# **ATTACHMENT 3**

# DRESDEN STATION THIRD TEN YEAR INSERVICE TESTING PLAN

# **REVISION 3**

9509060190 950831 PDR ADDCK 05000237 P PDR

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#### **REVISION SUMMARY SHEET**

\* The current revision/date for each individual Relief Request, Technical Approach & Position and Cold Shutdown Justification is listed on the Index/Summary Sheet for these sections.

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#### 1. Introduction

- 1.1 This Inservice Testing Plan outlines the requirements for the Inservice Testing of Class 1, 2, and 3 pumps and valves and certain non-code class pumps and valves at Dresden Nuclear Power Station, Units 2 and 3.
- 1.2 This Inservice Testing Plan will be effective from March 1, 1992 through and including February 28, 2002, which represents the third ten-year interval of the Inservice Testing Program for Dresden Nuclear Power Station, Units 2 and 3.
- 1.3 The key features of this plan are the following:
  - 1.3.1 The pump and valve listing that define the scope of the Inservice Testing Plan.
  - 1.3.2 Relief Requests (R.R.). Pursuant to 10CFR50.55a(f)(6)(i), relief requests have been included when specific requirements in the Code are considered impractical. The enclosed relief requests are subject to change throughout the inspection interval. If testing requirements are determined to be impractical during the course of the interval, additional or modified relief requests will be submitted in accordance with 10CFR50.55a(f)(6)(i), NRC Generic Letter 89-04, and NUREG-1482.
  - 1.3.3 Technical Approach and Positions (T.A.&P.). When the requirements of the Code are not easily interpreted, Dresden Station has reviewed general licensing and regulatory requirements and industry practice to determine a practical method of implementing each Code requirement. The Technical Approach and Position documents in this Plan have been provided to clarify Dresden Station's implementation of the Code.

Per J. E. Dyer (USNRC) to T. J. Kovach letter, "SAFETY EVALUATION (SE) OF THE INSERVICE TESTING PROGRAM RELIEF REQUESTS FOR PUMPS AND VALVES, DRESDEN NUCLEAR POWER STATION, UNITS 2 AND 3 (TAC NOS. M82898 AND M82899)", dated December 17, 1992, Relief Requests for Non-Code items are not reviewed by the NRC. For this reason, testing methodologies for these items, which do not meet code requirements, will be placed in Technical Approach and Positions.

1.3.4 Cold Shutdown Justifications (C.S.J.) (Valves only). In accordance with Article IWV-3412 or IWV-3522 of the Code, Dresden will full stroke exercise certain valves during Cold Shutdown if the valve cannot be exercised during normal operation. The technical justification for exercising a valve during Cold Shutdown rather than normal operation is provided in the Cold Shutdown Justification.

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#### INTRODUCTION AND PLAN DESCRIPTION

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1.4 Administrative procedures, surveillance testing procedures, reference value test results, and other records required to define and execute the Inservice Testing Program are all retained at Dresden Station.

#### 2. Basis of Inservice Testing Program

2.1 This Plan was developed in accordance with the requirements delineated in the July 31, 1991 issue of 10 CFR 50.55a, the 1986 Edition of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code, Section XI, Subsection IWV, and ANSI/ASME OMa-1988 PART 6. Specifically:

ANSI/ASME OMa-1988 PART 6 is used to establish the pump monitoring and testing requirements and allowable ranges for all pumps. ASME Section XI, Subsection IWP will not be used.

Subsection IWV is used to establish all valve testing requirements with the exception of OMa-1988, Part 10, Sections 4.2.1.2(g) and 4.3.2.2(g). These OM-10 sections govern cold shutdown testing requirements.

- 2.2 The commercial service dates for Dresden 2 and 3 are June 9, 1972 and November 16, 1971, respectively. The NRC has granted permission for establishment of November 1, 1978 as the common implementation date for the Inservice Testing Plan for both units <sup>1</sup>. The November 1, 1978 implementation date began the Third Inspection Period of the First Inspection Interval.
- 2.3 The Second Inspection Interval for both Units is from March 1, 1982 through February 28, 1992,
- 2.4 The Third Inspection Interval for both Units is form March 1, 1992 through February 28, 2002.
- 2.5 Augmented Inservice Testing (AIST) is performed on pumps and valves at the request of the NRC. These AIST requirements are in addition to the ASME Code requirements.

#### 3. System Classification

3.1 The construction permits for Dresden Units 2 and 3 were issued on January 10, 1966 and October 14, 1966 respectively. At that time, the ASME Boiler and Pressure Vessel Code covered only nuclear vessels and associated piping up to and including the first isolation or check valve. Piping, pumps, and valves were built primarily to the rules of USAS B31.1.0-1967, Power Piping. Consequently, the Dresden Station Inservice Testing Program does not contain any ASME Section III, Code Class 1, 2, or 3 systems.

<sup>1</sup> Letter from V. Stello, NRC, to C. Reed, CECo, dated May 5, 1978.

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#### System Classification (Con't)

- 3.2 The system classifications for the Inservice Inspection and Testing Programs are based on the requirements of 10 CFR 50 and Regulatory Guide 1.26, Revision 3. These classifications were developed for the sole purpose of assigning the appropriate inservice testing requirements for water, steam, and radioactive waste containing components.
- 3.3 Components within the reactor coolant pressure boundary, as defined in 10 CFR 50.2, are designated as Inservice Inspection Class 1, while other safety related components are designated as Inservice Inspection Class 2 or 3 in accordance with the guidelines of Regulatory Guide 1.26, Revision 3. Pursuant to 10 CFR 50.55a, paragraph (a)(1), the inservice testing requirements of the ASME Boiler and Pressure Vessel Code, Section XI are assigned to these components, within the constraints of existing plant design.

#### 4. <u>Contents of Inservice Testing Plan</u>

#### 4.1 <u>SECTION - 1 Table of Contents</u> Provides the organizational format for the Inservice Testing Plan.

- 4.2 <u>SECTION 2 Revision Summary Sheet</u> Provides the revision status of the effective pages in the Inservice Testing Plan.
- 4.3 <u>SECTION 3 Introduction and Plan Description</u> Provides details on the scope, basis, and contents of the Inservice Testing Plan.

#### 4.4 SECTION 4 - List of IST Systems and P&IDs

Provides a listing of all applicable systems, system numbers and Piping and Instrumentation Diagrams (P&IDs) that contain pumps and valves subject to testing under this Plan.

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# 4.5 SECTION 5 - Class 1, 2, and 3 Pump Listing

Provides a listing of all ASME Class 1, 2, and 3 pumps sorted by Equipment Piece Number (EPN).

#### 4.6 <u>SECTION 6 - Augmented Pump Listing</u> Provides a listing of all Augmented pumps requiring testing by the NRC.

4.7 <u>SECTION 7 - Pump Relief Request Index/Summaries</u> Provides a summary and the revision status of all relief requests related to Inservice Testing of pumps.

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Contents of Inservice Testing Plan (Con't)

#### 4.8 SECTION 8 - Relief Requests, Pumps

This section contains Relief Requests written in accordance with 10 CFR 50.55a(f)(6)(i) when specific OMa-1988, Part 6 requirements for Inservice Testing of Pumps are considered impractical.

Relief Request numbers are in the following format:

#### **RP-NNX**

Where;

RP: Relief Request for Pump Inservice Testing

NN: The first two numbers of the EPN are used for system dependent Relief Requests. The Number 00 is used for Relief Requests applying to more than one system.

NN = 00	General Issues
11	Standby Liquid Control (SBLC)
	Core Spray
15	LPCI/CCSW
19	Fuel Pool Cooling
23	High Pressure Coolant Injection (HPCI)
39	Diesel Cooling Water
52	Diesel Oil

- X: A unique, sequential alphabetical character used for identifying multiple Relief Requests on the same system. X = A for the first Relief Requests, B for the second ...
- 4.9 SECTION 9 Pump Technical Approach and Position Index/Summaries Provides a summary and the revision status of all Technical Approach and Positions related to Inservice Testing of Pumps.

#### 4.10 SECTION 10 - Technical Approach and Positions, Pumps

This section contains the Technical Approach and Position documents provided to clarify Dresden Station's implementation of ASME Section XI requirements for Inservice Testing of pumps.

Where; TP: Technical Approach and Position for Pump Inservice Testing.

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Contents of Inservice Testing Plan (Con't)

- NN: The first two numbers of the EPN are used for system dependent Technical Approach and Positions. The Number 00 is used for Technical Approach and Position applying to more than one system.
- X: A unique, sequential alphabetical character used for identifying multiple Technical Approach and Positions on the same system. X = A for the first Technical Approach, B for the second ...
- 4.11 SECTION 11 Class 1, 2, and 3 Valve Listing Provides a listing of all ASME Class 1, 2, and 3 valves sorted by EPN.
- 4.12 <u>SECTION 12 Augmented Valve Listing</u> Provides a listing of all Augmented valves requiring testing by the NRC.
- 4.13 <u>SECTION 13 Valve Relief Request Index/Summaries</u> Provides a summary and the revision status of all Relief Requests related to Inservice Testing of valves.

#### 4.14 SECTION 14 - Relief Requests, Valves

This section contains Relief Requests written in accordance with 10CFR50.55a(f)(6)(i) when specific ASME Section XI requirements for Inservice Testing of valves are considered impractical.

Relief Requests numbers are in the following format:

#### RV-NNX

Where;

- **RV:** Relief Request for Valve Inservice Testing
- NN: The first two numbers of the EPN are used for system dependent Relief Requests. The Number 00 is used for Relief Requests applying to more than one system.

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- NN = 00 General Issues 02 Reactor Recirculation/Main Steam/Feedwater
  - 03 Control Rod Drive (CRD)
  - 07 Traversing In-Core Probe (TIP)
  - 10 Shutdown Cooling
  - 11 Standby Liquid Control (SBLC)
  - 12 Reactor Water Cleanup (RWCU)
  - 13 Isolation Condenser

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14 Core Spray

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Contents of Inservice Testing Plan (Con't)

- 15 LPCI/CCSW
  - 16 Containment & Pressure Suppression
  - 19 Fuel Pool Cooling
  - 20 Radwaste (Drywell Sumps)
  - 23 High Pressure Coolant Injection (HPCI)
  - 24 Containment Atmosphere Monitor (CAM)
  - 25 Atmospheric Containment Atmosphere Dilution (ACAD)
  - 37 Reactor Building Closed Cooling Water (RBCCW)
  - 39 Diesel Cooling Water
  - 41 Fire Protection
  - 46 Service Air
  - 47 Instrument Air
  - 48 Reactor Building Equipment Drains
  - 52 Diesel Oil
  - 54 Off Gas
  - 57 Reactor Building/Control Room Ventilation
  - 66 Diesel Generator (D/G) Starting Air
  - 75 Standby Gas Treatment (SBGT)

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- 85 Process Sampling System
- 89 High Radiation Sampling System (HRSS)
- 92 Process Sampling System
- X: A unique, sequential alphabetical character used for identifying multiple Relief Requests on the same system. X = A for the first Relief Requests, B for the second ...
- 4.15 <u>SECTION 15 Valve Technical Approach and Position Index/Summaries</u> Provides a summary and the revision status of all Technical Approach and Positions related to the Inservice Testing of valves.

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#### Contents of Inservice Testing Plan (Con't)

4.16 SECTION 16 - Technical Approach and Positions, Valves This section contains the Technical Approach and Position documents provided to clarify Dresden Station's implementation of ASME Section XI requirements for Inservice Testing of valves.

Technical Approach and Position numbers are in the following format:

#### TV-NNX

- Where; TV: Technical Approach and Position for Valve Inservice Testing
  - NN: The first two numbers of the EPN are used for system dependent Technical Approach and Positions. The Number 00 is used for Technical Approach and Position applying to more than one system.

. . . .

- X: A unique, sequential alphabetical character used for identifying multiple Technical Approach and Positions on the same system. X = A for the first Technical Approach, B for the second ...
- 4.17 <u>SECTION 17 Cold Shutdown Justifications Index/Summaries</u> Provides a summary and the revision status of all Cold Shutdown Justifications.
- 4.18 <u>SECTION 18 Cold Shutdown Justifications</u> This section contains the justifications for testing valves during Cold Shutdowns.

Cold Shutdown Justification numbers are in the following format:

#### CS-NNX

- Where; CS: Cold Shutdown Justification for Valve Inservice Testing
  - NN: The first two numbers of the EPN are used for system dependent Cold Shutdown Justifications. The Number 00 is used for Cold Shutdown Justifications applying to more than one system.
  - X: A unique, sequential alphabetical character used for identifying multiple Cold Shutdown Justifications on the same system. X = A for the first Cold Shutdown Justification, B for the second ...

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#### 5. Pump Format Legend

The following abbreviations are used in the Pump Listing (Sections 5 & 6):

FIELD DESCRIPTION

PUMP EPN Pump equipment part number as used on the P&ID. To differentiate between units, the pump EPN is prefixed with "2-" or "3-" for Units 2 and 3 respectively and with "2/3-" for a pump which is common to both units.

DESCRIPTION Pump work description and name.

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CLASS

- ASME Code Class 2.
   ASME Code Class 3.
- SR Non ASME Code Class 1, 2, or 3, but is Safety-Related.

ASME Code Class 1.

NSR Non ASME Code Class 1, 2, or 3, and Non Safety-Related.

PID

Piping and Instrumentation Drawing (P&ID) Number. All drawing numbers are prefixed with "M". Sheet numbers follow the drawing number.

CORD Pump location on the P&ID.

**TEST TYPES:** 

- N Speed of pump to be measured. N/A Not applicable for pumps that are either synchronous or induction motor driven.
- $P_d$  Discharge pressure of pump to be measured.
- $\Delta P$  Differential pressure of pump to be measured.

Q Flow rate of pump to be measured.

V Vibration amplitude and velocity of pump to be measured.

RELIEF

REQUEST Relief Request associated with a particular test.

#### INTRODUCTION AND PLAN DESCRIPTION

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# Pump Format Legend (Con't)

#### TECHNICAL

POSITION Technical Approach and Position associated with a particular test.

# 6. <u>Valve Format Legend</u>

The following abbreviations are used in the Valve Listings (Sections 11 & 12):

FIELD	DESCRIPTION							
VALVE EPN	Valve equipment part number as used on the P&ID and in the IST Program. To differentiate between units, the valve EPN is prefixed with "2-" or "3-" for units 2 and 3 respectively and with "2/3-" for a valve which is common to both units.							
SIZE	Nominal size of valve in inches.							
PID	Piping and Instrumentation Drawing (P&ID) Number. All drawing numbers are prefixed with "M". Sheet numbers follow the drawing number.							
CORD	Valve location on the P&ID.							
CLS	<ol> <li>ASME Code Class 1.</li> <li>ASME Code Class 2.</li> <li>ASME Code Class 3.</li> <li>SR Non ASME Code Class 1, 2, or 3, but is Safety-Related.</li> <li>NSR Non ASME Code Class 1, 2, or 3, and Non Safety-Related.</li> </ol>							
CAT	<ul> <li>A ASME Valve Category A.</li> <li>B ASME Valve Category B.</li> <li>C ASME Valve Category C.</li> <li>D ASME Valve Category D.</li> <li>AC Falls in both Categories A and C</li> <li>BC Falls in both Categories B and C</li> </ul>							
VALVE TYPE	BTFButterflyCKCheckERVElectromatic ReliefFCVFlow Control ValveGAGateGLGlobe%%RPDRupture Diaphragm							

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# Valve Format Legend (Con't)

r Operated tplosive Actuated anual otor Operated If Actuated lenoid Operated alve is normally open during power operations 1% power with mode switch in RUN) alve is normally closed during power operations 1% power with mode switch in RUN)
alve is normally open during power operations 1% power with mode switch in RUN) alve is normally closed during power operations 1% power with mode switch in RUN)
alve stroke exercise is to the Open position alve stroke exercise is to Closed position alve stroke exercise is to both the Open and to the Closed sitions
ctive valve. This valve is required to change its position accomplish its safety-related function. ssive valve. This valve is not required to change its sition to accomplish its safety-related function.
alve seat leakage tested per Appendix J of 10 CFR 50 and resden Technical Specification Sections 3.7 and 4.7 ontainment Systems). Ill stroke exercise which includes measurement of stroke mes from switch to light. neck valve exercise open neck valve exercise closed fety valve, relief valve, and rupture disk tests per ASME

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Valve Format Legend (Con't)

TEST SCHED	<ul> <li>OP Tested Quarterly during normal operation.</li> <li>CS Tested during Cold Shutdown.</li> <li>RR Reactor refueling. For PIT, AT and DT tests, test frequency shall be at least once every 2 years.</li> <li>SAM Sampling Plan Technique</li> <li>5Y 5 Year Interval</li> <li>10Y 10 Year Interval</li> </ul>						
REL REQ	A relief request number is listed when a specific ASME Code requirement is determined to be impractical.						
TECH POS.	A Technical Approach and Position is listed when the requirements of the Code are not easily interpreted.						
CS JUST	A Cold Shutdown Justification is listed when stroking a valve during normal operations is determined to be impractical.						

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# **P&ID LISTING** (SORTED BY SYSTEM NAME) (Page 1 of 2)

SYSTEM	Unit 2 P&ID	Unit 3 P&ID
Atmospheric Containment Atmosphere Dilution (ACAD System)	M-707, SH. 1	M-707, SH. 2
Containment Air Sampling		M-1240
Containment Atmosphere Monitor (CAM System)	M-706, SH. 1	M-706, SH. 2
Control Rod Drive Hydraulic Piping (CRD System)	M-34	M-365
Control Room Ventilation (HVAC)	M-3121	M-3121
Core Spray (CS System)	M-27	M-358
Diesel Start-up Air Piping	M-173	M-173
Fuel Pool Cooling (FPC System)	M-31	M-362
High Pressure Coolant Injection (HPCI System)	M-51	M-374
High Radiation Sampling System (HRSS)	M-1234, SH. 1	M-1239, SH. 1
Instrument Air	M-37, SH. 2	M-367, SH. 2
Isolation Condenser	M-28	M-359
Low Pressure Coolant Injection (LPCI System)	M-29, SH. 1	M-360, SH. 1
Containment Cooling Service Water (CCSW System)	M-29, SH. 2	M-360, SH. 2
Main Steam	M-12, SH. 1 & 2	M-345, SH 1 & 2
Nuclear Boiler & Reactor Recirculation (Recirc System)	M-26, SHs. 1 - 3	M-357, SHs 1 - 3
Offgas	M-43, SH 1	M-371 - SH. 1

# P&ID LISTING (Con't) (SORTED BY SYSTEM NAME) (Page 2 of 2)

SYSTEM	Unit 2 P&ID	Unit 3 P&ID
Pressure Suppression	M-25	M-356
Reactor Building Closed Cooling Water (RBCCW System)	M-20	M-353
Reactor Building Equipment Drains	M-39	M-369
Reactor Building Ventilation	M-269	M-529
Reactor Feedwater (FW)	M-14	M-347
Reactor Water Clean-up (RWCU System)	M-30	M-361
Service Water (Diesel Generator Cooling Water also)	M-22	M-355
Shutdown Cooling (SDC System)	M-32	M-363
Standby Gas Treatment (SBGT System)	M-49	M-49
Standby Liquid Control (SBLC System)	M-33	M-364
Turbine & Diesel Oil	M-41, SH. 2	M-41, SH 2

(4-2)

#### CLASS 1, 2, & 3 PUMP LISTING PAGE 1 OF 7

NotE: All pumps are tested quarterly.

DESCRIPTION	CLASS	PID	COOR	TEST TYPE*	RELIEF REQUEST	TECHNICAL POSITION
				N-N/A		
				P <sub>d</sub>		
				۵P		
2A SBLC	2	29	E3	Q		
				v	RP-11B	
				N-N/A		
				P <sub>d</sub>	and the second	
				۵P	e H H H L <u>u u u u u u u u u u u u u u u u u u u</u>	a fan mei a transferinge fan state a fan state fan state fan state fan state fan state fan state state state s
2B SBLC	2	29	E7	Q		
				v	RP-11B	
				N-N/A		
		in an su	na na shi na na sa s	Pd	مى م	
				۵P		
2A CORE SPRAY	2	27	D9	Q		
				v		
	-			N-N/A		
				P <sub>d</sub>		
				۵P		
2B CORE SPRAY	2	27	E7	Q		
				v		
				N-N/A		
				P <sub>d</sub>		
				۵P		
2A CCSW	3	29	D10	Q		
			· ·, .	V .		
	DESCRIPTION 2A SBLC 2B SBLC 2A CORE SPRAY 2B CORE SPRAY 2A CCSW	DESCRIPTION CLASS	DESCRIPTIONCLASSPID2A SBLC2292B SBLC2292A CORE SPRAY2272B CORE SPRAY2272A CCSW329	DESCRIPTION CLASS PID COOR   2A SBLC 2 29 E3   2B SBLC 2 29 E7   2A CORE SPRAY 2 27 D9   2B CORE SPRAY 2 27 E7	DESCRIPTION         CLASS         PID         COOR         TEST TYPE*           N-N/A         Pd         AP           2A SBLC         2         29         E3         Q           2A SBLC         2         29         E3         Q           2B SBLC         2         29         E7         Q           2B SBLC         2         29         E7         Q           2A CORE SPRAY         2         27         D9         Q           2B CORE SPRAY         2         27         D9         Q           2B CORE SPRAY         2         27         E7         Q           2A CORE SPRAY         2         27         E7         Q           2A CORE SPRAY         2         27         E7         Q           2A CORE SPRAY         2         27         E7         Q           24         27         E7         Q         V           24         27         E7         Q         Q           24         3         29         D10         Q         V	DESCRIPTION     CLASS     PID     COOR     TEST TYPE*     RELIEF REQUEST       DESCRIPTION     CLASS     PID     ON-N/A

N - SPEED,  $P_d$  - DISCHARGE PRESSURE,  $\Delta P$ Q = FLOW, V = VIBRATION.

1.5.

# CLASS 1, 2, & 3 PUMP LISTING PAGE 2 OF 7

TE: All pumps are tested quarterly. N

PUMP EPN	DESCRIPTION	CLASS	PID	COOR	TEST TYPE*	RELIEF REQUEST	TECHNICAL POSITION
					N-N/A		
					P <sub>d</sub>		
					۵P		
2-1501-44B	2B CCSW	3	29	C10	Q	•	
					v		
					N-N/A		
					P <sub>d</sub>	· · · · · · · · · · · · · · · · · · ·	
					۸P		
2-1501-44C	2C CCSW	3	29	<b>B</b> 10	Q		
					v		
					N-N/A		
				• • • • • • • •	P <sub>d</sub>		
	· · · · · · · ·		st. 4	e al varia e	* <b>^P</b>		
2-1501-44D	2D CCSW	3	29	F3	Q		
					v	·	
					N-N/A		
					P <sub>d</sub>		
					۵P		
2-1502A	2A LPCI	2	29	F7	- <b>Q</b> 4≱		
					<b>V</b>		
					N-N/A	· · ·	
					Pd		
					۵P		
2-1502B	2B LPCI	2	29	E3	Q		
					V .		
* TEST TYPE:	N - SPEED, $P_d$ - DISCHARGE P O = FLOW, V = VIBRATION.	RESSURE, ▲P	= DIFFER	ENTIAL PRESSU	IRE,	· ·	<u>,</u>

# CLASS 1, 2, & 3 PUMP LISTING PAGE 3 OF 7

TE: All pumps are tested quarterly. N

PUMP EPN	DESCRIPTION	CLASS	PID _	COOR	TEST TYPE*	RELIEF REQUEST	TECHNICAL POSITION
					N-N/A		
					P <sub>d</sub>		
					۵P		
2-1502C	2C LPCI	2	29	<b>E3</b>	Q		
					v		
					N-N/A		
					P <sub>d</sub> .		
					هه. <b>⊿P</b>	o, so co contenta da seta ny so te	E avan e e
2-1502D	2D LPCI	2	29	F3	Q		
				· ·	V		
	,				N		
					P <sub>d Na</sub>		
	· ·	• .			۵P	u <b>r</b> . ,	· ·
2-2302	HPCI	2	51	A5	Q		
					v	, 	
				······	N-N/A		
				·	P <sub>d</sub>		
					۵P		
2-3903	DIESEL COOLING	3	22	B10	Q	· · · · · · · · · · · · · · · · · · ·	
					v		
			· ·		N-N/A	an a	
		-			P <sub>d</sub>		
					۵P		
2/3-3903	DIESEL COOLING	3	355	A10	Q	-	· · · · · ·
					<b>v</b>		
• TEST TYPE:	N - SPEED, $P_d$ - DISCHARGE Q = FLOW, V = VIBRATION	. PRESSURE, ∆P N.	= DIFFE	RENTIAL PRESSU	JRE,	· · · · · · · · · · · · · · · · · · ·	<u> </u>

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# CLASS 1, 2, & 3 PUMP LISTING PAGE 4 OF 7

NOTE: All pumps are tested quarterly.

PUMP EPN	DESCRIPTION	CLASS	PID	COOR	TEST TYPE*	RELIEF REQUEST	TECHNICAL POSITION
					N-N/A		
					P <sub>d</sub>		میں بیان کا بین میں بین میں وروز دولا ہوتا ہے۔ اور
					۵P	RP-14A	
2-1401-4	ECCS KEEP FILL	2	27	E8	Q	RP-14A	
					v		
					N-N/A		
					Pd		
					۵P		
3-1102A	3A SBLC	2	364	D7	Q		
					v	RP-11B	
					N-N/A		
					P <sub>d</sub>		
					۸P		
3-1102B	3B SBLC	2	364	E7	Q		
	· · · · · · · · · · · · · · · · · · ·				v	* RP-11B	
					N-N/A		
					P <sub>d</sub>		
					۸P	、	
3-1401A	3A CORE SPRAY	2	358	E7	<b>Q</b> .		
					V		
	,				N-N/A		
					P <sub>d</sub>		
					۵P		
3-1401B	<b>3B CORE SPRAY</b>	2	358	E9	Q		
					v		

\* TEST TYPE: N - SPEED,  $P_d$  - DISCHARGE PRESSURE,  $\Delta P$  = DIFFERENTIAL PRESSURE, Q = FLOW, V = VIBRATION.

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#### CLASS 1, 2, & 3 PUMP LISTING PAGE 5 OF 7

NOTE: All pumps are tested quarterly.

PUMP EPN	DESCRIPTION	CLASS	PID	COOR	TEST TYPE*	RELIEF REQUEST	TECHNICAL POSITION
					N-N/A	, i	
					P <sub>d</sub>	the second of the second se	
					۸P		
3-1501-44A	3A CCSW	3	360	A10	Q		
					v		
					N-Ŋ/A		
					P <sub>d</sub>		
					۵P	entres conservations entres conservations	· · · · · · · · · · · · · · · · · · ·
3-1501-44B	3B CCSW	3	360	A10	Q		
					v		
				-* • ·	N-N/A		
	· · · ·				P <sub>d</sub>		
					۵P		
3-1501-44C	3C CCSW	3	360	C10	<b>Q</b> , <sup>9</sup>	;	
					v		
					N-N/A		
					P <sub>d</sub>		
					۵P		
3-1501-44D	3D CCSW	3	360	D10	Q		
					<b>V</b> .		
					N-N/A		
					P <sub>d</sub>		
					۵P		
3-1502A	3A LPCI	2	360	E3	Q		
				•	v		

Q = FLOW, V = VIBRATION.

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#### CLASS 1, 2, & 3 PUMP LISTING PAGE 6 OF 7

NOTE: All pumps are tested quarterly.

PUMP EPN	DESCRIPTION	CLASS	PID	COOR	TEST TYPE*	RELIEF REQUEST	TECHNICAL POSITION
					N-N/A	· · · · · ·	
					P <sub>d</sub>		
					۵P		
3-1502B	3B LPCI	2	360	F3	Q		
	· · · · · · · · · · · · · · · · · · ·				V		
					N-N/A		
					P <sub>d</sub>		
					۸P	\$ 	•
3-1502C	3C LPCI	2	360	E7	Q		
					v		
					N-N/A		
			۰.	• • •••• •• •• •• •• •• •• •• •• •• ••	P <sub>d</sub>	an en ange d	
					۵P		
3-1502D	3D LPCI	2	360	F7	Q		
					v		
					N		
					P <sub>d</sub>		
	· · ·				۸P		
3-2302	HPCI	2	374	A5	Q		
					V		
					N-N/A		
					P <sub>d</sub>		
					۵P		
3-3903	DIESEL COOLING	3	355	B10	Q		
				•	v		
• TEST TYPE:	N - SPEED, P DISCHARGE F	RESSURE. AP	= DIFFE	RENTIAL PRESSU	JRE.		·

N - SPEED,  $P_d$  - DISCHARGE PRE: Q = FLOW, V = VIBRATION.

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#### CLASS 1, 2, & 3 PUMP LISTING PAGE 7 OF 7

NOTE: All pumps are tested quarterly.

PUMP EPN	DESCRIPTION	CLASS	PID	COOR	TEST TYPE*	RELIEF REQUEST	TECHNICAL POSITION
					N-N/A		
					P <sub>d</sub>		
					۸P	RP-14A	
3-1401-4	ECCS KEEP FILL	2	358	E8	Q	RP-14A	
					v		

\* TEST TYPE: N - SPEED,  $P_4$  - DISCHARGE PRESSURE,  $\Delta P$  = DIFFERENTIAL PRESSURE, Q = FLOW, V = VIBRATION.

Revision 3

#### AUGMENTED PUMP LISTING PAGE 1 OF 2

NOTE: All pumps are tested quarterly.

PUMP EPN	DESCRIPTION	CLASS	PID	COOR	TEST TYPE*	RELIEF REQUEST	TECHNICAL POSITION
					N-N/A		
					P <sub>d</sub>	and a second sec	
					۵P		TP-19A
2-1902-A	2A FUEL POOL	NSR	31	2E	Q		TP-19A
	COOLING				v		
					N-N/A		
					Pd		
					۵P		TP-19A
2-1902-В	2B FUEL POOL	NSR	31	2F	Q		.TP-19A
	COOLING		· •	, 1 A., (	v		
					N-N/A		
				<u>-</u> .	P <sub>d</sub>	· · ·	TP-52A
					۵P		
2-5203	DIESEL OIL	SR	41	E6	Q		
	TRANSFER				v		
					N-N/A		
					P <sub>d</sub>	an a	
					۵P		TP-23A
2-2303-AOP	UNIT 2 HPCI AUX	SR	NA	NA	<b>Q</b> <sup>7</sup>		TP-23A
	LUBE OIL PUMP				<b>V</b> :		
					N-N/A		
					Pd		TP-52A
					۵P		
2/3-5203	DIESEL OIL	SR	41	D2	Q	· ·	
	TRANSFER				v		
• TEST TYPE:	N - SPEED, $P_4$ - DISCHARGE Q = FLOW, V = VIBRATION	PRESSURE, AP	= DIFFE	RENTIAL PRESSU	RE,		

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#### AUGMENTED PUMP LISTING PAGE 2 OF 2

NOTE: All pumps are tested quarterly.

PUMP EPN	DESCRIPTION	CLASS	PID	COOR	TEST TYPE*	RELIEF REQUEST	TECHNICAL POSITION
					N-N/A		
					P <sub>d</sub>	-	
					۵P		TP-19A
3-1902-A	3A FUEL POOL	NSR	362	2E	Q		TP-19A
					v		
		1			N-N/A		
					P <sub>d</sub>		
					Δ <b>Ρ</b>		TP-19A
3-1902-В	3B FUEL POOL	NSR	362	2F	Q		TP-19A
			era er 12	3 P.S. 40 0 7.5	<b>V</b>		
				• • • • • •	N-N/A		
					P <sub>d</sub>		TP-52A
					<b>▲P</b> ,		
3-5203	DIESEL OIL	SR	41	B6	Q	· · · · · · · · · · · · · · · · · · ·	
	I KANSFEK			·····	<b>v</b>		
					N-N/A		TP-23A
					P <sub>d</sub>		
					۸P		TP-23A
3-2303-AOP	UNIT 3 HPCI AUX	SR	NA	NA	Q		TP-23A
	LUBE OIL PUMP				v		

PE: N - SPEED,  $P_4$  - DISCHARGE PRESSURE,  $\Delta P$  = DIFFERENTIAL PRESSURE, Q = FLOW, V = VIBRATION.



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# PUMP RELIEF REQUEST INDEX/SUMMARIES

Relief Request	Page(s)	Rev.	Date	Summary
RP-00A	NA	3	08/95	Relief Request Deleted, SBLC specific information moved to Relief Request RP-11B.
RP-00B	NA	3	08/95	Relief Request Deleted.
RP-11A	NA	3	08/95	Relief Request Deleted.
RP-11B	8-1	3	08/95	SBLC Pumps Vibration Monitor Frequency Response.
RP-14A	8-2	3	08/95	ECCS Keep Fill Pumps Hydraulic parameters will not be established or measured.
RP-19A	NA	3	08/95	Converted to Technical Approach and Position TP-19A.
RP-23A	NA	3	08/95	Relief Request deleted.
RP-52A	NA	3	08/95	Converted to Technical Approach and Position TP-52A.

Revision 3

# RELIEF REQUEST NUMBER RP-11B

(Page 1 of 1)

# **DESCRIPTION**

Frequency response range of vibration monitoring equipment for the Standby Liquid Control (SBLC) pumps.

## **COMPONENT IDENTIFICATION/FUNCTION**

PUMP	<u>CLASS</u>	P&ID <u>CORD</u>	FUNCTION
2-1102A	2	33/D7	Standby Liquid Control Pump
2-1102B	2	33/E7	Standby Liquid Control Pump
3-1102A	2	364/D7	Standby Liquid Control Pump
3-1102B	2	364/E7	Standby Liquid Control Pump

# CODE REQUIREMENT(S)

ANSI/ASME OMa-1988 PART 6 Paragraph 4.6.1.6 Frequency Response Range: The frequency response range of the vibration measuring transducers and their readout system shall be from one-third minimum pump shaft rotational speed to at least 1000 Hz.

## **BASIS FOR RELIEF**

The SBLC pumps operate at 420 rpm. The frequency response range requirement of ASME (1/3 minimum pump shaft rotational speed for low frequency) for these pumps is 2.3 Hz to 1000 Hz. Dresden Station has 2 vibration measurement systems. One covers 1 Hz to 500 Hz. the other covers 5 Hz to 10K Hz. The vibration results from the two response ranges cannot be added together to provide significant meaning. Commonwealth Edison's vibration analysis experts have determined that information provided by vibration analysis below 5 Hz may be of some value while above 500 Hz for slowly rotating pumps provides no significant indication of degradation.

A review of failure types shows that the failure which would occur at the highest frequency would be a bearing failure. The ball pass inner frequency at the first harmonic for the bearings in the SBLC pumps is 83.6 Hz and the frequency is still only 334.4 Hz at the fourth harmonic. Taking readings past the fourth harmonic will be of little or no benefit. Therefore, developing equipment and methodologies to determine vibration measurements at frequencies above 500 Hz places additional cost and burden on the utility without a corresponding increase in plant safety.

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#### **ALTERNATIVE TEST**

The vibration measurements of the SBLC pumps will only be analyzed for IST purposes below 500 Hz.

#### RELIEF REQUEST NUMBER RP-14A (Page 1 of 1)

#### DESCRIPTION

Relief is requested from establishing and measuring differential pressure and flow rate.

#### **COMPONENT IDENTIFICATION/FUNCTION**

PUMP	CLASS	P&ID CORD	FUNCTION
2-1401-4	2	27/E8	Unit 2 ECCS Keep Fill Pump
3-1401-4	2	358/E8	Unit 3 ECCS Keep Fill Pump

#### CODE REQUIREMENT(S)

OMa-1988, Part 6, Section 5.2:

An inservice test shall be conducted with the pump operating at specified test reference conditions. The differential pressure and flow rate will be measured.

#### **BASIS FOR RELIEF**

Instrumentation does not exist for measuring pressures or flow rates. Pump output varies with system operation and with system leakage. Establishing set flow rates for vibration measurement purposes is not practicable. System modification to provide test measuring locations and a standard test flow path places undue burden on the utility without demonstrating any increase in the level of plant safety. These pumps are in continuous operation.

The Condensate Transfer system provides an additional non-Safety Related source of water for maintaining the ECCS pump discharge headers in a filled condition.

#### **ALTERNATIVE TEST**

Vibration measurements will be taken under normal operating conditions. Additionally, the LPCI and Core Spray systems are vented prior to each pump run and these systems have alarms that indicate if the discharge lines are not maintained full which gives further indication that the system is performing acceptably.

# PUMP TECHNICAL APPROACH AND POSITIONS INDEX/SUMMARIES (Page 1 of 1)

Technical Approach & Position	Paga(s)	Day	Data	Summore
Position	Fage(S)	Kev.	Date	
TP-00A	NA	3	08/95	Deleted.
TP-00B	NA	3	08/95	Deleted.
TP-19A	10-1	3	08/95	Fuel Pool Cooling Pumps Hydraulic parameters will not be set due to system requirements.
TP-23A	10-2	3	08/95	HPCI Aux Oil Pump Hydraulic parameters will not be set or measured.
TP-52A	10-3	3	08/95	Diesel Fuel Oil Transfer Pump Suction pressure, differential pressure, and flow rate will not be measured.

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**Revision 3** 

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#### **TECHNICAL APPROACH AND POSITION NUMBER TP-19A**

(Page 1 of 1)

#### DESCRIPTION

Hydraulic parameters of the fuel pool cooling pumps will not be set due to the system requirements, shifting of the operating pumps will not be performed solely for the collection of IST data.

PUMP	CLASS	CORD	FUNCTION
2-1902-A	NSR NSP	31/2E 31/2E	2A Fuel Pool Cooling Pump 2B Fuel Pool Cooling Pump
2-1902-В 3-1902-А	NSR	362/2E	3A Fuel Pool Cooling Pump
3-1902-В	NSR	362/2F	3B Fuel Pool Cooling Pump

DOTO

#### DISCUSSION

These pumps are required to circulate fuel pool water through the fuel pool heat exchangers, filter, and demineralizers. The system flow is maintained between 450 to 550 gpm through the use of a flow control valve and the pump discharge pressure would vary according to the cleanliness of the fuel pool filters. This flow can be maintained as long as the differential pressure across the fuel pool filters is between 1 and 30 psid. The pumps will trip on low suction pressure (< 6 psig) and low discharge pressure (< 100 psig).

Since the hydraulic parameters are dependent upon the system, i.e. differential pressure across the filters, it is impractical to determine pump performance using hydraulic parameters. The fuel pool cooling system is in continuous operation and is monitored by operations personnel. Shifting pumps causes unnecessary transients on the system including loss of the filter precoats, with no corresponding increase in the level of safety due to additional testing.

#### **POSITION**

Pump vibration measurements will be taken quarterly on the operating pump.

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#### **TECHNICAL APPROACH AND POSITION NUMBER TP-23A**

(Page 1 of 1)

#### **DESCRIPTION**

Standardized hydraulic flow path and parameters will not be established, and measurements of hydraulic values will not be collected.

PUMP	CLASS	P&ID CORD	FUNCTION
2-2303-AOP	SR	NA	HPCI Aux Lube Oil Pump
3-2303-AOP	SR	NA	HPCI Aux Lube Oil Pump

#### DISCUSSION

The HPCI Auxiliary Lube Oil Pumps do not have suction or discharge pressure gauges, or flow gauges. Therefore, collection of this information cannot be performed. System modification to collect this information would place undue burden on the station without achieving a commensurate level of performance monitoring capability beyond normal operations.

#### **POSITION**

Vibration measurements will be taken while the system is in operation.

#### **TECHNICAL APPROACH AND POSITION NUMBER TP-52A**

(Page 1 of 1)

#### **DESCRIPTION**

Flow rate will not be measured.

PUMP	CLASS	P&ID CORD	FUNCTION
2-5203	SR	41-2/E6	Diesel Fuel Oil Transfer Pump
2/3-5203	SR	41-2/D2	Diesel Fuel Oil Transfer Pump
3-5203	SR	41-2/B6	Diesel Fuel Oil Transfer Pump

#### DISCUSSION

The Diesel Fuel Oil Transfer Pumps are positive displacement gear type pumps that operate at a constant speed. The pumps discharge into the top of a vented tank. The discharge piping is not provided with flow measuring devices. Measuring flow rate by change in tank level is not accurate enough to provide useful information. Modification of this system to install accurate flow rate instrumentation places unnecessary burden on the utility without providing any significant improvement in monitoring pump performance or degradation, and leads to no increase in plant safety.

#### **POSITION**

Vibration measurements will be taken and discharge pressure will be observed. Pump discharge capacity will be verified to be adequate to fill the day tank while the diesel is operating.

