	AT-1	RR	1300	C	VR-5,8		3,4
VC02	E-4	2	A	2	GL	M	C	AT-1	RR	1300	C	VR-5,8		3,4

..... END REPORT .....

.DATE 19 JUL 85 07:24:Cb RID 40 04 MAR 85 RAYMOND

*SYSTEM: FIRE PROTECTION *CGS INSERVICE TESTING PROGRAM DWG. NO.: M-02kC02

* VALVE NO.	PLID COOR	IST CLASS	IST CAT	VALVE SIZE	VALVE TYPE	ACT TYPE	NORM POS	TEST ROMT	TST FRE	MAX STRK TIME	MAX LEAKG	RELIEF REQUEST	REMARKS	
V47c	B-b	2	A,C	4	CK	SA	C	AT-1	RR		2600 C	VR-3		3
								CVT-C	RR			VR-5,8		3,4
FV-3F3	B-b	2	A	4	GA	MO	C	AT-1	RR		2600 C	VR-5	NOTE 36	3
								BT-C	Q	30		VR-6		4
								PIT	2Y					

***** END REPORT *****

DATE 21 MAR 85 16:12:23 RID 41 04 MAR 85 LYON
SYSTEM: STANDBY DIESEL GEN. WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02KJ01

VALVE NO.	P&ID COOR.	ISI CLASS.	IST CAT.	VALVE SIZE.	VALVE TYPE.	ACT TYPE.	NORM POS.	TEST RQMT	TST FRE.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST.	REMARKS
HV-1	B-6	3	B	1	GA	MO	O	ST-C PIT	Q 2Y	12			NOTE 36

..... END REPORT .....

.DATE 08 JUL 85 15:55:54 RID SD 04 MAR 85 RAYMOND
*SYSTEM: STANDBY DIESEL GEN. WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02KJ02

VALVE NO.	P&ID COOR.	ISI CLASS.	IST CAT.	VALVE SIZE.	VALVE TYPE.	ACT TYPE.	NORM. POS.	TEST RQMT	TST FRE.	MAX STRK TIME	LEAKG.	RELIEF REQUEST.	REMARKS	
V7[illegible]A	D-5	3	A,C	.75	CK	SA	C	AT-3	RR	1.33	P	VR-21		3
								CVT-C	RR					
V7[illegible]B	B-2	3	A,C	.75	CK	SA	C	AT-3	RR	1.33	P	VR-21		3
								CVT-C	RR					
V[illegible]-1A	F-3	3	B	.4	GL	SO	C	BT-O	Q	5		VR-1		
								PIT	2Y					
FV-1B	F-3	3	B	.4	GL	SO	C	BT-O	Q	5		VR-1		
								PIT	2Y					

..... END REPORT .....

.DATE 11 JUN 85 10:54:58 RID 42 04 MAR 85 LYON

*SYSTEM: STANDBY DIESEL GEN. *CGS INSERVICE TESTING PROGRAM DWG. NO.: M-02KJ03

* VALVE NO.	.PEID. COOR.	.ISI. CLASS.	.IST. CAT.	VALVE SIZE	VALVE TYPE	ACT TYPE	NORM. POS.	TEST RQMT	TST. FRE.	MAX STRK. TIME	MAX. LEAKG.	RELIEF REQUEST	REMARKS
HV-C	A-6	3	B	1	GA	MO	O	BT-C PIT	Q 2Y	12			NOTE 36

..... END REPORT .....

DATE 21 MAR 85 15:05:41 RID 43 04 MAR 85 LYON
SYSTEM: STANDBY DIESEL GEN. CGS INSERVICE TESTING PROGRAM DWG. NO.: M-02KJ04

VALVE NO.	P&ID COOR.	IST CLASS.	IST CAT.	VALVE SIZE.	VALVE TYPE.	ACT TYPE.	NORM POS.	TEST RQMT	TST FRE.	MAX STRK TIME	MAX RELIEF LEAKG.	REQUEST	REMARKS
HV-101	A-6	3	B	1	GA	MO	O	BT-C PIT	Q 2Y	12			NOTE 36

***** END REPORT *****

DATE 08 JUL 85 15:56:52 RID 51 04 MAR 85 RAYMOND

SYSTEM: STANDBY DIESEL GEN. CGS INSERVICE TESTING PROGRAM DWG. NO.: M-02KJ05

VALVE NO.	P&ID COOR.	ISI CLASS.	IST CAT.	VALVE SIZE	VALVE TYPE	ACT TYPE	NORM POS.	TEST RQMT	TST FRE.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST	REMARKS	
FV-2D1A	F-3	3	B	.4	GL	SO	C	BT-O PIT	Q 2Y	S			VR-1	
FV-2D2B	F-3	3	B	.4	GL	SO	C	BT-O PIT	Q 2Y	S			VR-1	
V7118	B-2	3	A,C	.75	CK	SA	C	AT-3 CVT-C	RR RR		1.33 P		VR-21	3
V7128	D-5	3	A,C	.75	CK	SA	C	AT-3 CVT-C	RR RR		1.33 P		VR-21	3

..... END REPORT .....