DRESDEN STATION 3RD INTERVAL INSERVICE TESTING PLAN

#### CLASS 1, 2 & 3 VALVE LISTING

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	nor Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST	
2- <del>0</del> 202-5A	28	26-2	6D	1	<b>B</b>	GA	nd	0	C	A	BT PIT	CS RR			CS-02A	
2A RECI	RC PUMP	DISCH	ARGE													
2-0202-5B	28	26-2	3C	1	B	GA	MO	0	C	A	BT PIT	CS RR			CS-02A	
2B RECI	rc pump	DISCH	ARGE							ورور خار دار						
2-0203-1A Main Sti	20 Ean Isol	12-1 Ation	4E VALVE	i	A	GL	A0	0	C	<b>A</b>	AT BT FST PIT	RR OP CS RR	RV-00A RV-02H RV-02H		CS-02B	
2-0203-1B Hain Sti	20 EAM ISOL	12-1 ATION	.4D VALVE	1	A	GL	AO	0	C	A	AT Bt FSt PIT	RR OP CS RR	RV-00A RV-02H RV-02H		CS-02B	
2-0203-1C	20	12-1	40	1	<b>A</b>	GL	AO .	0	с.	A	AT BT FST PIT	RR OP CS RR	RV-00A RV-02H RV-02H		С5-02в	
			VALVC												به چین و بر اور اور دو به ها که او	
-0203-1D	20	12-1	4B	t	Â	GL .	AO	0	<b>C</b>	A .	AT BT FST PTT	RR OP CS RR	R∀-00A RV-02H RV-02H		CS-02B	
HAIN ST	EAN ÌSOI	ATION	VALVE													

TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

DRESDEN STATION 3RD INTERVAL INSERVICE TESTING PLAN

#### CLASS 1, 2 & 3 VALVE LISTING

#### SYSTEM: RX RECIRC/MAIN STEAK/FEEDWATER

2-6203-2A       20       12-2       7F       1       A       GL       A0       0       C       A       AT       RR P       RV-62A RV-62H       RV-62A RV-62H       CS-62B         MAIN STEAH ISOLATION VALVE       2-0203-2B       29       12-2       7E       1       A       GL       A0       0       C       A       AT       RR PIT       RV-62A RV-62H       CS-62B         MAIN STEAH ISOLATION VALVE       2-0203-2C       20       12-2       7D       1       A       GL       A0       0       C       A       AT       RR BT BT CS       RV-62A RV-62H       CS-62B         MAIN STEAH ISOLATION VALVE       2-0203-2C       20       12-2       7D       1       A       GL       A0       0       C       A       AT       RR RT RV-62H       RV-62H RV-62H       CS-62B         MAIN STEAN ISOLATION VALVE       2-0203-2D       20       12-2       7C       1       A       GL       A0       0       C       A       AT       RR RV-62H       RV-62A RV-62H       CS-62B         MAIN STEAN ISOLATION VALVE       2-0203-3A       6       12-1       7F       1       AC       AO       0 <t< th=""><th>EPN</th><th>SIZE</th><th>PID</th><th>CORD</th><th>CLS</th><th>CAT</th><th>VALVE Tyfe</th><th>act Type</th><th>nor Pos</th><th>STR DIR</th><th>A/?</th><th>TEST</th><th>TEST Sched</th><th>REL REQ</th><th>TECH POS.</th><th>CS JUST</th></t<>	EPN	SIZE	PID	CORD	CLS	CAT	VALVE Tyfe	act Type	nor Pos	STR DIR	A/?	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST
2-0203-28       20       12-2       7E       1       A       GL       A0       0       C       A       AT       RR       RV-00A       RV-02H       RV-02H       RV-02H       CS-02B         MAIN STEAM ISOLATION VALVE       2-0203-2C       20       12-2       7D       1       A       GL       A0       0       C       A       AT       RR       RV-00A       RV-02H       CS-02B         MAIN STEAM ISOLATION VALVE       2-0203-2C       20       12-2       7D       1       A       GL       A0       0       C       A       AT       RR       RV-00A       BT       DP       RV-02H       CS-02B         MAIN STEAM ISOLATION VALVE       2-0203-2D       20       12-2       7C       1       A       GL       A0       0       C       A       AT       RR       RV-02H       RV-02H       RV-02H       ST-02B       RV-02H       RT       RR       RV-02H       RV-02H       CS-02B       RV-02H       CS-02B       RT       RR       RV-02H       CS-02B       RT       RR       RV-02A       RT       RR       RV-02A       RT       RR       RV-02A       RT       RR       RV-02A       RT       RR <t< td=""><td>2-0203-2A Main Sti</td><td>20 Eam Iso</td><td>12-2 LATION</td><td>7F VALVE</td><td>i</td><td>A</td><td>GL</td><td>AD</td><td>.0</td><td>C</td><td>A .</td><td>AT BT FST PIT</td><td>RR OP CS RR</td><td>RV-00A RV-02H RV-02H</td><td></td><td>CS-02B</td></t<>	2-0203-2A Main Sti	20 Eam Iso	12-2 LATION	7F VALVE	i	A	GL	AD	.0	C	A .	AT BT FST PIT	RR OP CS RR	RV-00A RV-02H RV-02H		CS-02B
2-0203-2C       29       12-2       7D       1       A       GL       AO       0       C       A       AT       RR       RV-00A         BT       OP       RV-02H       FST       CS       RV-02H       CS-02B         MAIN STEAM ISOLATION VALVE       2-0203-2D       20       12-2       7C       1       A       GL       AO       0       C       A       AT       RR       RV-00A         BT       OP       RV-02H       CS-02B       RV-02H       CS-02B       RV-02H       CS-02B         HAIN STEAM ISOLATION VALVE       AO       0       C       A       AT       RR       RV-00A         2-0203-3A       6       12-1       7F       1       BC       TRV       AO/SA       C       O       A       BT       RR       RV-02A         2-0203-3A       6       12-1       7F       1       BC       TRV       AO/SA       C       O       A       BT       RR       RV-02A         2-0203-3A       6       12-1       7F       1       BC       ERV       SO       C       O       A       BT       RR       RV-02A         2-0203-3B       6	2-0203-2B Main Sti	20 Eam iso	12-2 LATION	7E VALVE	1	A	GL	AD	0	C	A	AT BT FST PIT	RR OP CS RR	RV-00A RV-02H RV-02H		CS-02B
2-0203-2D       20       12-2       7C       1       A       GL       AO       0       C       A       AT       RR       RV-00A         BT       DF       RV-02H       FST       CS       RV-02H       CS-02B         MAIN STEAH ISOLATION VALVE       PIT       RR         2-0203-3A       6       12-1       7F       1       BC       TRV       AO/SA       C       O       A       BT       RR       RV-02A         STOR         2-0203-3A       6       12-1       7F       1       BC       TRV       AO/SA       C       O       A       BT       RR       RV-02A         Z-0203-3A       6       12-1       7F       1       BC       TRV       AO/SA       C       O       A       BT       RR       RV-02A         STOR       A       12-1       7F       1       BC       ERV       SO       C       O       A       BT       RR       RV-02A         Z       -0203-3B       6       12-1       7E       1       BC       ERV       SO       C       O       A       BT       RR       RV	2-0203-2C Main Sti	20 Ean Iso	12-2 LATION	7D 7D VALVE	1	A	GL	AO	0	С	A	AT BT FST PIT	RR OP CS RR	RV-00A RV-02H RV-02H		CS-02B
2-0203-3A 6 12-1 7F 1 BC TRV AO/SA C O A BT RR RV-02A RT RR PIT RR 3A TARGET ROCK RELIEF/SAFETY VALVE 2-0203-3B 6 12-1 7E 1 BC ERV SO C O A BT RR RV-02A RT RR PIT RR	2-0203-2D Main Stu	20 Ean Iso	12-2 LATION	7C 7C VALVE	1	A	GL	AO	0	С	A	AT BT FST PIT	RR OF CS RR	RV-09A RV-02H RV-02H		CS-02B
3A TARGET ROCK RELIEF/SAFETY VALVE 2-0203-3B 6 12-1 7E 1 BC ERV SO C O A BT RR RV-02A RT RR PIT RR	2-0203-3A	6	12-1	7F	1	BC	TRV	AO/SA	C	0	A	BT RT PIT	RR RR RR	RV-02A		
2-0203-3B 6 12-1 7E 1 BC ERV SO C 0 A BT RR RV-02A RT RR PIT RR	3A TARGI	ET ROCK	RELIEF	/SAFET	Y VA	LVE										
•	2-0203-3B	6	12-1	7E	i	BC	ERV	S0	C	0	A	BT Rt Pit	RR RR RR	RV-02A		
3B ELECTROMATIC RELIEF VALVE	3B ELECT	ROHATI	C RELIE	F VALV	E			• • • • • • • • • •								

TEST -SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

DRESDEN STATION 3RD INTERVAL INSERVICE TESTING PLAN

#### CLASS 1, 2 & 3 VALVE LISTING

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT TYPE	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST	 	
2-0203-3C	6	12-1	70	1	RC	ERV	SO	C	0	A	BT RT PIT	RR RR RR	RV-02A				
3C ELEC	TROMATI		EF VAL	VE												 	
2 <del>-0</del> 203-3D	6	12-1	7B	1	BC	ER¥	SO	C	0	A	BT RT PIT	RR RR RR	RV-02A				
3D ELEC	TROMATI	C RELIE	EF VAL	VE												 	
2-0203-3E	6	12-1	6E	<b>1</b>	BC	ERV	<b>SO</b> .	C	0	<b>A</b>	BT RT PIT	RR RR RR	RV-02A				
3E ELEC	TROMATIO	C RELIE	F VAL	/E						•	•						
2-0203-4A	6	12-1	88	1	.C	SV	SA	C	0	A	RT	5Y					
NAIN ST	ean safi	ETY VAL	.VE													 	
2-0203-4B	6	12-1	8E	i	3	SV <sup>.</sup>	SA	C .	0	A	RT	5Y					
MAIN ST	eam safi	ETY VAL	.VE		• .											 	
2-0203-4C	6	12-1	80	١	C	SV	SA	C	0	A	RT	5Y					
MAIN ST	ean Safi	ETY VAL	.VE														
								100								 	

RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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**REVISION 3**
## CLASS 1, 2 & 3 VALVE LISTING

#### SYSTEN: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	ACT Type	NOR Pos	STR DIR	a/p	TEST	TEST SCHED	REL REQ	TECH POS.	CS Just	 		•
2-0203-4D	6	12-1	8D	1	C	SV	SA	C	0	A .	RT	5Y	. •					
MAIN S	Steam Saf	ETY VA	LVE															***
2-0203-4E	6	12-1	80	1	C	SV	SA	Ç	0	A	RT	5Y						•
MAIN S	tean saf	ETY VAL	.VE													 		
2-0203-4F	6	12-1	80	1	C	SV	SA .	<b>C</b>	0	A	RT	5Y						•
MAIN S	tean saf	ETY VAL	.VE					و خوا ده دل ط			*****					 		t eta dat las adr
2-0203-4G	6	12-1	8B	í i	C	S¥	SA	C	0	A	RT	5Y					x.	
MAIN S	tean safi	ety val	VE					** =***										
2-0203-4H ·	6	12-1	8B	i	С	SV	SA	C	0	<b>A</b>	RT	SY						
MAIN S	tean safi	ety val	VE													 		

TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

## CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

EPN 	SIZE	PID	CORD	CLS	CAT	VALVE Type	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	cs Just		 . <b></b>
2-0205-24	2.5	26-1	6E	1	A	GA	NO	C	0/C	A	AT BT PIT	RR OP RR	RV-00A				
REACTOR H	IEAD CO	DOLING	INLET	(IN)	BOAR	D)				<b>-</b>		\-\-					
2-0205-27	2.5	26-1	5E	i	AC	CK	SA	C	0/C	A	AT CT-D Ct-C	RR RR RR	RV-00A RV,-02F	·			· ·
Reactor H	iead ci	JOLING	INLET	CHE(	:X	, همین مورد هر س							` **=**=======				 
2-0220-1	2	12-1	4E	1	A	GL	KO	0	C	A	AT BT PIT	RR OP 88	RV-00A		. *	×	
MAIN STEP	M LIN	ES INBO	ard df	RAIN	•						•••	tint.			·		
2-0220-105A	8	25	SE	3.	C	СК	SA	C	0/C	A	CT-O CT-C	CS CS	RV-02E		CS-02C		
TARGET RO	ick sai	FETY/RE	LIEF	/LV (	INE	VACUU	n Brea	KER									
2-0220-105B	8	25	SE	3	C	CK	SA	C	0/C	A	CT-O CT-C	CS CS	RV-02E		CS-02C		- A.
ELECTROMA	ATIC RI	ELIEF VI	ALVE (	INE	VAC	uum Bri	EAKER										
2-0220-105C	8	25	SE	3	C	CK	SA	C	0/C	A	CT-0 CT-C	CS CS	R¥-02E		CS-02C	,	
ELECTROMA	TIC RE	ELIEF VI	ALVE L	.INE	VAC	UUM BRI	EAKER										•

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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# CLASS 1, 2 & 3 VALVE LISTING

						SYST	EM: RX	( REC	IRC/	MAIN	STEA	1/FEEDWA	ATER					
EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	ACT Type	NOR PDS	STR DIR	A/P	TEST	test Sched	REL REQ	TECH POS.	CS JUST			
2-0220-105D	8	25	5E	3	C	CX	SA	C	0/C	A	CT-0 Ct-c	CS CS	RV-02E		CS-02C			
ELECTRO	MATIC R	ELIEF	VALVE	LINE	VAC	UUM BR	EAKER											
2-0220-105E	8	25	5E	3	C	CK	SA	C	0/C	A	CT-0 Ct-c	CS CS	RV-02E		CS-02C			
ELECTRO	MATIC R	ELIEF	VALVE	LINE	VAC	UUM BRI	EAKER											
2-0220-17A	θ.5	12-2	8E	1	AC	XFC	SA	0	Ĉ.	A	AT CT-C	RR RR	RV-00B					
FLOU-LI	MITING	CHECK	FOR DP	IS-2	61-1·	-2E-H												
2-0220-17B	0.5	12-2	8D	1	AC	XFC	SA	Ð	C	A.	. AT CT-C	RR RR	RV-00B	·				,
FLOW-LI	MITING	CHECK	FOR DP	IS-20	61-21	E-H												
2-0220-170	θ.5	<del>1</del> 2-2	8C	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-09B	•				
FLOW-LI	MITING	CHECK	FOR LO	-DPI	5-26	fJ-H											×	
2-0220-17D	0.5	12-2	8B	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B					
FLOW-LI	MITING	CHECK	FOR LO	DPI	5-26	1-2N-S										•		

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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### CLASS 1, 2 & 3 VALVE LISTING

### SYSTEH: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST
2-0220-18A	θ.5	12-2	8E	ť	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B		
FLOW-LI	MIJING	CHECK	FOR HI	DPI	S-26	1-2A-D									
2-0220-18B	0.5	12-2	8D	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B		
FLOW-LI	MITING	CHECK	FOR HI	DPI	S-26	1-2E-H									
2-0220-18C	θ.5	12-2	80	1	AC	XFC	SA	0	C	A	at Ct-C	RR RR	RV-90B		
FLOW-LI	HITING	CHECK	FOR HI	DPI	S-26	1-2J-H									
2-0220-18D	<b>0.</b> 5	12-2	8B	1	AC	XFC	SA	0	C	A	AT Ct-c	AR RR	RV-00B		
FLON-LI	MITING	CHECK	FOR HI	DPI	S-26	1-2N-5									
2-0220-19A	<del>0</del> .5	26-2	58	i	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B		• •
FLOW-LI	MITING	CHECK	FOR LO	¥ LE	G DP	T-261-	5A								· ·
2-0220-19B	0.5	26-2	3B	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B		
FLOW-LI	MITING	CHECK	FOR LO	W LE	g dp:	T-261-	5B								· .

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

# CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	ACT Type	NOR Fos	STR DIR	A/P	TEST	test Sched	REL REQ	TECH POS.	CS JUST
2-0220-2	2	12-2	7E	ſ	A	GL	HD	0	C	A	AT BT PIT	RR OP RR	RV-00A	-	
MAIN ST	iean lin	ies ou	FBOARD	DRAI	N 										
2-0220-20A	0.5	26-2	5B	١	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV- <del>00</del> B		
FL0¥-L1	MITING	CHECK	FOR HI	LEG	DPT	-261-5	A+D							40 440 307 ayu 147 vel ayu 440	
2-0220-20B	0.5	<b>26-</b> 2	3B	١	AC	XFC	SA	0	C	A	AT Ct-C	RR RR	RV-00B		
FLOW-LI	MITING	CHECK	FOR HI	LEG	DPT	-261-51	B+D				****				
2-0220-21A	0.5	26-2	80	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B		
FLOW-LI	MITING	CHECK	FOR LO	W LE	G FT	-261-6	4+B			** *** *** ****					
2-0220-21B	0.5	26-2	iD	i	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B		
FLOW-LI	HITING	CHECK	FOR LO	N LE	G FT	-2-261	-6C				**** •• • <b>*</b> *** •				
2-0220-22A	θ.5	26-2	8D	í	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B		•
FLOW-LI	HITING	CHECK	FOR HI	LEG	FT-:	261-6A	+B								

> TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

### CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	act Type	NOR Pos	STR DIR	a/p	TEST	test Sched	REL REQ	TECH Pos.	CS JUST
2-0220-22B	θ.5	26-2	iD	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B		
FLOW-LIM	ITING	CHECK	FOR HI	LEG	FT-:	2-261-0	5C								
2-0220-44	.75	26-2	2E	1	A	GL	AO	0	C	A	AT BT FST	RR OF OP	RV-00A	TV-00B	
RECIRC.	LOOP S	AMPLE	(INBOAI	RD)							r11	KK			
2-0220-45	.75	26-2	ίΕ	i	A	GL	AO .	0	C	<b>A</b>	AT BT FST PTT	RR OF OF	RV-00A	TV-00B	
RECIRC.	LOOP S	anple	(OUTBO)	ARD)									~~~~~		·
2-0220-54	0.5	26-1	5E	1	. AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B	,	
FLOW-LIN	ITING	CHECK	For PS-	-261-	-20,8	PI-261	-20								
2-0220-58A	18	14	4E	1	AC	CK	SA	0	C	A	AT Ct-C	RR RR	RV-00A RV-02C		
INBOARD	FEEDWA	TER CH	IECK							<b>-</b>					
2-0220-58B	18	14	4F	f	AC	CK	SA	0	C	A	AT CT-C Ct-O	RR RR OP	RV-00A RV-02C		
INBOARD	FEEDWA	TER CH	IECK					+						***	

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

### CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST	 	2
2-0220-59	18	14	2F	2	C	CK	SA	0	C	A	CT-C	RR	RV-00C				
OUTBOARD	FEED¥	ater ci	HECK														
<b>2-0220-62A</b>	18	14	3E	, 1	AC	CK	SA	0	C	A	AT CT-C	RR RR	RV-00A RV-02C	,			•
OUTBOARD	FEEDW	ATER CI	HECK			>									-	 	ي چر کار جو جو 100 نط 5
2-0220-62B	18	<b>14</b>	3F	1	AC	CK .	SA	0	C	<b>A</b>	AT CT-C CT-0	RR RR OP	RV-00A RV-02C				
OUTBOARD	FEEDW	ATER CH	IECK			,											. — — <u></u>
2-0220-67A	θ.5	26-2	SF	<b>i</b> .	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B				
FLOW-LIM	ITING	CHECK f	FOR DP	IS 2-	-261-	-34A											
2- <del>0220</del> -67 <u>8</u>	0.5	26-2	5F	í	AC	XFC	SÁ	0	C	A	AT CT-C	RR RR	RV-00B				
FLOW-LIM	ITING	CHECK F	OR OP	IS 2-	-261-	-34A										 	
2-0220-67C	θ.5	26-2	SF	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-66B				
FLON-LIN	ITING	CHECK F	FOR DP:	IS 2-	-261-	-34C											

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

## CLASS 1, 2 & 3 VALVE LISTING

# SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS Just		 
2-0220-67D	0.5	26-2	5F	1	AC	XFC	SA	0	C	A	AT Ct-C	RR RR	RV-GOB				
FLOW-LI	MITING	CHECK	FOR DP	[S 2·	-261	-34C											
2-0220-67E	0.5	26-2	3F	í	AC	XFC	SA	<b>0</b>	C	A	AT Ct-C	RR RR	RV-00B				
FLOW-LI	MITING	CHECK	FOR DP1	[S 2·	-261-	-34B									• •		
2-0220-67F	0.5	26-2	3F	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B				
FLOW-LI	HITING	CHECK	FOR DP	[\$ 2·	-261-	-34B								•			
2-0220-67G	9.5	26-2	3F	<b>1</b> .	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B				
FLOW-LI	MITING	CHECK	FOR DP	IS 2·	-261-	-34D					er 18 10						
2-0220-67H	0` <b>.</b> 5	26-2	3F	í	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B				
FLOW-LI	MITING	CHECK I	FOR DP1	[\$ 2·	-261	-34D									1	•	
2-0262-25A	0.5	26-2	7B	í	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B				
FLOW-LI	MITING	CHECK I	FOR PT-	-262-	-7C		•••••••••••••										 

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXFLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN, RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

### CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	PID	CURD	CLS	CAT	VALVE Type	ACT Type	NDR Pos	STR DIR	A/P	TEST	test Sched	REL	TECH POS.	CS JUST
2-0262-25B	0.5	26-2	2B	í	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-0 <del>0</del> B	ð	
FLOW-LIM	ITING	CHECK F	OR PT-	-262	-7D									- 40 - 20 - 20 - 20 - 20 - 20	
2-0262-26A	0.5	26-2	7B	i	AC	XFC	SA	Û	C	A	AT CT-C	RR RR	RV-00B		,
FLOW-LIN	ITING	CHECK F	OR PT-	-262-	-7A								• <b></b>		
2-0262-26B	0.5	26-2	2B	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B	·	
FLOW-LIP	ITING	CHECK F	OR PT-	-262-	-7B	,									
2-0263-2-11	θ.5	26-1	5E	f.	AC	XFC	SA	0	C	A	at Ct <sup>1</sup> -C	RR RR	RV-00B	• .	
FLOW-LIM	ITING	CHECK F	OR LON	I LEC	; LT-	-263-61									
2-0263-2-13A	θ.5	26-1	5D	i	AC	XFC	SA	0	0	A	AT CT-C	RR RR	RV- <del>0</del> 0B		
FLON-LIM	ITING	CHECK F	DR REF	ELEC	; TO	2202-5	5								
2-0263-2-13B	θ.5	26-1	3D	١	ac	XFC	SA	0	C	A	at Ct-C	RR RR	RV-00B	·	
FLON-LIM	ITING	CHECK F	OR REF	T LEC	; TÒ	2203-6	5								

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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### CLASS 1, 2 & 3 VALVE LISTING

## SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	nor Pos	STR DIR	A/P	TEST	test Sched	REL REQ	TECH POS.	CS JUST		
2-0263-2-15A	0.5	26-1	5D	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B				
FLOW-LIN	HITING	CHECK	FOR VA	R LE	G TO	2202-	5.	, ک نینے ک			****						
2-0263-2-15B	0.5	26-1	3D	1	AC	XFC	SA	0	С ,	A	AT CT-C	RR RR	RV-00B				
FLOW-LIM	ITING	CHECK	For Va	R LE	G TO	2202-	6	-							· .		
2-0263-2-17A	0.5	26-1	50	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B				-
FLOW-LIP	ITING	CHECK	FOR RP	V IN	STRU	MENTS		**						•			
2-0263-2-17B	θ <b>.</b> 5	26-1	3D	i	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B			•	
FLOW-LIN	ITING	CHECK	FOR RP	V IN	STRUI	MENTS					Ŧ 12 -= <sup>24</sup> 1						-
2-0263-2-19A	θ.5	26-1	5C	i	AC	XFC	SA	0	C	A	AT Ct-C	RR RR	RV-00B				
FLOW-LIM	ITING	CHECK	FOR LO	U LE	G LT-	-646A.											
2-0263-2-19B	θ.5	26-1	30	í	AC	XFC	SA	Ð	C	A	AT Ct-C	<b>RR</b> RR	RV-00B				
																	• •

AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

## CLASS 1, 2 & 3 VALVE LISTING

# SYSTEN: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	act Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS Just	
2-0263-2-20A	0.5	26-1	5B	1	ac	XFC	SA	0	C	A	AT Ct-C	RR RR	RV- <del>0</del> 0B			
FLOW-LI	MITING	CHECK	FOR HI	LEG	FT	263-63	A									
2-0263-2-20B	0.5	26-1	5B	i	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B			
FLOW-LII	MITING	CHECK	FOR FT	263	-63B			- <b></b>								
2-0263-2-200	θ.5	26-1	38	1	AC	XFC	SA .	0	C	<b>A</b>	AT CT-C	RR RR	RV-00B			
FLOW-LI	HITING	CHECK	FOR HI	LEG	FT	263-63	C.									
2-0263-2-20D	0.5	26-1	3B	i	. AC	XFC	SA	0	C	A	at Ct-C	RR RR	RV-00B			
FLOW-LI	AITING	CHECK	FOR HI	LEG	ET	263-631	)									
2-0263-2-2 <u>3</u> A	θ.5	26-1	5C	1	AC	XFC	SA	0	C	A	AT Ct-C	RR RR	RV-00B			
FLOW-LI	HITING	CHECK	FOR LO	LEG	FT	263-631	B 							******		
2-0263-2-23B	0.5	26-i	5C	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B			
FLOW-LI	HITING	CHECK	FOR LO	LEG	FT	263-631	A							يند الد ويور بند وادي بند	من مر چر چر اف او بی کر بار کر	

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST: SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

### CLASS 1, 2 & 3 VALVE LISTING

## SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

******	5I7E	PID	CORD	CLS	CAT	TYPE	TYPE	NUR POS	DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST 
2-0263-2-23C 0	<b>).</b> 5	26-1	30	1	AC	XFC	SA	0	C	A	AT Ct-C	RR RR	RV-00B		
FLOW-LIMIT	TING C	HECK I	FOR LO	LEG	FT 2	263-631	)								·
2-0263-2-23D 0	).5	26-1	30	1	AC	XFC	SA	0	C	A	at Ct-C	RR RR	RV-00B		
FLOW-LINIT	TING C	HECK I	FOR LO	LEG	FT 2	263-63(				<b>.</b>					
2-0263-2-25 0	).5	26-1	5 <b>B</b>	1	AC	XFC	SA	0	C	A	AT Ct-C	<b>RR</b> RR	RV-00B		
FLOW-LINIT	TING C	HECK	ABOVE 1	ihe C	ORE	PLATE	PRESS	•							
2 <b>-0263</b> -2-27 0	).5	26-i	5B	<b>1</b> .	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B		
FLOW-LINIT	ING C	HECK	BELON T	THE (	ORE	PLATE	PRESS								
2-0263-2-31B 0	).5	26-1	5C	í	AC	XFC	SA	0	0	A	at Ct-C	RR RR	RV-00B		
FLOW-LINIT	TING C	HECK I	FOR LOU		FT	263-64	NB.					*			*
2- <del>0</del> 263-2-31C 0	).5	26-1	5C	i	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B		
FLOW-LIMIT	TING C	HECK I	for lo	LEG	FT 2	263-64(									

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

### CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

E	PN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST
2-	-0263-2-31D	0.5	26-1	5C	1	AC	XFC	SA	0	C	A	AT Ct-C	RR RR	RV-00B		
	FLOW-LIN	11 I NG	CHECK	FOR LO	V LE	G FT	263-6	4D.								
2-	-0263-2-31E	0.5	26-1	5C	1	AC	XFC	SA	0	C	A	AT Ct-c	RR RR	RV-00B		
	FLOW-LIN	ITING	CHECK	FOR LO	LEG	FT	263-64	E.								·
2-	-0263-2-31G	0.5	26-1	50	1	AC	XFC	SA	0	C	A	at Ct-C	RR RR	RV-00B		
	FLOW-LIN	ITING	CHECK	FOR LO	LEG	FT	263-64	G.								
2.	-0263-2-31H	θ.5	26-1	5C	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B		
	FLOW-LIM	ITING	CHECK	FOR LO	LEG	FT	263-64	H.						و علم خد دی دک بند ہی ہی ہے		
2-	-0263-2-31J	θ.5	26-1	5C	t	AC	XFC	SA	0	C	A	AT Ct-C	RR RR	RV-00B		
÷	FLON-LIN	ITING	CHECK	FOR LO	LEG	FT	263 64.	J. `			, 				, 	
2-	-0263-2-31K	θ.5	26-1	5C	1	AC	XFC	SA	0	C	A	at Ct-C	RR RR	RV-00B		
	FLOW-LIN	ITING	CHECK	FOR LO	LEG	FT :	263-641	«.	÷							

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXFLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

## CLASS 1, 2 & 3 VALVE LISTING

## SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	act Type	NOR Pos	STR DIR	A/P	TEST	test Sched	REL REQ	TECH POS.	CS Just	***	
2-0263-2-31M	θ.5	26-1	30	í	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B				
FLOW-LIN	ITING	CHECK	FOR LO	LEG	FT :	263-641	۹.									*****	
2-0263-2-31N	0.5	26-1	3C	i	AC	XFC	SA	0	C	A	AT Ct-C	RR RR	RV-00B				·
FLOW-LIM	ITING	CHECK	FOR LO	LEG	FT :	263-641	¥.	م جہ سے مذہب			·.	س کا در بر ۱۹۰ م س کا ا					- 20- 40- 40- 40-
2-0263-2-31P	θ.5	26-1	30	í	AC	XFC	SA	0	C	Â	AT CT-C	RR RR	RV-00B				
FLOW-LIM	ITING	CHECK	FOR LO	LEG	FT 2	263-64	·.							•			
2-0263-2-31R	0.5	26-1	30	f .	AC	XFC	SA	0	C	A	AT Ct-C	RR RR	RV-00B				
FLOW-LIN	ITING	CHECK	FOR LO	LEG	FT :	263-64	<u>۱</u> .										·
2-0263-2-317	0.5	26-1	3C	١	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B			•	
FLOW-LIM	ITING	CHECK	FOR LO	LEG	FT 2	263-641	ſ <b>.</b>									***	
2-0263-2-31U	θ.5	26-1	30	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B				
FLOW-LIM	ITING (	CHECK	FOR LO	LEG	FT 2	263-641	J.		••• •								1999 aut 400 401 gaz siz 140

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

### CLASS 1, 2 & 3 VALVE LISTING

## SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS Just	 		•
2- <del>0</del> 263-2-31V	0.5	26-1	30	<b>5</b>	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B			¥		
FLOW-LIM	ITING	CHECK	FOR LO	LEG	FT	263-64	V.					***						
2-0263-2-31¥	θ.5	26-1	30	í	AC	XFC	SA	0	C	A	at Ct-C	RR RR	RV-00B	3	•			
FLOW-LIN	ITING	CHECK	FOR LO	LEG	FT :	263-64	<b>.</b>								در ها دار ها ها بار ها دار ها در	 	-	
2-0263-2-33	θ.5	26-1	3B	i	AC	XFC	SA .	0	C	<b>A</b>	AT CT-C	RR RR	RV-00B					
FLOW-LIM	ITING	CHECK	FOR HI	LEG	JET	PUNP (	FT'S.								-	 		•
2-0263-42A	θ.5	26-1	5C	1	AC	XFC	SA	8	C	A	AT CT-C	RR RR	RV-00B					
FLOW-LIN	ITING	CHECK	FOR LI	-262 <sup>.</sup>	-151	A.	ata gata-127 may pang dagta dagta									 		
2-0263-42B	θ.5	26-1	3C	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B					
FLOW-LIN	ITING	CHECK	FOR PS-	-263-	-111	B+D.						*				 		

AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

# CLASS 1, 2 & 3 VALVE LISTING

						SYSI	EM: RX	VES	SEL ¥	ATE	R LVL	INDICAT	ION				
EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	test Sched	REL Req	TECH POS.	CS JUST		 
2-0299-100A	3/8	26-3	<b>6E</b>	۱	AC	CK	SA	0	0/C	A	CT-O Ct-C A	OP RR RR	RV-02G RV-00A				
RVWLIS	"A." NAR	ROW RAN	NGE BAI	CKFI	LL I	NBOARD	CHECK										 
2- <del>0</del> 299-100B	3/8	26-3	4E	1	AC	CK	SA	0	0/C	A	CT-O Ct-C A	OP RR RR	RV-02G RV-00A		<i>.</i>		
RVWLIS	"B" NAR	ROW RAN	NGE BAI	CKFI	LL I	NBOARD	CHECK							و ورو که دور که خو روم دک		* = = * * * * * *	 
2-0299-97A	3/8	26-3	7E	t	AC	CK	SA	0	0/C	A	CT-O CT-C A	OP RR RR	RV-02G RV-00A				
RVWLIS	"A" MED	IUN RAN	IGE BA		LL O	UTBOARI	d Chec	K									
2- <del>0</del> 299-97B	3/8	26-3	.3E	<b>í</b> .	AC	CK	SA	0	0/C	A	CT-O CT-C A	OP RR RR	RV-02G RV-00A		•	: · · ·	
RVWLIS	B. MED	IUM RAN	IGE BA		LL 0	UTBOARI	D. CHEC	K								نیک بیش وی نف بیچ که آند بیچ من	
<b>2-0299-98A</b>	3/8	26-3	6E	t	AC	CX	SA	0	0/C	A	CT-O Ct-C A	OP RR RR	R∀-02G RV-00A	-			
RVULIS	'A' NAR	ROW RAN	IGE BA			utboari	D CHEC	K									
2-0299-98B	3/8	26-3	4E	t	AC	CK	SA	0	0/C	A	CT-O CT-C A	OP RR RR	RV-02G R∀-00A			·	
RVWLIS	'B" NAR	row ran	IGE BAC	CKFI	L 01	utboari	) Checi	K j	·								

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXFLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

## CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: RX VESSEL WATER LVL INDICATION

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	ACT TYPE	NOR POS	STR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST	 : '	•
2-0299-99A	3/8	26-3	7E	1	AC	CK	SA	0	0/0	A	CT-O Ct-C A	op Rr Rr	RV-02G RV-00A				
RVWLIS	"A" Mei	)IUM RAN	IGE BA	CKFI		NBOARD	CHECK									 	
2-0279-99B	3/8	26-3	3E	t	AC	CK	SA	0	0/0	A	CT-0 Ct-c A	OP RR RR	R¥−02G R¥−09A		·		

RVWLIS 'B' NEDIUM RANGE BACKFILL INBOARD CHECK

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

### CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: CONTROL ROD DRIVE

EPN	SI	ZE	PID	CORD	CLS	CAT	VALVE Type	act Type	NOR Pos	STR DIR	A/F	TEST	TEST Sched	REL REQ	TECH POS.	cs Just	 -	
2-0302-157	A 1		34	2F	2	B	GA	AD	0	C	A	BT FST PIT	OP OP RR					
SDV	DRAIN.						- مے <del>نے</del> در در خر										 	
2-0302-157	B t		34	5F	2	B	GA	AO	0	C	A	BT FST PIT	OP OP RR			- -		
SDV	DRAIN																 	
2-0302-158	A 1		34	2F	2	B	GA	AU .	0	C	<b>A</b> .	BT FST PIT	OP OP RR					
SDV	DRAIN																 	
2 <del>-0</del> 302-158	B 1		34	5F	2	B	GA	AO	0	C	A	BT FST PIT	OP OP RR			_	•	
SDV	DRAIN					10 1000 1000 1000 100						·					 	·
2-0302-160	A 1		34	fF	2	B	GA	AÜ	<b>0</b>	C .	A	BT FST PIT	OP OP RR			·		• .
SDV	VENT	# <del></del>				n -m t v											 	·
2-0302-160	Bi		34	6F	2	B	GA	AÜ	0	C	A	BT FST PIT	OP OP RR					•
SDV	VENT								ے ہے کہ ک					+			 	

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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# CLASS 1, 2 & 3 VALVE LISTING

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR PDS	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST	 1 <sup>-1</sup>
2- <del>0</del> 302-161A	1	34	١F	2	B	GA	AD .	0	C	A	BT FST PIT	op op Rr	. •			
SDV VEN	Τ.															
2- <del>0</del> 302-161B	1	34	۵F	2	B	GA	AO	0	C	A	BT FST PIT	OP OP RR			· .	
SDV VEN	T 	*														 
2-0305-114	0.5	34	90	2	C	CK	SA .	C	0	A	CT-0	OP	RV-03B			
SCRAM D	ISCH RI	SER BA	LL CHE	CK												 · · · · · · · · · · · · · · · · · · ·
2-0305-115	<b>0.</b> 5	34	θE	1	C	CK	SA	0	C	A	CT-C	CS .			CS-03A	
ACCUNUL	ATOR CH	ARGING	WATER	CHEC	CK											 _^~~~
2-0305-126	θ.5	<b>34</b>	θE	1	B	GA .	AO	<b>C</b> .	0	A	BT FST	OP OP	RV-03B			
HCU SCRI	AM INLE	T		B (# - 4) - B -						• <del></del> 4			-			 
2-0305-127	0.5	34	9D	1	B	GA	A0	C	0	A	BT FST	OP OP	RV-03B			
HCU SCR	AM OUTL	ET														 
	-															 

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

## CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: CONTROL ROD DRIVE

EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	act Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS Just		
2-0305-138	θ.5	34	0C	1	C	CK	SA	0	с	A	CT-C	0P				 	

COOLING WATER BALL CHECK

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING FLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

### CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: SHUTDOWN COOLING

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST
2-1001-1A	16	32	9B	1	A	GA	KD	C	C	A	AT BT PIT	RR CS RR	RV-00A	TV-00B	CS-10A
SDC INLE	T . HEADI	ER ISOLA	ATION												
2-1001-1B	16	32	9E	1	A	GA	KO	C	С	A	AT BT PIT	RR CS RR	RV-00A	TV-00B	CS-10A
SDC INLE	r heade	ER ISOLA	NOITE												
2-1001-2A	14	32	8A	1	A	GA	HO .	C	C	A	AT BT PIT	RR CS RR	RV-00A	TV-00B	CS-10A
2A SDC PL	JMP SU	CTION												i	
2-1001-2B	14	32	80	1.	A	GA	KO	C ~	C	A	AT BT PIT	RR CS RR	RV-00A	TV-00B .	CS-10A
2B SDC PL	IMP SUC	TION													· · · · · · · · · · · · · · · · · · ·
2-1001-2C (	14	32	8F	1	A	GA	NO	С	С	A	AT BT PIT	RR CS RR	RV-00A	TV-00B	CS-10A
2C SDC PL	imp suc	TION													
2-1001-5A	14	32	1E	1	A	GA	MO	С	C	A	AT BT PIT	RR CS RR	RV-00A	TV-00B	CS-10A
SDC OUTLE	et head	)ER ISOL	ATION	! . <b>-</b>											

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> TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

### CLASS 1, 2 & 3 VALVE LISTING

#### SYSTEM: SHUTDOWN COOLING

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	nor Pos	STR DIR	a/p	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST
2-1001-5B	14	32	2E	1	A	GA	Ю	<b>C</b> .	C	A	AT BT PIT	RR CS RR	rv-00a	1 <b>1-90</b> B	CS-10A
SDC OUTL	ET HEA	DER ISC	LATIO	N											,

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

## CLASS 1, 2 & 3 VALVE LISTING

# SYSTEM: SBLC

EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS Just		
2-1101-15	1.5	33	30	1	AC	CK	SA	C	0/C	A	AT CT-0 Ct-c	RR RR RR	RV-00A RV-11A				
SBLC IN	IJECTION	CHECK															
2-1101-16	1.5	33	4C	1	AC	CK	SA	C	0/C	A	AT CT-0 CT-C	RR RR RR	R¥-00A RV-11A		. •		
SBLC IN	JECTION	CHECK				، این ۱۹۹۰ سک بین دیده م				* = = -							****
2-1101-43A	1.5	33	6D	2	C	CK	SA	C	0	A	CT-0	OP				·	
"A" SBL	C PUMP	DISCHA	RGE CHI	ECK						<b>.</b>							
2-1101-43B	1.5	33	δE	2	. C	CK ·	SA	C	0	A	CT-0	OP					
*B* SBL	c punp	DISCHA	RGE CHE	ECK													
2-1105A	θ.5	33	4C	2	C	RV	SA	C	0	A	RT	10Y					
"A" SBL	C RELIE	F TO M	AIN TAN	₹ <b>K</b>													
2-1105B	0.5	33	4D	2	C	RV	SA	C	0	A	RT	10Y					
*B* SBL	C RELIE	F TO N	IAIN TAP	łK													

RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK.

TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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# CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: SBLC

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	act Type	NOR	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST	 *
2-1106A	1.5	33	4C	2	D	GA	EXP	C	0	A	DT	San				
'A' SBLC	SQUIB	VALVE														
2-1106B	1.5	33	4C	2	D	GA	EXP	C	0	A	DT	SAM				
"B" SBLC	SQUIB	VALVE														
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RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

## CLASS 1, 2 & 3 VALVE LISTING

						SYST	em: Ri	ICU								
EPN	SIZE	PID	CORD	CLS	CAT	VALVE	ACT TYPE	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	cs Just	 : `
2-1201-1	8	30	3A	1	A	GA	ND .	0	C	A	AT BT PIT	RR OP RR	RV-00A			
RUCU SY	STEM IN	LET	-													
2-1201-1A	2	30	3A	1	A	GL	NO	0/C	C	A	AT BT PIT	RR OF RR	RV-00A			
RWCU SY	STEN IN	LET BY	PASS													 
2-1201-158	8	30	5A	2	C	CK :	SA	0	C	A	CT-C	RR	RV-00C			
RWCU TO	FEEDNA	TER CH	ECK												•	
2-1201-2	8	30	3A	i -	A	GA	MQ	0	C	A	AT BT PIT	RR OF RR	RV-00A			
RWCU AU	X PUMP	BYPASS														
2-1201-3	8	30	4A	ţ	A	GA	NO.	C	C	A	AT BT PIT	RR OP RR	RV-90A			
RUCU AU	x pump	SUCTIO	N	v												

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

### CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: ISOLATION CONDENSER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	ACT Type	NOR Pds	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST
2-1301-1	14	28	9C	1	A	GA	NO	0	C	A	AT BT PIT	RR OP RR	RV-00A	×	
ISO	CONDENSER	STEAM	INLET												
2-1301-11	4	28	30	3	C	CK	SA	C	0	A	CT-0	SAN	RV-13A	TV-00C	
ISO	CONDENSER	CONTA	MINATED	DEM	IN F	ILL CH	ECK								
2-1301-17	.75	28	24	2	A	GL	AO .	0	<b>C</b> .	A	AT BT PIT	RR OP BR	RV-00A	<i>i</i> .	
ISO	CONDENSER	VENT	TO MAIN	STE	am Li	INE	;		-		FST	OP.	, 		
2-1301-2	14	28	θB	<b>f</b> .	Α.	GA .	MO	0	C	A	AT BT PIT	RR OF RR	RV-00A		•
ISO	CONDENSER	STEAM	INLET							• <b>-</b>					
2-1301-20	.75	28	34	2	<b>A</b>	GL	AO	0	C	A	AT BT PIT	RR OP RR	RV-00A		<u></u>
ISO	CONDENSER	VENT	TO NAIN	STE	AM LI	INE					roi	ur 			
2-1301-23	0.5	28	90	í	AC	т <sup>у</sup> XFC	SA	0	C	A	at Ct-C	RR RR	RV-00B		
EI UP	-LINITING	CHECK	FOR ISC	) CO)	VDENS	SER STI	eam li	NE							

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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# CLASS 1, 2 & 3 VALVE LISTING

						SYST	EM: IS	OLAT	ION	COND	Enser					
EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST	· · '
2-1301-24	0.5	28	9C	1	AC	XFC	SA	0	C	A	AT CT-C	RR AR	RV-00B			
FLOW-1	INITING	CHECK	FOR IS	0 CO	NDEN	SER ST	EAN LI	NE			***					
2-1301-29	θ.5	28	8E	í	AC	XFC	SA	0	C	A	AT Ct-C	RR RR	RV-00B			
FL0W-1	.IHITING	CHECK	FOR IS	0 00	NDEN	SER STI	EAM LI	NE				•••••				
2-1301-3	12	28	7E	i	A	GA	KO	C	0/C	A	AT BT PIT	RR OP RR	RV-00A			
ISO CO	INDENSER	CONDE	ISATE O	UTLE	[ 	****										
2-1301-30	<b>0.</b> 5	28	8E	1	AC	XFC	SA	0	C	A	AT Ct-C	RR RR	RV-00B			
FLOW-L	IMITING	CHECK	FOR IS	D C <b>O</b> I	IDEN:	SER STR	EAM LI	NE -	ر الدا عنگ چند. کا			****				
2-1301-4	12	28	8E	1	<b>A</b>	GA	KO	0	C	A	AT BT PIT	RR OP RR	RV- <del>00</del> A			
ISO CO	INDENSER	CONDEI	VSATE O	UTLE	ſ										• •	

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXFLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

### CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: CORE SPRAY

EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST
2-1402-13A	1.5	27	9C	2	Ć	SCK	SA	C	0	A	CT-O	SAN	RV-14A	700-VT	
2A CORE	SPRAY	PUMP	MIN FLO	W ST	0P C	HECK		ა ————————————————————————————————————							
2-1402-13B	1.5	27	7D	2	C	SCK	SA	C	0	A	CT-0	SAM	RV-14A	TV-00C	
2B CORE	SPRAY	PUNP	MIN FLO	N STI	OP CI	HECK									
2-1402-24A	10	27	28	2	A	GA	MO .	0	0/C	<b>A</b>	AT BT PIT	RR Op RR	RV-06A		
2A CORE	SPRAY	PUMP	UP-STRE	am II	NJEC.	TION									
2-1402-24B	10	27	5B	2	A	GA	KO	0	0/C	A	AT BT PIT	RR OP RR	RV-00A	;	
2B CORE	SPRAY	PUMP	UP-STRE	an II	NJEC.	TION					.+				
2-1402-25A	10	27	2C	١	A ·	GA ·	MO	C .	0/C	A	AT BT PIT	RR Op RR	RV-00A	TV-00B	· · · ·
2A CORE	SPRAY	PUMP	DOWN-ST	REAN	INJ	ECTION									
2-1402-25B	10	27	5C	1	A	GA	MO	C	0/C	A	AT BT PIT	RR Op Rr	RV-09A	TV-00B	
2B CORE	SPRAY	PUMP	DOWN-ST	ream	INJ	ECTION									

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

### CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: CORE SPRAY

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST		 	
2-1402-28A	2	27	6D	2	C	RV	SA	C	0	A	RT	10Y						
2A CORE	SPRAY	PUMP	DISCHAR	GE R	ELIE	F											 	
2-1402-28B	2	27	9B	2	C	RV	SA	C	0	A	RT	101						
2B CORE	SPRAY	PUMP	DISCHAR	GE R	ELIE	F											 	
2-1402-3A	16	27	7F	2	B	GA	HO .	0	C	A	BT PIT	op Rr						
2A CORE	SPRAY	PUMP	SUCTION	FRO	H TO	RÚS											 	
2-1402-3B	16	27	5F	2	B	GA	HO	0	C	A	BT PIT	of Rr				·		
2B CORE	SPRAY	PUMP	SUCTION	FRO	M TO	RUS									*****		 	
2-1402-31A	0.5	27	3D	í	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B	l				
CORE SP	RAY FLO	W-LIM	ITING C	HECK					*				*				 	
2-1402-31B	θ.5	27	40	i	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B	ł				
CORE SP	RAY FLO	W-LIN	ITING C	HECK														•

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

### CLASS 1, 2 & 3 VALVE LISTING

#### SYSTEM: CORE SPRAY

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EPN	SIZE	PID	CORD	CLS	CAT	VALVE	ACT Type	NDR Pos	STR DIR A/P	TEST	TEST SCHED	REL Req	TECH POS.	cs Just	
2-1402-34A	.75	27	8D	2	C	CK	SA	0	0/C A	CT-C Ct-O	op op	RV-14B			
ECCS KE	EP.FILL	TO CO	DRE SPR	AY L	00P	A									
2-1402-348	.75	27	6D	2	C	CK	SA	0	0/C A	CT-C Ct-O	OP OP	RV-14B		·.	
ECCS KE	EP FILL	TO CO	DRE SPR	AY L	00P	B									
2-1402-36A	.75	27	8E	2	C	SCK	SA .	0	0/C A	CT-C Ct-O	UP OF	RV-14B			
ECCS KE	EP FILL	TO CO	ire spr	AY S	top (	CHECK									
2-1402-36B	.75	27	бE	2	. C	sck	sa	0	0/C A	CT-C CT-O	OP OP	RV-14B		<b>n</b>	
ECCS KE	EPFILL	TO CO	ire spri	AY S	TOP (	CHECK									
2-1402-38A	1.5	27	8B	2	B	GA	Ko	0	0/C A	BT PIT	OP RR		•		
2A CORE	SPRAY	PUMP M	IIN FLO	<b>i</b>	• .	+ <del>-</del>									
			70	2	R	GA	MO	0	0/C A	BT	OP				
2-1402-38B	1.5	27	16	2	-					PIT	RR				

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

CLASS 1, 2 & 3 VALVE LISTING

						51511		KE 5	PRAT							
EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR POS	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST 	: <b>`</b>
2-1402-4A	8	27	8B	2	A	GĽ	ND	C	C	A	BT PIT	OP RR	. •			
2A CORE	SPRAY	PUMP	TEST RE	TURN	TO	TORUS	*****		* **	•						
2-1402-4B	8	27	8B	2	<b>A</b>	GL	Ю	C	C	A	BT Pit	OP RR				
2B CORE	SPRAY	PUMP	TEST RE	TURN	TO	TORUS	<b>17 14a 140 140 440 44</b>									
2-1402-8A	12	27	8C	2	C	SCK	sa .	C	0	A	CT-O Ct-C	OP OP				
2A CORE	SPRAY	PUMP	DISCHAR	GE S	TOP	CHECK										
2-1402-8B	12	27	7B	2	C	SCK	SA	C	0	A	CT-0 Ct-c	op op				
2B CORE	SPRAY	PUMP	DISCHAR	GE S	TOP	CHECK										
2-1492-9A :	10	27	30	1	AC .	CK	SA	<b>C</b> .	0/C	A	AT CT-0 Ct-c	RR CS RR	RV-14C	TV-00B	CS-00A	
2A CORE	SPRAY	INJEC	CTION CH	ECK												
2-1402-9B	tO	27	40	1	AC	CK	SA	C	0/C	A	AT CT-0 Ct-c	RR CS RR	RV-14C	TV-00B	CS-00A	
2B CORE	SPRAY	INJEC	TION CH	ECK												

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> TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

### CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: CORE SPRAY

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	test Sched	REL REQ	TECH POS.	CS Just	 	
2-1499-14	1	358	8E	2	C	CK	SA	0/C	0	A	CT-0	OP	, ···				
U2 ECCS	JOCKEY	' PUMP	DISCHG	CK	VLV			****									
2-1499-15	3/4	27	8E	2	C	CK	SA :	0/C	0	A	CT-0	OP			·		

U2 ECCS JOCKEY PHP MIN FLOW CK VLV

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

# CLASS 1, 2 & 3 VALVE LISTING

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR Pos	STR DIR A/F	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST
2-1501-1A	10	29-2	3B	3	C	CK	SA	C	0/C A	CT-O Ct-C	op op			•
"A" CCS¥	runp	DISCHAR	IGE CHI	ECK						ن من که رو. خط ون ا				
2-1501-1B	ŧΘ	29-2	30	3	C	СК	SA	<b>C</b> .	0/C A	CT-0 Ct-c	op Op			
B. CCSA	PUMP	DISCHAR	GE CHE	ECK			*=		بو عد چر عد رو دو ده ه		)			
2-1501-10	10	29-2	3E	3	<b>C</b>	CX	SA	C	0/C A	CT-O Ct-C	OP OP			· · ·
"C" CCSW	PUMP	DISCHAR	GE CHE	ECK										
2-1501-10	10	29-2	3F	3	. C	СК	SA	C	0/C A	CT-O CT-C	op op			
*D* CCSW	PUMP	DISCHAR	GE CHE	ECK					چر ذيئا جانف خله بت الله ه			, 		
2-1501-11A	18	29-1	9E	2	B	GA	Ю	0	0/C A	BT PIT	OP RR			
LPCI HEAT	EXCH	ANGER "	A" SHE		GIDE	BYPAS	5							
2-1501-11B	18	29-1	20	2	B	GA	Ю	0	0/C A	BT PIT	OP RR			

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

# CLASS 1, 2 & 3 VALVE LISTING

#### SYSTEM: LPCI/CCSW

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	cs Just		 	
2-1501-13A	3	29-1	70	2	B	Ga	NO	0	0/C	A	BT Pit	OP RR						
LPCI LOC	)P.I MI	N FLOW	BYPAS	S			214 an 124 147 149 149 149										 	
2-1501-13B	3	29-1	2C	2	B	GA	ко	0	0/C	A	BT Pit	OP RR				·		·
LPCI LOC	DP II N	IN FLOW	BYPAS	SS														
2-1501-17A	2	29-1	8C	2	<b>C</b>	RV	SA	C	0	<b>A</b>	RŤ	10Y						
2A LPCI	HEAT E	XCHANGE	R OUTI	LET I	IEADI	ER REL	IEF 			~							 	
2-1501-17B	2	29-1	2C	2.	C	RV	SA	C	0	A	RT	10Y						
2B LPCI	HEAT E	XCHANGE	r outl	.ET	IEADI	ER REL	IEF		10 <b>100</b> aya awa a								 	
2-15 <del>0</del> 1-18A	<b>6</b>	29-1	8B	2	<b>A</b>	GL	KO	<b>C</b> .	0/C	A	AT BT PIT	RR OP RR	RV-00A	<b>)</b>	,			· ·
LPCI LOO	IP I TO	RUS SPR	AY 														 	
2-1501-18B	6	29-1	28	2	A	GL .	KO	C	0/C	A	AT BT PIT	RR Op RR	RV-00A	Ì	·			
LPCI LOO	IP II TI	ORUS SP	RAY															

RT-RELIEF VALVE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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CLASS 1, 2 & 3 VALVE LISTING

# SYSTEM: LPCI/CCSW

EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	ACT Type	NOR Pos	STR DIR A/	p test	TEST SCHED	REL REQ	TECH PDS.	CS JUST		2 1 1
2-1501-20A	14	29-1	7B	2	ĥ	GA	Ю	C	0/C A	BT PIT	op Rr	. •				
LPCI	L00P. I FL	JLL FLO	W BYPA	SS T	EST	RETURN	TO TO	RUS								
2-1501-208	14	29-1	2B	2	A	GA	KO	C	0/C A	BT Pit	op Rr	• •				
LPCI	LOOP II F	ULL FL	OW BYP	ASS	TEST	RETURI	N TO T	ORUS								
2-1501-21A	18	29-1	8A	2	B	GA	HO .	0	0/C A	BT Pit	of Rr		·			
LPCI	LOOP I IN	JECTIO	N								÷=====					
2-1501-21B	18	29-1	2A	2	B	GA	HO	0	0/C A	BT PIT	op Rr					
LPCI	LOOP II I	NJECTI	0N													
2-1501-22A	18	29-1	7B	i	<b>A</b>	GA -	MO	C	0/C A	AT BT PIT	rr' Op rr	RV-00/	A TV-00B			•
LPCI	LOOP I IN	JECTIO	N				,		* * * * *							
2-1501-22B	18	29-1	3B	1	A	GA	HO	C	0/C A	AT BT PIT	RR OP RR	RV-00	A TV-00B			
LPCI	LOOP II I	NJECTIO	DN										<b></b>		*****	

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXFLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING FLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

#### CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: LPCI/CCSW

EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	act Type	NOR Pos	STR DIR	A/P	TEST	test Sched	REL REQ	TECH POS.	CS JUST
2-1501-25A	14	29-1	5B	1	AC	CK	SA .	C	0/C	A	AT CT-0 CT-C PIT	RR CS CS RR	RV-00A	TV-00B	CS-00A
LPCI INJECTION CHECK															
2-1501-25B	14	29-1	4B	١	AC	CK	SA	C	0/C	A	AT CT-O CT-C Pit	RR CS CS	RV-00A	TV-00B	CS-00A
LPCI INJECTION CHECK															
2-1501-27A	16	29-1	6A	2	A	GA	KO	C	0/C	A .	AT BT PIT	RR OP RR	RV-00A		
LPCI LOC	IP I DR	YWELL SI	PRAY												
2-1501-27B	16	29-1	6A	2	.A	GA	ho	C	0/C	A	AT BT PIT	RR OP RR	RV-00A		······································
LPCI LOOP II DRYNELL SPRAY															
2-1501-28A	16	29-1	3A	2	<b>A</b>	GA	KO	С.	0/C	A	AT BT PIT	RR OP RR	RV-00A		· · · · · · · · · · · · · · · · · · ·
LPCI LOOP I DRYWELL SPRAY															
2-1501-28B	16	29-1	3A	2	A	GA	KO	C	0/C	A	AT BT PIT	RR OP RR	RY-00A		
LPCI LOC	DP II D	RYWELL	SPRAY												

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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### CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: LPCI/CCSW

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST
2-1501-3A	12	29-1	8E.	3	B	GĽ	KO	C	0/C	A	BT	OP	. ·		
CNHT CLG	HX A	TUBE SI	IDE DI	SCH	NOV				•						
2-1501-3B	12	29-1	F3	3	B	GL	NO.	C	0/C	A	BT	OP			
CNHT CLG	HX B	TUBE SI	IDE DI	SCH	NOV					•		- 			
2-1501-32A	18	29-1	8D	2	B	GA	<b>XO</b> .	0	0/C	A	BT PIT	op Rr			
LPCI DIS	CHARGE	HEADER	CROS	S-TI	E 		*****		ہر چر کے تھ ع						
2-1501-328	18	29-1	2D	2	B	GA	HO	0	0/C	A	BT PIT	op Rr			
LPCI DIS	CHARGE	HEADER	CROS	S-TI	E 										
-1501-38A	14	29-1	88	2	B	GL	KO	<b>C</b>	<b>0/C</b>	A	BT Pit	op Rr			· · ·
LPCI LOO	P I FU	LL FLOW	I BYPA	SS TI	EST I	RETURN	TO TO	RUS							
2-1501-38B	14	29-1	3B	2	B	GL	MO	C	0/C	A	BT Pit	op Rr			
LPCI LOO	P II F	ULL FLO	)W BYP	ASS	TEST	RETUR	N TO T	ORUS						*****	

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLUSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

### CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: LPCI/CCSW

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR Pos	STR DIR A/F	P TEST	TEST Sched	REL Req	TECH POS.	cs Just	
2-1501-5A	14	29-1	5E	2	B	GA	MO	0	0/C A	BT Pit	OP RR		£ .		
"A" LPCI	PUMP	SUCTION	[												
2-1501-5B	14	29-1	5F	2	B	GA	HO	0	0/C A	BT PIT	OP RR				۰ نې
"B" LPCI	PUMP	SUCTION													
2-1501-5C	14	29-1	4E	2	B	GA	KO .	0	0/C A	BT PIT	OP RR	•			
"C" LPCI	PUMP	SUCTION												•	
2-1501-5D	14	29-1	4F	2.	B	GA	MO	0	0/C A	BT PIT	OP RR				
"D" LPCI	PUNP	SUCTION													
2-1501-63A	t2	29-1	7E	2	C	CK	SA	<b>C</b> .	0/C A	CT-0 Ct-c	OP OP				
"A" LPCI	PUMP	DISCHAR	GE CHI	ECK					****						
2-1501-63B	12	29-1	7F	2	C	СК	SA	Ĵ	0/C A	CT-0 Ct-C	0P 0P			х	•
"B" LPCI	PUMP	DISCHAR	ge che	ECK											

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TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

### CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: LPCI/CCSW

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	act Type	NOR Pos	STR DIR	A/P	TEST	test Sched	REL REQ	TECH Pos.	CS Just			•
2-1501-63C	12	29-1	2E	2	C	CK	SA	Ċ	0/C	A	CT-O Ct-C	OP OP	. •				·	
"C" LPCI	RUMP	DISCHAR	GE CHE	ECK														
2-1501-63D	12	29-1	2F	2	C	CK	SA	<b>C</b>	0/C	A	CT-O Ct-C	OP OP		ñ			·	
'D' LPCI	PUMP	DISCHAR	GE CHE	ECK								هیں کا خو ہی ہے خد د	•			ا ها الله الله الله الله الله الله الله		
2-1501-65A	2	29-1	7F	2	C	CK	SA	C	0	<b>A</b>	CT-0 CT-C CT-0	sam Op Op	RV-15A	TV-69C				
"A" LPCI	PUMP 1	HIN FLO	N CHEC	ж 														
2-1501-65B	2	29-1	7E	2	.C	СК	SA	C	0	A	CT-0 CT-C CT-0	sah Op Op	RV-15A	TV-00C .				
"B" LPCI	PUMP	MIN FLO	N CHEC	:K		a un ago ano de 100 a					er 140 Title etc - 140 Title - 1					~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
2-1501-650	2	29-1	2E	2	C	СК	SA	<b>C</b> .	0	A	CT-O CT-C CT-O	sah Op Op	RV-15A	TV-00C				
'B' LPCI	PUMP 1	HIN FLO	N CHEC	:K														
2-1501-65D	2	29-1	2F	2	С	CK	SA	C	0	A	CT-0 CT-C CT-0	sa <del>n</del> Op Op	RV-15A	TV-00C	,	•		
"D" LPCI	PUMP I	HIN FLO	N CHEC	X.														

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TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

**REVISION 3** 

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### CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: LPCI/CCSW

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST		
2-1501-66A	2	29-1	8F_	2	C	SCK	SA	0	0/C	A	CT-C Ct-O	op op	RV-15B				
ECCS KEE	P. FILL	TO LPC	I STO	p chi	ECK												
2-1501-66B	2	29-1	2F	2	C	SCK	SA	0	0/C	A	CT-C Ct-O	OP OP	RV-15B				·
ECCS KEEI	P FILL	TO LPC	1 STO	p chi	ECK										·		
2-1501-67A	2	29-1	8F	2	C	СК	SA	0	0/C	A	CT-C Ct-O	0P 0P	RV-15B			•	
ECCS KEE	P FILL	TO LPC	I CHE	CK													 
2-1501-67B	2	29-1	2F	2	C	CK	SA	0	C	A	CT-C Ct-O	OP OP	RV-15B				
ECCS KEEP	P FILL	TO LPC	I CHE(	CK													 
2-1599-13A	2	29-1	6E	2	C	RV	SA	C	0	A	RT	10Y					
"A" LPCI	PUMP	SUCTION	RELI	EF						:			•				
2-1599-13B	2	29-1	6E	2	с.	RV	SA	C -	0	A	RT	10Y				یں تل <del>کر ہو، ہو، د</del> و	
"B" LPCI	PUNP	SUCTION	RELI	EF													
ه من ۲۸۰۹ شدههای ک من <sub>ا</sub> و ک کم بود . که													ہ جے ہی اللہ نیے ہے اللہ بنیا ہے۔		· · · · · · · · · · · · ·		 

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

CLASS 1, 2 & 3 VALVE LISTING

## SYSTEM: LPCI/CCSW

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EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR FOS	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST		
2-1599-130	2	29-1	4E	2	C	RV	SA	C	0	A	RT	10Y					
•C• LPCI	PUNP	SUCTION	RELI	EF												•	
2-1599-13D	2	29-1	4E	2	с.	RV	SA	C ·	0	 А	RT	10Y					
'D' LPCI	PUMP	SUCTION	RELI	EF													
								•				کا بچر بن جہ کا میں ک					
							•									·	
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TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

### CLASS 1, 2 & 3 VALVE LISTING

### SYSTEN: RADWASTE

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST
2-2001-105 Drywell	3 Floor	39 Drain (	6F Sunp pi	2 JHP	A Disci	ga Harge	AO	C	0/C	A	AT BT PIT FST	RR OP RR OF	RV-00A		
2-2001-3	3	39	4E	2	B	GA	AO	0/C	0/C	A	BT PIT FST	OP RR OP			
DRYWELL	EQUIPH	ENT DR	AIN SUP	(P PI	ump i	DISCHA	RGE					ن جرچ قدرم وروز مراح	·		
2-2001-5	3	39 	4E	2	A IMO T	GA	AO	0/C	3	A	AT BT PIT FST	RR OP RR OP	RV-00A		

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

## CLASS 1, 2 & 3 VALVE LISTING

						SYST	EM: HF	'CI									,
EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	act Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL Req	TECH Pos.	cs Just		 
2-2301-10	12	51	4E	2	B	GĽ	KO	C	C	A	BT PIT	OP RR					
HPCI PU	MP DISC	HARGE	TO CON	DENS	ATE	STORAG	E									·	
2-2301-14	4	51	60	2	B	GL	NO	C	0/C	A	BT PIT	OP RR					
HPCI MA	IN FUHP	' MIN F	LOW TO	TOR	US												
2-2301-20	16	51	2E	2	C	CK	SA	C	0	A	CT-0	OP					
HPCI CON	IDENSAT	E STOR	AGE TA	NK S	UCTI	DN CHEI	CK ·										
2-2301-23	1.5	51	<b>4</b> A	2	C	RV	SA	C	0	A	RT	10Y					
HPCI PU?	1P SUCT	ION RE	LIEF						*****					*			
2-2391-26	.75	51	0C	1	AC	XFC	SA	0	C	<b>A</b>	AT CT-C	RR RR	RV-00B				
FLOW-LI	1ITING	CHECK	FOR HP	CI R	X HI	PRESS	INST.				***			•••			
. ·																	

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

## CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: HPCI

2-2301-27	75	<u>51</u>	<u> ƏD</u>	1	<u>AC</u>	XFC	SA	0	<u>C</u>	<u>A</u>	AT Ct-C	RR RR	RV-90B	 		1 <u></u>	F7524
FLOW-	LIMITING	CHECK	FOR HP	CI R)	K HI	PRESS	INST.							 + w = + + + = = = =		<b>-</b>	
2-23 <del>0</del> 1-28		51	8B	2	B	GL .	AÜ	C	0	A	BT Pit Fst	op Rr op					. ·
HPCI	INLET DR	AIN POT	2A DR	AIN	TO T	ORUS					***	** == += =1 += +=					
2-2301-29	1	51	9B	2	B	GL.	<b>AO</b> .	0	3	<b>A</b>	BT Pit Fst	op Rr op					
HPCI	INLET DR	AIN POT	DRAIN	TO I	MAIN	CONDE	NSER							 			
2-2301-3	10	51	. 9A	2.	B	GA	MO	C	0	A	BT Pit	OP RR			· •		
HPCI	TURBINE	steam 9	WPPLY											 			
2-2301-31	1	51	9A	2	B	GL	AO	C	0	A	BT FST	OP OP					
HPCI	INLET DRI	AIN POT	2A TR	ap B,	YPAS	S							N.				
2-2301-32	1	51	7B	2	B	GL	S0	C	0/C	A	BT FST	OP OP	RV−23H				-
upot													-				

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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CLASS 1, 2 & 3 VALVE LISTING

## SYSTEM: HPCI

EPN	SIZE	PID	COR	) CL	s cat	VALVE TYPE	ACT Type	NOR Pos	STR DIR	<b>a/p</b> `1	EST	TEST SCHED	REL REQ	TECH POS.	CS Just		 	
2-2301-34	2	51		2 -	<u>AC_</u>	. CK	SA	C	_0/C_	Af	I	RR	_ <u></u>					
										( (	:T-0 :T-C	op Rr	RV-23E					
HPCI S	TEAM LIN	1E DRA	IN TO T	IORU	s che	CK												
2-2301-35	16	51	2E	2	B	GA	XO	C	0/0	A E F	IT IT	OP RR					·	
HPCI T	ORUS SUC	TION				·												
	 16	54		 י		 ΓΔ			0/0	 4 F								
	10	_ <b>_</b> ,	, <b>L</b>	-		un		U		F	IT	RR						
HPCI T	ORUS SUC	TION	-				**	-			. <b></b>						 	• • • • •
2-2301-39	16	51	8E	2	. C	CK	SA	C	0/C i	A C C	T-0 T-C	sam Sam	RV-23A	TV-00C		- -	:	
HPCI P	ump suct	ION FI	rom top	US (	CHECK												 	
2-2301-4	10	51	9C	1	A	GA	NO	0	0/C (	A A	T	RR	RV-09A					
					• .		,	•		P	IT	RR						
HPCI T	URBINE S	TEAM	INLET									e,						
- 2-2301-40	4	51	70	2	AC	CK	SA	C	0	A C	T-0	SAM	RV-23F	TV-00C	•			
HPCI N	IN FLO₩	TO TO	rus che	CK.														

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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## CLASS 1, 2 & 3 VALVE LISTING

## SYSTEM: HPCI

EPN	SIZE	PID	CORD	CLS	CAT	TYPE	TYPE	POS	DIR	A/P	TEST	SCHED	REQ	POS.	JUST	
2-2301-45	24	_51	<u> </u>	_2	_AC _	_CK	SA	<u>    C                                </u>	<u>0/c</u>	<u>A</u>	AT CT-0 Ct-c	<u>rr</u> Of Rr	<u>RV-80A</u> RV-23E			ana ang kanang ka
HPCI	IURBINE E	XHAUST	CHECK				*									
2-2301-48	4	51	4B	2	B	GA	NO	<b>C</b>	0	A	BT Pit	op Rr				
KPCI (	COOLING W	ATER R	ETURN	TO B	00ST	er pun	p									
2-2301-49	4	51	4D	2	B	GA	MD .	0	C	A	BT Pit	OP RR				
HPCI (	COOLING W	ater r	ETURN	to ci	ONDE	NSATE	STORAG	E								
2-2301-5	10	51	ØB	<b>1</b> -	A	GA	MO	0	0/C	A	AT BT PIT	RR OP RR	RV-00A			
HPCI 1	TURBINE S	TEAM I	NLET +													
2-2301-50A	4	51	4C	2	C	CK	SA	C	0	A	CT-0	Sam	RV-23G	TV-00C		
HPCI	iland sea	L COND	ENSER	INLE	r						P P					
2-2301-51	4	51	4C	2	C	CK	SA	0	C	A	CT-0 Ct-c	sam San	RV-23G RV-23G	TV-00C TV-00C		
HPCI A	NUX COOLI	NG WAT	ER PUM	P DIS	Schai	RGE CHI	ECK									
																ł,

RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK.

TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

# CLASS 1, 2 & 3 VALVE LISTING

## SYSTEM: HPCI

EPN	SIZE	PID	CORI	) CL9	CAT	VALVE TYPE	ACT TYPE	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	us Just	
-2-2301-53		51	30	-2	- C	<u>_RV</u>	SA	<u> </u>	_0	<u>A</u>	<u>_RT</u>	<u>_10Y</u>	ر <u>سر میں دوسط</u> ا			
HPCI G	iland se	al coni	DENSER	INLE	t rei	LIEF										
						*					*****					
2-2301-6	16	51	2F	2	B	GA	MO	0	0/C	A	BT Pit	op Rr				
HPCI B	OOSTER	pump si	UCTION	FROM	i coni	DENSAT	e stop	AGE							•	
													*******		و کا ایک میں کہ خان کا کرد دی خود میں آباد جو خو کے کا ایک ہونے کا ایک ایک میں میں میں میں میں میں	
2-2301-64	1	51	5A	2	B	GL	<b>AO</b> .	Q	C	A	BT PIT	op Rr			•	
•		* * .			·						FST	OP				
HPCI T	URBINE	SV ABON	VE SEAT	DRA	IN											
2-2301-68	16	51	7A	2	. <b>C</b>	RPD	SA	Ċ	8	A	RT	5Y				
HPCI T	URBINE	exhaust	r Ruptu	IRE D	ISK											
2-2301-69	16	51	7A	2	С	RPD	SA	с С	0	A	RT	5Y				
					•		•								ŕ	
HPCI T	URBINE I	EXHAUSI	T RUPTU	RE D	ISK											
2-2301-7	14	51	6E	2	C	CK	SA	C	0/C	A	CT-O CT-C	CS RR	RV-231	8	CS-23A	
HPCI I	NJECTIO	N CHECK														
							*****					******				
T-SFAT I FAKAR	F TEST	RT-Fill	I STRA	KE E	XERCI	ISF: CI	1-0-CH	FCK '	VAL VF	FXF	RCIS	F OPEN.	CT-C-CH	CK VALV	E EXERCISE CLOSED	
T_DEI TEC VALV	F TEST:	DT-FXP	NOTVE	νΔI	VF TF	ST: FS	ST-FAT	امې امې	CC TC	GT.	017_1		I THETCAL	NO CUEC	Y	

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SYSTEN: HPCI VALVE ACT NOR STR TEST REL TECH CS EPN SIZE PID CORD CLS CAT TYPE TYPE POS DIR A/P TEST SCHED REQ POS. JUST 8V-00A \_\_\_\_\_2=2301=71\_\_\_\_2 51\_\_\_3D\_\_2 AC\_SCK\_SA\_C\_0/CA\_AT\_RR CT-0 0P CT-C RR RV-23E HPCI STEAM LINE DRAIN TO TORUS STOP CHECK 2-2391-74 12 51 8C 2 AC SCK SA C O/C A AT RR RV-90A CT-0 OF CT-C RR RV-23E HPCI TURBINE EXHAUST STOP CHECK 48 2 C CK C 0/C A CT-0 SAM 2-2301-75 SA 4 51 RV-23G TV-00C CT-C SAN HPCI GLAND SEAL CONDENSER DISCHARGE CHECK 2-2301-76 2 51 4C 2 C CK SA C O/C A CT-O SAM RV-23G TV-00C CT-C SAM HPCI GSLO PUMP CHECK 6E 2 B GA HO C O/C A BT OP 2-2301-8 14 51 PIT RR HPCI HAIN PUMP DISCHARGE TO FEEDWATER HEADER 2-2301-9 14 51 5E 2 B GA KO 0 0 A BT OP PIT RR HPCI PUMP DISCHARGE

CLASS 1, 2 & 3 VALVE LISTING

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

### CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: HPCI

EPN	SIZE	PID	CORD	CLS	CÁT	VALVE	ACT Type	NOR PDS	STR DIR A/P	TEST	test Sched	REL REQ	TECH POS.	CS JUST		214.1
-2-2354-500	75	-51		_2		<u>CK</u>	_SA	0	0/C_A_	<u>CT-C</u>	<u>.0P</u>	RV-230				
										CT-0	OP				inte contrato a	
ECCS KI	EEP. FILL	. TO HI	PCI CHE	CK												. 198 auj als 60 au an air ag an air
2-2354-501	.75	51	6E	2	C	SCK	SA	0	0/C A	CT-C Ct-O	OP OP	RV-230		•		
ECCS KI	EEP FILL	. TO H	PCI STO	p Chi	ECK							ک بلن ایل ایل ایل کرد که کند				***
2-2399-76A	1	51	8D	2	<b>C</b>	CK	SA .	C	0/C A	CT-O Ct-C	RR RR	RV-23D	ţ			
HPCI TU	JRBINE E	XHAUS	T TO TO	RUS	VACUI	JM BREA	AKER									. در زند بند <u>ک مه چک بند چ</u> ر که ک
2-2399-76B	١	51	8D	2 ′.	C	CK	SA	C	0/C A	CT-0 CT-C	RR RR	RV-23D	· ·			

HPCI TURBINE EXHAUST TO TORUS VACUUM BREAKER

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

### CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: CONTAINMENT ATMOSPHERE MONITOR

EPN	SIZE	PID	CORD	CLS	CAT	TYPE	ACT TYPE	NUR POS	STR DIR A/P 	TEST	TEST SCHED	REL REQ	POS.	US JUST 			*****
2=2499-1A			- 60 -	-2.	A	_GĄ	<u>.</u> SO	<u>C</u>	0/C <u>a</u>	AT	RR	RV-00A	دين بيچ،				
										PIT FST	RR Op						
"A" (A	N DRYWEL	L AIR :	SAMPLE		E1									و بر سرم خر مر خر می ندرم			
2-2499-1B	θ.5	706-1	20	2	A	GA	SO	C	0/C A	AT BT PIT	RR OP RR	RV-00A					
"B" CA	N DRYWEL	L AIR S	SAMPLE	INL	ĒT					151	UP				÷		
																. ان بن بن بن بن من بن م	
2-2499-2A	0.5	706-1	6D	2	A	GA	SO .	C	0/C A	AT BT PTT	RR OP BB	RV-00A					
										FST	OP						
"A" (Al	M DRYWEL	L AIR S	SAMPLE		.E   												
2-2499-2B	0.5	786-1	3D	2	A	GA	SO	C	0/C A	AT BT PIT	RR OP RR	RV-00Å			• .		
		י מזא נ		TAH	CT.					FST	OP						
D LH:		L MIR 3			.C I							·					
2-2499-28A	0.5	706-1	7C	2	AC	CK	SA	0	0/C A	AT CT-0 CT-C	RR OP RR	RV-00A RV-24A		ι,			
*A* Cai	H H2/02	ANALYSI	IS SAM	PLE	outli	et che	CK										
	*	· · · · · ·									<del>ک</del> رو اور اور اور اور اور اور اور اور اور				• <b></b>		
2-2499-28B	0.5	706-1	20	2	AC	CK	SA	0	0/C A	AT CT-D CT-C	RR Of RR	RV- <del>00</del> a RV-24a					
"B" CAI	H H2/02	ANALYSI	IS SAM	PLE	outli	et chei	CK										

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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## CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: CONTAINMENT ATMOSPHERE MONITOR

EPN	SIZE	PID	CORI	) CLS CA	VALVE T TYPE	ACT Type	NOR Pos	STR DIR A	/P TES	TEST I Sched	REL Req	TECH POS.	CS JUST			•
2-2499-3a	-0.5-	-706-1-	-7B	=2A	GA	<u></u>	C	0/C_A	AT	RR	RV-00A					
									BT Pit	OP RR						
									FST	OP						
"A" ('Añ	TURUS	AIR SAM	IPLE I	NLE												-
2-2400-3B	A 5	796-1	25			50	Ċ	በ/ሮ ል	ΔΤ	00	AAA_VA				•	
2 2477 30	V.J		20	2 1	Un .	50	L	U/U A	BT	OP	N# VVH				-	
									PIT	RR						
"B" CAM	TORUS	AIR SAM	PLE I	NLET					F 21	ur				•		
																_
2-2499-4A	0.5	706-1	68	2 A	GA	SQ .	C	0/C A	AT BT	RR NP	RV-00A					
									PIT	RR						
"A" CAM	TORUS	AIR SAN	IPLE I	NLET					FST	0P 				• • • • • • • • • • • •	*****	-
2-2499-4B	θ.5	706-1	3B	2 .A	GA	SO	C	0/C A	AT	RR	RV-00A		• .			
									BT	0P				·		
				•					FIT	KK Op					•	
"B" CAM	TORUS	AIR SAM	PLE I	NLET					,	2.						

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

## CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: ACAD

EPN	SIZE	PID	CORE	) CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST	 •			•
-2-2599=1A	_1.5_	707	8C	_2	<u>B</u>	GL	_A0	_C	<u>0/C</u>	<u>A</u>	BT	_OP				 			
i.											PIT FST	rr Op	·			 ·,			
2A ACAD	AIRIN	ILET HE	EADER													 			
2-2599-1B	1.5	707	iC	2	B	GL .	AO	C	0/C	A .	BT PIT FST	op Rr op							
2B ACAD	AIR IN	NLET HE	EADER								** ** ** ** ** **					 			
2-2599-2A	1	7.07	50	2	A	GL	AO .	C	0/C	A	AT BT PIT	RR OP RR	RV-09A		·				
2A ACAD	DRYNEL	L AIR	INLET	HEAD	ER						r51	ur 				 			
2-2599-2B	i	707	4C	2	- <b>A</b>	GL	AO	C	<b>0/</b> C	A	AT BT PIT	RR OP RR	R¥-00A	·					
2B ACAD	DRYWEL	L AIR	INLET	HEAD	ER		<u>`</u>					UP				 	**-		•
2-2599-22	1.5	7 <del>0</del> 7	6A	2	C	CK	SA	<b>C</b> .	0	A	CT-O	OP		t,					
ACAD AIF	R RECEI	IVER IN	VLET CH	IECK												 	ی داد درد وب وی زند		
2-2599-23A	t	707	6C	2	AC	CK	SA	C	C	A	AT CT-C Ct-O	rr Rr Sam	RV-00A RV-25A RV-25A	TV-00C				• .	
					*														

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

### CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: ACAD

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS Just	
2=2599-23B		707	<u> </u>	-2	- AC	-CK	<u>SA</u>	<b>C</b>	C	<u>A</u> .	AT CT-C CT-O	RR RR Sam	RV-00A RV-25A RV-25A	TV-00C		1.22 - <u>2-1</u> 2:
ACAD	SYSTEM DR	YWELL	CHECK													
2-2599-24A	1	707	60	2	AC	CK	SA	C	C	A	AT CT-C Ct-O	rr Rr Sam	RV-00A RV-25A RV-25A	TV-00C	· · ·	
ACAD	SYSTEM TO	IRUS CH	ECK										د کا خان کا بین جد جان ہیں :			• • • •
2-2599-24B	ŧ	<b>7</b> 07	30	2	AC	CK	SA	C	C	<b>A</b>	AT CT-C CT-0	rr Rr Sam	R¥-00A R¥-25A R¥-25A	TV-00C		
ACAD	SYSTEM TO	irus ch	ECK				+								·	
2-2599-3A	f	707	<b>6C</b>	2	A	GL	AO	C	0/C	A	AT BT PIT	RR OP RR	RV-00A	•	· · ·	
2A A(	ad torus	AIR IN	LET HE	ADER							rəi 	ur			·	
2-2599-3B ∖	١	707	3C	2	A 	GL	AO	<b>C</b> .	0/C	A	AT BT PIT FST	RR OP RR OP	RV- <del>00</del> A			
2B A(	AD TORUS	AIR IN	LET HE	ADER						•						
2-2599-4A	θ.5	707	3F	2	A	GL .	AÛ	C	0/C	A	AT BT PIT FST	RR OP RR OP	RV-00A			· .
2A A(	AD DRYVEL	L TO S	BGTS VI	ent i	EADE	ER						<b>.</b>				

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

CLASS 1, 2 & 3 VALVE LISTING

## SYSTEM: ACAD

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR Pos	STR DIR	A/P	TEST	test Sched	REL REQ	TECH POS.	CS Just	¢			
2-2599-4B	θ.5	7 <del>0</del> 7	3E	2	A	GL	AÛ	3	0/C	A	AT	RR	RV-00A						
											BT PIT FST	OP RR OP						£	
2B ACAD	DRYWEL	L TO 9	SBGTS V	ent i	HEAD	ER											**===		
2-2599-5A	0.5	707	SF	2	B	GL	a0	C	0/C	A	BT PIT FST	op RR op							
2A ACAD	DRYNEL	L TO 9	SBGTS V	ent i	HEADE	ER			ه رور رور نور و		AT	RR	RV-00A			فند ند جو کان			
2-2599-5B	θ.5	707	5E	2	B	GL	AO	C	0/C	A	BT Pit	op Rr							
2B ACAD	DRYNELI	L TO 9	SBGTS V	ent i	HFADE	FR				•	FST At	op Rr	RV-00A						

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

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CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: RBCCW

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST	1. 1919 - 1
-2-3702	6	<u>.20</u>	3B	2	A	GA	MO	0	C	A	AT	RR	RV-00A			
			·								BI	cs Rr			- "CS-37A	
RBCCW	TO DRYWE	LL SUP	PLY HE	ADER			*									
2-3703	6	20	1B	2	A	GA	HO	0	C	A	AT BT PIT	RR CS RR	RV-00A		C3-37A	
RBCCW	DRYWELL -	RETURN	HEADE	R												
2-3706	6	20	1B	2	A	GA	KO	0	C	A	AT Bt Pit	RR CS RR	RV-00A		CS-37A	
RBCCW	DRYWELL	RETURN	HEADEI	R						~						
2-3769-5 <del>00</del>	6	20	3B	2	C	CK	SA	0	C	A	CT-C	RR	RV-37A RV-900		· ·	

REACTOR BLG CLOSED CLG WATER CHECK VALVE

•4

TEST: AT-SEAT LEAKAGE TEST, BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

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## CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: DIESEL COOLING/SERVICE WATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	ACT Type	NOR F'OS	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH Pos.	CS JUST	 		
2-3930-501	6	22	ØB	3	C	CK	SA	C	0	A	CT-O	OP				 -20 a.		
D/G C001	_ING WA	TER PU	IP DIS	CHAR	GE C	HECK	-											~=~-
2-3999-336	1	29-2	4C	3	C	CK	SA	Û	C	A	CT-C	OP				•		
D/G C001	LING WA	TER TO	CCSW	CHEC	K													
2-3999-338	1	29-2	4E	3	C	CK	SA .	0	C	A	CT-C	OP						
D/G COOL	_ING WA	TER TO	CCSW	CHEC	K									****		 		
2-3999-634	1.5	29-2	4E	3	. C	CK	SA	C	0/C	A	CT-C Ct-O	op op						
D/G COOL	_ING WA	TER TO	CCSV	KEEP	FIL	L 	****			+						 	-10 -10 -10 -10 -10	
2-3999-636	1.5	29-2	4B	3	C	CK	SA	C	·0/C	A	CT-C CT-O	op op						
D/C (00)	TNE HA	TER TO	การแป	KEED	FTH	1												

TEST. AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

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CLASS 1, 2 & 3 VALVE LISTING

## SYSTEM: RX. BLDG. EQUIP. DRAINS/LPCI

EPN	SIZE	PID	CORD	CLS	G CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	cs Just		 •	
2=4899=72	1	_ 39 _	<u></u>	.2	<u> </u>	RV	SA	<u> </u>	0	<u>A</u> _	RT	<u>10Y</u>		- <u></u>	332	27-27-1 <u>000-00</u>	 	- :
'A'LF(	CI HEAT	exchan	IGER SHE	LL 9	SIDE	RELIEF				*								
2-4899-77	1	39	5E	3	C	RV	SA	C	0	A	RT	10Y						٨
*B* LF	°CI HEAT	EXCHA	NGER TU	BE 9	GIDE 1	RELIEF		***					*****	~~~~~~~				
2-4899-78	· 1	39	5E	2	C	RV	SA	C	0	A	RT	1 <del>0</del> Y						
"B" LF	CI HEAT	EXCHA	NGER SH	ELL	SIDE	RELIE	F						*****			-		
2-4899-79	i	39	6E	3	. <b>C</b>	RV	SA	C	0	A	RT	10Y				÷		
											-							

"A" LPCI HEAT EXCHANGER TUBE SIDE RELIEF

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### CLASS 1, 2, & 3 VALVE LISTING

### SYSTEM: DIESEL COOLING/SERVICE WATER

			VALVE ACT	NOR STR	TEST	REL	TECH	CS	
EPN	SIZE PID	CORD CLS CAT	TYPE TYPE	POS DIR A/P TEST	SCHED	REQ	POS.	JUST	: '

<u>\_\_\_2/3-1599-103\_\_2.5\_\_3121\_\_2B\_\_3\_C\_CX\_SA\_\_C\_O\_A\_CT-0\_0P</u>

CONTROL ROOM HVAC REFRIG COND UNIT CCSW INLET

2/3-3930-501 6 355 8A 3 C CK SA C O A CT-O OP

D/G COOLING WATER PUMP DISCHARGE CHECK

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

## CLASS 1, 2, & 3 VALVE LISTING

## SYSTEM: CONTROL ROOM VENTILATION

SIZE	PID	CORD	CLS	CAT	VALVE Type	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL Req	TECH POS.	CS Just			
2.5	<u>3121</u>	2 <u>A</u>	3	B	GA	<u>A0</u>	0/C	0	<u>A</u>	BT FST PIT	OP OP RR		÷		· <u>·····</u>		<u> </u>
ENT AIR	TO CON	ITROL	ROOM	HVA	2											·	
3	3121	2B	3	B	GA	AO	0/C	C	A	BT FST PIT	OP OP RR						•
ROOM H	VAC CON	ID UNI	T IN	LET	*												
2.5	3121	3B	3	B	GL	AO	0/C	0	A	BT FST	OP OP	RV-57A					
	SIZE 2.5 ENT AIR 3 ROOM H 2.5	SIZE PID 2.5 3121 ENJ AIR TO COM 3 3121 ROOM HVAC COM 2.5 3121	SIZE    PID    CORD      2.5    3121    2A      ENT AIR TO CONTROL    3    3121    2B      ROOH HVAC COND UNI    2.5    3121    3B	SIZE PID CORD CLS 2.5 3121 2A 3 ENT AIR TO CONTROL ROOM 3 3121 2B 3 ROOM HVAC COND UNIT IN 2.5 3121 3B 3	SIZE PID CORD CLS CAT 2.5 3121 2A 3 B ENT AIR TO CONTROL ROOM HVAN 3 3121 2B 3 B ROOM HVAC COND UNIT INLET 2.5 3121 3B 3 B	VALVE    SIZE  PID  CORD  CLS  CAT  TYPE    2.5  3121  2A  3  B  GA    ENT  AIR  TO  CONTROL  ROOM  HVAC    3  3121  2B  3  B  GA    ROOM  HVAC  COND  UNIT  INLET    2.5  3121  3B  3  B  GL	SIZE  PID  CORD  CLS  CAT  TYPE  TYPE    2.5  3121  2A  3  B  GA  AO    ENT  AIR  TO  CONTROL  ROOH  HVAC    3  3121  2B  3  B  GA  AO    ROOH  HVAC  COND  UNIT  INLET    2.5  3121  3B  3  B  GL  AO	SIZE  PID  CORD  CLS  CAI  TYPE  POS    _2.5  3121  2A  3  B  GA  AO  O/C    ENT  AIR  TO  CONTROL  ROOH  HVAC  AO  O/C    3  3121  2B  3  B  GA  AO  O/C    ROOH  HVAC  COND  UNIT  INLET  2.5  3121  3B  3  B  GL  AO  O/C	VALVE ACT NOR STR    SIZE PID CORD CLS CAT TYPE TYPE POS DIR    2.5  3121  2A  3  B  GA  AO  O/C O    ENT AIR TO CONTROL ROOM HVAC    3  3121  2B  3  B  GA  AO  O/C C    ROOM HVAC    2.5  3121  2B  3  B  GA  AO  O/C C    COND UNIT INLET    2.5  3121  3B  3  B  GL  AO  O/C O	VALVE ACT NOR STR    SIZE  PID  CORD  CLS  CAT  TYPE  TYPE  POS  DIR  A/P	VALVE ACT NOR STR    SIZE  PID  CORD  CLS  CAT  TYPE  TYPE  POS  DIR  A/P  TEST	SIZE  PID  CORD  CLS  CAT  TYPE  TYPE  POS  DIR  A/P  TEST  SCHED	SIZE  PID  CORD  CLS  CAT  TYPE  TYPE  POS  DIR  A/P  TEST  REL    2.5  3121  2A  3  B  GA  AO  O/C  0  A  BT  OP    2.5  3121  2A  3  B  GA  AO  O/C  0  A  BT  OP    PIT  RR  REQ  AO  O/C  0  A  BT  OP    PIT  RR  REQ  REQ  AO  O/C  A  BT  OP    PIT  RR  R  AO  O/C  A  BT  OP    FST  OP  FST  OP  FST  OP    SI21  2B  3  B  GA  AO  O/C  C  A  BT  OP    SI21  2B  3  B  GA  AO  O/C  C  A  BT  OP    ROOH  HVAC  COND  UNIT  INLET  R  AO  O/C  A  BT  OP	VALVE ACT NOR STR TEST REL TECH    SIZE  PID  CORD CLS CAT TYPE  TYPE  POS DIR A/P TEST SCHED  REQ  POS.    2.5  3121  2A  3  B  GA  AO  O/C O  A  BT  OP	VALVE ACT NOR STR TEST REL TECH CS    SIZE PID CORD CLS CAT TYPE TYPE POS DIR A/P TEST SCHED  REL TECH CS    2.5  3121  2A  3  B  GA  AO  O/C O  A  BT  OP    2.5  3121  2A  3  B  GA  AO  O/C O  A  BT  OP    FST OP    FST OP    FST OP    FST OP    FST OP    FST OP    S 3121  2B  3  B  GA  AO  O/C C  A  BT  OP    FST OP    FST OP    FST OP    FST OP    FST OP    PIT RR    ROOM HVAC COND UNIT INLET    2.5  3121  3B  3  GL  AO  O/C O  A  BT  OP  RV-57A    FST OP	VALVE ACT  NOR STR  TEST  REL  TECH  CS    SIZE  PID  CORD  CLS  CAT  TYPE  POS  DIR  A/P  TEST  REQ  POS  JUST    2.5  3121  2A  3  B  GA  AO  O/C  A  BT  OP    FST  OP  FST  OP  PIT  RR    ENI AIR TO CONTROL ROOM HVAC	VALVE ACT  NOR STR  TEST  REL  TECH  CS    SIZE  PID  CORD CLS CAT TYPE  TYPE  POS DIR A/P TEST SCHED  REQ  POS.  JUST    2.5  3121  2A  3  B  GA  AO  O/C O  A  BT  OP    2.5  3121  2A  3  B  GA  AO  O/C O  A  BT  OP    PIT  RR  RR  FST  OP  PIT  RR    ENT AIR TO CONTROL ROOM HVAC

CONTROL ROOM HVAC REF. COND SU OUT FCV

## CLASS 1, 2 & 3 VALVE LISTING

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	nor Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST	
3-0202-5A	28	357-2	6D	1	B	GA	KO	0	C	A	BT	CS			CS-02A	 
	-				•			_			-11.	AN				
RX RECI	RC "A"	PUMP DI	SCHAR	GE										***		 
3-0202-5B	28	357-2	30	1	B	GA	MO	Q	C	A	BT PIT	CS RR			CS-02A	•
RX RECI	RC •B•	PUMP DI	schar	GE			<b>2</b> ago ago an ian mi									 
3-0203-1A	<b>20</b>	345-1	4E	f	<b>A</b> -	GL	<b>AO</b> .	0	C	A	AT Bt FST	RR OP CS	RV-00A RV-02H R∀-02H		CS-02B	
MAIN ST	AN ISO	LATION	VALVE								P11	кк <u>.</u>	) (m m m m m m m m m m m m m m m m m m m			 
3- <del>0</del> 203-18	20	345-1	4D	1.	A	ቢ	AD .	0	C	A	AT BT FST PIT	RR OP CS RR	RV-00A RV-02h RV-02h		CS- <del>0</del> 2B	
MAIN STE	AN ISO	LATION	VALVE					*								 
<b>3-0203-1C</b> ·	20	345-1	4C	1	<b>A</b>	GL	AO	0	C	<b>A</b>	AT BT FST PTT	RR OP CS 88	RV-00A RV-02h RV-02h		CS-02B	
MAIN STE	AM ISU		VALVE									AA				 
3-0203-1D	20	345-1	4B	ſ	A	GL	AO	0	C	A	AT BT FST PTT	RR OP CS 88	RV-00A RV-02H RV-02H		CS-02B	·
MAIN STE	AM ISO	LATION	VALVE									NN.				