DATE 21 MAR 85 15:04:59 RID 44 04 MAR 85 LYON
SYSTEM: STANDBY DIESEL GEN. CGS INSERVICE TESTING PROGRAM DWG. NO.: M-02KJ06

VALVE NO.	P&ID COOR.	IST CLASS.	IST CAT.	VALVE SIZE.	VALVE TYPE.	ACT TYPE.	NORM POS.	TEST RQMT	TST FRE.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST.	REMARKS
FV-102	A-5	3	B	1	GA	MO	O	2T-C PIT	Q 2Y	12			NOTE 36

..... END REPORT .....

DATE 21 MAR 85 15:04:36 RID 52 04 MAR 85 LYCO

SYSTEM: FLOOR AND EQUIP. DRAINS WCGS INSERVICE TESTING PROGRAM DWG. NO.: M-02LF03

VALVE NO.	P&ID COOR.	ISI CLASS.	IST CAT.	VALVE SIZE	VALVE TYPE	ACT TYPE	NORM POS.	TEST RQMT	TST FRE.	MAX STRK TIME	MAX LEAKG.	RELIEF REQUEST.	REMARKS
HV-1D1	C-5	3	B	6	GA	MO	O	BT-C	Q	30			NOTE 36
								PIT	2Y				
HV-1D2	C-4	3	B	6	GA	MO	O	BT-C	Q	30			NOTE 36
								PIT	2Y				

***** END REPORT *****

.DATE 19 JUL 85 07:24:3. RID 45 04 MAR 65 RAYMOND
*SYSTEM: FLOOR AND EQUIP. DRAINS *CGS INSERVICE TESTING PROGRAM DWG. NO.: M-02LF09

* VALVE NO.	.P&ID.	ISI CLASS	IST CAT.	VALVE SIZE	VALVE TYPE	ACT TYPE	NORM POS.	TEST RQMT	TST FRE	MAX STRK TIME	MAX LEAKG	RELIEF REQUEST	REMARKS	
FV-15	F-2	2	A	6	GA	MO	O	AT-1	RR		3900 C	VR-5	NOTE 36	3
								BT-C	Q	30		VR-6		4
								PIT	2Y					
FV-16	F-2	2	A	6	GA	MO	O	AT-1	RR		3900 C	VR-1		3
								BT-C	Q	4		VR-2		
								FST	Q			VR-5		
								PIT	2Y			VR-6		4

***** END REPORT *****

.DATE 19 JUL 85 07:25:26 RID 46 04 MAR 85 RAYMOND
*SYSTEM: NUCLEAR SAMPLING *CGS INSERVICE TESTING PROGRAM DWG. NO.: M-025J01

VALVE NO.	COOR.	CLASS.	CAT.	SIZE.	TYPE.	TYPE.	POS.	RQMT	FRE.	TIME	LEAKG.	REQUEST.	REMARKS	
HV-12	F-7	2	A	1	GL	SO	C	AT-1	RR	650 C		VR-1		3
								BT-C	Q 5			VR-2		
								FST	Q			VR-5		
								PIT	2Y			VR-6		4
HV-13	E-7	2	A	1	GL	SO	C	AT-1	RR	650 C		VR-1		3
								BT-C	Q 5			VR-2		
								FST	Q			VR-5		
								PIT	2Y			VR-6		4
HV-14	G-4	2	B	1	GL	SO	O	PAS	NA					
HV-15	G-4	2	B	1	GL	SO	O	PAS	NA					
HV-16	G-3	2	B	1	GL	SO	O	PAS	NA					
HV-17	G-3	2	B	1	GL	SO	O	PAS	NA					
HV-18	F-3	2	A	1	GL	SO	C	AT-1	RR	650 C		VR-1		3
								BT-C	Q 5			VR-2		
								FST	Q			VR-5		
								PIT	2Y			VR-6		4
HV-19	E-3	2	A	1	GL	SO	C	AT-1	RR	650 C		VR-1		3
								BT-C	Q 5			VR-2		
								FST	Q			VR-5		
								PIT	2Y			VR-6		4

***** END REPORT *****

.DATE 19 JUL 85 07:26:44 RID 47 04 MAR 85 RAYMOND
*SYSTEM: NUCLEAR SAMPLING
*CGS INSERVICE TESTING PROGRAM DWG. NO.: M-025J04