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED;

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RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

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## CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST
 3-0203-2A	20	345-2	7F	1	A	GL	AO	0	C	A	AT	RR	RV-00A		
MAIN STE	AM ISO	LATION	VALVE								FST	CS RR	RV-02H		CS-02B
3-0203-2B	20	345-2	7E	i	A	GL	AD	0	C	A .	AT BT FST	RR OP CS	RV-00A RV-02H RV-02H		CS-02B
MAIN STE	AN ISO	ATION	VALVE					*			F11	κn 			
3-0203-20	<b>20</b>	345-2	70	1	A	GL	AO .	0	C	<b>A</b> .	AT BT FST	RR OP CS	RV-00A RV-02H RV-02H		СЅ-02В
HAIN STEP	AM ISOL	ATION V	/ALVE												
3-0203-2D	20	345-2	70	1	A	GL	AO	0	C	A	AT BT FST	RR OP CS	RV-00A RV-02H RV-02H		CS-02B
MAIN STE	AM ISOL	ATION	ALVE								F11	лл 			
3-0203-3A	6	345-1	7F	1	BC	TRV	ao/sa	<b>C</b> .	0	A :	BT RT PIT	RR RR RR	RV-02A		
TARGET RI	JCK SAF	ETY/REL	.IEF		-		*****								
3-0203-3B	6	345-1	7E	i	BC	ERV	SO	С	0	A	BT Rt Pit	RR RR RR	RV-02A		
3B ELECT	ROMÁTIC	RELIEF						• <b></b>							

TEST: HI-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

# CLASS 1, 2 & 3 VALVE LISTING

## SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

3-0203-30	6	345-i	7£	í	BC	ERV	SO	C	0	A	RT	RR	RV-82A					
			1 399	.= =						- 13	-RT-=				- 1997.1.3		- 112 74 - 1	 
						·					£71	ŔΛ						
30 ELE			.r 															 
3- <del>0</del> 203-3D	6	345-1	78	1	BC	ERV	S0	C	0	A	BT Rt Pit	RR RR RR	RV-02A				•	•
3D ELE	CTROMATI	C RELIE	:F															
, 									;							ang dan ant din 440 M		 
1-0203-3E	6	345-1	6E	i	BC	ERV	S0	<b>C</b>	0	A	BT Rt	RR RR	RV-02A					
											PIT	RR						
JE ELE	CTROMATI	C RELIE	F															 
- <del>0</del> 203-4A	6	345-1	8E	ſ	Э.	SV	SA	С	ß	A	RT	5Y						
	-				-			-	-									
MAIN S	iean saf	ETY												·				
															*			 
-0203-48	6	345-1	8E	1	C	5¥	SA	C	0	A	RT	5Y						
					•													
NAIN S	rean saf	ETY																 
- <del>0</del> 203-4C	6	345-1	8D	١	C	SV	SA	С	0	A	RT	5Y						
	-			•	•	-		-	-				,					
		ETV																· .

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### CLASS 1, 2 & 3 VALVE LISTING

## SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER CS TECH VALVE ACT NOR STR TEST REL JUST CORD CLS CAT TYPE TYPE POS DIR A/P TEST SCHED REQ POS. EPN SIZE PID \_\_\_\_\_ \_\_\_\_ \_\_\_\_\_ 3-0203-4D 345-1 8D 1 C SV SA C D A RT 5Y 6 ana mining the state of the second MAIN STEAM SAFETY \_\_\_\_\_ ---------3-0203-4E 6 345-1 8C 1 C SV SA C O A RT 5Y MAIN STEAM SAFETY 3-0203-4F 6 345-1 8C 1 C SV SA C O A RT 5Y MAIN STEAM SAFETY 3-0203-4G 6 345-1 8B 1 .C SV SA C O A RT 5Y NAIN STEAM SAFETY \_\_\_\_\_ 3-0203-4H 6 345-1 8B 1 C SV SA C D A RT 5Y NAIN STEAM SAFETY 3-0205-24 2.5 357-1 6E 1 A GA MO C O/C A AT RR RV-00A BT OP PIT RR

REACTOR HEAD COOLING INLET

TEST- AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

**REVISION 3** 

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### CLASS 1, 2 & 3 VALVE LISTING

## SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type 	NOR Pos 	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS Just 
<u>3-0205-27</u>	2.5	357-1	5E	1	AC	CK	SA	C	0/C	A	AT	RR	RV-00A	_	
											CT-C	RR	KT-VZF		
REACTOR	HEAD C	OOLING	INLET	CKE	CK					•	• + =				
3-0220-1	2	345-1	4E	1	A	GL	ю	0	C	A	AT BT PIT	RR OP RA	RV-00A		
MAIN ST	eam dra	IN TO C	CONDEN	SER											
3-0220-105A	8	356	5E	3	2	CK	SA	C	0/C	A	CT-0 Ct-c	CS CS	RV-02E	·	CS-02C
TARGET	ROCK SA	FETY/RE		VLV '	VACU	UM BRE	AKER								
3-0220-105B	8	356	5E	3.	C	CK	SA	C	0/C	A	CT-0 Ct-c	CS CS	RV-02E		. <b>CS-02C</b>
ELECTRO	ATIC R	ELIEF \	ALVE	LINE	VAC	JUM BRI	EAKER			n					******
3-0220-1050	8	356	5E	3	C	СК	SA	<b>C</b>	0/C	A	CT-0 Ct-c	CS CS	RV-02E		CS-02C
ELECTRO	MATIC R	ELIEF	/ALVE	LINE	VAC	UUM BRI	EAKER			**			و چې چې چې چې چې دې وې دې و		
3-0220-105D	8	356	SE	3	C	CK	SA	C	0/C	A	CT-O Ct-C	CS CS	RV-02E		CS- <del>0</del> 2C
ELECTRO	IATIC R	ELIEF V	ALVE	LINE	VACI	JUM BRI	EAKER	<b></b>							
				4											

RT-RELIEF VALVE TEST; DT-EXFLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK.

TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

## CLASS 1, 2 & 3 VALVE LISTING

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## SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

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-3-0220-105E-	8		. 5E	_3	C. <u>-</u>	CK	SA	_C _	0/0	<u>A</u>	CT-D	CS	RV-02E		CS-02C			
											CT-C	CS				و*هالک د د	 <b>1.747</b> (	. :==
ELECTR	MALIC I	ELIEF V	ALVE		VAC	UUM BR	EAKER	9 100° aya 200 ya							~~~~~~		 	-
3-0220-17A	0.5	345-2	8E	١	AC	XFC	SA .	0	C	A	AT Ct-C	RR RR	RV-GOB					
FLOW-L	INITING	CHECK F	OR LO	DP1	S-26	1-2A-D	•											
3-6220-17B	9.5	345-2	8D	1	ÁC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B				 	-
FLOW-L	INITING	CHECK F	OR LO	DPI	S-26	1-2E-H	•				****			• • • • • • • • • • • • • • • • • • •			 	
3-0220-17C	0.5	345-2	38	1	.AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B		ş.			
FLOW-L	IMITING	CHECK F	OR LO	-DP]	S-26	1-2JH.		20 - 40 - 40					<b></b>		+		 	
3-0220-17D	0.5	345-2	88	i	AC	XFC	SA	0	C	A	AT Ct-C	RR RR	RV-00B					
FLOW-L	INITING	CHECK F	OR LO	DP1	S-26	1-2N-S	•	· · · · · ·			*****			و من خد من به خد			 	-
3-0220-18A	<b>0.</b> 5	345-2	8E	i	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-GOB					
FLOW-L	INITING	CHECK F	OR HI	DPI	S-26	1-2A-D	٠ 										 	

### CLASS 1, 2 & 3 VALVE LISTING

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### SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	PID	CORD	CLS	CAT	TYPE	TYPE	POS	DIR	A/P	TEST	SCHED	REQ	POS.	JUST	 	 	
<u>3-0220-188</u>	0.5	345-2	8D	<u>1</u>	AC	XFC	SA	0	C	<u>A</u>	AT Ct-C	RR RR	RV-00B		· <u>······</u> ·····························	¥ <del>7</del> 7.	 <del></del>	
FLOW-LI	MITING	CHECK F	OR HI	DPI	S-26	1-2E-H	•											
3-0220-18C	0.5	345-2	80	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B			 		
FLON-LI	HITING	CHECK F	OR HI	DPI	S-26	1-2J-N	•									 	 	
3-0220-18D	<b>0.</b> 5	345-2	8B	Í	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B			v	-	
FLOW-LI	NITING	CHECK F	OR HI	DPI	S-26	1-2N-S	•									 		
3-0220-19A	0.5	357-2	5B	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B					
FLOW-LI	MITING	CHECK F	OR LO	W LE	G DP'	T-261-	5A									 	 	<b></b> ,
3-0220-19B	0.5	357-2	3B	1	AC	XFC	SA	0	C	A	AT CT-C	<b>RR</b> RR	RV-00B					
FLOW-LI	MITING	CHECK F	OR LO	W LE	G DP	[-261-	5B									 	 	
3-0220-2	2	345-2	7E	1	A	GL	KO	0	C	A	AT BT PIT	RR OF RR	RV-00A					
MAIN ST	EAM LIN	IE OUTBO	IARD D	RAIN														
																	 	-

RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK.

TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

### CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: RX RECIRC/HAIN STEAM/FEEDWATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR	A/F	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST	 ş."
<u>3-0220-20A</u>	0.5	<u>357-2</u>	<u>58</u>	1	AC	XFC	SA	0	C	<u>A</u>	AT	RR				
											CT-C	RR	RV-00B			£. y <del>Angenik 1949. a</del>
FLOW-L	IMIJING	CHECK F	OR HI	DPT	-261	-5A										 ** ** * * * * * * * *
3-0220-20B	0.5	357-2	3B	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	R¥-0∂B			•
FLON-L	IHITING	CHECK F	OR HI	DPT	-261	-5B										 ***
3-0220-21A	0.5	357-2	8D	í	AC	XFC	SA	0	C	A .	AT	RR				
										· ·	CI-C	RR	KA-69R			
FLOW-L	IMITING	CHECK F	OR LO	FT-	261-	6A								*		 
3-0220-21B	0.5	357-2	1D	1	. AC	XFC	SA	0	C	A	AT Ct-C	RR RR	RV-00B		· · · · ·	,
FLOW-L	INITING	CHECK F	OR LO	FT-	261-	6B										
3-0220-22A	<b>0.</b> 5	357-2	8D	í	AC	XFC	SA	0	C	A	AT Ct-C	RR RR	RV-00B			ł
FLOW-L	INITNG C	HECK FO	R HI	FT-2	61-61	A		*					ان او و کارو رو ور در رو			
3-0220-22B	0.5	357-2	iD	i	AC	XFC	SA	0	C	A	AT Ct-C	RR RR	RV-00B			
FI (1)4-1 1	INITING	CHECK F	0.00.11		FT-2	261-60	-									

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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## CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

												<b></b> -			 	 	
3-0220-44	.75	357-2	2E	1	A	GL	AD	0	C	A	AT	RR	RV-00A	TV-00B	 	 	
					`						FST	OP OP					
RECIRC	. LOOP 9	SAMPLE (	INBOA	RD)							F 1 (	RR					
7 0000 45	75	757 0	45				<u>-</u>		~		AT			TU AAD	 		
5-8228-45	. ()	337-2	12	1	A	ել	AU	U	ſ,	A	AT BT	OP	KV-08A	14-AAR			
											PIT	up RR					
RECIRC	. LOOP 9	Sample (	OUTBO	ARD) 									· · · · · · · · · · · · · · · · · · ·		 	 	
3-0220-54	θ.5	357-1	5E	f	AC	XFC	SA	0	C	A	AT	RR					
											CT-C	RR	RV-00B				
FLOW-L	INITING	CHECK F	OR PS	-261	-20,	PI-26	1-20						:				
1-9229-284		347	AC	4	ልሮ	CV/	сл	 Л	 г		ΔΤ		0V-005				
J VZZV JUH	10	ורע	76	1		CA	Un	U	U	п	CT-C	RR	RV-02C				
INBOAR	D FEEDWA	ATER CHE	CK														
و ب و هنگ گنارش به بار ب														•		 	
3-0220-588	18	347	4F	1	ac	CK	SA	0	C	A	AT CT-C	RR RR	RV-00A RV-02C	·			
					• .						CT-O	OP					
INBOAR	D FEEDWA	ATER CHE	CK				*****								 	 	
3-0220-59	18	347	2F	2	C	CK	SA	0	C	A	CT-C	RR	RV-00C				
2																	
<u>AUTROA</u>	RD FEFDL	iater ch	ECK			•											•
							*							* <del></del>	 	 	
														•			

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RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDONN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

**REVISION 3** 

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### CLASS 1, 2 & 3 VALVE LISTING

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EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST		:		
. <u>3-0220=62</u> A	18	347	<u>_3E_</u>	<u>.</u>	<u>_AC</u> _	<u>_CK</u>	<u>.sa</u>	0	<u> </u>	<u>A</u>	AT CT-C	<u>RR</u> RR	RV-00A RV-02C			<del>.</del>		n =/	22
FEEDWA	TER: OUTE	BOARD C	HECK																
3-0220-62B	18	347	3F	1	AC	CK	SA	0	C	A	AT CT-C CT-O	RR RR OF	RV-00A RV-02C						
FEEDWA	TER OUTE	JOARD CH	łeck																
3-0220-67A	0.5	357-2	5F	1	AC	XFC	SA	0	C	A	AT Ct-C	RR RR	RV-00B						
FLON-L	INITING	CHECK I	FOR DP	IS 3	-261	-34A							به چو نانه دینو چو خد ز						
3-0220-67B	° 0.5	357-2	SF	ť	. AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B		•				
FLOW-L	IMITING	CHECK F	OR DP	IS 3	-261	-34A											******		
3-0220-67C	θ.5	357-2	SF	i	AC	XFC	SA	0	3.	A	AT CT-C	RR RR	RV-00B			2	14 A		
FLOW-L	IMITING	CHECK F	OR DP	IS 3	-261	-34C							يه رود فقا الد في وي فقا الد في و		. « د د و بر بر می اف ا		* *= =: =: == == == =:		_
3-0220-67D	0.5	357-2	SF	í	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B						
						740												• .	•

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

**REVISION 3** 

### CLASS 1, 2 & 3 VALVE LISTING

EPN	SIZE	PID	COR	D CL	S CAT	VALVE TYPE	ACT TYPE	NOR	STF DIF	r 1 a/p 	TEST	TEST SCHED	REL REQ	TECH POS.	CS Just				
<u>_3-0220-67E</u> _	0.5	357-2	<u>3F</u>	1	AC	_XFC	SA	0	C	<u>A</u>	AT Tt-C	RR RR	RV-00B						
FLOX-I		CHECK	FOR DI	PIS	3-261	-34B													
3-0220-67F	θ.5	357-2	3F	í	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B						
FLOW-1	LINITING	CHECK	FOR DI	PIS	3-261	-34B								ک اسپو اند سر در ۲			ے سل طور ہے۔ کہ قدم		
3-0220-67G	0.5	357-2	3F	1	AC	XFC	SA	Ó	C	A	AT CT-C	RR RR	RV-00B						
FLOW-I	INITING	CHECK	FOR DI	PIS	3-261	-34D											•	·	
3-0220-67H	0.5	357-2	3F	i	. AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B	•	,	· ·			
FLOW-	LIMITING	CHECK	FOR DI	PIS	3-261	-34D													
3-0262-25A	0.5	357-2	7B	í	AC	XFC	SA	0	C	Â	AT CT-C	RR RR	RV-00B						
FLOW-1	LIMITING	CHECK	FOR P	T-26	2-70					-	<b></b> ,								
3-0262-258	0.5	357-2	28	í	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV- <del>00</del> B				·		
FL0H-I	_IMITING	CHECK	FOR P	[-26	2-7D														
				ų			-												

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TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK.

### CLASS 1, 2 & 3 VALVE LISTING

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### SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	ACT Type	NOR PDS	STR DIR	L A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST	 	:	•
3-0262-26A -		- 357-2	- 7B	4 -	AC	XFC	SA	<u>0</u>	<u> </u>	. <u>A</u>	AT CT-C	<u>RR</u> RR	RV-00B	- <del></del>		 - <del>2</del> - 1977 - 19	671. J	وي ريانية
FLOW-LI	HITING	CHECK F	OR PT	-262 <sup>.</sup>	-7A					·•						 		
3-0262-26B	θ.5	357-2	2B	i	AC	XFC	SA	0	C	A	at Ct-C	RR RR	RV-00B					
FLOW-LI	MITING	CHECK F	OR PT	-262	-7B				+		*		) ang aki ang ang ati ati ani ati ati			 		
3-0263-2-11	0.5	357-1	5E	i	AC	XFC	SA	0	C	<b>A</b> .	AT CT-C	RR RR	RV-00B					
FLOW-LI	MITING	CHECK F	OR LO	# LE(	G LT	-263-6	f 									 		
<b>3-0</b> 263-2-13A	θ.5	357-1	5D	١	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B		·			
FLOW-LI	MITING	CHECK F	OR REF	F LE(	; TO	2203-	5			*** *** ***						 		
3-0263-2-13B	θ.5	357-1	3D	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B					
FLOW-LI	HITING	CHECK F	OR REF	F LEC	; TO	2203-	6											
3-0263-2-15A	0.5	357-1	5D	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B					
FLOW-LI	HITING	CHECK F	or vai	r le(	; TO	2203-	6											

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

### CLASS 1, 2 & 3 VALVE LISTING

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### SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	PID 	CORD	CLS	G CAT	TYPE	TYPE	PDS	DIR	( A/P	TEST	SCHED	REQ	POS.	JUST		******		-
-3-0263-2-15B	0.5	- 357-1	_30 _	1	_ AC _	_XFC	<u>_sa</u>	<u> </u>	<u> </u>	<u>A</u>	AT Ct-C	RR RR		r= <u></u>					<b></b> n
FLOW-LI	MITING	CHECK F	'or va	R LE	EG TO	2203-	6									*****			-
3-0263-2-17A	θ.5	357-1	SD	ŧ	AC	XFC	SA	0	C	A	AT Ct-C	RR RR	RV-00F				·		
FLOW-LI	MITING	CHECK F	OR RF	V IN	ISTRU	MENTS													-
3-0263-2-17B	θ.5	357-1	3D	i	AC	XFC	SA	0	C	A	AT Ct-C	RR RR	RV-00E						
FLOW-LI	MITING	CHECK F	OR RP	V IN	ISTRUI	MENTS										*==*			_
3-0263-2-19A	θ.5	357-1	5C	í	. AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00E		Þ				
FLOW-LI	MITING	CHECK F	OR LO	₩ LE	G LT·	-646A			- w										_
3-0263-2-19B	0.5	357-1	30	1	AC	XFC	SA	0	C	A	AT Ct-C	RR RR	RV-00B						
FLOW-LI	MITING	CHECK F	OR IN	ST L	.T-64	6B													-
3-0263-2-20A	θ.5	357-1	5B	i	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B						
FLOW-LI	MITING	CHECK F	OR HI	LEG	FT	263-63	A	<b></b> _										بر بر بن بن ما شرار مر	_
													-						-

RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. 4

TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.
# CLASS 1, 2 & 3 VALVE LISTING

# SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR PDS	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS Just			
3=0263-2-20B_	θ. <u>5</u> -	357-1-		_1	_AC_	XFC	_sa	0	<u> </u>	<u>A</u>	AT CT-C	RR RR	RV-00B			- 5- 12 (tr) - 1-10	1	
FLOW-LI	MITING	CHECK F	FOR HI	LEG	FT	263-63	B									****		
3-0263-2-20C	0.5	357-1	3B	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	8 <b>8-00</b> B					
FLOW-LIN	MITING	CHECK F	FOR HI	LEG	FT	263-63	C	•										
<b>3-0</b> 263-2-20D	0.5	357-1	3B	1	AC	XFC	SA	0	C	<b>A</b>	AT Ct-C	RR RR	RV-00B					
FLOW-LI!	HITING	CHECK F	FOR HI	LEG	FT-1	263-63	D											
3-0263-2-23A	θ.5	357-1	50	1	- AC	XFC	SA	0	C	A	AT Ct-C	RR RR	RV-00B					
FLOW-LI	MITING	CHECK F	FOR LO	LEG	FT-	263-63	B											
3-0263-2-2 <u>3</u> B	θ.5	357-1	5C	i	AC	XFC	SA	0	C	A	AT Ct-C	RR RR	RV-00B					
FLOW-LI	MITING	CHECK F	FOR LO	LEG	FT	263-63	A										·	
3-0263-2-23C	0.5	357-1	30	١	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B					
FLOW-LI	MITIŅG	CHECK F	FOR LO	LEG	FT	263-63	D											

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXFLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

# CLASS 1, 2 & 3 VALVE LISTING

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### SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	act Type	NOR FOS	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST			 •
<u>3-0263-2-23D</u>	0.5	_357-1	<u>    3C                                </u>	1	AC	XFC	SA	0	C	A	AT	RR				715.800.		
51 OH   1		011504 5			<b>CT</b> 2	17 170					61-6	κκ	VA00D					
FLU9-LI		CHECK F	UK LU	LE6	+12	63-63C 												 
3-0263-2-25	0.5	357-1	5B	i	AC	XFC	SA	0	C	A	at Ct-C	RR RR	RY-00B		<b>s.</b>			
FLOW-LI	HITING	CHECK A	BOVE	THE (	CORE	PLATE	PRESS	•				m 100 400 140 140 410 410 410 410						 
<b>3-0263</b> -2-27	θ.5	357-1	5B	í	AC	XFC	SA .	0	C	A	AT Ct-C	RR RR	RV-00B			ţ		
FLOW-LI	HITING	CHECK B	ELOW	THE (	CORE	PLATE	PRESS	•	`									 
3-0263-2-31B	θ.5	357-1	5C	í	.AC	XFC	SA	0	C	A	at Ct-C	RR RR	RV-00B					
FLOW-LI	HITING	CHECK F	OR LO	LEG	FT-:	263-641	}											 
3-0263-2-31C	θ.5	357-1	5C	i	AC	XFC	SA	0	C	A	AT Ct-C	RR RR	RV-00B					
FLOW-LI	MITING	CHECK F	OR LO	LEG	FT 2	263-64(	;										, 	 ** ** **
3-0263-2-31D	0.5	357-1	5C	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV- <del>0</del> 0B					·
FLOW-LI	MITING	CHECK F	OR LO	LEG	FT 2	263-641	)											 
•																		

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

# CLASS 1, 2 & 3 VALVE LISTING

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SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	act Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	cs Just				•	
3-0263-2-31E-	0.5-	- 357-1-	-50—	-1	- AC	_XFC	_SA_	<u>0.</u>	<u>    C                                </u>	.A	AT CT-C	RR RR	RV-00B		·		, 			
FLOW-LI	MITING	CHECK F	OR LO	LEG	FT	263-64	E										u	بد بن حد الد فر ا	۰.	
3-0263-2-31G	0.5	357-1	5C	1	AC	XFC	SA	0	C	A	AT Ct-C	RR RR	. RV-00B					•	£.	
FLOW-LI	MITING	CHECK F	for Lo	LEG	FT	263-64	G													
3-0263-2-31H	0.5	357-1	50	f	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B							
FLOW-LI	MITING	CHECK F	OR LO	LEG	FT	263-64	 H								·.					
3-0263-2-31J	θ.5	357-1	5C	i	. AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B		•					
FLOW-LI	MITING	CHECK F	OR LO	LEG	FT	263-64	J											<u>ے ہے اور شائم ہے ا</u>	· <b></b> -	••
3-0263-2-31K	θ.5	357-1	5C	í	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B	·						
FL0W-LI	MITING	CHECK F	OR LO	LEG	FT	263-64	K									و چې چې چې کې کې کې کې کې			-	
3-0263-2-31N	0.5	357-1	30	í	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B							•
FLOW-LI	MITING	CHECK F	OR LO	LEG	FT	263-64	М													

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

### CLASS 1, 2 & 3 VALVE LISTING

# SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	act Type	NOR PDS	STR DIR	A/F	TEST	test Sched	REL Req	TECH POS.	cs Just			•
<u>3-0263-2-31N</u>	0.5	<u>.357-1</u>	3C	<u> </u>	AC	_XFC	<u>sa</u>	0	C	<u>A</u>	AT CT-C	RR RR	RV-00B	. "L" c. <del></del>		<u></u>		<u></u>
FLOW-LI	MITING	CHECK	FOR LO	LEG	FT	263-64	N											
3-0263-2-31P	0.5	357-1	30	í	AC	XFC	SA <sup>`</sup>	0	C	A	AT CT-C	RR RR	RV-00B					·
FLOW-LI	MITING	CHECK	FOR LO	LEG	FT	263-64	P 					* =						
3-0263-2-31R	0.5	357-1	30	1	AC	XFC	SA	0	C	A	at Ct-C	RR RR	RV-00B			· .		
FLOW-LI	MITING	CHECK	FOR LO	LEG	FT	263-64	R									*==*	•	
3-0263-2-31 T	0.5	357-1	30	1	. AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B		•			
FLOW-LI	MITING	CHECK	FOR LO	LEG	FT	263-64	T						10 agus qui 100 aut 101 agus 100					
3-0263-2-3 <u>1</u> U	0.5	357-1	30	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B		;	•		
FLOW-L1	MITING	CHECK I	FOR LO	LEG	FT	263-64	U 											
3-0263-2-31¥	0.5	357-1	30	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-66B					
FLOW-LI	MITING	CHECK F	FOR LO	LEG	FT	263-64	1						<u> </u>					

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

### CLASS 1, 2 & 3 VALVE LISTING

# SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

EFN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT TYPE	NOR Pos	STR DIR	A/P	TEST	test Sched	REL REQ	TECH POS.	CS JUST	÷.	
3-0263-2=314	.0.5_	<u>357=1</u>	_3C	1	_AC	XFC	SA	0	<u>C</u>	<u>A</u>	AT	RR					
											CT-C	RR	RV-00B	,			
FLOW-LIN	ITING	CHECK F	OR LO	LEG	FT	263-64	¥ 					ک چند سی مند علیہ ہوں خد او					
3-0263-2-33	0.5	357-1	3B	i	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B				
FLOW-LIN	ITING	CHECK F	OR HI	LEG	JET	PUNP	FT'S										
3-0263-42A	0.5	357-1	50	í	AC	XFC	SA	0	C	A	at Ct-C	RR RR	RV-00B	•	•		
FLOW-LIM	ITING	CHECK F	OR LI	262-	-151/	۹ 			` 								
3-0263-42B	0.5	357-1	3C	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B	· •			

# CLASS 1, 2 & 3 VALVE LISTING

# SYSTEM: RX VESSEL WATER LVL INDICATION

.3=0299=100A3. RVWLIS *A: 3-0299-100B 3, RVWLIS *B* 3-0299-97A 3, RVWLIS *A*	/8 NARR /8	<u>357-3</u> OW RAN(  357-3 OW RAN(	<u>_6E</u> GE BAI	<u>1</u> CKFI 1	<u>AC</u> LL I	<u>CK</u> NBOARD	SA CHECK	<u>0</u>	<u>0/C A</u>	CT-O CT-C A	op RR		<u>,</u>			 <del>-11-1-11-11-11-11-11-11-11-11-11-11-11-</del>
RVWLIS 'A: 3-0299-100B 3, RVWLIS 'B' 3-0299-97A 3, RVWLIS 'A'	NARR /8 NARR	OW RAN	GE BAI	CKFI 	LL I	NBOARD	CHECK	ł		61-6 A	RR RR	RV-026 RV-00A				inter a settinge
RVWLIS 'A: 3-0299-100B 3, RVWLIS 'B' 3-0299-97A 3, RVWLIS 'A'	NARR 78 NARR	OW RANG 357-3 OW RANG	GE BA	CKFI 	LL I	NBOARD	CHECK	l						,		
3-0299-100B 3, RVWLIS 'B' 3-0299-97A 3/ RVWLIS 'A'	/8 Narr	357-3 Ow Rand	4E .	1	ልሮ								ي المراجع من المراجع م			 
RVWLIS 'B' 3-0299-97A 3/ RVWLIS 'A'	NARR	ow rand			nu	CK	SA	0	0/C A	CT-0	OP					
RV₩LIS "B" 3-0299-97A 3/ RV₩LIS "A"	NARR	ow rand								CT-C A	RR RR	RV-02G RV-00A				
3-0299-97A 3, RVWLIS 'A'			GE BA	CKFI	LL I	NBOARD	CHECK	[								
RVWLIS 'A'	<i>i</i> n .	757 7						·	0/C A						<b>ن</b> جه ان ایم بر ان نو نو ن	 
RVWLIS 'A'	/8	337-3	ſĽ	1	AL.	LK	58	U	U/L A	CT-C	RR	RV-02G				
RVWLIS 'A'			•	_						A	KR	KA-669		· .		
	MEDI	um Rang 	GE BAI	CKFI 		UTBOAR	D CHEC	:К 								 <u></u>
3-0299-97B 3/	/8	357-3	3E	f	AC	CK	SA	0	0/C A	CT-O	OP					
										-C1-C A	KK RR	RV-02G RV-00A	•			
RVWLIS 'B'	MEDI	un ran(	GE BA	CKFI	LL O	UTBOAR	D CHEC	K		**=**=						 
3-0299-98A 3/	/8 ;	357-3	6E	1	AC	CK	SA	0	0/C A	CT-0	ÛP			. «J		
·							,			CT-C A	RR RR	RV-02G RV-00A				
RVULIS "A"	NARRI	OW RANC	GE BAG	CKFI	Ll Oi	utboari	d chec	K.								,
••••••••••••••••••••••••••••••••••••••					<b></b>							یہ ہے جب کے طور کو اول ہے جنو		*****		 
3- <del>0</del> 299-98B 3/	/8 ;	357-3	4E	1	AC	CK	SA	0	0/C A	CT-O CT-C A	OP RR RR	RV-02G RV-00A				
RAM LC +5+	NARRI	UN BONU	.F RAI	CKET	11 01	TRADAR	0 ርዝፑር	¥								· .

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

### CLASS 1, 2 & 3 VALVE LISTING

# SYSTEM: RX VESSEL WATER LVL INDICATION

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR Pos	STR DIR	A/P	TEST	test Sched	REL REQ	TECH POS.	cs Just		•	
<u>3-0299-99A</u>	3/8	357-3	7E	<u>1</u>	AC	CK	SA	0	0/C	<u>A</u>	CT-O CT-C	OF RR =				 <b>-</b>		
RVWLIS	'A: Hei	DIUM RAN	IGE BA	CKFI	LL I 	NBOARD	CHECK	(	****		H 	<u>к</u> к	K¥~OVH			 		
3-0299-99B	3/8	357-3	3E	1	AC	CK.	SA	0	<b>0/</b> C	A	CT-O CT-C	OF RR	RV-02G					
RVWLIS	'B' HEI	dium ran	ige ba	CKFI	., LL I	NBOARD	CHECK	ť			<b>n</b>	ĸл	K¥-0VH					

# CLASS 1, 2 & 3 VALVE LISTING

EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	ACT Type	NOR Pos	STR DIR	ል/ዮ	TEST	TEST Sched	REL REQ	TECH POS.	cs Just			•
 3-0302-156A		_365_	<u>5F</u>	2	<u>B</u>	GA	<u>A0</u>	0	C	A	BT	0f* 0F 88			ı.			 
SDV DRAI	N.	`																
3-0302-156B	1	365	2F	2	₿	GA	AO	Ū	C	A	BT FST FIT	OP OP RR	-					•
SDV DRAI	N																	 
3- <del>0</del> 302-157A	1	365	2F	2	B	GA	AO .	0	C	A	BT FST PIT	OP OP RR			, •			
SDV DRAI	N																	 
3-0302-157B	Í	365	5F	2	.8	GA	AŪ	0	C	A	BT FST PIT	OP OP RR						••• • .
SDV DRAI	N															,		 
3-0302-160A	1	365	1F	2	B	GA	AÛ	0	C	A	BT FST PIT	op op rr			:		4	·
SDV VENT										_*	•							
3-0302-160B	1	365	бF	2	B	GA	AO	0	Ċ	A	BT FST PIT	OP OP RR						
SDV VENT																		

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK.

TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

# CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: CONTROL ROD DRIVE

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST		
<u>3=0302-161A</u>	_1	_365 _	<u>1F</u>	2.	<u>B</u>	<u>GA</u>	A0	0	C	A	BT Fear-	OP					
											PIT	RR		71			
SDV VENT	· .						*										· '
3-0302-1618	1	365	6F	2	B	GA	AC	0	C	<b>A</b> .	BT FST PIT	op op Rr					
SDV VENT	[														- 		
3-0305-114	0.5	365	9D	2	C	CK	SA	C	0	A	CT-0	OP	RV-03B		•		
SCRAM DI	ISCH RI	SER BA	ill che	CK		•							,		· ·	•	
										<b>-</b> -		· · · · · · · · · · · · · · · · · · ·					
3-0305-115	6.2	365	θE	1	. <b>(</b>	CK	54	U	C	A	61-6	US		-	. CS-03A		
ACCUMULA	ATOR CH	IARGING	WATER	CHE	CK		÷						i				
3-0305-126	0.5	365	θE	1	B	GA	AO	C .	0	A	BT FST	OP OP	RV-03B		,		۰ ۰
HCU SCRA	IM INLE	.T															
3-0305-127	0.5	365	9D	1	B	GA	A()	C	0	Á	BT FST	op of	RV-03B				
	Na niti	FT			ï												·

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

### CLASS 1, 2 & 3 VALVE LISTING

SYSTEM: CONTROL ROD DRIVE

VALVE ACT NOR STR TEST REL TECH CS EPN SIZE PID CORD CLS CAT TYPE TYPE POS DIR A/P TEST SCHED REQ POS. JUST	
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<u>3-0305-138 0.5 365 OC 1 C CK SA O C A CT-C OP</u>

COOLING WATER BALL CHECK

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# CLASS 1, 2 & 3 VALVE LISTING

# SYSTEM: SHUTDOWN COOLING

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	Nor Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST
_3=1001=1A	=16	_363	<u>98</u>	1	<u>A</u>	<u>GA</u>	NO	<u>C</u>	<u> </u>	P	AT BT PIT	RR CS RR	RV-00A	TV-00B	
SDC INLE	T .HEAD	ER ISOL	ATION										*		
3-1001-1B	16	363	9E	1	A	GA	HO	C	C	P	AT BT PIT	RR CS RR	RV-00A	TV-GOB	CS-10A
SDC INLE	T HEAD	ER ISOL	ATION												
3-1001-2A	14	363	8A	ſ	A_	GA .	HO .	C	<b>C</b> ,	P	AT BT FIT	RR CS RR	rv-99a	TV-90B	CS-10A
JA SDC RI	UMP SU	CTION						*							
3-1001-2B	14	363	8C	<b>1</b>	A	GA	HO	3	C	P	AT BT PIT	RR CS RR	RV-00A	TY-00B	CS-10A
3B SDC PI	UNP SU	CTION				·	** == =* -* *								
3-1001-20	14	363	. 8F	1	A	ĠA	HO	C	C	P	AT BT PIT	RR CS RR	RV-00A	TV-00B	CS-10A
3C SDC PI	UNP SU	CTION		*-*									*		
3-1001-5A	14	363	fΕ	1	A	GA	KO	C	C	P	AT BT PIT	RR CS RR	RV-00A	TV-00B	CS-10A
SDC OUTLI	et hea	DER IS(	DLATIO	N											

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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### CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: SHUTDOWN COOLING

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT TYPE	Nor Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	cs Just	
 <u>3-1061-58</u>	<u>14</u>	363	<u>2E</u>	<u>1</u>	<u>A</u>	<u>GA</u>	<u>N0</u>	<u> </u>	C	£	AT BT PIT	RR TCS RR	RV-00A	TV-00B	-CS-10A===	

SDC OUTLET HEADER ISOLATION

**REVISION 3** 

# CLASS 1, 2 & 3 VALVE LISTING

# SYSTEM: SBLC

EPN	\$17E	PID	CORI	) CLS	CAT	VALVE TYPE	ACT TYPE	NOR FOS	STR DIF	R R A/F	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST 
<u>3-1101-15</u>	<u>i 5</u> .		<u>3C</u>	<u>1</u>	AC	CX	<u></u>	<u>C</u>	0/(	<u> </u>	AT CT-0 Ct-c	RR RR RR	RV-00A RV-11A		
SBLC II	VJECTIO	V CHECK	[					·							
5-1101-16	1.5	364	4C	ŧ.	AC	CK .	SA	C	0/0	C A ·	AT C7-0 Ct-c	RR RR RR	RV-00A RV-11A		
SBLC II	VJECTIO	I CHECK						·							
3-1101-43A	1.5	364	6D	2	C	CK	SA	C	0	A	CT-0	ዐዮ			
•A• SBI	.C PUMP	DISCHA	IRGE CI	IECK							***	** -* -** -** -** -** -**			
5-1101-43B	1.5	364	6E	2	. C	CK	SA	C	0	A	CT-0	OP			
'B' SRI	_C PUNP	DISCHA	IRGE CI	HECK											
5-1105A	0.5	364	4C	2	C	RV	SA	C	0	Å	RT	10Y			
*A* SBI	.C RELI	EF TO M	IAIN TA	ANK											
8-11058	0.5	364	4D	2	C	RV	SA	C	0	A	RT	10Y			
'B' SBI	_C RELI	۲۵ F	IAIN TA	NK								*			
SELT 1 C18467	1507														

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# CLASS 1, 2 & 3 VALVE LISTING

# SYSTEM: SBLC

	EFN			SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHE:	D 	REL REQ	TECH POS.		:S IUST 					
.* <u>************</u> **	<u>_3=1</u> 106	A		<u> 5</u>	364	<u>4C</u>	2	<u>D</u>	<u>6a -</u>	EXP	<u>C</u>	0	<u>A</u>	DT	SAN		1777. <u>(</u> 1977.) 2						1	- <u></u>	
-		'A'	SBLC	SQUIB	VALVE														ъ.						
	3-1106	8		1.5	364	4C	2	Ð	GA	EXP	C	0	A	DT	SAN			1							
		<b>•</b> ₿•	SBLC	SQUIB	VALVE															<b>*</b>					ĸ
												• • • • •		······································				• • • • • • • • • • • • • • •							
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,																									
TEST: A R TEST SC	NT-SEAT XT-RELIE HED: OP	leax F Va -Nor	age t Lve t Mal C	EST; EST; IPERAT	BT-FULL DT-EXPL ION; CS	STRO OSIVE -COLD	KE EI Val' Shu	KERC Ve t Tdon	ISE; C EST; F N; RR-I	T-O-CH ST-FAI REACTO	ECK L SA R RE	val V Fé ti Fijel	E EX EST; ING;	ERCIS PIT- SAM-	E OPE POSIT SAMPL	N, CI IDN 1 ING F	T-C-CH INDICA PLAN T	ECK VA TOR CH ECHNIG	NLVE 8 HECX. NUE; )	XERCIS (Y-ONCE F	SE CL( E EVER Revis:	DSED; Ry X Y Ion 3	'EARS.		

CLASS 1, 2 & 3 VALVE LISTING

SYSTEM: RUCU

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	ACT Type	NOR PDS	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST	 	•	
_3-1201-1	8	361	<u>3</u> A	1	<u>A</u>	GA	MO	0	<u>C</u>	A	AT DT	RR	RV-00A		<u>—,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,</u>			
											PIT	RR						
RWCU SYS	TEN IN	LET														 		
3-1201-1A	2	361	3a	t	A	GL	KO	0/C	C	A	AT BT PIT	RR OP RR	RV-09A					
RWCU SYS	TEM IN	LET BYP	ASS			**-*-										 		
3-1201-158	8	361	5A	2	C	CK	SA	0	C	Â	CT-C	RR	RV-00C					
R₩CU TO	FEEDWA	TER CHE	CK												• .	 		
3-1201-2	8	361	3A	1	. <b>A</b>	GA	HO	0	C	A	AT BT PIT	RR OP RR	* RV-00A					
RWCU AUX	PUMP	BYPASS																
3-1201-3	8	361	4A`	f	A	GA	NO	C	C	A	AT BT PIT	RR OP RR	RV-00A					
RWCU AUX	PUMP	SUCTION	•															

# CLASS 1, 2 & 3 VALVE LISTING

# SYSTEM: ISOLATION CONDENSER

21 <u>- - - - - - - - - - -</u>

EPN	SIZE	21D	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST	 
_3 <u>=1301-1</u>	14	359	<u>90</u>	1	A	GA	MO	0	<u>C</u>	<u>A</u>	AT	RR	RV-00A			
н на селото на селот На селото на											PIT	RR	*			
ISO COND	ENSER	STEAM I	NLET													
3-1301-11	4	359	30	3	C	CX	SA	С	0	A'	CT-O	Sam	RV-13A	TV-00C		
						4							-			
ISO COND	ENSER	CONTAMI	NATED	DEN	IN F	ILL CHI	ECK		•====							 
3-1301-17	.75	359	2A	2	A	GL	AU	D	C	A	AT PIT	RR Of: RR	RV-00A	:		
ISO COND	ENSER	VENT TO	) MAIN	STE	am Li	INE					FST	OP				
3-1301-2	14	359	9B	<b>i</b> .	A	GA	KO	Ũ	С	A	AT BT PIT	RR OF RR	RV-00A			 
ISO COND	ENSER	STEAM I	NLET									·				
3-1301-20	.75	359	34	2	A	GL .	AO	0	C	A	AT BT PIT FST	RR OF RR OP	RV-00A			
ISO COND	ENSER	VENT TO	MAIN	STE	AN LI	INE										 
3-1301-23	0.5	359	0C	ť	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B			
FLOW-LIN	ITING	CHECK F	OR IS	) CO)	IDENS	SER STR	EAM LI	NE	٩			×				
								*			·					 

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE UPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXFLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

# CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: ISOLATION CONDENSER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR Pos	STR DIR	A/1	P TEST	TEST SCHED	REL Req	TECH Pos.	CS JUST		 	•
=3-1301-24===-	<b>0.</b> 5 -	-359	-0C-	{	-AC	XFC -	- <u>SA</u>	-0	<u> </u>	.A.	AT Ct-C	_ <u>RR</u>	RV-00B		<u></u>	. <u></u>	 	<del></del> .
FL04-LIN	ITING	CHECK	FOR IS	0 CO	NDEN	SER ST	EAM LI	NE				**					 	
3-1301-29	<b>9.</b> 5	359	8E	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-OSB					·
FLOU-LIN	ITING	CHECK I	FOR IS	0 CC	NDEN:	SER ST	EAM LI	NE				• <b></b> -					 	· <b></b>
3-1301-3	12	359	7E	1	A	GA	Ю	Ċ	0/C	A	AT Bt Pit	RR OP RR	RV-00A			·		
ISO COND	ENSER	CONDEN	SATE O	UTLE	T												 	
3-1301-30	0.5	359	9E	1	AC	XFC	SA	0	C	A	AT CT-C	RR RR	RV-00B					
FLOW-LIN	ITING	CHECK I	FOR IS	0 CO	NDENS	SER ST	EAN LI	NE 									 	
3-1301-4	12	359	8E	1	A	GA	НO	0	C	A	AT Bt Pit	RR Of RR	RV-00A					
ISO COND	ENSER	CONDEN	SATE O	UTLE	T												 	

### CLASS 1, 2 & 3 VALVE LISTING

# SYSTEM: CORE SPRAY

EPN	SIZE	PID	CORI	) CL(	S CAT	VALVE TYPE	ACT Type	NOR FOS	SIR DIR	A/P	TEST	TEST SCHED	REL REQ	POS.	US JUST	
<u>3-1402-136</u>	<u>. 1.5</u>	358	<u>90</u>	2	<u>C</u>	SCK	SA	C	0	A	CT-O	SAK	RV-14A	TV-00C		
JA CORE	SPRAY	KIN FL	0¥ ST(	IP Cł	IECK											
3-1402-13B	1.5	358	70	2	C	SCK	sa	C	0	A	CT-0	San	RV-14A	TV-00C		
38 CORE	SPRAY	MIN FL	ow sto	)P CI	IECK											***
3-1402-24A	10	358	28	2	A	<u>G</u> a	XO	0	0/C	A	AT BT PIT	RR OP RR	RV-09A			
JA CORE	SPRAY	PUMP U	P-STRE	an 1	INJEC	TION									•	
3-1402-248	10	358	5B	2	. A	GA	NO	0	0/C	A	AT BT PIT	RR OP RR	R¥-00A ,			
3B CORE	: Spray	PUMP U	P-STRE	AN	INJEC	TION .						*				
3-1402-25Á	10.	358	20	t	A	GA	HO	C	0/C	A	AT BT PIT	RR DF RR	RV-00A	TV-00B	• ·	
3A CORE	SPRAY	PUMP D	own-st	REAN	LHI	ECTION										
3-1402-25B	10	358	5C	ì	A	GA	MO	С	0/C	A.	PIT BT AT	RR OF RR	RV-00A	TV-00B		
3B CORE	SPRAY	PUNP D	OWN-ST	REA	I INJ	ECTION										

TEST: AT-SEAT LEAKAGE FEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

# SYSTEM: CORE SPRAY VALVE ACT NOR STR TEST REL TECH CS. EPN SIZE PID CORD CLS CAT TYPE TYPE POS DIR A/P TEST SCHED JUST REQ POS. <u>3-1402-28A 2 358 6D 2 C RV SA C O A RI 10Y</u> **3A CORE SPRAY PUMP DISCHARGE RELIEF** 3-1402-28B 2 358 9B 2 C RV SA C O A RT 10Y 3B CORE SPRAY PUMP DISCHARGE RELIEF 3-1402-3A 16 358 7F 2 B GA MO O C A BT OP PIT RR 3A CORE SPRAY PUMP SUCTION FROM TORUS 3-1402-3B 16 358 5F 2 B GA HO O C A BT OP PIT RR **3B CORE SPRAY PUMP SUCTION FROM TORUS** 3-1402-31A 0.5 358 3D 1 AC XFC SA D C A AT RR CT-C RR RV-00B CORE SPRAY FLOW-LIMITING CHECK 3-1402-31B 0.5 358 4D 1 AC XFC SA O C A AT RR RV-00B CT-C RR CORE SPRAY FLOW LIMITING CHECK

CLASS 1, 2 & 3 VALVE LISTING

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

# SYSTEM: CORE SPRAY TEST REL TECH CS VALVE ACT NOR STR POS. EPN SIZE PID CORD CLS CAT TYPE TYPE POS DIR A/P TEST SCHED REQ JUST RV-148 ECCS KEEP FILL TO CORE SPRAY LOOP B 8E 2 C SCK SA O O/CA CT-COP 3-1402-36A .75 358 RV-14B CT-0 OP ECCS KEEP FILL TO CORE SPRAY STOP CHECK 3-1402-36B .75 358 6E 2 C SCK SA 0 0/C A CT-C OP RV-14B CT-0 OP ECCS KEEP FILL TO CORE SPRAY STOP CHECK 3-1402-38A 1.5 358 8B 2 B GA HO 0 0/C A BT OP PIT RR **3A CORE SPRAY FUMP MIN FLOW** \_\_\_\_\_ 3-1402-388 1.5 358 7C 2 8 GA MO O O/C A BT OP PIT RR . . **3B CORE SPRAY PUMP MIN FLOW** 3-1402-4A 8 358 8B 2 A GL MO C C A BT OP PIT RR **3A CORE SPRAY PUMP TEST RETURN TO TORUS**

CLASS 1, 2 & 3 VALVE LISTING

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDONN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

CLASS 1, 2 & 3 VALVE LISTING

						SYSTI	em: Co	re si	PRAY									
EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT TYPE	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST			
<u>3-1402-48</u>	88	358	88	2	A	GL	NO	C	<u>C</u>	A	BT PIT	OP RR		= .= .=	<u></u>	1221-7-, *		
3B CORE	SPRAY	PUMP TE	ST RE	TURN	TO	TORUS												
3-1402-8A	12	358	80	2	C,	SCK	SA	C	0	A	CT-O CT-C	0f 0P						
CORE SPR	AY FUM	P DISCH	ARGE	STOP	CHE	CK											¢	
J-1402-8B	12	358	78	2	C	SCK	SA	C	0	A	CT-O Ct-C	op op			·			
CORE SPR	AY PUM	P DISCH	ARGE	STOP	CHE	CK												
3-1402-9A	10	359	3C	i	AC	CK	SA	C	، ٥/٢	A	AT CT-0 Ct-C	RR CS RR	RV-14C	TV-00B .	CS-00A			
3A CORE	SPRAY	INJECTI	on Chi	ECK											*			
3-1402-9B	10	358	4C	1	AC	СК	SA	C	0/C	A	AT CT-0 CT-C	RR CS RR	RV-14C	TV-00B	CS-00A	,		
3B CORE	SPRAY	INJECTI	он сні	ECK							×							
3-1499-14	1	358	8E	2	C	CK	SA	0/C	0	A	CT-0	OP						
U3 ECCS	JOCKEY	PUMP D	1SCHG	CK	VLV													

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

# CLASS 1, 2 & 3 VALVE LISTING

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						SYST	en: Co	RE S	FR	RAY								
EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR Pos	S	STR DIR A/I	° TEST	TEST SCHED	REL Req	TECH POS.	CS Just		 	•
3-1499-15	.3/4	358	8E	2	C	CK	SA	0/C	0	) A	CT-0	OP						
U3 ECCS	JOCKEY	( PHP h	IN FLO	W CK	VLV												 	
3-1499-34A	. 75	358	9D	2	C	CK	SA	0	0	)/C A	CT-C Ct-0	OP OP	RV-14B	ł				
ECCS KEI	EP FILL	. TO CO	RE SPR	AY L	900 	A										· · · · · · · · · · · · · · · · · · ·		
			•															
							-											
•																		

#### CLASS 1, 2 & 3 VALVE LISTING

# SYSTEM: LPCI/CCSW

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	Nor F'os	STR DIR A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST		
3-1501-14	10	369-2	3B	3	C	CK	SA	C	0/C A	CT-D Ct-C	OP OP					
'A' CCSI	I FUMP	DISCHAR	GE													
3-1501-1B	10	369-2	30	3	C	CK	SA	C	0/C A	CT-O CT-C	OP OP					
'B' CCS	I PUMP	DISCHAR	GE 			•.										
3-1501-1C	10	360-2	JE	3	C	CK	SA	C	0/C A	CT-O Ct-C	OP OP					
"C" CCSI	I PUMP	DISCHAR	GE													
3-1501-1D	10	360-2	3F	3	.C	CK	SA	C	0/C A	CT-O CT-C	OP OP	,			·	
'D' CCSI	I PUMP	DISCHAR	GE 													
3-1501-114	18	360-1	9E	2	8	GA	KO	0	0/C A	BT Pit	OP RR		. <b>.</b>			
LPCI HE	AT EXCH	IANGER •	a" shi	ELL	SIDE	BYFAS	S									
3-1501-11B	19	360-1	2D	2	8	GA	Ю	0	0/C A	BT Pit	OP RR					
LPCI HEA	AT EXHA	NGER 'B	• She	LL S	IDE	BYPASS										
						_						_				

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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# CLASS 1, 2 & 3 VALVE LISTING

# SYSTEM: LPCI/CCSW

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3-1501-13A	3	360-t	20	2	B	GA	HO .	0	0/C	A	BT PIT	OF RR	w -			•
LPCI LOO	P. I. MI	N FLOW	BYFAS	5		* • • • • <b>•</b> •									 	
3-1501-13A(RV)	2	360-1	4F	2	C	RV	SA	C	0	A	ŔŢ	10Y			•	ì
'A' LPCI	PUMP	SUCTION	RELI	EF												
3-1501-13B	3	360-1	7C	2.	B	GA	HO .	0	0/C	A	BT Pit	OP RR				
LPCI LOO	P II M	IIN FLOW	BYPA	SS	<u>.</u>								-	 :	 	•••••••
3-1501-13B(R¥)	2.	360-1	4E	2	C	RV	SA	C	0	A	RT	101				
'B' LPCI	PUNP	SUCTION	RELI	EF												
3-1501-130	2	360-1	6E	2	C	RV	SA	C	0	A	RT	10Y				
'C' LPCI	PUMP	SUCTION	RELI	EF											 	
3-1501-13D	2	360-1	F6	2	C	RV	SA	C	0	A	RT	10Y				• .
*D* LPCI	FUMF	SUCTION	RELI	F												

TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

# CLASS 1, 2 & 3 VALVE LISTING

# SYSTEM: LPCI/CCSW

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT TYPE	PDS	DIR	A/P	TEST	IESI SCHED	REL REQ	TECH POS.	CS JUST 		
3-1501-17A	2	360-1	20	2	C	RV	SA	C	0	A	RT	10Y					
'A' LPCI	HEAT	EXCHANG	er ou	TLET	HEA	DER REI	LIEF										
3-1501-17B	2	360-1	80	2	C	RV	SA	C	0	A	RT	10Y					
'B' LPCI	HEAT	EXCHANG	ER OU	TLET	HEA	DER REI	LIEF										
3-1501-18A	6	360-1	8B	2	A	GL	HD	C	0/C	A	AT BT PIT	RR Of RR	RV-00A			U	
LPCI LOO	° I TO	RUS SPR	AY														
3-1501-18B	6	360-1	ŹB	2	. A	GL .	KO	C	0/C	A	AT BT PIT	RR OP RR	RV-00A				
LPCI LOOP	P II T	ORUS SP	RAY														
3-1501-20A	14	360-1	7B	2 -	A	GA	NO	С	0/C	A	BT Fit	OP RR					
LPCI LOO	P I FU	LL FLOW	BYPA	SS TI	EST	RETURN	TO TO	RUS									
3-1501-20B	14	360-1	2B	2	A ,	GA	ND	C .	0/C	A	BT PIT	OP RR			•		
LPCI LOO	9 <u>11</u> F	ULL FLO	W BYP	ASS 3	TEST	RETUR	N TO T	ORUS									
															,		
T-SEAT DEAKAGE 1	reet.	QT_CU11	CTDA	ער כי	יכסר	TCE. (°	T-0-CH	נרע ו			-0010	- 00531		OV - 1241 11	, ,		.) - N

### CLASS 1, 2 & 3 VALVE LISTING

# SYSTEM: LPCI/CCSU

EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	ACT Type	NOR F'DS	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST			
3-1501-21A	18	360-1	8A	2	B	GA	MO	0	0/C	A	BT PIT	of Rr				:		
LPCI LOC	)F.I IN	JECTION																
3-1501-218	18	360-1	2A	2	B	GA	ho	0	0/C	A	BT Pit	OF RR	·		·			•
LPCI LOC	IP II I	NJECTIO	N															
3-1501-22A	18	360-1	34	i	A	GA	MO .	С	0/ <u>C</u>	A	AT BT PIT	RR DP RR <sup>·</sup>	RV-00A	TV-GOB				
LPCI LOO	IP I IN	JECTION			· .	***		+	4+ 44+ 444 444 -	• •• <b>-</b> - •		***	·	•			,	
3-1501-228	18	360-1	78	ſ	A	GA	HO	C	0/C	A	AT BT PIT	RR OP RR	RV- <del>00</del> a	TV-00B	·.			
LPCI LOC	PIII	NJECTIO	N.												•			
3-1501-25A	14	360-1	5B	1	AC	CK	SA	C	0/C	A	AT CT-O CT-C PIT	RR CS CS RR	RV-00A	TV-00B	CS-00A		مي ا	
LPCI INJ	IECTION	CHECK													*			
3-1501-25B	14	360-1	48	1	AC	CK	SA	C	0/C	<b>A</b>	AT CT-0 CT-C PIT	RR CS CS RR	RV-00A	TV-00B	CS-00A		<b>ک</b> و ۱.	
LPCI INJ	ECTION	CHECK		* * ** ** ** *														

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

# CLASS 1, 2 & 3 VALVE LISTING

EPN 	SIZE	P1D	CORD	CLS	CAT	TYPE	TYPE	POS	DIR	A/P	TEST	SCHED	REQ	POS.	JUST
3-1501-27A	16	350-1	6A	2	A	GA	MD	C	0/C	A	AT Bt Pit	RR OP RR	RV-00A		
LPCI LO	DP.I DR	YNELL 9	FRAY												
3-1501-27B	16	360-1	6A	2	Â	GA	МО	C	0/C	A	AT BT PIT	RR OF RR	RV-00A		
LPCI LO	)P II D	RYWELL	SPRAY												
3-1501-28A	16	360-1	3a	2	A	GA	KO	C	0/C	A	AT BT PIT	RR OP RR	RV-00A		
LPCI LO	Dp I Dr	YWELL 9	FRAY			÷									
3-1501-28B	16	360-1	34	2	. A	GA	no	C	0/C	A	AT BT PIT	RR OF RR	RV-00A		
LPCI LOC	)F II D	RYNELL	SPRAY												
3-1501-38 -	12	360-i	2F	3	B	GL	MO	C	0/C	A	BL	OP			
3-1501-3B	12	360-1	9F	3	B	GL	 0א	С	0/C	A	BI	OP			
											,				

# CLASS 1, 2 & 3 VALVE LISTING

# SYSTEM: CONTAINMENT CLG SERVICE WATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR Pos	STR D1R	A/P	TEST	TEST SCHED	REL Req	TECH POS.	CS JUST		
3-1501-32A	18	360-1	8D	2	B	GA	ND	0	0/C	A	bt Pit	CS RR					
LPCI DIS	CHARGE	HEADER	CRUS	STIE													
3-1501-32B	18	360-1	2D	2	B	GA	Ю	0	0/C	A	BT Pit	CS RR					
LPCI DIS	CHARGE	HEADER	CROS	STIE													
3-1501-38A	14	360-1	8B	2	B	GL	MO	C	0/C	À	BT PIT	OP RR					
LPCI LOO	P I FU	LL FLOW	BYPA	SS T	est i	RETURN	TO TO	RUS									
3-1501-38B	14	360-1	3B	2	. B	GL	МО	2	0/C	A	BT PIT	OP RR					
LPCI LOO	P II F	ULL FLO	# BYP:	ASS	TEST	RETURI	V TO T	ORUS								·.	
3-i 501-5A	14	360-1	SE	2	B.	GA	KO	0	0/C	A	BT FIT	of Rr					
'A' LPCI	PUNP	SUCTION														****	
3-1501-58	f 4	360-1	5F	2	B	GA	no	0	0/C	A	BT PIT	OF RR					
"B" LPCI	PUMP	SUCTION															

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

# CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: LPCI/CCSW

3-1501-50	14	350-1	4E	2	B	GA	MD	0	0/C A	- 81 P1	T	OP RR			
"C" LFCI	punp 	SUCTION								**					
3-1501-5D	14	360-1	4F	2	B	GA	HO	0	0/C A	81 P1	T	OP RR			
'D' LPCI	PUMP	SUCTION													
3-1501-63A	12	360-1	7E	2	C	CK	SA .	C	0/C A	C1 C1	-0 -C	OP OP			
'A' LPCI	PUNP	DISCHAR	GE CHI	ECK											
3-1501-63B ·	f2	360-1	7F	2	. C	CK	SA	C	0/P A	C1 C1	-0 -C	op op			
'B' LPCI	PUMP	DISCHAR	GE CH	ECK											
3-1501-630	12	360-1	2E	2	C	CK	SA	C	0/C A	C1 C1	-0 -C	OP OF	,	·	
'C' LPCI	PUNP	DISCHAR	GE CH	ECK											
3-1501-63D	12	369-1	2F	2	C	CK	SA	C	0 A	C1 C1	-0 -C	op op			
D. Thei	PUNF	DISCHAR	GE CH	ECK											
·															

TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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# CLASS 1, 2 & 3 VALVE LISTING

# SYSTEM: LPCI/CCSW

3-1501-450	 2	768-1	 7F	 2			 ςδ		·	Δ	°T-0	сон	RV-150	TV-000			
	ź	1 000	*1	-	U	UN	, ,	U	U	п	CT-C CT-O	op op	NT 120				
'A' LFC	I PUMP	MIN FLO	n che	CK		~										ı.	
3-1501-65B	2	360-1	7E	2	С	CK	SA	C	0	Å	CT-0 CT-C CT-0	sam Op Op	RV-15A	TV-00C			
<b>'B'</b> LPC	I PUMP	MIN FLO	V CHE	CK						*							
3-1501-650	2	360-1	2E	2	C	CK	SA	C	0	A	CT-0 CT-C CT-0	sam Op Op	RV-15A	TV-00C			
"C" LPC	I PUMP	MIN FLO	¥ CHE	CK						* -=							+
3-1501-65D	2	360-1	2F.	2	C	CK	SA	C	0	A	CT-0 CT-C CT-0	sam Op Op	RV-15A	TV-00C .			• .
'D' LFC	I PUMP	NIN FLO	W CHE	CK	*												
3-1501-66A	2	360-1	8F .	2	C	SCK	SA	0	0/C	A	CT-C CT-O	OP OP	RV-15B				
ECCS KE	EP FILL	TO LPC	I STO	P CHI	ECK												
3-1501-66B	2	360-1	2F	2	C	SCK	SA	0	0/C	A	CT-C CT-O	op op	RV-15B				
ECCS KE	EP FILL	TO LPC	I STO	p Chi	ECK												
																5	
-SEAT LEAKAGE	TEST;	BT-FULL	STRO	KE EX	KERC	ISE; C	T-0-CH	eck '	VALVE	E EXE	ERCISE	E OPEN,	CT-C-CHE(	X VALVE	EXERCI	ISE CLOS	ED;

TEST

# CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: LPCI/CCSW

EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	ACT Type	NOR PDS	STF DIF	R R A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST
3-1501-67A	2	360-1	8F	2	C	CK	SA	0	0/0	C A	CT-C Ct-O	OP Of	RV-15B	l	
ECCS KEE	EP.FILL	. TO LPC	I CHE	CK								- <b>-</b>			
3-1501-67B	2	360-1	2F	2	C	CK	SA	0	0/0	Â	CT-C Ct-O	OP OP	RV-15B	1	

ECCS KEEP FILL TO LPCI CHECK

# CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: RADWASTE

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR PDS	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST
3-2001-105	3	369 84480	6F	2	A	GA	AÜ	C	0/C	A	AT BT PIT FST	RR OP RR OP	RV-00A		
DA1WELL															
3-2001-3	3	369	4E	2	B	GA	A0	0/C	0/C	A	BT Pit Fst	OP RR OP			
DRYWELL	EQUIPM	IENT DA	RAIN SU	NP PI	ump 1	DISCHAI	RGE								
3-2001-5 Drywell	3 Equipm	369	4E Rain Sui	2 HP PI	a Uhp 1	GA Dischaf	AO RGE	0/C	3	A	AT BT PIT FST	RR OP RR OP	RV-00A		· · ·

# CLASS 1, 2 & 3 VALVE LISTING

						SYST	em: HP	13									
EPN	SIZE	PID	CORD	CLS	CAT	VALVE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	cs Just		
3-2301-10	12	374	4E	2	B	GL	MO	C	C	A .	BT Pit	op Rr	. •				
HPCI PI	UMP DISC	HARGE	TO CON	DENS	ATE	STORAG	E 			عد ده به		<del>ن</del> ہ دے ہے <u>ہے ہے</u> بید اید					
3-2301-14	4	374	6C	2	B	GL	NO	Ç	0/C	A	BT Pit	OP RR					•
HPCI M	AIN PUMP	MIN P	FLOW TO	TOR	US		******										
3-2301-20	16	374	2E	2	3	CK	SA	C	0	A	CT-0	OP					
HPCI CC	INDENSAT	E STO	RAGE TA	NK S	UCTI	on chei	CK						الله الله عن الله الله الله الله الله عن الله عن ا				
3-2301-23	1.5	374	4A	2	. <b>C</b>	RV	SA	C	0	A	RT	10Y					
HPCI PL	JNP SUCT	ION RE	LIEF														
3-2301-26	.75	374	θC	i	AC	XFC	SA	0.	C	A	AT CT-C	RR RR	RV-00B	1			
FLOW-LI	INITING	CHECK	FOR HP	CI R	K HI	SH PRES	SS INS	Τ.									
																	·.
																- 	

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# CLASS 1, 2 & 3 VALVE LISTING

# SYSTEN: HPCI

1 A PCI RX 2 B RAIN TO 2 B N TO MA	0D 1 K FOR HPCI 8B 2 3T 3A DRAIN 9B 2	AC ) RX HIGH B ( TO TOF B ( HAIN (	XFC H PRES GL RUS GL	SA SS INS AO AO	0 T. C	C 0	A A	AT CT-C BT PIT FST	RR RR OP RR OP	RV-00B					
PCI RX 2 B RAIN TO 2 B N TO MA	K FOR HPCI 8B 2 3T 3A DRAIN 9B 2	RX HIGH B ( TO TOP B ( MAIN (	H PRES	A0	т. С	0	A	BT PIT FST	OP RR OP						
2 B RAIN TO 2 B N TO HA	8B 2 DT 3A DRAIN 9B 2	B ( TO TOP B ( Main (	GL RUS GL	A0 A0	C 0	0	A	BT PIT FST	OP RR OP						·
RAIN TO 2 B N TO HA	OT 3A DRAIN 9B 2	TO TOF B (	RUS  GL	AD .	0										
2 B N TO HA	9B 2	B (	GL CONDEN	AO .	0										
n to ha	T DRAIN TO	MAIN (	CONDEN			C	<b>A</b>	BT Pit Fst	OP RR OP						
				ISER									و میں دین انکار کی دین		:
2 B	9A_2	- B (	GA	MO	C	0	A	BT PIT	OP RR						
	SUPPLY														
2 B	9A 2	B (	GL	AŨ	C	0	A	BT FST	op op						
RAP BYP	jt 3a trap 1	BYPASS													****
<u>э</u> ъ	7B 2	B (	GL	S0	C	0/C	A`	BT FST	OP OP	RV-23H					
ζ Β	LAND SEAL	CONDENS	SER												
∠ B Eal coni	<b>الله اليون بين الله الله الله الله الله الله الله الل</b>									******				***************	
	JLAND SI	EAL	EAL CONDEN	EAL CONDENSER	EAL CONDENSER Die Exercise; CT-O-Chi E Valve Test; FST-Faii	EAL CONDENSER Dike Exercise; CT-O-Check v E Valve Test, FST-Fail Saf	EAL CONDENSER DKE EXERCISE; CT-O-CHECK VALVE E VALVE TEST; FST-FAIL SAFE TE	EAL CONDENSER Dike Exercise; CT-O-Check valve exe E valve test; FST-FAIL SAFE test;	EAL CONDENSER DKE EXERCISE; CT-O-CHECK VALVE EXERCISE E VALVE TEST; FST-FAIL SAFE TEST; PIT-P	EAL CONDENSER DKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, C E VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION	EAL CONDENSER DKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHEC E VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATO	EAL CONDENSER DXE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE E VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK	EAL CONDENSER DKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE E VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK.	EAL CONDENSER DXE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSE E VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. D SHUTDOWN: RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY	EAL CONDENSER DXE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; E VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK.

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TEST

TEST

# CLASS 1, 2 & 3 VALVE LISTING

# SYSTEM: HPCI

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	test Sched	REL REQ	TECH POS.	cs Just		<b></b> .
3-2301-34	2	374	8D	2	AC	CK	SA	0	0/C	A	AT CT-O CT-C	RR Of RR	RV-00A RV-23E				
HPCI ST	EAN LIN	E DRAIN	I TO TI	DRUS	CHE	CK					*						
3-2301-35	16	374	2E	2	B	GA	MO	C	0/C	A	BT PIT	OP RR			-		
HPCI TO	RUS SUC	TION															
3-2301-36	16	374	9E	2	B	GA	KO .	C	0/C	A	BT PIT	OP RR				*******	
HPCI TO	RUS SUC	TION															•
3-2301-39	16	374	8E	2	.C	CK	SA	C	0/C	A	CT-O CT-C	san San	RV-23A	TV-00C		ſ	
HPCI PU	MP SUCT	ION FRO	im tori	us ci	HECK	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~											
3-2301-4	10	374	90	1	A	GA	MO	0	0/C	A	AT BT PIT	RR OP RR	RV-00A				
HPCI TU	RBINE S	TEAM IN	LET														
3-2301-40	4	374	70	2	AC	CK	SA	C	0	A	CT-O	Sam	RV-23F	TV-00C			
	ы гэ <b>л</b> н	TO TODI	IC														

RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

TEST

**REVISION 3** 

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# CLASS 1, 2 & 3 VALVE LISTING

# SYSTEN: HPCI

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST
3-2301-45	24	374	8B	2	AC	CK	SA	C	0/C	A	AT CT-0 Ct-C	RR OP RR	RV-00A RV-23E		
HPCI	TURBINE	exhaus1	CHECK					·							
3-2301-48	4	374	4B	2	B	GA	HO	0	0	A	BT PIT	OF RR			
HPCI	COOLING	WATER P	RETURN	TO BI	DOSTI	er pum	P 		•	<b>-</b> -					
3-2301-49	4	374	4D	2	B	GA	HO .	C	C	A	BT Pit	OP RR			
HPCI	COOLING	WATER F	RETURN	to ci	ONDEI	NSATE 1	STORAG	E							
3-2301-5	10	374	OB	1	A	GA	HO	0	0/C	A	AT BT PIT	RR OP RR	RV-00A	پ ب	
HPCI	TURBINE	STEAM I													
3-2301-50A	4	374	40	2	C	CK	SA	<b>C</b> .	0	A	CT-0	Sam	RV-23G	TV-00C	
HPCI	gland sei	AL CONI	)enser (	INLE	T										
3-2301-51	4	374	<b>4</b> C	2	C	CK	SA	0	C	A	CT-C CT-C	sam Sam	RV-23G RV-23G	TV-00C TV-00C	
HPCI	aux cool:	ING WAT	er pum	P DIS	schaf	rge chi	ECK								
I-SEAT LEAKA	GE TEST:	BT-FUL	L STRO	(E E)	KERCI			ECK	/ALVE	E EXI	ERCISE	E OPEN.	CT-C-CHE	CK VALVE	EXERCISE CLOSED:

TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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### CLASS 1, 2 & 3 VALVE LISTING

						SYST	EM: HP	CI								
EPN	SIZE	PID	CORD	CLS	CAT	VALVE	act Type	NOR POS	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH PDS.	CS JUST	
3-2301-53	4	374	30	2	C	RV	SA	C	0	A	RT	10Y				
HFCI GL	.AND SEA	IL CONDE	ENSER	INLE	T RE	LIEF										
3-2301-6	16	374	2F	2	B	GA	KO	0	0/C	A	BT Pit	OP RR				
HPCI BO	IOSTER F	ump suc	CTION	FROM	CON	DENSAT	E STOR	AGE				*				
3-2301-64	١	374	5A	2	B	GL	AO .	0	C	A	BT FST PIT	op op Rr				
HPCI TU	IRBINE S	V ABOVE	e seat	DRA	IN											
3-2301-68	16	374	7A	2	. C	RPD	SA	C	0	A	RT	5Y				
HPCI TU	IRBINE E	XHAUST	Ruptu	RE D	ISK											
3-2301-69	16	374	7 <b>A</b>	2	C	RPD	SA	C	0	A	RT	5Y				
HPCI TU	JRBINE E	XHAUST	RUPTU	RE D	ISK											
3-2301-7	14	374	6E	2	C	CK	SA	C	0/C	A	CT-O Ct-C	CS RR	RV-231	)	CS-23A	
HPCI IN	IJECTION	I CHECK														
																*

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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**REVISION 3** 

# CLASS 1, 2 & 3 VALVE LISTING

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	EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	act Type	NOR Pos	STR DIR	A/P	TEST	test Sched	REL REQ	TECH POS.	CS JUST		
	3-2301-71	2	374	8D	2	AC	SCK	SA	C	0/C	A	AT CT-0 CT-C	RR OP RR	RV-00A RV-23E			٤	
	HPCI STE	AM LIN	E DRAIN	TO TO	ORUS	STOP	o checi	(									·	
	3-2301-74	12	374	8C	2	AC	CK	SA	C	0/C	A	AT CT-O CT-C	RR OF RR	RV-00A RV-23E				 
	HPCI TUR	BINE E)	(HAUST (	CHECK														
	3-2301-75	4	374	48	2	C	CK	SA	С	0/C	A	CT-O CT-C	sam Sam	RV-23G	TV-00C -			
	HPCI GLAN	ND SEAL	_ CONDEN	iser (	DUTLE	et ch	IECK											
	3-2301-76	2	374	4C	2	Ċ	CK	SA	C	0/C	A	CT-O CT-C	sa <del>n</del> Sam	RV-23G	TV-00C .			
	HPCI GSL	) PUNP	DISCHAP	GE Cł	IECK													
-	3-2301-8	14	374	6E	2	B	GA	МО	C	0/C	A	BT PIT	OP RR					*****
	HPCI NAI	1 PUMP	DISCHAR	IGE TO	) FE	EDWA1	'ER HEA	DER										
	3-2301-9	14	374	5E	2	B	GA	HO	0	0	A	BT PIT	OP RR					
	HPCI PUM	° DISCH	IARGE															. *
-		**							4 <b>66</b> 99 99 99 99				,					 

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

### CLASS 1, 2 & 3 VALVE LISTING

						21211	cn: nr	61									
EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT TYPE	NOR Pos	STR DIR A	1/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST	 	
3-2354-500	.75	374	6E	2	C	CK	SA	0	0/C <i>f</i>	ì	CT-C Ct-O	OP OP	RV-23C				
ECCS	KEEP.FILL	to HP	CI CHE	CK												 	
3-2354-501	.75	374	6E	2	C	SCK	SA	0	0/C 4	à	CT-C CT-O	OP OP	RV-23C		·		·
ECCS	KEEP FILL	to HF	CI STO	p Ch	ECK									****		 	
<b>3-</b> 2399-76A	ţ	374	8D	2	C	CK	SA .	C	0/C 4	<b>)</b>	CT-0 Ct-c	RR RR	RV-23D		,		
HPCI	TURBINE E	XHAUST	TO TO	RUS	VACU	UM BRE	AKER									 	
3-2399-76B	f .	374	8D	2	. C	CK	Sa	C	0/C 4	ł	CT-0 CT-C	RR RR	RV-23D		ł	·	

HPCI TURBINE EXHAUST TO TORUS VACUUM BREAKER

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

# CLASS 1, 2 & 3 VALVE LISTING

#### SYSTEM: CONTAINMENT ATMOSPHERE MONITOR

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	nor Pos	STR DIR	a/p	TEST	TEST Sched	REL REQ	TECH POS.	cs Just	 
3-2499-1A	0.5	706-2	6D	2	A	GA	SO	C	0/C	A	AT BT PIT	RR OF RR	RV-00A			
"A" CAM	DRYWEL	L AIR S	anple	INL	ET							UI				 
3-2499-1B • B* CAM	0.5 DRYWEL	706-2 L AIR S	2D Ample	2 INL	A	GA	S0	C	0/C	A	AT BT PIT FST	RR OP RR OP	RV-00A			
3-2499-2A •A* CAN	0.5	706-2	6D AMPLE	2 TNI	 A FT	GA	SO	C	0/C	A	AT BT PIT FST	RR OP RR OF	RY-00A			 
3-2499-2B	0.5	706-2	3D	2		GA	SO	Ċ	0/C	A	AT BT PIT	RR OP RR	RV-00A			 , <u> </u>
"B" CAN	DRYWEL	L AIR S	ample	INL	ET						FST	OP				
3-2499-28 <u>A</u>	0.5	706-2	7C	2	AC	CK	SA	0	0/C	A	AT CT-0 CT-C	RR OP RR	RV-00A RV-24A			
"A" CAH	H2/02	ANALYSI	s sami	PLE	OUTLI	et che	CK									 
3-2499-28B	0.5	706-2	2C	2	AC	CK	SA	0	0/C	A	AT CT-0 CT-C	RR OP RR	RV-00A RV-24A			
"B" CAM	H2/02	ANALYSI	S SAM		ו ודווח	et chei	CK									

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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#### CLASS 1, 2 & 3 VALVE LISTING

#### SYSTEM: CONTAINMENT ATMOSPHERE MONITOR

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	ACT TYPE	NOR PDS	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST
3-2499-3A 'A' Cam	0.5 Torus	706-2 Air Sam	7B PLE II	2 NLET	A	GA	SO .	С	0/C	A	AT BT PIT FST	RR OP RR OP	RV-00A		
3-2499-3B "B" CAM	0.5 Torus	706-2 Air San	2B PLE II	2 NLET	A	GA	SO	С	0/C	A	AT BT PIT FST	RR OP RR OP	RV-00A		
3-2499-4A "A" CAM	0.5 TORUS	706-2 Air Sam	6B PLE II	2 VLET	A	GA	S0	C	0/C	A .	AT BT PIT FST	RR OP RR OP	R¥-00A		
3-2499-4B •B• CAM	0.5 Torus	706-2 AIR SAM	3B PLE II	2 NLET	.A	GA	SO	C	0/C	A	AT BT PIT FST	RR OP RR OP	RV-00A		· · · · · · · · · · · · · · · · · · ·

TEST AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

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#### CLASS 1, 2 & 3 VALVE LISTING

#### SYSTEM: ACAD

			CORD	CLS	CAT	TYPE	TYPE	POS	DIR	A/P	TEST	SCHED	REQ	POS.	JUST	 
3-2599-14	1.5	707-2	9C	2	B	GL	AO	C	0/C	A	BT PIT FST	OP RR OP				
3A ACAD A	IR IN	Let hea	DER							*						 
3-2599-1B	1.5	707-2	iC	2	B	GL	AO	C	0/C	A	BT Pit Fst	OP RR OP		۰ ۲	•	
3B ACAD A	IR IN	et heai	DER					•••••••								 
<b>3-</b> 2599-2A	<b>f</b> .	707-2	50	2	<b>A</b>	GL	<b>AO</b> .	C	0/C	<b>A</b>	AT BT PIT FST	RR OP RR OP	RV-00A		÷	
JA ACAD D	RYWELI	AIR II	NLET H	EADE	ER											 
3-2599-2B 38 ACAD D	t RYVELI	707-2 _ AIR II	4C	2 ·	A	GL	AO	C	0/C	A	AT BT PIT FST	RR OP RR OP	RV-00A			
							****		84 alia alia ini -							 
3-2599-22	1.5	707-2	6A	2	C	CK	SA	C	0	A	CT-0	OP				
U3 ACAD A	IR REG	CEIVER	INLET	CHEC	ж											
3-2599-23A	í	707-2	60	2	AC	CK	SA	C	C	A	AT CT-C CT-O	rr Rr Sam	RV-00A RV-25A RV-25A	TV- <del>0</del> 0C		
ACAD SYST	EM DRI	WELL CI	IECK				• •									

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

REVISION 3

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### CLASS 1, 2 & 3 VALVE LISTING

						SYST	em: ac	AD							
EPN	SIZE	PID	CORD	CLS	CAT	VALVE	ACT TYPE	NOR	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST
3-2599-238	i	707-2	30	2	AC	CK	SA	C	C	A	AT CT-C Ct-O	RR RR SAM	RV-00A RV-25A RV-25A	<b>⊺V-0</b> 0C	
ACAD SYS	TEM DR	YWELL C	HECK												
3-2599-24A	· <b>f</b>	707-2	6C	2	AC	CK	SA	C	C	A	AT CT-C CT-O	rr Rr Sam	- RV-00A RV-25A RV-25A	TV-00C	· · ·
ACAD SYS	TEN TO	RUS CHE	CK									*			
3-2599-24B	i	707-2	3C	2	AC	CK	SA	Ċ	C	A	AT CT-C CT-O	rr Rr Sam	RV-00A RV-25A RV-25A	TV-00C	
ACAD SYS	TEN TO	RUS CHE	CK									, 			
3-2599-3A	<b>f</b>	7 <del>0</del> 7-2	6C	2	A	GL	AO	C	0/C	A	AT BT PIT FST	RR OF RR OP	RV-00A		· .
3A ACAD	TORUS	AIR INL	et he	ADER											
3-2599-3B ·	1	707-2	3C	2	<b>A</b>	GL .	AO	C	0/C	A	AT BT PIT FST	RR OP RR DP	RV-00A		
3B ACAD	TORUS	AIR INL	ET HE	ADER											· · · · · · · · · · · · · · · · · · ·
3-2599-4A	0.5	707-1	3F	2	A	GL	AO	C	0/C	A	AT BT PIT FST	RR OP RR OP	RV-00A		
3A ACAD	DRYWEL	L TO SB	GTS V	ENT	HEAD	ER					- <b>-</b> ·				

TES. AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

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#### CLASS 1, 2 & 3 VALVE LISTING

# SYSTEN: ACAD

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS Just	 
3-2599-4B	0.5	707-2	3E	2	A	GL	AO	C	0/C	A	AT BT PIT FST	RR OP RR OP	RV-00A			
38 ACAD	DRYWEL	L TO SB	GTS V	ENT	Headi 	ER 					-					 
3-2599-5A	0.5	707-2	SF	2	B	GL	A0	C	0/C	A	BT PIT FST	op Rr op				
JA ACAD	DRYWEL	L TO SB	GTS V	ENT	HEAD	ER					AT	RR	RV-00A			
3-2599-5B	θ.5	707-2	5E	2	B	GL	AO	C	0/C	A	BL	OP				
											PIT FST	rr Of	511 AAA			
3B ACAD	DRYWELI	L TO SBI	GTS V	ent 1	HEADI	ER					AI	ĸĸ	KV-OĐA	•	•	

TEST AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

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# CLASS 1, 2 & 3 VALVE LISTING

						SYST	EM: RB	CCH								
EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	act Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST	 
3-3702	6	353	3B	2	A	GA	NO	0	C	A	AT BT PIT	RR CS RR	RV-004	}	CS-37A	
RBCCW	DRYWELL	SUPPLY	HEADE	R 		+	***									 
3-3703	6	353	1 B	2	A	GA	HO	0	C	A	AT BT PIT	RR CS RR	RV-004	ì	CS-37A	
RBCCW	DRYWELL	RETURN	I HEADE	R												 
3-3706	6	353	fB	2	A	GA	MO .	0	C	A	AT BT PIT	RR CS RR	RV-004		CS-37A	
RBCCW	DRYWELL	RETURN	I HEADE	R											•	 
3-3769-500	6	353	3B	2	. C	СК	SA	0	C	A	CT-C At	RR RR	RV-374 RV-004	• <b>-</b>		

REACTOR BLG CLOSED CLG WATER CHECK VALVE

TEST AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

# CLASS 1, 2 & 3 VALVE LISTING

### SYSTEM: DIESEL COOLING/SERVICE WATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST		 	•
3-3930-501	6	355	0B	3	C	CK	SA	C	0	A	CT-O	٥P						
D/G CO(	DLING WA	NTER PUN	IP DIS	Char	, Ge c	HECK							an 100 100 00 00 100 100 100				 	
3-3999-336	<b>. 1</b>	360-2	4C	3	C	CK	SA	0	C	A	CT-C	OP						
D/G C80	DLING WA	ITER TO	CCSN	CHEC	K							<b>.</b>					 	
3-3999-338	ţ	360-2	4E	3	C	CK	SA	0	C	A	CT-C	OP	·					
D/G C00	DLING WA	ITER TO	CCSW	CHEC	K		***-							• = = = = = = = = = = = = = = = = = = =		**	 •	
3-3999-640	1.5	360-2	4E	3	. C	CK	SA	C	0/C	A	CT-C Ct-O	op op	·	· .				
D/G COO	LING WA	TER TO	CCSN I	KEEP	FIL												 	
3-3999-642	1.5	360-2	4B	3	C	СК	SA	C	0/C	A	CT-C Ct-O	OP OP						

D/G COOLING WATER TO CCSW KEEP FILL

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TEST AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

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# CLASS 1, 2 & 3 VALVE LISTING

# SYSTEM: RX. BLDG. EQUIP. DRAINS/LPCI

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR PDS	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST	
3-4899-84	í	369	8E	3	3	RV	SA	C	0	A	RT	10Y	. •			
"A" LFC	( HEAT	EXCHAN	GER TU	BE S	IDE	RELIEF										
3-4899-89	1	369	8E	2	C	RV	SA	 C	0	A	RT	10Y				
"A" LFCI	HEAT	EXHANG	er she	LL S	IDE	RELIEF									· , ·	
3-4899-98	1	369	7E	2		RV	SÁ	C	0	A	RT	10Y				
"B" LPC	( Heat	EXCHAN	GER SH	ELL	SIDE	RELIE	F									
3-4899-99	1	369	 7E	3		RV	SA	C	0	A	RT	10Y				
3-4899-99	1	369	 7E	3	.C	RV	SA	C	0	A	RT	10Y				

"B" LPCI HEAT EXCHANGER TUBE SIDE RELIEF

### AUGMENTED VALVE LISTING

#### SYSTEM: RX RECIRC/HAIN STEAM/FEEDWATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST
2-0220-84A	0.5	12-1	3F	SR	C	CK	SA	0	C	A ·	CT-C	RR		T¥-02A	
					r										. •
HSIV	ACCUNULAT	OR INL	ET -	، سے ہے۔ جن اللہ							*				*****
2-0220-84B	θ.5 4	12-1	3F	SR	C	CK .	SA	0	C	A	CT-C	RR		TV-02A	
MSIV	ACCUMULAT	OR INL	ET			• <b></b>									
2-0220-84C	0.5	12-1	3F	SR	Ċ	CK	SA	0	C	A	CT-C	RR		TV-02A	
		•									L.				
HSIV	ACCUMULAT	OR INL	ET				*		a 140 400 400 400 4						
2-0220-84D	0.5	12-1	3F	SR	C	СК	SA	0	C	A .	CT-C	RR		TV-02A .	
NSIV	ACCUMULAT	OR INLI	ET			w up									
2-0220-85A	0.5	12-2	7F	SR	C	СК	SA	0	C	<b>A</b>	CT-C	RR		TV-02A	• •
NSIV	ACCUMULAT	OR INLI	ET		· .										
2-0220-85B	θ.5	12-2	7F	SR	C	СК	SA	0	C	A	CT-C	RR		TV-02A	
KSIV	ACCUMULAT	OR INLI	ET		-										
<u> </u>	ACCUMULAT	OR INLI	ET 												

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

# AUGMENTED VALVE LISTING

#### SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	act Type	NOR PDS	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST
2-0220-850	0.5	12-2	7F	SR	C	CK	SA	0	C	A	CT-C	RR		TV-02A	
MSIV ACC	UMULAT	OR INLE	T		ţ										
2-0220-85D	θ.5	12-2		SR	C	ск	SA	0	с.	 A	ст-с	RR		TV-02A	

MSIV ACCUMULATOR INLET

TEST AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

### AUGMENTED VALVE LISTING

SYSTEM:	CONTROL	80D	DRIVE
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EPN	SIZE	P1D	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	test Sched	REL REQ	TECH POS.	CS JUST
2-0301-122	1	34	7E	SR	C	CK	SA	C	0/C	A	CT-O Ct-C	RR RR		TV- <del>0</del> 3a TV-03a	
CRD BAG	CKUP SCR	AK BYPA	SS 								***				
2-0302-19A	0.5	34	7E	SR	B	TWV	SO	Ũ	C	A ·	BT FST	RR RR		TV- <del>0</del> 3A TV-03A	· · ·
BACKUP	SCRAM			<b></b>					•						
2- <del>0</del> 302-19B	<b>0.5</b>	34	7E	SR	B	TWV	SO .	0	C	<b>A</b>	BT FST	RR RR		TV-03A TV-03A	
BACKUP	SCRAN														
2-0302-20A	θ.5	34	8E	SR	B	TUV	SO	0	C	A .	BT FST	RR RR		TV-03A . TV-03A	
SCRAM I	)UMP														
2-0302-20B	0.5	34	8E	SR	B	TUV	SO	0	C	A	BT FST	RR RR		TV-03A TV-03A	
SCRAM I	)ump														
2 <del>-0</del> 3 <del>0</del> 5-117	0.5	34	ØD	SR	B	TWV	S0	0	C	A	BT FST	RR RR		TV-03B TV-03B	
SCRAM F	PILOT								·						· · ·

TEST. HT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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### AUGMENTED VALVE LISTING

'DN	C17F	DTB	000	<u>ei e</u>	CAT	VALVE	ACT	NOR	STR	A /D	-	TEST	REL	TECH	CS
.r n		P10 			LAI				DIR	я/r 	1651	5UHED 	KEQ	PU5.	JUS1
2-0305-118	θ.5	34	ØD	SR	B	TWV	SD	0	C	A	BT FST	RR RR		TV-03B TV-03B	
SCRAM P	ILOT														
2-0399-524A	f	34	8D	SR	B	TNV	SO	0	C	A	BT FST	RR RR		TV-03C TV-03C	
ATUS-AR	I														
2-0399-524B	1	34	8D	SR	B	TWV	SO	0	C	A	BT FST	RR RR		TV-03C TV-03C	
ATWS-AR	I												8		
2-0399-525	t	34	8D	SR	.C	CK	SA	C	0	A	CT-0	RR		TV-03C	· · · ·
SCRAM A	IR HEAD	ER ARI	BYPAS	5											
2-0399-548 <u>A</u>	1	34	9C	SR	B	GA	S0	C .	0	A <sub>.</sub>	BT FST	RR RR		TV-03C TV-03C	
AT₩S-AR	I														
2-0399-548B	i	34	90	SR	B	GA	S0	C	0	A	BT FST	RR RR		TV-03C TV-03C	
ATUS-AR	I								·						
							****								

TEST AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

# AUGMENTED VALVE LISTING

SYSTEM:	CONTROL	ROD	DRIVE
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EPN	SIZE	PID	CORD	CLS	CAT	VALVE	act Type	NOR PDS	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST
2-0399-549A	1	34	8E	SR	B	GA	S0	C	0	A .	BT Fst	RR RR		TV <del>-0</del> 3C TV-03C	
ATUS-AR)	[		*****												
2-0399-549B	i	34	8E	SR	B	GA	SO	C	0	A	BT FST	RR RR		TV-03C TV-03C	