VALVE NO.	PLID COOR	ISI CLASS	IST CAT	VALVE SIZE	VALVE TYPE	ACT TYPE	NORM POS	TEST RQMT	TST FRE	MAX STRK TIME	MAX LEAKG	RELIEF REQUEST	REMARKS	
V100	H-4	2	C	1	CK	SA	C	PAS	NA					
V101	G-7	2	C	1	CK	SA	C	PAS	NA					
V111	A-7	2	A,C	1	CK	SA	C	AT-1	RR		650 C	VR-3		3
								CVT-C	RR			VR-5,8		3,4
V116	F-5	2	C	1	CK	SA	C	PAS	NA					
HV-3	F-7	2	B	1	GL	SO	C	PAS	NA					
HV-4	H-7	2	B	1	GL	SO	C	PAS	NA					
HV-5	F-6	2	A	1	GL	SO	O	AT-1	RR		650 C	VR-1		3
								BT-C	Q	5		VR-2		
								FST	Q			VR-5		
								PIT	2Y			VR-8		
HV-6	F-6	2	A	1	GL	SO	O	AT-1	RR		650 C	VR-1		4
								BT-C	Q	5		VR-2		3
								FST	Q			VR-5		
								PIT	2Y			VR-8		
HV-20	G-7	2	B	1	GL	SO	C	PAS	NA					4
HV-127	F-6	2	A	1	GL	SO	C	AT-1	RR		650 C	VR-1		3
								BT-C	Q	5		VR-2		
								FST	Q			VR-5		
								PIT	2Y			VR-8		
HV-128	H-6	2	A	1	GL	SO	O	AT-1	RR		650 C	VR-1		4
								BT-C	Q	5		VR-2		3
								FST	Q			VR-5		
								PIT	2Y			VR-8		
HV-129	H-5	2	A	1	GL	SO	O	AT-1	RR		650 C	VR-1		4
								BT-C	Q	5		VR-2		3
								FST	Q			VR-5		
								PIT	2Y			VR-8		
HV-130	G-5	2	A	1	GL	SO	C	AT-1	RR		650 C	VR-1		4
								BT-C	Q	5		VR-2		3
								FST	Q			VR-5		
								PIT	2Y			VR-8		
HV-131	B-6	2	A	1	GL	SO	C	AT-1	RR		650 C	VR-1		4
								BT-C	Q	5		VR-2		3
								FST	Q			VR-5		
								PIT	2Y			VR-8		
HV-132	A-6	2	A	1	GL	SO	C	AT-1	RR		650 C	VR-1		4
								BT-C	Q	5		VR-2		3
								FST	Q			VR-5		
								PIT	2Y			VR-8		
HV-133	F-4	2	B	1	GL	SO	O	PAS	NA					4

***** END REPORT *****

NOTES

1. Operating these valves during normal operation would cause a decrease in pressure in the respective main steam header. This could introduce a severe transient in the main steam header which is unacceptable from an operational viewpoint. Valve testing will be performed during cold shutdown.

2. Closure of the main steam isolation valves during unit operation could result in reactor trip and safety injection actuation which would introduce a severe transient in the main steam lines which is unacceptable from an operational viewpoint. Testing by isolating each main steam header is also possible but would cause a power reduction which is also unacceptable from an operational viewpoint. These valves will be partially stroked every three months and full-stroke tested along with a fail safe test during cold shutdown.

3. Exercising these valves during normal operation is considered impractical. Stroking these valves would isolate feedwater to the steam generators which could result in a severe transient, possibly causing a unit trip. Valve testing will be performed during cold shutdown.

4. Exercising these valves during normal operation is considered impractical. Stroking these valves could result in a loss of steam generator level control on the corresponding steam generator, possibly causing a unit trip. Valve testing will be performed during cold shutdown.

5. During normal operation exercising these valves would be impractical. Closing these valves during operation would isolate feedwater to the steam generators which could result in a severe transient, possibly causing a unit trip. Valves FV-39, 40, 41 and 42 will be partial stroke tested during normal operation while the remaining testing on all the valves pertaining to this NOTE will be performed during cold shutdown.

6. Exercising these valves during normal operation would introduce cold auxiliary feedwater into the steam generators and therefore would cause an unnecessary thermal shock to the auxiliary feed nozzles. Valve testing will be done during cold shutdown.

7. Valves AL HV-5, AL HV-7, AL HV-9, and AL HV-11 are flow control valves. Therefore these valves are neither active or passive and thus testing requirements are NA.

8. These valves have an interlock which prevents their opening when reactor coolant system pressure is above 360 PSIG. Valve testing will be performed during cold shutdown.