AT₩S-ARI

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

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# AUGMENTED VALVE LISTING

SYSTEM:	TRAVERSING	IN-CORE	PROBE
	11/11/01/01		1 1/07/

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST	
2-0733-A	θ.5	37-2	1F	SR	A	BAL	SO	C	C	A	AT Bt Pit	RR OP RR	RV-00A			
TIP BALL	VALVE							• ••• ••• ••• •••								
2-0733-B	θ.5	37-2	1F	SR	A	BAL	SO	C	C	A	AT BT PIT	RR OP RR	RV- <del>o</del> ga			
TIP BALL	VALVE						*****									
2-0733-C	<b>0.5</b>	37-2	fF	SR	A	BAL	SU .	C	C	A	AT BT PIT	RR OP RR	RV-00A			
TIP BALL	VALVE															
2- <del>0</del> 733-D	θ.5	37-2	1F	SR .	A	BAL	S0	C	C	A	AT BT PIT	RR OP RR	RV-00A			
TIP BALL	VALVE															
2-0733-E	θ.5	37-2	1F	SR	<b>A</b>	BAL	SO	C	C	A	AT BT PIT	RR OF RR	RV-00A			
TIP BALL	VALVE												· • • · • • • • • • • • • • • • • • • •			
2-0736-1	0.5	37-2	1F	SR	D	GA	EXP	0	C	A	DT	RR				
TIP SHEA	r valv	E													***	

TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

TEST

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# AUGMENTED VALVE LISTING

	-					SYST	EM: TR	AVER	SING	IN-	CORE	PROBE					
EPN	SIZE	PID	CORD	CLS	CAT	VALVE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH Pos.	cs Just	 	
2-0736-2	0.5	37-2	1F	SR	D	GA	EXP	0	C	A.	DT	RR				·	
TIP SH	IEAR VALV	E			:												
2-0736-3	0.5	37-2	1F	SR	D	GA	EXP	0	C	A	DT	RR		- <b>-</b>			
TIP SH	EAR VALV	E	****														
2-0736-4	0.5	37-2	١F	SR	D	GA	EXP	0	C	A	DT	RR					
TIP SH	EAR VALV	E															
2 <del>-0</del> 736-5	0.5	37-2	ſF	SR	.D	GA	EXP	0	C	A	DT	RR					

TIP SHEAR VALVE

TEST -SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

# AUGMENTED VALVE LISTING

SYSTEM: ISOLATION CONDENSER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	nor Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	cs Just	
2-1301-10	4	28	3C	SR	B	GA .	KO	C	0/C	A	BT PIT	OP RR				

ISO CONDENSER CONTAMINATED DEMIN FILL

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

### AUGMENTED VALVE LISTING

# SYSTEM: LPCI/CCSW

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS Just	 	
2-1501-19A	6	29-1	7B	SR	<b>A</b>	GA	KO	C	0/C	A	AT BT PIT	RR OF RR	RV-00A				
LPCI LO	DOP I TO	IRUS SPI	ray .										, ,			 ar bat	-
2-1501-19B	6	29-1	28	SR	A	GA	KO	Ç	0/C	A	AT BT PIT	RR DF RR	RV-00A	·			
LPCI LO	OP II T	ORUS SI	PRAY				*****									 	
2-1599-61	3	29-1	4D	SR	B	GA	A0	<b>C</b>	C	A	BT FST PIT	op op RR					
TORUS 1	ro hotwe															 ••••••••••	
2-1599-62	3	29-1	4D	SR	B	GA	AD	C	C	A .	BT FST PIT	op op Rr					
TORUS 1	Fo hotwe	LL															

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

### AUGHENTED VALVE LISTING

SYSTEN:	CONT.	å	PRESSURE	SUPPRESSION
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EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	cs Just
2-1601-20A Reactor	20 R BUILDI	25 Ng to	8D Torus	SR Vacu	a Jun Ri	BTF	AO	C	0/C	A	AT BT FST PIT	RR OP OP RR	RV-00A		
2-1601-20B REACTOR	20 20 R BUILDI	25 Ng to	8E Torus	SR SR	a Jim Ri	BTF	A0	C	0/C	A	AT BT FST PIT	RR OP OP RR	RV-09A		
2-1601-21 DRYWELL	18 . VENT A	25 ND PUF	6C 8GE	SR	A	BTF	AO	C	0/C	A	AT BT FST PIT	RR OF OP RR	RV-00A		
2-1601-22 DRYWELL	18 ./Torus	25 VENT	60	SR	.A	BTF	AO	С	С	A	AT BT FST PIT	RR OP OP RR	RV-00A		
2-1601-23 ·	18 . Vent Ti	25 O Read	3B Ctor Bui	SR	A {G	BTF	AO	C	<b>C</b>	A	AT BT FST PIT	RR OP OP RR	RV-00A		
2-1601-24 Torus/d	18 RYWELL	25 VENT	28	SR	A	BTF	AO	C	C	A	AT BT FST PIT	RA OP OP RR	RV-00A		

TEST. AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

**REVISION 3** 

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# AUGMENTED VALVE LISTING

EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST 		
2-1601-31A	20	25	9D	SR	AC	CK	SA	C	0/C	A ·	AT	RR	RV-00A				
											CT-C	OP					
REACTO I	BUILDIN	G TO T	ORUS V	ACUU	M BR	EAKER											
2-1601-31B	20	25	9E	SR	AC	CK	SA	C	0/C	A	AT CT-0 CT-C	rr Of Op	RV-00A				
REACTOR	BUILDI	NG TO	TORUS	VACU	UM B	REAKER											
2-1601-32A	18	25	30	SR	AC	CK	SA	C	0/C	A	AT	RR					
								•			CT-C	OP					
TORUS TO	) DRYWE	LL VAC	UUM BRI	EAKEI	R												
2-1601-32B	18	25	3D	SR	AC	CK	SA	C	0/C	A	AT CT-0 CT-C	RR Op Op				·	
TORUS TO	DRYWE	LL VAC	UUM BRE	Eakei	R 										***		
2-1601-32C	18	25	3D	SR	AC	CK	SA	<b>C</b> .	0/C	A	AT CT-0 Ct-c	rr op op					
TORUS TO	) DRYWE	LL VAC	UUM BRI	AKE	R				14 alia dan tan a								
2-1601-32D	18	25	3E	SR	AC	CK	SA	C	0/C	A	AT CT-0 Ct-C	rr Op Op					

TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

# AUGMENTED VALVE LISTING

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST	 	
2-1601-32E	18	25	3E	SR	AC	CK	SA	C	0/C	A	AT CT-0	RR OP				 • • · · ·	
TORUS TO	O DRYWE	ILL VAC	UUM BRI	EAKEI	R						C1-C	UP					
2-1601-32F	18	25	3E	SR	AC	CK	SA	C	0/C	A	AT CT-0 CT-C	RR Op Op					
TORUS TO	D DRYWE	LL VAC	UUM BRE	akei	R 											 	
2-1601-33A	18	25	70	SR	AC .	CK	SA .	C	0/C	A	AT CT-0 Ct-c	RR OP OP					
TORUS TO	D DRYWE	LL VAC	UUM BRE	AKEI	<u>۱</u>	*****		+								 ****	
2-1601-33B	18	25	70	SR	AC	CK	SA	C	0/C	A	AT CT-0 CT-C	RR Op Op					
TORUS TO	) DRYWE	LL VAC	UUM BRE	AKEF	{ 											 	
2-1601-33C	18	25	70	SR	AC	CK	SA	<b>C</b> .	0/C	A	AT CT-0 Ct-c	RR Op Op					
TORUS TO	) DRYWE	LL VAC	UUM BRE	AKEI	{ 						<b></b> .					 •	
2-1601-33D	18	25	7E	SR	AC	CK	SA	C	0/C	A	AT CT-0 CT-C	RR Op Op			ų		
TORUS TO	DRYNE	LL VACI	UUM BRE	AKER	2												

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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# AUGMENTED VALVE LISTING

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH PDS.	CS Just
2-1601-33E	18	25	7E	SR	AC	CK	ŚA 	C	0/C	A .	AT °CT-0 Ct-c	RR OP OP			
TORUS TO	DRYWE	LL VAC	UUM BRI	EAKE	R										
2-1601-33F	18	25	7E	SR	AC	CK	SA	Ç	0/C	A	AT CT-0 Ct-c	rr Op Op			
TORUS TO	DRYWE	LL VAC	UUM BRI	EAKE	R								*		
2-1601-55 Dw/torus	4 N2 PU	25  Rge an	6B D pump	SR Baci	a K su(	BTF CTION	AU .	0	C	<b>A</b>	AT BT FST PIT	RR Of Of RR	RV-00A		
2-1601-56 Torus ven	18 It and	25 PURGE	6D	SR	.A	BTF	AÜ	0	C	A	AT BT FST PIT	RR OP OP RR	RV-00A		· · · · · · · · · · · · · · · · · · ·
2-1601-57 ·	1.5	25	80	SR	A	GL	MO	0	С	A	AT BT PIT	RR OP RR	RV-00A		
DRYWELL/1	ORUS	N2 MAK	e-up												
2-1601-58	1.5	25	70	SR	A	GL	AO	C	C	A	AT BT FST PIT	RR OP OP RR	RV-00A		

TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

**REVISION 3** 

### AUGHENTED VALVE LISTING

#### SYSTEM: CONT. & PRESSURE SUPPRESSION

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST 		
2-1601-59	1.5	25	6D	SR	A	GL	AO	0	C	A	AT BT	RR OP	RV-00A	. <u>-</u>			
N2 MAKE	E-UP TO	DRYWELI	r								FST PIT	OP RR				**	
2-1601-60	18	25	2E	SR	A	BTF	AO	C	0/C	A	AT BT FST	RR OP OP	RV-00A		·		
TORUS	VENT TO	REACTO	R BUIL	DING	VEN	T SYST	em 				PIT	RR					
2-1601-61	2	25	2E	SR	A	GA	AO .	с	0/C	A	AT Bt FST	RR OP OP	RV-00A				
TORUS N	IAIN VEN	T BYPA	5S								PIT	RR					
2-1601-62	2	25	3B	SR	. <b>A</b>	GL	AO	C	0/C	A	AT BT FST PTT	RR OF OP	RV-00A		· .		
DRYWELL	VENT B	YPASS										· · ·	د که مدینیون وی وی وی وی ایک		*****	w-* w w a a a a a a	
2-1601-63	6	25	2A	SR	<b>A</b> :	BTF	AO	C	0/C	<b>A</b>	AT BT FST	RR OP OP	RV-00A				
TORUS/I	ORYWELL	VENT									F 1 I	кл 					
2-1601-91	18	25	B2	NSR	B	BTF	A0	0	C	A	BT PIT	CS RR			CS-16A		
	ם העי <b>מו</b> ה				/114	DENER	УЕНТ	200.1									

TEST. AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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## AUGMENTED VALVE LISTING

#### SYSTEM: CONT. & PRESSURE SUPPRESSION

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	act Type	NOR PDS	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS Just	
2-1601-92	10	25	B2	NSR	B	BTF	AD	C	0/C	A	BT	CS			CS-16A	

VENT TO MAIN CHIMNEY (HARDENED VENT MOD)

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TEST AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

# AUGMENTED VALVE LISTING

EPN	SIZE	PID	CORD	CLS	CAT	TYPE	HUT TYPE	POS D	IR 1	A/P	TEST	SCHED	REQ	POS.	JUST				-
2-1901-16A	6	31	6A	NSR	<u>C</u>	CK	SA	0/C 0	<b>f</b>	A 	CT-O	0P		TV-19A					
FUEL PO	OL DEMI	N RETUR	IN TO	DIFFU	ISER														_
2-1901-16B	6	31	6A	NSR	C	CK	SA	0/C 0		ł	CT-0	OP		TV-19A				•	
FUEL PO	OL DEMI	N RETUR	N TO	DIFFU	ISER														_
2-1901-27A	6	31	3E	NSR	С	CK	SA .	0/C 0	f	ì	CT-0	OP		TV-19A					
"A" FUE	L POOL	COOLING	PUMP	DISC	HARG	e chei	CK		±++-							, ane alle aler alle late te	••••		-
2-1901-27B	6	31	3E	NSR .	C	CK	SA	0/C 0	ł	1	CT-0	OP		TV-19A					
*B* FUE	l pool	COOLING	PUMP	DISC	HARG	E CHE	:K												-
2-1901-55	6	31	10D	NSR	С	CK	SA	0/C 0	. A	1	CT-O	0P		TV-19A					
FUEL PO	OL DENI	N RETUR	N TO	DIFFU	ISER				•										_
															. '				

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TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

# AUGMENTED VALVE LISTING

### SYSTEN: RADWASTE

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS Just		
2-2001-106	3	39	7F	SR	A	GA	AO	0/C	C	A	AT	RR	RV-00A				
							• • • • •	,			BT	OP	غ الاحمد ال	** ** ** -*** -		 	····· · · · · · · ·
					•						PIT	RR					
	_										FST	OP					
DRYWELI	L FLOOR	DRAIN	SUMP P	UMP	DISC	HAKGE							•				
************																	
2-2001-6	3	39	3E	SR	A	GA	AO	0/C	C	A	AT	RR	RV-00A			•	
											BT	OP				·	
											PIT	RR					
											FST	OP			•		
DRYWELI	L EQUIP	IENT DI	RAIN SU	P P	UMP	DISCHA	RGE										

TEST. HI-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

### AUGMENTED VALVE LISTING

						VAL VE	ACT	NOR	STR			TEST	8F1	TECH	CS	٠
PN 	SIZE	PID	CORD	CLS	CAT	TYPE	TYPE	POS	DIR	A/P	TEST	SCHED	REQ	POS.	JUST	 
-2301-15	12	51	4F	NSR	B	GA	NO	C	C	A	BT-O	OP				 
U2 HPCI	RETURN	to com	IDENSA	TE S	TORA	GE										
-2301-30	í	51	10B	SR	B	GL	AO	Q	C	A	BT	OP				•
U2 HPCI	INLET	DRN POT	7 2A O	TBD	DRN	to MN (	DSR									 
-2301-65	<b>i</b> .	51	6A	SR	B	GL	<b>AO</b> .	0	C	A	BT PIT FST	OP RR OP				
HPCI TU	RBINE S	V ABOVE	SEAT	DRA	EN											
-2399-77A	f	51	8D	SR	. <b>C</b>	СК	SA	C	0/C	A	CT-O Ct-C	RR RR	·	TV-23B .		
HPCI TU	RBINE E	XHAUST	to to	RUS I	/ACUL	IM BREA	KER									 
-2399-77B	í	51	8D	SR	C	CK	SA	C	0/C	<b>A</b>	CT-O CT-C	RR RR		TV-23B		
HPCI TU	RBINE E	XHAUST	to toi	RUS I	/ACUL	IM BREA	KER									
		, ,	, agus data unte añte Min e													 
																· .

TEST MASEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

### AUGMENTED VALVE LISTING

-								SYST	em: ac	CAD									
	EPN	S17	ZE	PID	CORD	CLS	CAT	VALVE Type	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS Just		 •
	2-2599-79	1.2	25	707	64	SR	C	CK	SA	C	0	A	CT-D	OP		<b>.</b>		-	 
	ACAD	AIR COP	1PRE	SOR	DISCHAR	GE C	HECK												 
	2-2599-8	0.5	5	7 <del>0</del> 7	8F	SR	C	CK	SA	C	0	A	CT-0	Of					

ACAD VENT HEADER TO SBGT CHECK

TEST HI-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

#### AUGMENTED VALVE LISTING

SIGURA SERVICE MIN	SERVICE AIR	SYSTEM:
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EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	ACT Type	NOR Pos	STR DIR	A/F	TEST	TEST Sched	REL REQ	TECH POS.	cs Just	 		
2-4699-311A	0 <b>.</b> 5	173	4F	SR	C	CK	SA	C _	0/C	A	CT-0 Ct-c	0P 0P	· • •			 <b></b> · ·	<b>.</b> .	
D/G STAR	RTING 4	AIR COM	IPRESSO	R 'A	• DI	SCHARG	e chec	K										
2-4699-311B	0.5	173	6F	SR	C	CK	SA	C	0/C	A	CT-0 Ct-c	OP OP						•
D/G STAR	TING A	AIR "B"	Compr	ESSO	R DI	SCHARG	e chec	K								 		
2-4699-312	1.5	173	50	SR	C	CK	SA	C	0/C	A	CT-0 Ct-c	op op						
D/G STAR	TING A	IR REC	EIVER	TANK	outi	let chi	ECK											
2-4699-313A	θ.5	173	3D	SR	. <b>C</b>	RV	SA	C	0	A	RT	18Y						
D/G STAR	TING A	IR AI	RECEIV	ER TI	ANK F	RELIEF							**			 		
2-4699-313 <u>B</u>	0.5	173	5D	SR	C	RV	SA	C	0	<b>A</b>	RT	10Y	:					
D/G STAR	TING A	IR BI	RECEIV	ER TA	ANK F	RELIEF							-			 		
	0.5	173	4D	SR	<b>C</b>	RV	SA	C	0	A	RT	10Y						
2-4699-314A																		

TEST-RT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

#### AUGMENTED VALVE LISTING

						SYST	EM: SE	RVIC	E AI	R								
EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH Pos.	CS JUST	 		•
2-4699-314B	0.5	173	6D	SR	C	RV	SA	C	0	A	RT	10Y	<sup>1</sup>			 	• •	
D/G STA	ARTING A	AIR B2	RECEIV	ER T	ANK	RELIEF												
2-4699-316	1.5	173	SD	SR	C	CK	SA	C	0/C	A	CT-O CT-C	OP OP					· .	

D/G STARTING AIR RECEIVER TANK OUTLET CHECK

TEST AT SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

### AUGMENTED VALVE LISTING

### SYSTEM: INSTRUMENT AIR

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST		 •
2-472 <del>0</del>	1	37-2	70	SR	A	GA	AD	0	C	A	AT	RR	RV-00A				
		• -									FST	OP					
DRYWELI	L PNUERA	TIC CO	IPRESS	OR S		ON					PIT	RR				1977 and 1921 and 1921 and 1921 and 1921 and 1921	
2-4721	1	37-2	70	SR	A	GA	A0	0	C	A	AT BT FST PIT	RR OP OP RR	RV-00A				
DRYWELI	L PNUEMA	TIC CO	IPRESS	OR S		ON 											
2-4722	ŧ	<b>37-2</b>	2E	SR	A	GL	AO	0	C	<b>A</b>	AT BT FST PIT	RR CS CS BR	RV-00A		CS-47A		
INSTRU	HENT AIR	TO DR	WELL														
2-4799-514	0.5	37-2	4F	SR	.AC	CK	SA	0	C	A	AT CT-C	RR - RR	RV-00A	TV-47A			

TIP VALVE PURGE ASSY OUTLET CHECK

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TEST AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

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#### AUGMENTED VALVE LISTING

SYSTEM: DIESEL OIL

_	EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	act Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL Req	TECH POS.	CS JUST	•
	2-5202A-501	1.5	41-2	5E	SR	C	CK	SA	C	0	A	CT-0	0P				

D/G FUEL DIL TRANSFER PUMP DISCHARGE CHECK

TEST MI-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

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### AUGMENTED VALVE LISTING

					SYST	EM: RX	. BL	DG.	VENT	ILATI	NC					
SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pds	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST		•
43	269	ſĂ	SR	B	BTF	AD	0	C	A	BT FST PIT	OP OP RR	. می	· •• •	· · · •		
BUILDI	ING VENT	SUPP	LY I	SOLA	TION		. <b></b>									- 199 199 199 199 199 199 199
48	269	1A	SR	B	BTF	AO	0	C	A	BT FST PIT	OP OP RR				•	
BUILDI	NG VENT	SUPP	LY I	SOLA	TION			* * ** ** **	** == ~== ==							
48	269	ÐB	SR	B	BTF	AC .	0	C	A	BT FST PIT	OP OP RR					
BUILDI	NG VENT	EXHA	UST	ISOL	ATION	يني ختم وقد طلب عنه من			*					• •		- ş
48	269	ÐB	SR	B	BTF	A0	0	C	A	BT FST PIT	OP OP RR					
	SIZE 48 EUILDI 48 BUILDI 48 BUILDI 48	SIZE PID 48 269 BUILDING VENT 48 269 BUILDING VENT 48 269 BUILDING VENT 48 269	SIZE PID CORD 48 269 1A BUILDING VENT SUPP 48 269 1A BUILDING VENT SUPP 48 269 0B BUILDING VENT EXHA 48 269 0B	SIZEPIDCORDCLS482691ASRBUILDINGVENTSUPPLYI482691ASRBUILDINGVENTSUPPLYI482690BSRBUILDINGVENTEXHAUST482690BSR	SIZE PID CORD CLS CAT 48 269 1A SR B BUILDING VENT SUPPLY ISOLA 48 269 1A SR B BUILDING VENT SUPPLY ISOLA 48 269 0B SR B BUILDING VENT EXHAUST ISOL 48 269 0B SR B	SYSTI VALVE SIZE PID CORD CLS CAT TYPE 48 269 1A SR B BTF BUILDING VENT SUPPLY ISOLATION 48 269 1A SR B BTF BUILDING VENT SUPPLY ISOLATION 48 269 0B SR B BTF BUILDING VENT EXHAUST ISOLATION 48 269 0B SR B BTF	SYSTEM: RX VALVE ACT SIZE PID CORD CLS CAT TYPE TYPE 48 269 1A SR B BTF AD BUILDING VENT SUPPLY ISOLATION 48 269 1A SR B BTF AD BUILDING VENT SUPPLY ISOLATION 48 269 0B SR B BTF AD BUILDING VENT EXHAUST ISOLATION 48 269 0B SR B BTF AD	SYSTEM: RX. BLI SIZE PID CORD CLS CAT TYPE TYPE PDS 48 269 1A SR B BTF AD 0 BUILDING VENT SUPPLY ISOLATION 48 269 1A SR B BTF AD 0 BUILDING VENT SUPPLY ISOLATION 48 269 0B SR B BTF AD 0 BUILDING VENT EXHAUST ISOLATION 48 269 0B SR B BTF AD 0	SYSTEM: RX. BLDG. SIZE PID CORD CLS CAT TYPE TYPE PDS DIR 48 269 1A SR B BTF AO O C BUILDING VENT SUPPLY ISOLATION 48 269 1A SR B BTF AO O C BUILDING VENT SUPPLY ISOLATION 48 269 0B SR B BTF AO O C BUILDING VENT EXHAUST ISOLATION 48 269 0B SR B BTF AO O C	SYSTEM: RX. BLDG. VENT   SIZE PID CORD CLS CAT TYPE TYPE POS DIR A/P   48 269 1A SR B BTF AO O C A   BUILDING VENT SUPPLY ISOLATION 48 269 1A SR B BTF AO O C A   BUILDING VENT SUPPLY ISOLATION 48 269 0B SR B BTF AO O C A   BUILDING VENT SUPPLY ISOLATION 48 269 0B SR B BTF AO O C A   BUILDING VENT EXHAUST ISOLATION 48 269 0B SR B BTF AO O C A   BUILDING VENT EXHAUST ISOLATION 48 269 0B SR B BTF AO O C A	SYSTEM: RX. BLDG. VENTILATION SIZE PID CORD CLS CAT TYPE TYPE POS DIR A/P TEST 48 269 1A SR B BTF AO O C A BT FST PIT BUILDING VENT SUPPLY ISOLATION 48 269 1A SR B BTF AO O C A BT FST PIT BUILDING VENT SUPPLY ISOLATION 48 269 0B SR B BTF AO O C A BT FST PIT BUILDING VENT EXHAUST ISOLATION 48 269 0B SR B BTF AO O C A BT FST PIT BUILDING VENT EXHAUST ISOLATION	SYSTEM: RX. BLDG. VENTILATION   SIZE PID CORD CLS CAT TYPE TYPE POS DIR A/P TEST SCHED   48 269 1A SR B BTF AO O C A BT OP   48 269 1A SR B BTF AO O C A BT OP   48 269 1A SR B BTF AO O C A BT OP   48 269 1A SR B BTF AO O C A BT OP   48 269 1A SR B BTF AO O C A BT OP   48 269 0B SR B BTF AO O C A BT OP   48 269 0B SR B BTF AO O C A BT OP   90 FI RR	SYSTEM: RX. BLDG. VENTILATION   VALVE ACT NOR STR TEST REL   SIZE PID CORD CLS CAT TYPE TYPE POS DIR A/P TEST SCHED REQ   48 269 14 SR B B BTF AO O C A BT OP   48 269 14 SR B B BTF AO O C A BT OP   48 269 1A SR B B BTF AO O C A BT OP   48 269 1A SR B B BTF AO O C A BT OP   48 269 1A SR B B BTF AO O C A BT OP   48 269 0B SR B B BTF AO O C A BT OP   48 269 0B SR B B BTF AO O C A BT OP   48 269 0B SR B B BTF AO O C A	SYSTEM: RX. BLDG. VENTILATION   VALVE ACT NOR STR TEST REL TECH   SIZE PID CORD CLS CAT TYPE TYPE POS DIR A/P TEST SCHED REQ POS.   48 269 1A SR B BTF AD O C A BT OP   48 269 1A SR B BTF AD O C A BT OP   48 269 1A SR B BTF AO O C A BT OP   48 269 1A SR B BTF AO O C A BT OP   48 269 1A SR B BTF AO O C A BT OP   48 269 0B SR B BTF AO O C A BT OP   901LDING VENT EXHAUST ISOLATION 48 269 0B SR B BTF AO O C A BT OP   48 269 0B SR B BTF AO O	SYSTEM: RX. BLDG. VENTILATION   VALVE ACT NOR STR TEST REL TECH CS   SIZE PID CORD CLS CAT TYPE TYPE PDS DIR A/P TEST SCHED REQ POS. JUST   48 269 1A SR B BTF AO O C A BT OP   FST OP FST OP PIT RR PIT RR   BUILDING VENT SUPPLY ISOLATION 48 269 1A SR B BTF AO O C A BT OP PIT RR   BUILDING VENT SUPPLY ISOLATION 48 269 0B SR B BTF AO O C A BT OP PIT RR   BUILDING VENT SUPPLY ISOLATION 48 269 0B SR B BTF AO O C A BT OP   48 269 0B SR B BTF AO O C A BT OP PIT RR	SYSTEM: RX. BLDG. VENTILATION   VALVE ACT NOR STR TEST REL TECH CS   SIZE PID CORD CLS CAT TYPE TYPE POS DIR A/P TEST SCHED REQ POS. JUST   48 269 1A SR B BIF AD O C A BT OP   FST OP FST OP PIT RR PUILDING VENT SUPPLY ISOLATION PIT RR   801LDING VENT SUPPLY ISOLATION 48 269 0B SR B BTF AO O C A BT OP   48 269 0B SR B BTF AO O C A BT OP   48 269 0B SR B BTF AO O C A BT OP   901LDING VENT EXHAUST ISOLATION 48 269 0B SR B BTF AO O C A BT OP   91LDING VENT <t< td=""></t<>

REACTOR BUILDING VENT EXHAUST ISOLATION

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TEST HT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

### AUGMENTED VALVE LISTING

#### SYSTEM: D/G STARTING AIR

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST	
2-6699-103	.375	173	ØA	SR	B	GA	SO	C	0	A	BT	0P OP		TV-66A		~
					ł						1.21	01				
D/G STA	RTING A	IR												•••••		
2-6699-104	.375	173	0A	SR	0	CK	SA	C	<b>0/</b> C	A	CT-0 Ct-c	OP OP				· · ·
D/G STA	RTING A	IR CHE	ECK													
2-6699-105	.375	173	ØA	SR	B	GA	AO .	<b>C</b>	0	A	BT Fst	op op		TV-66A		
D/G STA	RTING A	IR REL	.AY													

TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3
## AUGMENTED VALVE LISTING

#### SYSTEM: PROCESS SAMPLE

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EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH Pos.	cs Just	 	
2-8501-1A	0.5	25	2E	SR	A	CV	AD	0	C	A	AT	RR OD	RV-00A		· •·· • · • ••	 	
					•						PIT	RR					
INBOARD	TORUS	SAMPLE									rai	ur					
2-8501-1B	θ.5	25	2E	SR	Â	FCV	AO .	Q	C	A	AT BT PIT	RR OF RR	R¥-00A	-	· · · · · · · · · · · · · · · · · · ·		
OUTBOAR	D TORUS	s Sampl	£								rəi	Ur				 	
2-8501-3A	0.5	<b>25</b>	4D	SR	A	FCV	AO .	0	C	A <sup>r</sup>	AT BT PIT	RR OP RR	RV-00A				
INBOARD	PROCES	is samp	LE								751	UP.					
2-8501-3B	0.5	25	4D	SR	. <b>A</b>	FCV	AO	0	C	A	AT BT PIT FST	RR OP RR OP	RV-00A				
OUTBOARI	) PROCE	iss sam	PLE 													 به وی هدونه مرد دی	·
2-8501-5A	0.5	25	30	SR	<b>A</b>	FCV	A0	0.	C	A	AT BT PIT	RR OP RR	R¥-00A				
INBOARD	PROCES	s samp	LE								151	UP					
2-8501-5B	0.5	25	3D	SR	A	FCV	AO	0	C	A	AT BT PIT	RR OP RR	RV-00A				· .
OUTBOARI	) pròce	ss sami	PLE	-							r31	U <b>r</b> "					

TEST AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

**REVISION 3** 

# AUGHENTED VALVE LISTING

#### SYSTEM: PROCESS SAMPLE

EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST		 •
2-8526	.75	25	8D	SR	C	RV	SA	C	0	A	RT	10Y			• •	•••	 

NITROGEN INERTING RELIEF

#### AUGHENTED VALVE LISTING

#### SYSTEM: HRSS

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS Just		 	•
2-8941-709	0.5	1234-1	5E	SR	B	GA	AD	C	0/0	A 	BT FST- PIT	op op Rr		. <u>-</u>		-	 	
*A* LPC	i heat	EXCH. T	o hrs	s an	D GR	AB SAMI	PLE						**				 	•
2-8941-710	0.5	1234-1	5D	SR	B	GA	A0	C	0/C	A .	BT FST PIT	op op rr						

"B" LPCI HEAT EXCH. TO HRSS AND GRAB SAMPLE

# AUGMENTED VALVE LISTING

### SYSTEM: PROCESS SAMPLE

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST			 	_
2-9205A	0.5	25	3D	SR	A	FCV	AO	0	C	A	AT BT –	rr of -	RV-00A			• -	، سو رو		
INBOAF	ND PROCES	s sami	PLE		`						PIT FST	RR OP						 	-
2-9205B	θ.5	25	3D	SR	A	FCV	AO	0	C	A	AT BT PIT FST	RR OP RR OP	RV-00A				•		-
OUTBOA	ARD PROCE	SS SAI	MPLE 															 	-
2-9206A	<b>0.5</b>	25	40	SR	A	FCV	AO .		C	A	AT BT PIT	RR OP RR	RV-00A						
INBOAR	D PROCES	is sami	9LE						****		FJ)	UI						 	-
2-9206B	θ.5	25	4D	SR	A	FCV	AO	0	C	A <sub>.</sub>	AT BT PIT	RR OP RR	RV-00A						
OUTBOA	RD PROCE	iss sai	1PLE				•				F21	UP						 	-
2-9207A	θ.5	25	6D	SR	<b>A</b>	FCV	AO	0	C	<b>A</b>	AT BT PIT	RR OP RR	RV-00A						
INBOAR	D PROCES	is same	°LE	P ani an an an							r 3 i	ur						 	-
2-9207B	0.5	25	6D	SR -	A	FCV	AO	0	C	A	AT BT PIT FST	RR OP RR OP	RV-00A						
OUTBOA	RD PROCE	iss saf	1PLE																

TEST AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

**REVISION 3** 

# AUGHENTED VALVE LISTING

					SYSTI	EN: PR	OCES	s sai	MPLE							
SIZE	PID	CORD	CLS	CAT	VALVE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	cs Just		
θ.5	25	6D	SR	A	FCV	AD	0	C	A	AT BT	RR NP	RV-00A				
				•						PIT	RR					
PROCES	s samp	LE						• <b></b>		FST	OP					
θ.5	25	6D	SR	A	FCV	AO	0	C	A	AT	RR	RV-00A				
										BT	OP					
										PIT	RR					
	SIZE 0.5 ROCES 0.5	SIZE PID 0.5 25 ROCESS SAMP 0.5 25	SIZE PID CORD 0.5 25 6D ROCESS SAMFLE 0.5 25 6D	SIZE PID CORD CLS 0.5 25 6D SR PROCESS SAMFLE 0.5 25 6D SR	SIZE PID CORD CLS CAT 0.5 25 6D SR A PROCESS SAMPLE 0.5 25 6D SR A	SIZE   PID   CORD   CLS   CAT   TYPE     0.5   25   6D   SR   A   FCV     PROCESS   SAMPLE	SIZEPIDCORDCLSCATVALVEACT0.5256DSRAFCVADPROCESSSAMPLE0.5256DSRAFCVAD	SIZE   PID   CORD   CLS   CAT   TYPE   TYPE   POS     0.5   25   6D   SR   A   FCV   AD   D     PROCESS   SAMPLE	SIZE   PID   CORD   CLS   CAT   TYPE   TYPE   POS   DIR     0.5   25   6D   SR   A   FCV   AO   O   C     PROCESS   SAMFLE	SIZE   PID   CORD   CLS   CAT   TYPE   TYPE   POS   DIR   A/P     0.5   25   6D   SR   A   FCV   AD   O   C   A     PROCESS   SAMPLE	SIZE   PID   CORD   CLS   CAT   TYPE   TYPE   POS   DIR   A/P   TEST     0.5   25   6D   SR   A   FCV   AO   O   C   A   AT     0.5   25   6D   SR   A   FCV   AO   O   C   A   AT     PIT   FST   PST   FST   FST   FST   FST   FST     0.5   25   6D   SR   A   FCV   AO   O   C   A   AT     BT   DIT   FST   FD   FCV   AO   O   C   A   AT     DIT   FST   FST <td>SIZE PID CORD CLS CAT TYPE TYPE POS DIR A/P TEST   0.5 25 6D SR A FCV AO O C A AT RR   0.5 25 6D SR A FCV AO O C A AT RR   PIT RR FST OP PIT RR FST OP   PROCESS SAMPLE 0 SR A FCV AO O C A AT RR   0.5 25 6D SR A FCV AO O C A AT RR   BT OP OP O C A AT RR</td> <td>VALVE ACT   NOR STR   TEST   REL     SIZE   PID   CORD   CLS   CAT   TYPE   TYPE   POS   DIR   A/P   TEST   REL     0.5   25   6D   SR   A   FCV   AO   O   C   A   AT   RR   RV-00A     9.5   25   6D   SR   A   FCV   AO   O   C   A   AT   RR   RV-00A     PIT   RR   FST   OP   PIT   RR   FST   OP     PROCESS   SAMFLE   0   SR   A   FCV   AO   O   C   A   AT   RR   RV-00A     0.5   25   6D   SR   A   FCV   AO   O   C   A   AT   RR   RV-00A     DT   DO   D   D   D   D   D   D   D</td> <td>SIZE PID CORD CLS CAT TYPE TYPE POS DIR A/P TEST REL TECH   0.5 25 6D SR A FCV AD O C A AT RR RV-00A   0.5 25 6D SR A FCV AD O C A AT RR RV-00A   PIT RR FST OP PIT RR FST OP   PROCESS SAMFLE SR A FCV AO O C A AT RR RV-00A   0.5 25 6D SR A FCV AO O C A AT RR RV-00A</td> <td>VALVE ACT   NOR STR   TEST   REL   TECH   CS     SIZE   PID   CORD CLS CAT   TYPE   TYPE   POS DIR A/P TEST   SCHED   REQ   POS.   JUST     0.5   25   6D   SR   A   FCV   AO   O   C   A   AT   RR   RV-00A     PIT   RR   FST   OP   PIT   RR   FST   OP     PROCESS   SAMPLE   AO   O   C   A   AT   RR   RV-00A     0.5   25   6D   SR   A   FCV   AO   O   C   A   AT   RR   RV-00A     PIT   RR   FST   OP   OP   PIT   RR   RV-00A   BT   OP</td> <td>VALVE ACT   NOR STR   TEST   REL   TECH   CS     SIZE   PID   CORD CLS CAT   TYPE   TYPE   POS DIR A/P TEST   SCHED   REQ   POS.   JUST     0.5   25   6D   SR   A   FCV   AO   O   C   A   AT   RR   RV-00A     PIT   RR   FST   OP   PIT   RR   FST   OP     PROCESS   SAMPLE   AO   O   C   A   AT   RR   RV-00A     0.5   25   6D   SR   A   FCV   AO   O   C   A   AT   RR   RV-00A     PIT   RR   FU   AO   O   C   A   AT   RR   RV-00A     PIT   RD   DP   DT   DD   DP   DT   DD</td>	SIZE PID CORD CLS CAT TYPE TYPE POS DIR A/P TEST   0.5 25 6D SR A FCV AO O C A AT RR   0.5 25 6D SR A FCV AO O C A AT RR   PIT RR FST OP PIT RR FST OP   PROCESS SAMPLE 0 SR A FCV AO O C A AT RR   0.5 25 6D SR A FCV AO O C A AT RR   BT OP OP O C A AT RR	VALVE ACT   NOR STR   TEST   REL     SIZE   PID   CORD   CLS   CAT   TYPE   TYPE   POS   DIR   A/P   TEST   REL     0.5   25   6D   SR   A   FCV   AO   O   C   A   AT   RR   RV-00A     9.5   25   6D   SR   A   FCV   AO   O   C   A   AT   RR   RV-00A     PIT   RR   FST   OP   PIT   RR   FST   OP     PROCESS   SAMFLE   0   SR   A   FCV   AO   O   C   A   AT   RR   RV-00A     0.5   25   6D   SR   A   FCV   AO   O   C   A   AT   RR   RV-00A     DT   DO   D   D   D   D   D   D   D	SIZE PID CORD CLS CAT TYPE TYPE POS DIR A/P TEST REL TECH   0.5 25 6D SR A FCV AD O C A AT RR RV-00A   0.5 25 6D SR A FCV AD O C A AT RR RV-00A   PIT RR FST OP PIT RR FST OP   PROCESS SAMFLE SR A FCV AO O C A AT RR RV-00A   0.5 25 6D SR A FCV AO O C A AT RR RV-00A	VALVE ACT   NOR STR   TEST   REL   TECH   CS     SIZE   PID   CORD CLS CAT   TYPE   TYPE   POS DIR A/P TEST   SCHED   REQ   POS.   JUST     0.5   25   6D   SR   A   FCV   AO   O   C   A   AT   RR   RV-00A     PIT   RR   FST   OP   PIT   RR   FST   OP     PROCESS   SAMPLE   AO   O   C   A   AT   RR   RV-00A     0.5   25   6D   SR   A   FCV   AO   O   C   A   AT   RR   RV-00A     PIT   RR   FST   OP   OP   PIT   RR   RV-00A   BT   OP	VALVE ACT   NOR STR   TEST   REL   TECH   CS     SIZE   PID   CORD CLS CAT   TYPE   TYPE   POS DIR A/P TEST   SCHED   REQ   POS.   JUST     0.5   25   6D   SR   A   FCV   AO   O   C   A   AT   RR   RV-00A     PIT   RR   FST   OP   PIT   RR   FST   OP     PROCESS   SAMPLE   AO   O   C   A   AT   RR   RV-00A     0.5   25   6D   SR   A   FCV   AO   O   C   A   AT   RR   RV-00A     PIT   RR   FU   AO   O   C   A   AT   RR   RV-00A     PIT   RD   DP   DT   DD   DP   DT   DD

#### AUGMENTED VALVE LISTING

						SYST	em: se	RVIC	e ai	R							
EPN	SIZE	PID	CORD	CLS	CAT	VALVE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH Pos.	CS JUST	 	
2/3-4699-311A	0.5	173	4F	SR	C	CK	SA	C	0/0	A	CT-O Ct-C	OP OP				 	-
D/G STAR	TING A	IR 'A'	COMPRI	ESS0	R DI	SCHARG	e chec	:K									
2/3-4699-311B	θ.5	173	6F	SR	C	CK	SA	C	0/C	A	CT-O Ct-C	OP OP					
D/G STAR	TING A	AIR COM	PRESSO	R B	DISC	HARGE	CHECK								+++	 	
2/3-4699-312	1.5	173	5D	SR	C	CK	SA	C ,	0/C	A	CT-0 Ct-c	op op					
D/G STAR	TING A	VIR REC	EIVER	TANK	OUT	Let Chi	ECK					*	·			 *	
2/3-4699-313A	θ.5	173	3D	SR	.C	RV	SA	C	0	A	RT	10Y					
D/G STAR	TING A	IR AI	RECEIV	ER T	ank i	RELIEF										 	
2/3-4699-313B	0.5	173	5D	SR	C	RV	SA	C	0	<b>A</b>	RT	10Y					
D/G STAR	TING A	AIR Bi	RECEIV	ER T	ANK									~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~			
2/3-4699-314A	0.5	173	4D	SR	C	RV	SA	C	0	A	RT	10Y					
D/G STAR	TING A	NIR A2	RECEIV	ER T	ank I	RELIEF											
							~ ~ ~		 							 	

## AUGMENTED VALVE LISTING

#### SYSTEM: SERVICE AIR

	EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	act Type	NOR PDS	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	cs Just	 	•
-	2/3-4699-314B	0.5	173	6D	SR	C	RV	SA	0	0	A	RT	10Y	···· ··· ···			 	
	D/G STAR	TINGA	IR B2	RECEIV	Er t	ANK	RELIEF											
	2/3-4699-316	1.5	173	5D	SR	C	CK	SA	C	0/C	A	CT-0	OP				•	

CT-C OP

D/G STARTING AIR RECEIVER TANK OUTLET CHECK

# AUGHENTED VALVE LISTING

SYSTEM: DIESEL OIL

	EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR Pos	STR DIR	a/p	TEST	TEST SCHED	REL REQ	TECH POS.	CS Just	 ,
• • • •	2/3-5202A-501	1.5	41-2	iD	SR	C	CK	SA	C	0	A	CT-O	OP		•••		

D/G FUEL OIL TRANSFER PUMP DICHARGE CHECK

#### AUGMENTED VALVE LISTING

						SYSTI	en: CC	INTRO	L 800	iy Mc	ENTIL	ATION					
EPN	SIZE	PID	CORD	CLS	CAT	VALVE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL Req	TECH Pos.	CS Just	 	
2/3-5741-35	2.5	3121	<b>D</b> 7	SR	B	GĽ	AO	C	0	A	BT	OP					
					'					• • • •	FST PIT	RR .				 	
INSTRUME	NT AIR	TO CO	NTROL I	ROOM	HVA	C										 و القار الحد حالة الله: القار القار	<b>_</b>
2/3-5741-55	10	3121	5C	SR	B	BTF	AO	0	C	A	BT	OP					
											FST PIT	OP RR					
"A" CONT	ROL RO	OM FIL	TRATIO	n un	IT Fi	AN OUTL	.ET DA	MPER	•					44 10 AB 10 10 10 10 10 10 10		 	
2/3-5741-56	10	3121	50	SR	B	BTF	AO	0	C	A .	BL	OP					
								•			FST PIT	op Rr					
"B" CONT	ROL RO	OM FILI	[RATIO	N UN:	LT F	AN OUTL	ET DA	MPER						•		 	
2/3-5741-57	10	3121	6B	SR	B	BTF	AŪ	0	C	A	BT	OP					
											FST PIT	OP RR					
CONTROL	ROOM F	ILTRATI	ION UN	IT B'	(PAS	5 DAMPE	ER									 	
2/3-5741-58	10	3121	7C	SR	B	BTF	AO	C	0	A	BI	0P 0P					
											PTT	00					

#### AUGMENTED VALVE LISTING

#### SYSTEM: D/G STARTING AIR

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST
2/3-6699-103	.375	173	0A	SR	B	GA .	S0	C	0	A	BT FST	0P 0P	<b></b>	TV-66A	
					<b>L</b> .								·		
D/G STAR	RTING A	IR													
2/3-6699-104	.375	173	0A	SR	C	CK	SA	Ç	0/C	A	CT-0 Ct-c	OP OP			
D/G STAR	TING A	IR CHE	CK												
2/3-6699-105	.375	173	ØA	SR	B	GA	AO .	с ,	0	A	BT FST	op op		TV-66A	
D/G STAR	TING A	IR REL	AY								J.				

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# AUGMENTED VALVE LISTING

EPN			SIZE	PID	CORD	CLS	CAT	TYPE	TYPE	POS	DIR	A/P	TEST	SCHED	REQ	POS.	JUST			
BACK	DRAFT	DHP	24	49	9A	SR	C	CK	SA	<b>C</b>	0	A	CT-D	OP			<u>-</u>			
	2/3	'B'	BACK I	DRAFT	DAMPER		، 									•••••••				
BACK	DRAFT	DMP	24	49	9C	SR	C	CK	SA	Ç	0	A	CT-O	OP						
_ <u>.</u>	2/3	'A'	BACK I	)RAFT	DAMPER															
2/3-	7505A		24	49	3A	SR	B	BTF	KO	C	0	A.	BT PIT	OP RR						
	'A' (	SBGT	INLET	ſ 															tep dik als us as as -	
2/3-7	7505B		24	49	3A	SR	B	BTF	HO	C	0	A	BT PIT	OP RR						
	•B• 6	SBG T	INLE	[							÷					140 141 40 40 100 100 100 100 100 100				
2/3-7	7507A ·		24	49	90	SR	B	BTF	HO	<b>C</b> .	0	<b>A</b>	BT Pit	op Rr						
	"A" (	SBGT	BLOW	ER OUT	LET						* *								••••••••••••••••••••••••••••••••••••••	
2/3-1	7507B		24	49	9A	SR	B	BTF	NO	C	0	A	BT Pit	OP RR						
	•B• 8	SBGT	BLOW	ER OUT	LET															
T-SEA1	L LEAKA	IGE 1	IEST :	BT-FU	LL STROK	EF	XFRC	rse: C	r-0-CH	ECK \	VALVI	E EXI	RCIS	E OPEN.	CT-C-CH	ECK VALV	VE EXERCIS	e closi	ED;	

# AUGMENTED VALVE LISTING

					SYST	EM: SB	GT							
SIZE	PID	CORD	CLS	CAT	VALVE Type	act Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH Pos.	CS JUST
24	49	90	SR	B	BTF	NO	0	0	P	N/A			: . <b>.</b>	مراجع المرجعين والمرجعين والمرجع
BLOVE	R INLET			•										
24	49	9A	SR	B	BTF	HO	Q	0	P	N/A				
	SIZE 24 BLOWE 24	SIZE PID 24 49 BLOWER INLET 24 49	SIZE PID CORD 24 49 9C BLOWER INLET 24 49 9A	SIZE PID CORD CLS 24 49 9C SR BLOWER INLET 24 49 9A SR	SIZE PID CORD CLS CAT 24 49 9C SR B BLOWER INLET 24 49 9A SR B	STST VALVE SIZE PID CORD CLS CAT TYPE 24 49 9C SR B BTF BLOWER INLET 24 49 9A SR B BTF	STSTEM: SE VALVE ACT SIZE PID CORD CLS CAT TYPE TYPE 24 49 9C SR B BTF HO BLOWER INLET 24 49 9A SR B BTF HO	STSTEM: SBUT VALVE ACT NOR SIZE PID CORD CLS CAT TYPE TYPE POS 24 49 9C SR B BTF NO O BLOWER INLET 24 49 9A SR B BTF MO O	STSTER: SBGT VALVE ACT NOR STR SIZE PID CORD CLS CAT TYPE TYPE POS DIR 24 49 9C SR B BTF NO O O BLOWER INLET 24 49 9A SR B BTF NO O O	STSTEM: SBGT     VALVE ACT NOR STR     SIZE PID   CORD CLS CAT TYPE TYPE POS DIR A/P     24   49   9C   SR   B   BTF   HO   O   O   P     BLOWER INLET   24   49   9A   SR   B   BTF   HO   O   O   P	VALVE ACT NOR STR SIZE PID CORD CLS CAT TYPE TYPE POS DIR A/P TEST 24 49 9C SR B BTF HO O O P N/A BLOWER INLET 24 49 9A SR B BTF HO O O P N/A	STSTEM: SBUT     VALVE ACT   NOR STR   TEST     SIZE   PID   CORD CLS CAT TYPE   TYPE   POS DIR A/P TEST SCHED     24   49   9C   SR   B   BTF   MO   O   O   P   N/A     BLOWER INLET   24   49   9A   SR   B   BTF   MO   O   O   P   N/A	STSTEM: SBUT     VALVE ACT   NOR STR   TEST   REL     SIZE   PID   CORD CLS CAT TYPE   TYPE   POS DIR A/P TEST SCHED   REQ     24   49   9C   SR   B   BTF   HO   O   O   P   N/A     BLOWER INLET   24   49   9A   SR   B   BTF   HO   O   O   P   N/A	STSTER: SBGT     VALVE ACT   NOR STR   TEST   REL   TECH     SIZE   PID   CORD   CLS   CAT   TYPE   TYPE   POS   DIR   A/P   TEST   REQ   POS.     24   49   9C   SR   B   BTF   NO   0   0   P   N/A     BLOWER INLET   24   49   9A   SR   B   BTF   MO   0   0   P   N/A

"B" SBGT BLOWER INLET

.

# AUGHENTED VALVE LISTING

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# SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST		
3-0220-84A	0.5	345-1	3F	SR	C	CK	SA	0	C	A	CT-C	RR		TV-02A			
MSIV A	CUMULAT	OR INLE	T		۰.												
3-0220-84B	0.5	345-1	3F	SR	C	СК	SA	0	C	A	CT-C	RR		TV-02A			***
HSIV A	CUMULAT	OR INLE	.T														
3- <del>0</del> 220-84C	θ.5	345-1	3F	SR	C	СК	SA	0	C	A	CT-C	RR		TV-02A			
MSIV AC	CUMULAT	OR INLE	T														
3-0220-84D	<del>0</del> .5	345-i	3F	SR	C	CK	SA	0	C	A	CT-C	RR		TV-02A			
MSIV A	CUMULAT	OR INLE	.T													-	
3-0220-85A	θ.5	345-2	7F	SR	C	СК	SA	0	C	<b>A</b>	CT-C	RR		TV-02A			
MSIV AC	CUMULAT	OR INLE	T				** ** ** ** ** **										
3-0220-85B	0.5	345-2	7F	SR	C	CK .	SA	0	C	A	CT-C	RR		TV-02A			
MSIV AC	CUHULAT	OR INLE	T											*			
					, <b></b>			<b>*</b>						-		0.000-	
-SEAT LEAKAGE -RELIEF VALVE IFD: OP-NORMAL	TEST; TEST; OPERAT	BT-FULL DT-Expli Ion; CS	STROM DSIVE -COLD	(e e) Vali Shut	(ERCI /E TE [Down	ISE; CI IST; FS I; RR-F	I-U-CH ST-FAI REACTO	LUK V L SAF R REF	ALVE E TE UELT	.EXE ST; NG:	RCISE PIT-F SAM-9	L UPEN, POSITION SAMPLING	CI-C-CH INDICA PLAN T	ECK VALVE TOR CHECK ECHNIQUE:	EXERCISE	ULUSED; VERY X '	YEARS.

#### AUGMENTED VALVE LISTING

#### SYSTEM: RX RECIRC/MAIN STEAM/FEEDWATER

EPN	SIZE	P1D	CORD	CLS	CAT	VALVE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST
3-0220-850	0.5	345-2	7F	SR	0	CK	SA	D	C	A	CT-C	RR	·••· •	TV-02A	
MSIV AC	CUMULAT	OR INLE	T						****						
3-0220-85D	0.5	<b>345-</b> 2	7F	SR	C	CK	SA	0	C	A.	CT-C	RR		TV-02A	

NSIV ACCUMULATOR INLET

### AUGMENTED VALVE LISTING

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST 	
3-0301-122	i	365	7E	SR	C	CK	SA	C	0/C	<b>A</b>	CT-0 Ct-C	RR RR		TV-03A TV-03A		
CRD BAG	CKUP SCR	AN BYP	155		۱.											
3-0302-19A	0.5	365	7E	SR	B	TWV	S0 -	0	C	A	BT FST	RR RR		TV-03A TV-03A		
BACKUP	SCRAM								*				- (			
3-0302-19B	0.5	365	7E	SR	B	TUV	SO .	0	C	A	BT Fst	RR RR		TV-03A TV-03A		
BACKUP	SCRAM											<b></b>				
3- <del>0</del> 302-20A	0.5	365	8E	SR .	B	TUV	SO	0	C	A	BT FST	RR RR		TV-03A . TV-03A		
SCRAM I	)ump												مد سار مان برد بود بود بود ب			
3 <del>-0</del> 302-208 <sub>.</sub>	θ.5	365	8E	SR	B	TWV	SO	0	C	A	BT FST	RR RR		TV-03A TV-03A		
SCRAM I	)UMP									*						
3-0305-117	<b>0.</b> 5	365	ØD	SR	B	TWV	SO	0	C	A	BT FST	RR RR		TV-03B TV-03B		
SCRAM F	PILOT															

TEST AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

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# AUGHENTED VALVE LISTING

PN	SIZE	PID	CORD	CLS	CAT	TYPE	ACI TYPE	POS	DIR	A/P	TEST	SCHED	REL REQ	POS.	JUST		 
-0305-118	0.5	365	9D	SR	B	TWV	SO	0	<b>C</b>	A	BT FST	RR RR		TV-03B TV-03B			 · · · · · ·
SCRAM	PILOT				:												
<del>-0</del> 399-524A	1	365	8D	SR	B	IAA	SO,	0	C	A	BT FST	RR RR		TV-03C TV-03C			
ATUS-AI	RI	· •• •• •• •• •• •• ••										***		بوزي شور مود خط مود الله الله			 
-0399-524B	1	365	8D	SR	B	TWV	SO .	0	C	A	BT FST	RR RR		TV- <del>0</del> 3C TV-03C			
ATWS-A	RI									*		, 					 
-0399-525	ſ	365	8D	SR	C	CK	SA	C	0	A	CT-0	RR		TV-03C .		•	
SCRAM	AIR HEA	der ar	I BYPA	SS													
-0399-548 <u>A</u>	1	365	90	SR	B	GA	SO	C	0	A 	BT FST	RR RR		TV-03C TV-03C			
ATWS-Af	₹I										** ** ** ** **					e 140 -100 -100 -100 -100 -100	 
-0399-548B	1	365	90	SR	B	GA	S0	C	0	A	BT Fst	RR RR		TV-03C TV-03C			·
ATUS-AF	{I																

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## AUGHENTED VALVE LISTING

						SYST	EM: CO	NTRO	L RO	D DR	IVE						
EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	act Type	NOR PDS	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST		
3-0399-549A	<b>1</b>	365	8E	SR	B	GA	S0	C	0	A .	BT FST	RR RR	·	TV-03C TV-03C			
ATWS-ARI																	
3-0399-549B	i	365	8E	SR	B	GA	S0	C	0	A	BT FST	RR RR		TV-03C TV-03C		· .	
ATUS-ARI															• .		
			•										-				
															·		
												٠					
					·												

### AUGMENTED VALVE LISTING

SYSTEM:	TRAVERSING	IN-CORE	PRORE
	111114 - 110 - 1110		1 1101-6

EPN	SIZE	PID	CORD	CLS	CAT	TYPE	TYPE	PDS	DIR	A/P	TEST	SCHED	REQ	POS.	JUST		 
3-0733-A	0.5	367-2	1F	SR	A	BAL	SO	C	C	A	AT RT	RR OP -	RV-00A				 
					۲.						PIT	RR					
TIP BAL	L VALVE																
3-0733-B	0.5	367-2	fF	SR	A	BAL	S0	C	C	A	AT BT PIT	RR OF RR	RV- <del>o</del> ga			• .	-
TIP BAL	L VALVE		ہ کل جب جب علم دالہ						، حد حد جد در							• • • • • • • • •	 
3-0733-C	0.5	367-2	łF	SR	A	BAL	<b>SO</b> .	C	C	A	AT BT PIT	RR OP RR	RV-00A				
TIP BAL	L VALVE																 
3-0733-D	0.5	367-2 ,	١F	SR	A	BAL	50	C	C	A	AT BT PIT	RR OP RR	RV-00A				
TIP BAL	L VALVE												ن ان خر خر ایم می بین کر				 
3-0733-Е	<b>0.</b> 5	367-2	ſF	SR	<b>A</b>	BAL	S0	C	C	A	AT BT PIT	RR OP RR	RV-00A				
TIP BAL	L VALVE																 
3-0736-1	0.5	367-2	1F	SR	D	GA	EXP	0	C	A	DT	RR					
TIP SHE	AR VALV	E															

#### AUGMENTED VALVE LISTING

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR PDS	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST		
3-0736-2	0.5	367-2	1F	SR	D	GA	EXP	0	C	A	DT	RR				<b>~</b>	 
TIP SH	EAR VALV	Ë															 
3-0736-3	θ.5	367-2	1F	SR	D	GA	EXP	0	C	A	DT	RR					
TIP SH	EAR VALV	E															 
3-0736-4	θ.5	367-2	۱F	SR	D	GA	EXP	0	C	A	DT	RR	·				
TIP SH	EAR VALV	E		-													 <b>6</b>
3-0736-5	θ.5	367-2	١F	SR	D	GA	EXP	0	C	A	DT	RR					

### AUGMENTED VALVE LISTING

#### SYSTEM: ISOLATION CONDENSER

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	cs Just		 
3-1301-10	4	359	30	SR	B	GA	MO	C	0/C	A	BT PIT	op Rr-				 	 -

ISO CONDENSER CONTAMINATED DEMIN WATER FILL

#### AUGMENTED VALVE LISTING

#### SYSTEM: LPCI/CCSW

EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	ACT Type	NOR Pos	STR DIR	A/F	P TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST	 	
3-1501-19A	6	360-1	7B	SR	A	GA	HO	C	0/C	A	AT	RR	RV-00A				
	• • •				:						BT PIT	TOP RR				 •	
LPCI LO	OP I TO	RUS SPR	AY													 	
3-1501-19B	6	360-1	2B	SR	A	GA	KO	C	0/C	A	AT Bt Pit	RR OP RR	RV-00A				·
LPCI LO	OP II T	ORUS SP	RAY			**										 	
3-1599-61	3	360-1	4D	SR	B	GA	AO .	C	C	A	BT FST PIT	OP OP RR					
Torus to	) HOTWE	LL										***				 	
3-1599-62	3	360-1	4D	SR	B	GA	A0	C	C	A	BT FST PIT	of Op Rr					
torus to	) hotwe	LL															

### AUGMENTED VALVE LISTING

SYSTEM: CONT. & PRESSURE SUPPRESSION

EP	2N		SIŻE	PID	CORD	CLS	CAT	VALVE	act Type	NOR PDS	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST
3-	-1601-	20A	20	356	8D	SR	A	BTF	AD	C	0/C	A	AT	RR NP	RV-00A		
	R	EACTO	R BUILDI	NG TO	Torus 1	VACU	um Ri	ELIEF					FST PIT	OF RR			
3-	1601-1	20B	20	356	8E	SR	A	BTF	AO	C	0/C	A	AT BT FST PIT	RR OP OP RR	RV-00A		
	RI	EACTO	R BUILDI	NG TO	TORUS \	VACUI	um Re	ELIEF							و و و و و و و و و و و و و و و و		
3-	1601-1	21	18	356	60	SR	A	BTF	<b>AO</b> .	C	<b>0</b> /C	<b>A</b>	AT BT FST	RR OP OP	RV-00A		
	Di	RYWELL	. VENT A	ND PUR	GE								<b>r</b> 11	ĸĸ			· ·
3-	1601-2	22	18	356	6C	SR	. A	BTF	AO	С	C	A	AT BT FST	RR OP OP	R¥-00A		
	D	RYWELL	_/TORUS	VENT									FII	ĸĸ			
3-	-1601-2	23	18	356	3B	SR	<b>A</b>	BTF	AO	C	C	A	AT BT FST PIT	RR OP OP RR	RV-00A		
	DI	RYWELL	VENT T	O REAC	TOR BUI		\G 				•						
3-	1601-1	24	18	356	2B	SR	A	BTF	AO	C	C	A	AT BT FST	RR OP OP	RV-00A		
	T	DRUS/I	RYWELL	VENT									r11 ·	лл 	-		

TEST AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

# AUGHENTED VALVE LISTING

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR PDS	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST			
3-1601-31A	20	356	9D	SR	AC	CK	SA	0	0/C	A	AT CT-0	RR OP	RV-00A			·		
REACTOR	BUILDI	NG TO	TORUS	VACU	UM BI	REAKER					CI-C	UP						
3-1601-31B	20	356	9E	SR	AC	CK	SA	C	0/C	а. А	AT CT-0 CT-C	RR OP OP	RV-00A					
REACTOR	BUILDI	NG TO	TORUS	/ACUI	JM BI	REAKER							<u>-</u>		*****			
J-1601-32A	18	356	3D	SR	AC	СК	SA .	C	0/C	A	AT CT-0 CT-C	RR Op Op						
TORUS T	O DRYWE	LL VAC	UUM BRE	AKEI	<u>}</u>													
5-1601-32B	18	356	3D	SR	AC	CK	SA	C	0/C :	A .	AT CT-0 Ct-c	RR OP OP						
TORUS T	O DRYWE	LL VAC	UUN BRE	AKE	<u>}</u>	¢ === == == == == ==			17 alls 241 bak cap									
5-1601-320	18	356	3D	SR	AC	CK	SA	<b>C</b> .	0/C :	A	AT CT-0 CT-C	RR OP OP						
TORUS T	O DRYWE	LL VAC	UUM BRE	AKE	<b>}</b>												و، چە قاراقا ھا دار مە د	
-1601-32D	18	356	3E	SR	AC	CK	SA	C	0/C	A	AT CT-0 Ct-C	RR Op Op						
TORUS T	O DRYWE	LL VAC	UUM BRE	EAKEI	1													

TEST AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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# AUGMENTED VALVE LISTING

						31311	-11. 60		a ( 14)		1. 90	I ALOOIT	211				
EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT TYPE	NOR POS	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST		 
3-1601-32E	18	356	3E	SR	AC	CK	SA	C	0/C	A	AT CT-0 CT-C	RR Of Op					
TORUS TO	) DRYWE	LL VAC	UUM BRI	EAKE	R												 
3-1601-32F	18	356	3E	SR	AC	CK	SA	C	0/C	A	AT CT-U CT-C	rr Op Op					
TORUS TO	) DRYWE	LL VAC	UUM BRI	EAKE	R												 
3-1601-33A	18	356	70	SR	AC	СК	SA	<b>C</b>	0/C	<b>A</b>	AT CT-0 CT-C	rr Op Op					
TORUS TO	) DRYWE	LL VAC	UUM BRI	EAKE	R												
3-1601-33B	18	356	70	SR	AC	CK	SA	C	0/C	A	AT CT-0 CT-C	RR Op Op					
TORUS TO	) DRYWE	LL VAC	UUM BRE	EAKEI	R 	ک دک دلد که خان که ا	*										 
3-1601-33C	18	356	70	SR	AC	CK	SA	C	0/C	<b>A</b>	AT CT-0 CT-C	RR OP OF					
TORUS TO	DRYWE	LL VACI	UUM BRE	EAKEI	R				*****								 
3-1601-33D	18	356	7E	SR	AC	СК	SA	C	0/C	A	AT CT-0 Ct-C	rr Op Op				·	
TORUS TO	DRYVE	LL VACI	UUM BRE	EAKEI	R												

TEST AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

### AUGMENTED VALVE LISTING

#### SYSTEM: CONT. & PRESSURE SUPPRESSION

EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	act Type	NOR PDS	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	cs Just			
3-1601-33E	18	356	7E	SR	AC	CK	SA	C	0/C	A .	AT Ct-o Ct-c	RR Op Op						
TORUS TO	DRYVE	LL VACU	UN BRE	AKE	R													
3-1601-33F	18	356	7E	SR	AC	CK	SA	Ç	0/C	A	AT CT-0 Ct-c	rr Op Op					•	
TORUS TO	DRYWE	LL VACU	UM BRE	EAKE	R 					•								
3-1601-55	4	356	6B	SR	<b>A</b>	BIF	<b>AO</b> .	0	C	<b>A</b>	AT BT FST PIT	RR OP OP BR	RV-00A					
DW/TORUS	N2 PU	RGE AND	PUNP	BACI	( 500	CTION							***	***		و دول دي الله فقا الله خدم وي.		
3-1601-56	18	356	6D	SR .	A	BTF	AÜ	0	C	<b>A</b>	AT BT FST	RR OP OP	RV-00A					
TORUS VE	NT AND	PURGE				** <b></b>					F11	~~~~~~						
3-1601-57	1.5	356	8D	SR	A .	GL	KO	0	C	<b>A</b>	AT BT PIT	RR OP RR	RV-00A					
DRYWELL/	TORUS	N2 MAKE	-UP									- <i>4</i> - <del>4</del> - <del>7</del> - <del>7</del> - <del>7</del> - <del>7</del>					فله في عنه الله عليه الله الله الله	
3-1601-58	f.5	356	7D	SR	A	GL.	AO	C	C	A	AT BT FST PIT	RR OP OP BR	RV-00A					
N2 MAKE-	UP TO	TORUS																

#### AUGMENTED VALVE LISTING

#### SYSTEM: CONT. & PRESSURE SUPPRESSION

EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL Req	TECH POS.	CS JUST	 
3-1601-59	1.5	356	6D	SR	A	GL	AO	0	C	A	AT Bt FSt	RR OP OP	RV-00A			
N2 MAKE	-UP TO	DRYWELI	Ľ								P11	KK				 
3-1601-60 Torus V	18 Tent to	356 Reactor	2E R BUILI	SR DING	a Ven	BTF f systi	a0 Em	C	0/C	A	AT BT FST PIT	RR OP OP RR	RV-00A			
3-1601-61	2	356	2E	SR	A	GA	A0	C	0/C	A	AT BT FST PIT	RR OF OP RR	RV-00A			
3-1601-62 DRYWELL	2 . VENT B	356 YPASS	.3B	SR	A	GL	A0	С	0/C	A	AT BT FST PIT	RR OP OP RR	RV-00A			
3-1601-63 ·	6 RYWELL	356 VENT	2A	SR	A	BTF	A0	C	0/C	A	AT BT FST PIT	RR OP OP RR	RV-00A			
3-1601-91	18	356	B2	NSR	B	BTF	AO	0	C	A	BT PIT	CS RR			CS-16A	
VENT TO	RX BLD	g exhau	JST SYS	STEM	(HAI	RDENED	VENT	MOD)								

TEST AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

# AUGMENTED VALVE LISTING

						51511	EM: CU	NI. (	6 PRE	:550	KE SU	PPRESSIO	N			
EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	act Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL Req	TECH POS.	cs Just	
3-1601-92	10	356	B2	NSR	B	BTF	AO	C	0/C	A	BT PIT	CS RR			CS-16A	
					·									١		

VENT TO MAIN CHIMNEY (HARDENED VENT HOD)

## AUGMENTED VALVE LISTING

						SYSTI	EN: FU	iel pi	00L	COOL	ING							
EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR PDS	STR DIR	A/P	TEST	test Sched	REL REQ	TECH POS.	cs Just	 		
3-1901-16A	6	362	бA	NSR	C	CK	SA	0/C	0	A	CT-O	OP	. *	TV-19A				
FUEL PO	OL DEMI	N RETU	RN TO I	DIFF	User									· .			-	
3-1901-16B	6	362	6A .	NSR	C	CK	SA	0/C	0	A	CT-O	OP		TV-19A				
FUEL PO	OL DENI	n retu	RN TO I	DIFF	JSER													
3-1901-27A	6	362	3E	NSR	C	CK	SA	0/C	0	A	CT-0	OP		TV-19A				
"A" FUE	L POOL	COOLIN	G PUMP	DISC	CHAR	je chec	CK									 		
3-1901-27B	6	362	3F	NSR.	C	CK	SA	0/C	0	A	CT-0	OP		TV-19A .		<b>•</b> .		
"B" FUE	l pool	COOLIN	G PUNP	DIS	CHAR	JE CHE(	ж									 	~~~~	
3-1901-55 ·	6	362	10D	NSR	C	CK	SA	0/C	0	<b>A</b>	CT-0	OP		TV-19A				
FUEL PO	OL DEMI	N RETU	RN TO I	DIFFL	JSER			·					·					

TEST AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

#### AUGHENTED VALVE LISTING

•						SYST	em: Ra	DWAS	TE							
EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	act Type	NOR	STR DIR	A/P	TEST	test Sched	REL Req	TECH POS.	CS JUST	
3-2001-106	3	369	7F	SR	A	GA .	AO .	0/C	C	A	AT BT PIT FST	RR OP RR OP	RV-00A			
DRYWEL	L FLOOR	DRAIN	SUMP P	UMP	DISC	HARGE										
3-2001-6	3	369	3E	SR	A	GA .	AO	0/C	C	A	AT BT PIT FST	RR OP RR OF	RV-00A			
DRYNEL	L EQUIPH	ient di	RAIN SU	MP P	ump 1	DISCHA	RGE									

### AUGMENTED VALVE LISTING

•						SYST	EM: HF	CI									
EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	ACT Type	NOR Pos	STR Dir	A/P	TEST	TEST Sched	REL REQ	TECH Pos.	cs Just		
3-2301-15	12	374	4F	NSR	B	GA	MO	C	C	A	BT-O	OP					
U3 HP	CI RETUR	N TO CO	INDENSA	TE S	TORA	GE			*				-				
3-2301-30	f	374	10B	SR	B	GL	AO	0	C	A	BT	OP					
U3 HP	CI INLET	DRN PO	IT 2A O	TBD	DRN	TO NN I	CDSR										
3-2301-65	1	<b>374</b>	6A	SR	B	GL	AŬ .	0	C	A	BT FST PIT	OP OF RR					
HPCI	TURBINE	SV ABOV	'e seat	DRA	IN												
3-2399-77A	f	374	8D	SR	. <b>C</b>	CK	SA	C	0/C	A	CT-O Ct-C	RR RR		TV-23B		· .	
HPCI	TURBINE	exhaust	TO TO	RUS	VACU	UM BREA	AKER							***			
3-2399-77 <u>8</u>	1	374	8D	SR	C	CK .	SA	C	0/C	A	CT-O CT-C	RR RR		TV-23B			
HPCI	TURBINE	exhaust	TO TO	RUS 1	VACUI	UM BREf	KER										

#### AUGMENTED VALVE LISTING

SYSTEM:	ACAD
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EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	test Sched	REL REQ	TECH PDS.	cs Just	 
3-2599-79	1.25	707-2	6A	SR	C	CK	SA	C	0	A	CT-O	OP				
ACAD ATP	CUNDS	COD DI	CUAR	נד ר	HEUX											
HUND HIN										·						
5-2379-8	A'2	(81-2	AR	5K	Ľ	LK	58	Ĺ	U	A	C1-0	UP				
ACAD VEN	T HEAD	ER TO S	BGT C	HECK												 
							•									
÷						·										
						·										

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

### AUGMENTED VALVE LISTING

						SYST	em: se	RVIC	E AIR				•				
EPN	SIZE	PID	CORD	CLS	CAT	VALVE	ACT Type	NOR Pos	STR DIR (	A/P T	EST	TEST SCHED	REL REQ	TECH POS.	CS Just	 	
3-4699-311A	0.5	173	4F	SR	C	CK	SA	C	0/C /	A C C	t-0 t-C	op Op					
D/G STAF	RTING A	AIR CON	MPRESSO	R A 	DISC	HARGE	CHECK										
<b>3-4699-</b> 311B	0.5	173	6F	SR	C	СК	SA	C	0/C 4	A C C	T-0 T-C	op op					
D/G STAF	RTING A	VIR COP	1PRESSO	R B	DISC	HARGE (	CHECK			ter ant 114 150 150 150		-				 	
3-4699-312	1.5	173	5D	SR	C	CK	SA	<b>C</b>	0/C 4	A C C	T-0 T-C	0P 0P					
D/G STAF	RTING A	IR REC	CEIVER	Tank	0UTI	ET CH	ECK										
3-4699-313A	θ.5	173	3D	SR	.C	RV	SA	C	0 f	A R	T	10Y					
D/G STAF	RTING A	IR A1	RECEIV	ER Ti	ank f	RELIEF										 	
3-4699-313 <u>8</u>	θ.5	173	5D	SR	C	RV	SA	C	0 A	₩R.	T	10Y					
D/G STAF	RTING A	IR BI	RECEIV	ER T	ANK I	ELIEF			-					***		 	
3-4699-314A	0.5	173	4D	SR	C	RV	SA .	C	04	A R	T	10Y			· .		
D/G STAF	RTING A	IR A2	RECEIV	er ti	ANK F	RELIEF											
														*****	•		

# AUGHENTED VALVE LISTING

														 	 	 	 •	
3-4699-314B	9.5	173	6D -	SR (	; R	V	SA	3	Ō	A	RT	1	θY					
D/G STAF	RTING 4	NIR B2	RECEIV	er tai	IK RE	LIEF									 	 	 	
3-4699-316	1.5	173	5D	SR (	; c	K .	Sa	C	0	/C A	CT- CT-	-0 0 -C 0	P P					•
)																		
				• •						•								
				·														

### AUGMENTED VALVE LISTING

#### SYSTEM: INSTRUMENT AIR

EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	act Type	NOR POS	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	CS JUST	 •
3-4720 Drywel	. † - L PNUENA	367-2 NTIC COM	7C IPRESS	SR Or s	A UCTI	ga On	ÂÛ	Ū	C	Á ···	AT BT FST PIT	RR Op Op RR	RV-00A	2		 `
3-4721 Drywel	i L pnuema	367-2	7C	SR OR S	A	GA ON	AÜ	0	С	A	AT BT FST PIT	RR OP OP RR	RV-00A			
3-4722 INSTRU	1 Ment Air	367-2 to dry	2E WELL	SR	A	GL	<b>AO</b> .	0	C	A :	AT BT FST PIT	RR CS CS RR	RV-00A		CS-47A	
3-4799-514	0.5	367-2	4F	SR	. AC	СК	SA	0	C	A	AT CT-C	RR RR	RV-00A	TV-47A		

TIP VALVE PURGE ASSY OUTLET CHECK

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

### AUGMENTED VALVE LISTING

EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST	 	
-5202A-501	1.5	41-2	58 -	SR	6 - 3	CK	sa	- C -	Û	Â	CT-Ũ	0P	· · ·			 <del>.</del>	-
D/G FUEL	OIL 1	IRANSFER	PUMP	DIS	CHARI	Ge Chei	:K				*** ** == == ==						
-5202C-500	1.5	41-2	5C	SR	B	GA	SO	C	0/C	A	BT	OP		TV-52A			
D/G FUEL	OIL 1	FRANSFER	PUMP	TO .	DAY	rank											
		-														 	
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TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

# AUGMENTED VALVE LISTING

SYSTEM: RX. BLDG. VENTILATION																		
EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	act Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	CS JUST			
3-5741A	48	529	1A	SR	B	BTF	AD	_ 0	C -	<b>A</b> -	BT PIT FST	op – Rr op	. <u>.</u>					
REACTO	R BUILDI	ING VEN	r supp	LY I	SOLA	TION												
3-5741B	48	529	1A	SR	B	BTF	AO	0	C	A	BT Pit Fst	op Rr op						•
REACTO	R BUILDI	ING VEN	T SUPP	LY I	SOLA	TION										****		
3-5742A	48	529	ØB	SR	B	BTF	<b>AO</b>	0	C	A	BT Pit Fst	op Rr op						
REACTO	R BUILDI	ING VENT	r exha	UST	ISOL	ATION											u	
3-5742B	48	529	ØB	SR	B	BTF	AO	0	C	A	BT Pit FST	op Rr op						
REACTO	R BUILDI	ING VENT	r exha	UST	ISOL	ATION												

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3
#### AUGMENTED VALVE LISTING

										•			·				
EPN	SIZE	PID	CORD	CLS	CAT	VALVE TYPE	act Type	NOR POS	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	cs Just 		
3-6699-103	.375	173	0A _	SR	B	_GA _	S0	C	0	A	BT FST	op op	•. 2	TV~66A			
D/G STA	RTING A	IR					P1 12 aga aga aga aga										
3-6699-104	.375	173	ÐA	SR	C	CK	SA	C	0/C	A.	CT-O Ct-C	op op					
D/G STA	RTING A	IR CHE	CK			••• ••• •• •• •• •• •• ••		÷									
3-6699-105	.375	f73	θA	SR	B	GA	AO .	<b>C</b>	0	A	BT FST	OP OP		TV-66A		·	

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

#### AUGMENTED VALVE LISTING

#### SYSTEM: PROCESS SAMPLE

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH POS.	cs Just		 
3-8501-1A	.5 _	356	2E	SR	A	FCV	A0	Û	C	A	AT BT PIT FST	RR OP RR OP	RV-00A		-	-	
INBOARD	TORUS	Sample ` 				و مود این این رک بلی بی											 
3-8501-1B	0.5	356	2E	SR	<b>A</b>	FCV	A0	0	C	A	AT BT PIT FST	RR OF RR OP	RV-00A	·			•
OUTBUARI	) TORUS	SAMPLE			***									***			 
3-8501-3A	θ.5	356	4D	SR	A	FCV	AO .	0	C	<b>A</b>	AT BT PIT	RR OP RR	RV-00A				
INBOARD	PROCES	s sampl	E								1.01	01					 
3-8501-3B Outboard	0.5	356 358 SAMP	4D LE	SR	A	FCV	A0	0	C	A	AT BT PIT FST	RR OP RR OP	RV-00A				
																******	 
<b>3-8501-5A</b> -	θ.5	356	3D	SR	<b>A</b>	FCV	A0	0	C	A	AT BT PIT FST	RR OP RR OP	R¥-00A				
INBOARD	PROCES	s sampl	E									<u>.</u>					
3-85 <del>0</del> 1-58	0.5	356	3D	SR	A	FCV	AO	0	C	A	AT BT PIT FST	RR OP RR OP	RV-00A				
OUTBOARI	) proce	ss samp	LE						-								 

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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#### AUGMENTED VALVE LISTING

#### SYSTEM: PROCESS SAMPLE

EPN	SIZE	PID	CORD	CLS.	CAT	VALVE TYPE	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL REQ	TECH Pos.	CS JUST		
3-8526	.75	356	8D	SR	C	RV	SA	C.	0	A	-RT ~	10Y -		ī. ·	• .	•	

NITROGEN INERTING RELIEF

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

#### AUGMENTED VALVE LISTING

•						SYST	EM: HR	SS									
EPN	SIZE	PID	CORD	CLS	CAT	VALVE Type	ACT Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL Req	TECH POS.	cs Just		
3-8941-709	0.5	1239-1	<b>5E</b>	SR	B	GA	AO	C , .	0/C	A.	BT FST PIT	op op Rr				· 	
"A" LPC	I HEAT	EXCH. T	0 HRS	s an	D GR	AB SAM	PLE										****
3-8941-710	0.5	1239-1	5D	SR	B	GA	A0	C	0/C	A	BT FST PIT	op op rr				· ·	

"B" LPCI HEAT EXCH. TO HRSS AND GRAB SAMPLE

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS. REVISION 3

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#### AUGMENTED VALVE LISTING

EPN	SIZE	PID	CORD	CLS	CAT	VALVE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST SCHED	REL REQ	TECH POS.	cs Just
3-9205A	0.5	356	3D	SR	A	FCV	AD _	0	C		AT BT PIT FST	RR OP RR OP	RV-00A	-	
INBOARD	PROCES	s samp	LE 						*						
3-9205B	θ.5	356	3D	SR	A	FCV	AO	0	C	A	AT BT PIT FST	RR OP RR OP	RV-00A		• • •
OUTBOAR	D PROCE	ss sam	PLE												
3-9206A	0.5	356	4D	SR	A	FCV	AO .	0	C	A	AT BT PIT FST	RR OP RR OF	RV-00A		
INBOARD	PROCES	s samp 	LE 												
3-9206B	0.5	356	4D	SR	.A	FCV	A0	Û	C	A	AT BT PIT	RR DP RR	rv-00a		
OUTBOAR	D PROCE	ss sam	PLE					<b></b>							
3-9207A	θ.5	356	6D	SR	<b>A</b>	FCV	AÛ	0	C	A	AT BT PIT FST	RR OP RR OP	RV-00A		
INBOARD	PROCES	s samp	LE 												
3-92078	θ.5	356	60	SR	A	FCV	AO	0	C	A	AT BT PIT FST	RR OP RR OP	RV-00A		
NUTROAR	D PROCE	SS SAM	PI F												

TEST: AT-SEAT LEAKAGE TEST; BT-FULL STROKE EXERCISE; CT-O-CHECK VALVE EXERCISE OPEN, CT-C-CHECK VALVE EXERCISE CLOSED; RT-RELIEF VALVE TEST; DT-EXPLOSIVE VALVE TEST; FST-FAIL SAFE TEST; PIT-POSITION INDICATOR CHECK. TEST SCHED: OP-NORMAL OPERATION; CS-COLD SHUTDOWN; RR-REACTOR REFUELING; SAM-SAMPLING PLAN TECHNIQUE; XY-ONCE EVERY X YEARS.

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## AUGMENTED VALVE LISTING

## SYSTEM: PROCESS SAMPLE

EFN	SIZE	PID	CORD	CLS	CAT	VALVE	act Type	NOR Pos	STR DIR	A/P	TEST	TEST Sched	REL Req	TECH POS.	CS JUST		 	 ••
3-9208A	0.5	356	6D	SR	A	FCV	, <b>ad</b> ,	0.	<u>C</u>	<u>A</u> _	AT BT PIT FST	RR Op RR Op	rv-00a		-	. 1		
1NBUARD		S SAMPL	.Ł														 	 
3-9208B	0.5	356	6D	SR	A	FC¥	A0	0	C	A	AT BT PIT FST	RR DP RR DP	RV-00A					•
OUTBOARD	PROCE	ISS SAMP	'LE															

# VALVE RELIEF REQUEST INDEX/SUMMARIES (Page 1 of 4)

Relief Request	Page(s)	Rev.	Date	Summary
RV-00A	14-1	0	03/92	<b>Primary Containment Isolation Valves</b> Local leak rate tests will be conducted in accordance with 10CFR50, Appendix J.
RV-00B	14-2	0	03/92	<b>Excess Flow Check Valves</b> Exercise during reactor refueling outages in accordance with Technical Specification 4.7.D.1.b.
RV-00C	14-3	3	08/95	FW and RWCU Check Valves Verified closed during reactor refueling outages.
RV-02A	14-4 to 14-5	3	08/95	Electromatic Relief Valves Exercise without timing at least once per operating cycle in accordance with the Technical Specifications.
RV-02B	NA	3	08/95	Deleted.
RV-02C	14-6	0	03/92	Feedwater Check Valves Exercise closed during reactor refueling outages.
RV-02D	NA	3	08/95	Converted to Technical Approach and Position TV-02A.
RV-02E	14-7 to 14-8	0	03/92	Main Steam Relief Valve Discharge Piping Vacuum Breakers Full stroke exercise without measuring the torque and visually inspect the internals during cold shutdowns.
RV-02F	14-9	0	03/92	<b>Reactor Head Spray Check Valves</b> Exercise and leak test during reactor refueling outages.
RV-02G	14-10 to 14-11	3	08/95	<b>RVWLIS Backfill Check Valves</b> Exercise and leak test during reactor refueling outages.
RV-02H	14-12	3	08/95	MSIV Partial stroke quarterly, full stroke at Cold Shutdown.

# VALVE RELIEF REQUEST INDEX/SUMMARIES (Page 2 of 4)

Relief Request	Page(s)	Rev.	Date	Summary
RV-03A	. NA	3	08/95	Converted to Technical Approach and Position TV-03A.
RV-03B	14-14 to 14-15	3	08/95	<b>CRD Scram Inlet and Outlet Valves</b> Individual scram insertion times and exercising will be performed in accordance with the Technical Specifications.
RV-03C	NA	3	08/95	Converted to Technical Approach and Position TV-03C.
RV-11A	14-16 to 14-17	0	03/92	SBLC Injection Check Valves Exercise open with the injection test and closed with local leak rate testing during reactor refueling outages.
RV-13A	14-18	3	08/95	<b>Isolation Condenser Make Up Valves</b> Disassemble and inspect in accordance with the sampling technique.
RV-14A	14-19 to 14-20	0	03/92	Core Spray Minimum Flow Check Valves Disassemble and inspect in accordance with the sampling technique.
RV-14B	14-21	3	08/95	Core Spray Keep Fill Check Valves Test as a series combination with both being repaired or replaced as necessary.
RV-14C	14-22	3	08/95	<b>Core Spray Injection Check Valves</b> Verify closure function with leakage test on refuel outage basis.
RV-15A	14-23 to 14-24	0	03/92	LPCI Minimum flow Check Valves Disassemble and inspect in accordance with the sampling technique.
RV-15B	14-25	3	08/95	LPCI Keep Fill Check Valves Test as a series combination with both being repaired or replaced as necessary.

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# VALVE RELIEF REQUEST INDEX/SUMMARIES (Page 3 of 4)

Relief Request	Page(s)	Rev.	Date	Summary
RV-23A	14-26 to 14-27	3 -	08/95	HPCI Pump Torus Suction Valves Partial Stroke exercise each quarter and disassemble and inspect in accordance with the sampling technique
RV-23B	14-28 to 14-29	3	08/95	HPCI Injection Check Valve Full stroke exercise open and closed during reactor refueling outages and measure the torque required to full stroke exercise open during cold shutdowns.
RV-23C	14-30	3	08/95	HPCI Keep Fill Check Valves Test as a series combination with both being repaired or replaced as necessary.
RV-23D	14-31 to 14-32	3	08/95	HPCI Turbine Exhaust Vacuum Breakers Functionally test open and closed each refueling outage as an assembly.
RV-23E	14-33 to 14-34	3	08/95	HPCI Turbine Exhaust Check Valves Leak test during reactor refueling outages.
RV-23F	14-35	0	03/92	<b>HPCI Minimum Flow Check Valves</b> Disassemble and inspect according to the sampling techniques.
RV-23G	14-36 to 14-37	0	03/92	HPCI Gland Seal Condenser Check Valves Disassemble and inspect according to the sampling technique.
RV-23H	14-38 to 14-39	3	08/95	HPCI Drain Pot Solenoid Exercise valve quarterly without timing.
RV-24A	14-40	3	08/95	CAM System Isolation Valves Exercise closed during reactor refueling outages.
RV-25A	14-41 to 14-42	3.	08/95	ACAD Containment Isolation Valves Exercise during reactor refueling outages .
RV-37A	14-43	3	08/95	<b>RBCCW Supply Check Valve</b> Exercise closed during reactor refueling outages.

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# VALVE RELIEF REQUEST INDEX/SUMMARIES (Page 4 of 4)

Relief Request	Page(s)	Rev.	Date	Summary
RV-47A	NA	. 3	08/95	Converted to Technical Approach and Position TV-47A.
RV-57A	14-44	3	08/95	C.R. HVAC Cooling Water Flow Control Valve Fail Safe test and monitor stem travel for degradation without timing.
RV-66A	NA	3	08/95	Converted to Technical Approach and Position TV-66A.

Revision 3

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## RELIEF REQUEST NUMBER RV-00A (Page 1 of 1)

#### **DESCRIPTION**

Relief from ASME Code leak test requirements to do tests in accordance with 10CRF50 Appendix J, Type C, Local Leak Rate Testing.

## **COMPONENTS IDENTIFICATION/FUNCTION**

All Category A and AC Primary Containment Isolation valves

#### CODE REQUIREMENTS(S)

IWV-3426 Analysis of Leakage Rates.

IWV-3427(b) Corrective Actions if a leakage rate exceeds the rate determined by the previous test.

#### **BASIS FOR RELIEF**

Primary containment Category A and AC isolation valves will be seat leak tested in accordance with the requirements of Technical Specification Sections 3.7 and 4.7 and 10 CFR 50 Appendix J.

Failure to meet the maximum allowable leakage rates as defined by the Technical Specifications shall require compliance with ASME Section XI, IWV 3427(a).

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Data trending, as required by IWV-3427(b) for valves 6 inches and larger, does not provided meaningful information that would justify the burden of taking corrective action. With the increased frequency, constraints would be placed upon the plant requiring extended shutdowns. Therefore, corrective action per IWV-3427(b) will not be used.

#### **ALTERNATIVE TEST**

Perform seat leakage testing in accordance with the requirements of 10 CFR 50 Appendix J, or as amended by Technical Specifications.

The seat leakage results of the primary containment isolation valves will be analyzed in accordance with 10 CFR 50 Appendix J, Technical Specification Section 3.7/4.7 and IWV-3426.

Containment isolation valves will be repaired or replaced as required when the leakage rate exceeds the maximum allowable as stated in the Dresden Nuclear Station Technical Specifications or IWV-3427(a).

## RELIEF REQUEST NUMBER RV-00B (Page 1 of 1)

## DESCRIPTION

Relief is requested from partial and full stroke exercising of all excess flow check valves during quarterly or cold shutdown periods.

#### **COMPONENT IDENTIFICATION/FUNCTION**

All excess flow check valves as listed in the IST Program. Excess flow check valves are denoted as XFC in the Valve Type column.

#### CODE REQUIREMENT(S)

IWV-3521 Test Frequency: Check valves shall be exercised at least once every 3 months.

IWV-3522 Exercising Procedure: Valves which cannot be exercised during operations shall be exercised during cold shutdowns.

#### **BASIS FOR RELIEF**

These are reactor process instrument line excess flow check valves that are tested in accordance with Technical Specification 4.7.D.1.B. requirements which consist of a leakage test conducted every reactor refueling outage. The testing involves uncoupling the instrument lines and verifying that each valve strokes to the closed position. The test also verifies that the valve limits flow to an acceptable level. These excess flow check valves are designed to automatically close in the event of a down stream line rupture. Valving operations and instrument line disconnections during the performance of the inservice testing can result in a reactor scram and an emergency core cooling system initiation, or other automatic actions during the time the vessel is pressurized. This would result in uncontrolled rapid pressure transients in the reactor vessel and/or other undesirable consequences. The optimum time for the inservice testing of these valves is during reactor refueling.

#### ALTERNATIVE TEST

The valves will be exercised during reactor refueling in accordance with Technical Specification 4.7.D.1.B.