9. This valve is passive since it is in series with a normally closed non-safety-related, air operated valve (BG HV-8145) and does not have to change positions to perform a safety-related function.

10. The power-operated relief valves have a history of failures and should not be challenged at power. Valve testing will be performed during cold shutdown.

11. Failure of these valves in the closed position during normal operation would inhibit flow to the reactor coolant pump thermal barriers. This is not desirable during pump operation. Valve testing will be performed during cold shutdown.

12. Failure of these valves in the closed position during normal operation would inhibit flow to the reactor coolant pump seals which could damage the reactor coolant pump seals. Valve testing will be performed during cold shutdown.

13. Failure of these valves in the open position during normal operation would put the reactor in a potential small break LOCA situation. Valve testing will be performed during cold shutdown.

14. Failure of these valves in the closed position during normal operation would result in a loss of seal water flow to the reactor coolant pumps and could cause pump seal damage. Valve testing will be performed during cold shutdown.

15. Failure of one of these valves in the closed position during normal operation would result in loss of pressurizer level control and may cause plant shutdown. Valve testing will be performed during cold shutdown.

16. Failure of these valves in the closed position during normal operation would inhibit letdown flow to the regenerative heat exchanger which would effect normal letdown and charging operation. Valve testing will be performed during cold shutdown.

17. Closure of one of these valves during normal operation would isolate charging flow to the reactor coolant system which could result in loss of pressurizer level control and cause plant shutdown. Valve testing will be performed during cold shutdown.

18. The normal charging pumps' suction would be isolated upon closure of one of these valves during normal operation. Alternate suction flow paths (e.g. aligned with the refueling water storage tank) would cause a sudden increase in reactor coolant system boron inventory, thereby a plant transient. Also, seal water injection to the reactor coolant pumps would be inhibited which could result in damage to the seals. Valve testing will be performed during cold shutdown.

19. Testing this valve during normal operation would introduce boric acid to the primary side causing unwanted negative reactivity addition. Valve testing will be performed during cold shutdown.

20. Exercising these valves during normal operation would result in isolating accumulator injection flowpaths and safety injection system hot leg recirculation loops 2 and 3. Valve testing will be performed during cold shutdown. 1 3

21. Failure of this valve in the closed position during normal operation could cause a failure of both SI pumps by isolating the miniflow recirculation path for both pumps. Valve testing will be performed during cold shutdown.

22. Failure of these valves in the open position during normal operation could result in introduction of borated water into the reactor coolant system, which could possibly cause plant shutdown. Valve testing will be performed during cold shutdown.

23. These are solenoid valves of a hermetically enclosed, seal welded design with internally mounted reed switches for position indication. Visual verification of valve position is not possible unless the valve is removed from service and disassembled. Valve position will be verified by observation of flow.

24. Testing these valves during normal operation would result in interruption of component cooling water flow for equipment necessary for normal operation. Valve testing will be performed during cold shutdown.

25. Testing the valve during normal operation would interrupt component cooling water flow to the reactor coolant pumps and possibly damage the pumps. Valve testing will be performed during cold shutdown.

26. Testing these valves would require stroking valves EJ HV-8804 A and B. Valve HV-8804 A and B have control interlocks with other ECCS valves and cannot be exercised during normal operation. Valve testing will be performed during cold shutdown.

27. These valves have control interlocks with other ECCS valves and cannot be exercised during normal operation. Valve testing will be performed during cold shutdown.

28. These valves have their power removed during normal operation so that the ECCS flowpath can be maintained operable per Technical Specifications. Valve testing will be performed during cold shutdown.

29. These valves are locked open with power removed during normal operation with RCS pressure above 1000 PSIG as required by Technical Specifications. Valve testing will be performed during cold shutdown.

30. Failure of this valve in the closed position during normal operation would inhibit a portion of the emergency core cooling system. Valve testing will be performed during cold shutdown.

31. Exercising of these valves during normal operation would result in interruption of Component Cooling Water flow to the Reactor Coolant Pump's Thermal Barrier Cooling Coil. Valve testing will be performed during cold shutdown. | 3

32. Valves EM V-014 and V-017 have no safety function.

33. Testing these valves during normal operation would require isolating the spray additive tanks which would violate Technical Specifications. Valve testing will be performed during cold shutdown.

34. Not used. | 3

35. Not used. | 3

36. All motor operated valves fail-as-is and therefore do not require a fail safe test per IWV-3415.

37. Exercising these valves during normal plant operation is not possible because valves cannot be opened against reactor coolant pressure. Valve testing will be performed during cold shutdown.

38. Exercising this valve during normal operation would inhibit flow to the reactor coolant pump seals which could damage the reactor coolant pump seals. Valve testing will be performed during cold shutdown.