## RELIEF REQUEST NUMBER RV-00C (Page 1 of 1)

## **DESCRIPTION**

Relief is requested for full stroke exercising closed the following valves quarterly or during cold shutdown.

## **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ CORD	<b>FUNCTION</b>
2-220-59	18.0	C	2	14/2F	FW Check Valve
2-1201-158	8.0	C	2	30/5A	RWCU Check Valve
3-220-59	18.0	C	2	347/2F	FW Check Valve
3-1201-158	8.0	C	2	361/5A	RWCU Check Valve

## CODE REQUIREMENT(S)

IWV-3521 Test Frequency: Check valves shall be exercised at least once every 3 months.

IWV-3522 Exercising Procedure: Valves which cannot be exercised during operations shall be exercised during cold shutdowns.

## **BASIS FOR RELIEF**

To verify the above check valves closed requires quantifying leakage with a reverse flow test or seat leakage test.

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Because the 220-59 valve is normally open and valve 1201-158 cannot be isolated, no direct or indirect methods exist for quantifying leakage during power operation or cold shutdowns.

During cold shutdowns, the condensate/feedwater system is required to be operable in order to maintain reactor water inventory. The normal make-up path to the reactor during cold shutdowns is through the 2(3)-220-59 check valve and therefore the volume containing the above valves cannot be isolated.

#### ALTERNATE TEST

Operability of the above check valves in the closed position will be verified each reactor refueling outage.

Closure will be verified during performance of a leakage rate test in which seat leakage will be quantified for the above valves.

## Dresden Station 3rd Interval Inservice Testing Plan

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## RELIEF REQUEST NUMBER RV-02A (Page 1 of 2)

#### DESCRIPTION

Relief from Code timing and information on valve exercising during Cold Shutdown.

#### **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ <u>CORD</u>	FUNCTION
2-0203-3A	6"	BC	1	12-1/7F	Main Steam Target Rock Safety Relief Valve
2-0203-3B	6"	BC	1	12-1/7E	Main Steam Electromatic Relief Valve
2-0203-3C	6"	BC	1	12-1/7C	<b>11</b> 3. va 5
2-0203-3D	6"	BC	1	12-1/7B	
2-0203-3E	6"	BC	1	12-1/6E	N N
3-0203-3A	6"	BC	1	345-1/7F	Main Steam Target Rock Safety Relief Valve
3-0203-3B	6"	BC	1	345-1/7E	Main Steam Electromatic Relief Valve
3-0203-3C	6"	BC	1	345-1/7C	11
3-0203-3D	6"	BC	1	345-1/7B	11
3-0203-3E	6"	BC	1	345-1/6E	"

#### CODE REOUIREMENT(S)

- IWV-3411 Test Frequency: Category A and B valves shall be exercised at least once every three months.
- IWV-3412 Exercising Procedure: Valves shall be exercised during plant operations.
- IWV-3413 Power Operated Valves: Limiting values of full-stroke times shall be specified by the owner.

#### **BASIS FOR RELIEF**

#### Valve Timing

Relief is requested for the timing requirement for these valves. These valves provide steam blowdown (relief) to the torus which is initiated either automatically or manually by the use of a key operated switch. Because of the ability to be manually operated, they are categorized as both "B" and "C" valves.

## RELIEF REQUEST NUMBER RV-02A (Page 2 of 2)

These valves are exercised once each operating cycle with the reactor at pressure. Each valve is manually opened and is indirectly verified open by observing a compensating turbine bypass valve or control valve closure, positive indication of steam flow change, and by indication from discharge acoustic monitors or tailpipe temperature monitors. Consistent timing of this event for the purpose of determining the operational readiness of these valves is not practical because they are not equipped with direct position indication. Additionally, these valves are rebuilt after every other outage.

## Valve Exercising

Each relief valve discharges at one location in the torus and should the valve remain open for longer than five minutes, there is a concern that the extended blowdown at a given point could overheat the water locally, resulting in the release of free steam. This can create localized problems with the interior coating.

Manually exercising these valves requires steam pressure behind the disk before cycling and thus must be performed with the reactor at pressure. Thus, the plant must be in an operating or startup condition with the required steam pressure in the main steam lines.

Additionally, under IST Category C safety valve and relief valve tests, all these valves are rebuilt every other outage or approximately 36 months. Dresden Station believes the combination of rebuilding (once every 36 months) and insitu exercising (once each operating cycle) adequately verifies the valves operational readiness.

Exercising and timing these valves beyond technical specification requirements places undue burden on the utility and provides no corresponding increase in the level of plant safety.

#### ALTERNATE TEST

These valves will be full stroke exercised at least once per operating cycle in accordance with the Technical Specifications. Enhanced maintenance activities as recommended in NUREG 1482, Sec. 4.3.4, including examination for degradation, will be conducted on each valve while being rebuilt every other outage. In lieu of the Code stroke timing requirements, a limiting stroke time will be assigned to each valve. Each valve will be verified to stroke in less than the limiting stroke time based on indirect indications of SRV position, such as turbine bypass/control valve position change, steam flow change, and acoustic or temperature monitors. The limiting stroke times will be based on a reasonable deviation from the reference or average stroke times determined during the next inservice test. The SRVs will be declared inoperable if the limiting stroke time is exceeded.

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#### RELIEF REQUEST NUMBER RV-02C (Page 1 of 1)

#### DESCRIPTION

Relief is requested from verifying closed the inboard and outboard Feedwater check valves quarterly or during cold shutdowns.

#### **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ <u>CORD</u>	FUNCTION
2-0220-58A	18.0"	AC	1	M-14/4F	Inboard FW Check
2-0220-58B	18.0"	AC	1	M-14/4F	Inboard FW Check
2-0220-62A	18.0"	AC	1	M-14/3E	Outboard FW Check
2-0220-62B	18.0"	AC	1	M-14/3F	Outboard FW Check
3-0220-58A	18.0"	AC	1	M-347/4E	Inboard FW Check
3-0220-58B	18.0"	AC	1	M-347/4F	Inboard FW Check
3-0220-62A	18.0"	AC	1	M-347/3E	Outboard FW Check
3-0220-62B	18.0"	AC	1	M-347/3F	Outboard FW Check

#### CODE REQUIREMENT(S)

- IWV-3521 Test Frequency: Check valves shall be exercised at least once every 3 months.
- IWV-3522 Exercising Procedure: Valves which cannot be exercised during operations shall be exercised during cold shutdown.

#### **BASIS FOR RELIEF**

These valves are normally open and cannot be exercised closed during normal operation because the feedwater system is required to be operable to maintain reactor coolant inventory.

To exercise these vales closed during cold shutdown would require isolating the feedwater system, deinerting the drywell and backpressurizing the check valves individually to verify closure.

This testing is impractical to perform during cold shutdowns due to the Reactor Water Cleanup path and Feedwater being required (means of maintaining reactor coolant inventory) during cold shutdowns. Additionally, approximately 2,200 gallons of feedwater would need to be drained from the feedwater system headers prior to performing the necessary backflow test. This added operational and testing burden would invariably delay unit startup.

#### **ALTERNATE TEST**

These valves will be exercised closed each reactor refueling.

## RELIEF REQUEST NUMBER RV-02E (Page 1 of 2)

#### **DESCRIPTION**

Relief is requested from measuring the force or torque required to exercise the vacuum breaker check valves.

#### **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ <u>CORD</u>	FUNCTION
2-0220-105A	8"	С	3	25/5E	Main Steam relief valve discharge piping vacuum breaker check valves
2-0220-105B	8"	С	3	25/5E	u u u
2-0220-105C	8"	С	3	25/5E	
2-0220-105D	8"	С	3	25/5E	**
2-0220-105E	8"	С	3	25/5E	"
3-0220-105A	8"	С	3	356/5E	11
3-0220-105B	8"	С	3	356/5E	**
3-0220-105C	8"	С	3	356/5E	"
3-0220-105D	8"	С	3	356/5E	"
3-0220-105E	8"	С	3	356/5E	99 ·

#### CODE REQUIREMENT(S)

IWV-3522 Exercising Procedure: The force required to open a check valve shall be measured.

#### **BASIS FOR RELIEF**

These valves provide vacuum relief on the main steam electromatic and target rock relief valve piping to the torus. They are normally closed and are required to open when steam is blown down to the torus. The steam condenses and creates a vacuum.

The requirements of IWV-3522 to measure the force or torque used by a mechanical exerciser to move the disk is not applicable in this case because the valve does not have a manual exerciser and can only be exercised by reaching into the valve and pushing the disk off the seat. These valves are designed to open on a differential pressure of less than 1 psid and therefore manually exercising the disk requires only slight hand pressure. Obtaining and adapting a device to measure the force exerted on the disk while exercising it is impractical.

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## RELIEF REQUEST NUMBER RV-02E (Page 2 of 2)

## **ALTERNATE TEST**

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These valves will be manually full stroke exercised during each cold shutdown when the drywell is de-inerted.

Additionally, since the valve internals are visible without disassembly, the valve disk, seat, pin and spring will be visually inspected during the stroke test.

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## **RELIEF REQUEST NUMBER RV-02F**

(Page 1 of 1)

## **DESCRIPTION**

Relief is requested from partial and full stroke exercising the inboard isolation reactor head spray check valves quarterly or during cold shutdown periods.

#### **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ <u>CORD</u>	FUNCTION
2-0205-27	2.5"	AC	1	26-1/5E	Inboard isolation function for the reactor head spray line.
3-0205-27	2.5"	AC	1	357-1/5E	Inboard isolation function for the reactor head spray line.

## CODE REQUIREMENT(S)

IWV-3412 Exercising Procedure: Valves shall be exercised during operations.

#### **BASIS FOR RELIEF**

These values are normally closed during both reactor operation and extended shutdown periods. The designated safety position of these values is closed; however, reactor head spray could be used for injecting into the vessel. Credit for this feature is not taken.

To exercise these valves during operations or cold shutdowns would require injecting water, with a temperature of approximately 70°F, into the reactor. Injecting cold water into the reactor could cause cracks in the reactor vessel due to thermal shock.

## ALTERNATE TEST

These valves will be exercised and leak tested during reactor refueling.

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## RELIEF REQUEST NUMBER RV-02G (Page 1 of 2)

## **DESCRIPTION**

Relief from close stroke testing Reactor Vessel Water Indication System (RVWLIS) keep fill check valves quarterly or during cold shutdown.

## **COMPONENT IDENTIFICATION/FUNCTION**

				P&ID/	
VALVE	<u>SIZE</u>	<u>CAT</u>	<u>CLASS</u>	CORD	FUNCTION
2-0299-97A	3/8"	AC	1	26-3/7E	RVWLIS "A" Medium Range
	÷		-		Backfill Outboard Check Valve
2-0299-97B	3/8"	AC	1	26-3/3E	RVWLIS "B" Medium Range
	5/0		•	20 5/52	Backfill Outboard Check Valve
2-0299-98A	3/8"	AC	1	26-3/6E	RVWLIS "A" Narrow Range
	0,0		-	20 07 02	Backfill Outboard Check Valve
2-0299-98B	3/8"	AC	1	26-3/4E	RVWLIS "B" Narrow Range
			_	· · · · · · · · · · · · · · · · · · ·	Backfill Outboard Check Valve
2-0299-99A	3/8"	AC	1	26-3/7E	RVWLIS "A" Medium Range
					Backfill Inboard Check Valve
2-0299-99B	3/8"	AC	1	26-3/3E	RVWLIS "B" Medium Range
					Backfill Inboard Check Valve
2-0299-100A	3/8"	AC	1	26-3/6E	<b>RVWLIS</b> "A" Narrow Range
					Backfill Inboard Check Valve
2-0299-100B	3/8"	AC	1	26-3/4E	RVWLIS "B" Narrow Range
					Backfill Inboard Check Valve
3-0299-97A	3/8"	AC	1	357-3/7E	RVWLIS "A" Medium Range
					Backfill Outboard Check Valve
3-0299-97B	3/8"	AC	1	357-3/7E	RVWLIS "B" Medium Range
					Backfill Outboard Check Valve
3-0299-98A	3/8"	AC	1	357-3/7E	RVWLIS "A" Narrow Range
					Backfill Outboard Check Valve
3-0299-98B	3/8"	AC	1	357-3/7E	<b>RVWLIS</b> "B" Narrow Range
					Backfill Outboard Check Valve
3-0299-99A	3/8"	AC	1	357-3/7E	RVWLIS "A" Medium Range
					Backfill Inboard Check Valve
3-0299-99B	3/8"	AC	1	357-3/7E	RVWLIS "B" Medium Range
			•		Backfill Inboard Check Valve
3-0299-100A	3/8"	AC	1	357-3/7E	RVWLIS "A" Narrow Range
					Backfill Inboard Check Valve
3-0299-100B	3/8"	AC	1	357-3/7E	RVWLIS "B" Narrow Range
					Backfill Inboard Check Valve

Dresden Station 3rd Interval Inservice Testing Plan

#### **RELIEF REOUEST NUMBER RV-02G**

(Page 2 of 2)

#### CODE REQUIREMENT(S)

- IWV-3411Test Frequency: Category A and B valves shall be exercised at least once every<br/>three months.
- IWV-3521 Test Frequency: Check valves shall be exercised at least once every three months.

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#### **BASIS FOR RELIEF**

These valves can only be tested for closure via a leakage type test, which is impractical to perform at intervals other than refueling outages. Verification of closure capability for these valves would isolate the Reactor Vessel Water Level Instrumentation piping and restrict the ability to maintain the system filled. This may result in loss of level indication or protective action which is undesirable in an operating or cold shutdown plant. Establishing the test conditions, conducting the test, and returning the system to normal line-up renders leak testing impractical during power operation and cold shutdown outages as described in NUREG-1482, Section 4.1.4.

## **ALTERNATE TEST**

These valves will be seat leakage tested during reactor refueling outages, as described in NUREG-1482, Section 4.1.4, to verify the ability to go closed. These valves are continuously monitored to be operable in the open position based on water level parameters.

## RELIEF REQUEST NUMBER RV-02H (Page 1 of 1)

## **DESCRIPTION**

Relief from full stroke testing the Main Steam Isolation Valves (MSIVs) quarterly.

## COMPONENT IDENTIFICATION/FUNCTION

				P&ID/	
VALVE	<u>SIZE</u>	CAT	<b>CLASS</b>	<u>CORD</u>	FUNCTION
2-203-1A	20	AB	1	12-1/4E	1A INBD MSIV
2-203-1B	20	AB	1	12-1/4D	1B INBD MSIV
2-203-1C	20	AB	1	12-1/4C	1C INBD MSIV
2-203-1D	20	AB	1	12-1/4B	1D INBD MSIV
2-203-2A	20	AB	1	12-2/7F	2A OTBD MSIV
2-203-2B	20	AB	1	12-2/7E	2B OTBD MSIV
2-203-2C	20	AB	1	12-2/7D	2C OTBD MSIV
2-203-2D	20	AB	1	12-2/7C	2D OTBD MSIV
3-203-1A	20	AB	1	345-1/4E	1A INBD MSIV
3-203-1B	20	AB	1	345-1/4D	1B INBD MSIV
3-203-1C	20	AB	1	345-1/4C	1C INBD MSIV
3-203-1D	20	AB	1	345-1/4B	1D INBD MSIV
3-203-2A	20	AB	1	345-2/7F	2A OTBD MSIV
3-203-2B	20	AB	1	345-2/7E	2B OTBD MSIV
3-203-2C	20	AB	1	345-2/7D	2C OTBD MSIV
3-203-2D	20	AB	1	345-2/7C	2D OTBD MSIV

#### CODE REQUIREMENT(S)

IWV-3411 Test Frequency: Category A and B valves shall be exercised at least once every three months.

#### **BASIS FOR RELIEF**

Full stroke testing these valves during normal reactor operation sequentially isolates the main steam lines. Isolation of these lines results in primary system pressure spikes, abnormal reactor power fluctuations, and increased flow in the remaining steam lines. This unstable operation can lead to a reactor trip. As discussed in NUREG-0626, pressure transients resulting from full stroke testing MSIVs increase the chances of actuating primary system relief valves. Furthermore, partial stroking the MSIVs under power is also undesirable since it increases the risk of valve closure when the unit is generating power. It is proposed that these valves be full stroked and timed during cold shutdowns.

Dresden Station 3rd Interval Inservice Testing Plan

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## ALTERNATE TEST

These valves are stroked and timed quarterly as required by the Technical Specifications at the time this relief request was written. In the fall of 1995, Dresden will convert to the standardized Technical Specifications. Upon approval of the applicable sections of Technical Specifications, these valves will only be full stroke exercised during cold shutdowns as referred to in the Note in NUREG-1482 Section 4.2.4.

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#### **RELIEF REQUEST NUMBER RV-03B**

(Page 1 of 2)

#### **DESCRIPTION**

Relief from Code timing and information on valve exercising frequency in accordance with Technical Specification frequency.

## **COMPONENT IDENTIFICATION/FUNCTION**

There are 177 of each of the valve numbers listed below for each of the CRD Hydraulic Control Units (HCU).

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ <u>CORD</u>	FUNCTION
2-0305-114	0.5"	C	2	34/9D	CRD Scram Outlet Check
2-0305-126	0.5"	B	1	34/0D	CRD Scram Inlet Valve
2-0305-127	0.5"	B	1	34/9D	CRD Scram Outlet Valve
3-0305-114	0.5"	C	2	365/9D	CRD Scram Outlet Check
3-0305-127	0.5"	B	1	365/0E	CRD Scram Inlet Valve
3-0305-127	0.5"	B	1	365/9D	CRD Scram Outlet Valve

#### CODE REQUIREMENT(S)

IWV-3400Test Frequency: Category A and B vales shall be exercised at least once every<br/>3 months.

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IWV-3413 Power Operated Valves: Stroke times shall be set by the owner.

IWV-3522 Exercising Procedure: Valves which cannot be exercised during operations shall be exercised during cold shutdowns.

#### **BASIS FOR RELIEF**

To exercise these valves requires scramming the individual CRD's.

The proper operation of each of the valves is demonstrated by the Technical Specification required scram testing. To exercise these valves more than the current Technical Specification requirements is not practical.

## **RELIEF REQUEST NUMBER RV-03B**

(Page 2 of 2)

## BASIS FOR RELIEF (Con't)

These values are exercised and each individual control rod drive scram insertion is timed and must meet specific time increments as stated in the Technical Specifications. This individual rod timing ensures that the values function properly.

## ALTERNATE TEST

Individual scram insertion times and subsequent valve exercising will be performed per the Technical Specification requirements. The required frequency is as follows:

- 1. After each refueling outage, prior to operation greater than 30 percent of rated thermal power, all control rods shall be subject to scram-time tests from the fully withdrawn position with reactor pressure above 800 psig; and
- 2. At 16-week intervals, 50% of the control rod drives shall be tested so that every 32 weeks, all the control rods shall have been tested.

In the fall of 1995 Dresden will convert to standardized Technical Specifications. At this time the required frequency will be:

- 1. Following core alteration or shutdown greater than 120 days and with reactor pressure greater than 800 psig, and prior to thermal power exceeding 40% of rated thermal power, all control rods shall be subject to scram-time tests.
- 2. At least 10% of the control rods, on a rotating basis, at least once per 120 days of power operation.

#### **RELIEF REQUEST NUMBER RV-11A**

(Page 1 of 2)

#### **DESCRIPTION**

Relief is requested from partial and full stroke exercising the Standby Liquid Control (SBLC) check valves during quarterly or cold shutdown periods.

## **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	<u>CAT</u>	<u>CLASS</u>	P&ID/ CORD	FUNCTION
2-1101-15	1.5"	AC	1	33/3C	SBLC Injection Check Valve
2-1101-16	1.5"	AC	1	33/3C	SBLC Injection Check Valve
3-1101-15	1.5"	AC	1	364/3C	SBLC Injection Check Valve
3-1101-16	1.5"	AC	1	364/3C	SBLC Injection Check Valve

#### CODE REQUIREMENT(S)

IWV-3521 Test Frequency: Check valves shall be exercised at least once every 3 months.

IWV-3522 Exercising Procedure: Valves which cannot be exercised during operations shall be exercised during cold shutdowns.

#### **BASIS FOR RELIEF**

Exercising these valves requires firing the squib valves and injecting demineralized water into the reactor vessel.

Injecting ambient water into the reactor vessel during operations is undesirable because the SBLC system would be inoperative during this test due to the isolation of the sodium pentaborate solution (neutron poison). In addition to SBLC being inoperative and placing the plant in a seven day Technical Specifications Limiting Condition of Operation (LCO), injecting cold water into the reactor could eventually fatigue and crack the injection nozzles due to the induced thermal shock. In addition to the nozzle cracking concerns, a cold water transient in the vessel could cause a reactor trip.

Because sodium pentaborate is a neutron poison, it is imperative that there be a physical separation between the poison and the primary system. To attempt a full flow test during a cold shutdown period would require a thorough system flushing and either removal or firing of one explosive valve. This work is beyond the scope of a normal cold shutdown period.

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## RELIEF REQUEST NUMBER RV-11A (Page 2 of 2)

## ALTERNATE TEST

These valves will be exercised during reactor refueling outages. This will be done in conjunction with the firing of one explosive squib valve and injecting demineralized water into the reactor vessel at rated system flow. These valves are also leak tested during reactor refueling outages.

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# **RELIEF REQUEST NUMBER RV-13A**

(Page 1 of 1)

## **DESCRIPTION**

Relief is requested from full and partial stroke exercising the Isolation Condenser Make up check valves quarterly.

## **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ <u>CORD</u>	FUNCTION
2-1301-11	4.0"	С	3	M-28/3C	Iso Condenser Makeup
3-1301-11	4.0"	C	3	M-359/3C	Iso Condenser Makeup

## CODE REQUIREMENT(S)

IWV-3521 Test Frequency: Check valves shall be exercised at least once every 3 months.

IWV-3522 Exercising Procedure: Check valves shall be exercised to the position required to fulfill their safety function. Confirmation shall be obtained by visual observation, position indication, appropriate pressure, or flow indications, or other positive means.

## **BASIS FOR RELIEF**

To properly exercise these valves requires running the Diesel Fire pump and discharging the water to the shell side of the isolation condenser.

During normal operations, the isolation condenser shell side contains approximately 22,000 gallons of clean demineralized water. By conducting the required flow test to verify valve operability with the diesel fire pump, untreated service water would be introduced to the isolation condenser shell at a rate of 3000 gallons per minute.

The isolation condenser tubes are the primary boundary between the reactor vessel water and outside secondary containment. Service water contains chlorides, sulfates and minerals which would deposit on the tubes and cause pitting and eventual tube failure.

To drain, clean, and refill the isolation condenser with clean demineralized water every 3 months after verifying valve operability by flow testing is not possible since the isolation condenser is required for normal reactor operations and the time to drain and fill the condenser may possibly exceed the Limiting Condition for Operation.

## ALTERNATE TEST

These valves will be disassembled and inspected to verify valve operability in accordance with the sampling technique discussed in TV-00C

## (14-18)

#### **RELIEF REQUEST NUMBER RV-14A**

(Page 1 of 2)

#### **DESCRIPTION**

Relief is requested from full and partial stroke exercising the Core Spray minimum flow check valves quarterly or during cold shutdowns.

## **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ CORD	FUNCTION
2-1402-13A	1.5"	С	2	M27/0C	Core Spray Pump Min. Flow Check
2-1402-13B	1.5"	С	2	M27/7D	Core Spray Pump Min. Flow Check
3-1402-13A	1.5"	С	2	M358/0C	Core Spray Pump Min. Flow Check
3-1402-13B	1.5"	С	2	M358/7D	Core Spray Pump Min. Flow Check
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#### CODE REQUIREMENT(S)

IWV-3521 Test Frequency: Check valves shall be exercised at least once every 3 months.

IWV-3522 Exercising Procedure: Check valves shall be exercised to the position required to fulfill their safety function. Confirmation shall be obtained by visual observation, position indication, appropriate pressure or flow indications, or other positive means.

#### **BASIS FOR RELIEF**

Exercising open the Core Spray pump minimum flow check valves requires verifying a flow rate of 185 gpm. This verification cannot be repeated quarterly since the minimum flow valve 1402-38A(B) closes within an extremely short time (10 seconds) making it difficult to obtain repeatable flow data due to the hydraulic instability of the 1.5" minimum flow piping.

To verify check valve operability requires operating the Core Spray pumps at minimum flow conditions. During this mode of operation, hydraulic instability and impeller recirculating flow conditions may exist. This unsteady flow phenomena becomes progressively more pronounced as the flow is further decreased and can result in pump damage due to excessive vibration, excessive forces on the impeller and pump cavitation. Original minimum flow sizing was established without considering the hydraulic phenomena.

Special tests performed at minimum flow conditions indicate vibration levels of 2 to 3 times normal levels on the Core Spray pumps. This level of vibration will eventually cause damage to pump impeller and bearings. NRC Bulletin No. 88-04: Potential Safety-Related Pump Loss is in support of this evidence.

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Dresden Station 3rd Interval Inservice Testing Plan

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## **RELIEF REQUEST NUMBER RV-14A**

(Page 2 of 2)

## **ALTERNATE TEST**

Core Spray minimum flow check valves will be disassembled and inspected on a refueling outage basis to verify valve operability in accordance with the sampling technique discussed in TV-00C.

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## **RELIEF REQUEST NUMBER RV-14B**

(Page 1 of 1)

## **DESCRIPTION**

Relief is requested from individually stroke testing the Core Spray keep fill check valves.

#### **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ <u>CORD</u>	<b>FUNCTION</b>
2-1402-34A	0.75"	С	2	M27/8D	Core Spray Keep Fill
2-1402-34B	0.75"	С	2	M27/6D	Core Spray Keep Fill
2-1402-36A	0.75"	С	2	M27/8D	Core Spray Keep Fill
2-1402-36B	0.75"	С	2	M27/6D	Core Spray Keep Fill
3-1499-34A	0.75"	С	2	M358/8D	Core Spray Keep Fill
3-1402-34B	0.75"	С	2	M358/6D	Core Spray Keep Fill
3-1402-36A	0.75"	С	2	M358/8D	Core Spray Keep Fill
3-1402-36B	0.75"	С	2	M358/6D	Core Spray Keep Fill

#### CODE REQUIREMENT(S)

IWV-3521 Test Frequency: Check valves shall be exercised at least once every 3 months.

IWV-3522 Exercising Procedure: Check valves shall be exercised to the position required to fulfill their safety function. Confirmation shall be obtained by visual observation, position indication, appropriate pressure or flow indications, or other positive means.

#### **BASIS FOR RELIEF**

Independently exercising closed the Core Spray keep fill check valves is not possible because two check valves are in series combination and both cannot be back pressurized during normal Core Spray pump tests. In addition, test connections between the valves do not exist, therefore, no method of independent valve position verification exists.

#### ALTERNATE TEST

These values will be tested closed as a series combination. Should the series combination fail to operate satisfactory, both values in the series will be disassembled, inspected, and repaired or replaced as necessary as described in NUREG 1482 Section 4.1.1.

Dresden Station 3rd Interval Inservice Testing Plan

#### RELIEF REQUEST NUMBER RV-14C (Page 1 of 1)

#### DESCRIPTION

Relief is requested for full stroke exercising closed the following valves quarterly or during cold shutdown.

#### **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ <u>CORD</u>	FUNCTION
2-1402-9A	10.0	AC	1	27/3C	Core Spray Injection Check
2-1402-9B	10.0	AC	1	27/4C	Core Spray Injection Check
3-1402-9A	10.0	AC	1	358/3C	Core Spray Injection Check
3-1402-9B	10.0	AC	1	358/4C	Core Spray Injection Check

#### CODE REOUIREMENT(S)

IWV-3521 Test Frequency: Check valves shall be exercised at least once every 3 months.

IWV-3522 Exercising Procedure: Valves which cannot be exercised during operations shall be exercised during cold shutdowns.

#### **BASIS FOR RELIEF**

To verify the above check valves closed requires quantifying leakage with a reverse flow test or seat leakage test.

The 1402-9A(B) valves are located on the third floor of the drywell. Since testing these valves under power would require primary containment to be violated and radiological concerns make access to the drywell impractical, no direct or indirect methods exist for quantifying leakage during power operation. In addition, performing closure test during cold shutdowns requires removing the system from service, draining the piping, performing a seat leakage test, returning the system to service and filling and venting the piping. These tasks could delay plant startup as described in NUREG-1482 Section 4.1.4.

#### ALTERNATE TEST

Operability of the above check valves in the closed position will be verified each reactor refueling outage. Closure will be verified during performance of a high pressure seat leakage test in which seat leakage will be quantified.

## RELIEF REQUEST NUMBER RV-15A (Page 1 of 2)

## **DESCRIPTION**

Relief is requested from full and partial stroke exercising the Low Pressure Coolant Injection (LPCI) minimum flow check valves quarterly or during cold shutdowns.

#### **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ CORD	FUNCTION
2-1501-65A	2.0"	С	2	M29-1/7F	LPCI Pump Min. Flow Check
2-1501-65B	2.0"	С	2	M29-1/7E	LPCI Pump Min. Flow Check
2-1501-65C	2.0"	С	2	M29-1/2F	LPCI Pump Min. Flow Check
2-1501-65D	2.0"	С	2	M29-1/2E	LPCI Pump Min. Flow Check
3-1501-65A	2.0"	С	2	M360-1/7F	LPCI Pump Min. Flow Check
3-1501-65B	2.0"	С	2	M360-1/7E	LPCI Pump Min. Flow Check
3-1501-65C	2.0"	С	2	M360-1/2E	LPCI Pump Min. Flow Check
3-1501-65D	2.0"	С	2	M360-1/2F	LPCI Pump Min. Flow Check

## CODE REQUIREMENT(S)

IWV-3521 Test Frequency: Check valves shall be exercised at least once every 3 months.

IWV-3522 Exercising Procedure: Check valves shall be exercised to the position required to fulfill their safety function. Confirmation shall be obtained by visual observation, position indication, appropriate pressure or flow indications or other positive means.

#### **BASIS FOR RELIEF**

Exercising open the LPCI pump minimum flow check valves requires verifying a flow rate of 450 gpm. This verification can not be repeated quarterly since the minimum flow valve (1501-13A, B) closes within a very short time (10 seconds) making it very difficult to obtain repeatable flow data due to hydraulic instability in the minimum flow piping.

To verify check valve operability requires operating the LPCI pumps at minimum flow conditions. During this mode of operation, hydraulic instability and impeller recirculation flow conditions may exist. This unsteady flow phenomena becomes progressively more pronounced as the flow is further decreased and can result in pump damage due to excessive vibration, excessive forces on the impellers, and pump cavitation. Original minimum flow sizing was established without considering the hydraulic phenomena.

#### **RELIEF REQUEST NUMBER RV-15A**

(Page 2 of 2)

## **BASIS FOR RELIEF** (Con't)

Special tests performed at minimum flow conditions indicate vibration levels of 2 to 3 times normal levels on the LPCI pumps. This level of vibration will eventually cause damage to the pump impeller and bearings. NRC Bulletin No. 88-04: Potential Safety-Related Pump Loss is in support of this evidence.

## **ALTERNATE TEST**

The LPCI minimum flow check valves will be disassembled and inspected on a refueling outage basis to verify valve operability in accordance with the sampling technique discussed in TV-00C.

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## **RELIEF REQUEST NUMBER RV-15B**

(Page 1 of 1)

## **DESCRIPTION**

Relief is requested from individually stroke testing the Low Pressure Coolant Injection keep fill check valves.

## **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	<u>CAT</u>	<u>CLASS</u>	P&ID/ <u>CORD</u>	FUNCTION
2-1501-66A	2.0"	С	2	M29-1/8F	LPCI Keep Fill
2-1501-66B	2.0"	С	2	M29-1/2F	LPCI Keep Fill
2-1501-67A	2.0"	С	2	M29-1/8F	LPCI Keep Fill
2-1501-67B	2.0"	С	2	M29-1/2F	LPCI Keep Fill
3-1501-66A	2.0"	С	2	M360-1/8F	LPCI Keep Fill
3-1501-66B	2.0"	С	2	M360-1/2F	LPCI Keep Fill
3-1501-67A	2.0"	С	2	M360-1/8F	LPCI Keep Fill
3-1501-67B	2.0"	С	2	M360-1/2F	LPCI Keep Fill

## CODE REQUIREMENT(S)

IWV-3521 Test Frequency: Check valves shall be exercised at least once every 3 months.

IWV-3522 Exercising Procedure: Check valves shall be exercised to the position required to fulfill their safety function. Confirmation shall be obtained by visual observation, position indication, appropriate pressure or flow indications, or other positive means.

## **BASIS FOR RELIEF**

Independently exercising closed the Low Pressure Coolant Injection keep fill check valves is not possible because two check valves are in series combination and both cannot be back pressurized during normal Low Pressure Coolant Injection pump tests. In addition, test connections between the valves do not exist, therefore, no method of independent valve position verification exists.

#### ALTERNATE TEST

These valves will be tested closed as a series combination. Should the series combination fail to operate satisfactory, both valves in the series will be disassembled, inspected, and repaired or replaced as necessary as described in NUREG 1482 Section 4.1.1.

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### **RELIEF REQUEST NUMBER RV-23A**

(Page 1 of 2)

#### **DESCRIPTION**

Relief is requested from full and partial stroke exercising closed the High Pressure coolant Injection (HPCI) pump suction check valve quarterly or during cold shutdown periods.

#### **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ <u>CORD</u>	<b>FUNCTION</b>
2-2301-39	16.0"	С	2	M51/8E	HPCI Torus Suction
3-2301-39	16.0"	С	2	M374/8E	HPCI Torus Suction

#### CODE REQUIREMENT(S)

- IWV-3521
   Test Frequency: Check valves shall be exercised at least once every 3 months.
- IWV-3522 Exercising Procedure: Check valves shall be exercised to the position required to fulfill their safety function. confirmation shall be obtained by visual observation, position indication, appropriate pressure or flow indications, or other positive means.

#### **BASIS FOR RELIEF**

To full stroke exercise these valves open requires a flow test using suppression pool (torus) water as the HPCI pump suction.

The normal test flow path uses the condensate storage tank (CST) as the pump suction rather than the torus. The torus is not used as the HPCI pump suction for testing because the system test loop is not designed to recirculate water from the torus to the torus.

The only flow path available to verify full flow valve operability would involve pumping torus water to the condensate storage tank. Since torus water is untreated, low quality water and the condensate storage tank water is demineralized, the tank would have to be drained (approximately 100,000 gallons), flushed and refilled to restore water chemistry back to specifications after each test. This testing would be extremely burdensome because of the time involved in draining and refilling the CST and processing the large amount of waste water that would be generated.
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# **RELIEF REQUEST NUMBER RV-23A**

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# ALTERNATE TEST

These valves will be disassembled and inspected on a refueling outage basis to verify valve operability. The disassembly and inspection will be performed in accordance with the sampling technique discussed in TV-00C.

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#### **RELIEF REQUEST NUMBER RV-23B**

(Page 1 of 2)

#### **DESCRIPTION**

Relief is requested from full and partial stroke exercising the High Pressure Coolant Injection (HPCI) valves quarterly or during cold shutdowns.

#### **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ <u>CORD</u>	FUNCTION
2-2301-7	14.0"	С	2	M51/6E	HPCI Injection Check
3-2301-7	14.0"	C	2	M374/6E	HPCI Injection Check

#### CODE REQUIREMENT(S)

 IWV-3521
 Test Frequency: Check valves shall be exercised at least once every 3 months.

IWV-3522 Exercising Procedure: Valves which cannot be exercised during operations shall be exercised during cold shutdowns.

#### **BASIS FOR RELIEF**

The HPCI check values have both an open and closed safety function. These values are required to be closed during normal power operation to prevent flow diversion of reactor coolant (feedwater). These values are also required to open upon a HPCI initiation to provide the injection path for HPCI.

To full stroke exercise these valves open quarterly or during cold shutdowns requires injecting approximately 5,000 gpm of condensate storage tank water at 70°F into the reactor vessel at 540°F. This type of test is impractical because repeating this test will eventually fatigue and crack the injection nozzles due to the induced thermal shock. In addition to the nozzle cracking concerns, a cold water transient in the vessel will cause a reactor trip.

A reverse flow test (back pressurizing) is required to verify the closed position of the HPCI injection check valves.

To accurately perform a reverse flow test on these valves during normal power operation (quarterly) requires entering the X-area, mounting a temporary gauge and monitoring the pressure upstream of the injection valve. This test is impractical because of the extremely high dose rates in the area coupled with the amount of time necessary to determine valve operability.

#### **RELIEF REOUEST NUMBER RV-23B**

(Page 2 of 2)

#### BASIS FOR RELIEF (Con't)

Two technicians will be required to preform the test. The test would take approximately 30 minutes barring any operational problems. The average dose rates for these areas is considered to be extremely high. The estimated radiation exposure to perform this test each quarter is considered extremely impractical.

To verify closure of the HPCI injection check valve during cold shutdown periods requires isolating the Feedwater and Reactor Water Cleanup systems, draining and venting the respective test volume and leak rate testing the HPCI injection valve. This test is impractical to conduct during cold shutdowns because Reactor Water cleanup flow path and Feedwater being required (means of maintaining reactor coolant inventory) during cold shutdown. Additionally, the added operational and testing burden would delay unit start-up.

#### ALTERNATE TEST

The 2301-7 valve will be full stroke exercised open and closed each reactor refueling. Additionally, these valves will be full stroke exercised open during cold shutdowns and the torque measured as required by IWV-3522.

#### **RELIEF REQUEST NUMBER RV-23C**

(Page 1 of 1)

#### **DESCRIPTION**

Relief is requested from individually stroke testing the High Pressure Coolant Injection keep fill check valves.

#### **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ <u>CORD</u>	<b>FUNCTION</b>
2-2354-500	0.75"	C	2	M51/7C	HPCI Keep Fill
3-2354-500	0.75	c	2	M31/7C M374/7C	HPCI Keep Fill
3-2354-501	0.75"	С	2	M374/7C	HPCI Keep Fill

#### CODE REOUIREMENT(S)

IWV-3521 Test Frequency: Check valves shall be exercised at least once every 3 months.

IWV-3522 Exercising Procedure: Check valves shall be exercised to the position required to fulfill their safety function. Confirmation shall be obtained by visual observation, position indication, appropriate pressure or flow indications, or other positive means.

# **BASIS FOR RELIEF**

Independently exercising closed the High Pressure Coolant Injection keep fill check valves is not possible because two check valves are in series combination and both cannot be back pressurized during normal Low Pressure Coolant Injection pump tests. In addition, test connections between the valves do not exist, therefore, no method of independent valve position verification exists.

The keep fill line to HPCI discharge piping is normally isolated and is not required to be operable under normal conditions. The discharge piping is maintained full from the static head of the Condensate Storage Tank.

#### ALTERNATE TEST

When required to be operable, these valves will be tested closed as a series combination. Should the series combination fail to operate satisfactory, both valves in the series will be disassembled, inspected, and repaired or replaced as necessary as described in NUREG 1482 Section 4.1.1.

#### **RELIEF REOUEST NUMBER RV-23D**

(Page 1 of 2)

#### **DESCRIPTION**

Relief is requested from individually partial and full stoke exercising the High Pressure Coolant Injection (HPCI) turbine exhaust vacuum breakers quarterly or at cold shutdown.

#### **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ <u>CORD</u>	FUNCTION
2-2399-76A	1.0"	C	2	M51/8C	HPCI Vacuum Breaker
2-2399-76B	1.0"	C	2	M51/8D	HPCI Vacuum Breaker
3-2399-76A	1.0"	C	2	M374/8C	HPCI Vacuum Breaker
3-2399-76B	1.0"	C	2	M374/8D	HPCI Vacuum Breaker

#### CODE REQUIREMENT(S)

IWV-3521 Test Frequency: Check valves shall be exercised at least once every 3 months.

IWV-3522 Exercising Procedure: Check valves shall be exercised to the position required to fulfill their safety function. Confirmation shall be obtained by visual observation, position indication, appropriate pressure or flow indications, or other positive means.

#### **BASIS FOR RELIEF**

The vacuum breaker assembly consists of two parallel trains of two check valves in series. The trains are cross connected between the series check valves. Test connections and isolations are not available to individually test each of the four valves, or individual trains. Because normal system instrumentation does not exist to verify operability of the valve assembly, the torus must be entered to conduct functional testing.

This testing is impractical during power operations since the torus is inaccessible because it is inerted and at a negative pressure. This testing would require the violation of Primary Containment to enter.

Functional testing of these valves during cold shutdowns is extremely burdensome because entering the torus requires removal of the 4.0 ft. diameter manway cover. Once the cover is replaced, a local leak rate test must be performed to verify the primary containment boundary. This added maintenance and testing burden would invariably delay unit startup.

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# **RELIEF REQUEST NUMBER RV-23D**

(Page 2 of 2)

# ALTERNATE TEST

This set of valves will be functionally tested open and closed each refueling outage. When functional testing indicates that the operability of the valve assembly is questionable, all valves in the assembly will be repaired or replaced.

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# **RELIEF REQUEST NUMBER RV-23E**

(Page 1 of 2)

# **DESCRIPTION**

Relief is requested from exercising closed the High Pressure Coolant Injection (HPCI) turbine exhaust valves quarterly or during cold shutdowns.

# **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ CORD	FUNCTION
2-2301-34	2"	AC	2	51/8D	HPCI Exhaust Drain to Torus
2-2301-45	24"	AC	2	51/8D	HPCI Exhaust to Torus
2-2301-71	2"	AC	2	51/8D	HPCI Exhaust Stop Check to Torus
2-2301-74	12"	AC	2	51/8C	HPCI Exhaust Check to Torus
3-2301-34	2"	AC	2	374/8D	HPCI Exhaust Drain to Torus
3-2301-45	24"	AC	2	347/8D	HPCI Exhaust to Torus
3-2301-71	2"	AC	2	374/8D	HPCI Exhaust Stop Check to Torus
3-2301-74	12"	AC	2	374/8C	HPCI Exhaust Check to Torus

# CODE REQUIREMENT(S)

- IWV-3521 Test Frequency: Check valves shall be exercised at least once every 3 months.
- IWV-3522 Exercising Procedure: Valves which cannot be exercised during operations shall be exercised during cold shutdowns.

# **BASIS FOR RELIEF**

These valves have a safety function in the closed direction for primary containment isolation and are stroke closed during the 10 CFR 50, Appendix J, LLRT. Testing these valves in this fashion requires moving the LLRT test apparatus into an area located just off of the torus catwalk. Establishing the test conditions, conducting the test, and returning the system to normal line-up renders leak testing impractical during power operation and cold shutdown outages as described in NUREG-1482, Section 4.1.4.

Additionally, conduct of this test during cold shutdown could unnecessarily delay Unit startup.

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# **RELIEF REQUEST NUMBER RV-23E**

(Page 2 of 2)

# **ALTERNATE TEST**

These valves will be exercised closed each reactor refueling outage during the Appendix J leak rate test as described in NUREG 1482, Section 4.1.4.

# RELIEF REQUEST NUMBER RV-23F (Page 1 of 1)

# **DESCRIPTION**

Relief is requested for full stroke exercising the High Pressure Coolant Injection (HPCI) minimum flow check valves quarterly or during cold shutdowns.

# **COMPONENT IDENTIFICATION/FUNCTION**

VALYE	SILL	CAT	<u>CLASS</u>	CORD	<b>FUNCTION</b>	
2-2301-40	4"	AC	3	51/C7	HPCI Min Flow Check	
3-2301-40	4"	AC	3	374/C7	HPCI Min Flow Check	··· ,

#### CODE REQUIREMENT(S)

- IWV-3521
   Test Frequency: Check valves shall be exercised at least once every 3 months.
- IWV-3522 Exercising Procedure: Check valves shall be exercised to the position required to fulfill their safety functions. Confirmation shall be obtained by visual observation, position indication, appropriate pressure or flow indications, or other positive means.

#### **BASIS FOR RELIEF**

Exercising open the HPCI minimum flow check valve requires verifying design accident flow during quarterly testing. This test cannot be accurately repeated since the minimum flow valve, 2(3)-2301-14, closes prior to obtaining stable flow data.

To verify operability would require operating HPCI for extended periods at minimum flow conditions. These low flow conditions result in hydraulic instability and may cause damage to the HPCI pump.

#### ALTERNATE TEST

Operability of the HPCI minimum flow check valve will be verified by disassembly and inspection in accordance with the sampling technique discussed in TV-00C.

# RELIEF REQUEST NUMBER RV-23G (Page 1 of 2)

# **DESCRIPTION**

Relief is requested from full stroke exercising the High Pressure Coolant Injection (HPCI) Gland Seal Condenser (GSC) Check valves quarterly or during cold shutdowns.

#### **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	<u>CAT</u>	<u>CLASS</u>	P&ID/ <u>CORD</u>	FUNCTION
2-2301-50A	4"	С	2	51/C4	HPCI Booster Pump to the GSC Check
2-2301-51	4"	C	2	51/C4	HPCI Aux Cooling Water Pump
					Discharge Check
2-2301-75	4"	С	2	51/B4	HPCI GSC Outlet Check
2-2301-76	2"	С	2	51/C4	HPCI GSLO Pump Discharge Check
3-2301-50A	4"	C	2	374/C4	HPCI Booster Pump to the GSC Check
3-2301-51	4"	С	2	347/C4	HPCI Aux Cooling Water Pump
				· · ·	Discharge Check
3-2301-75	4"	С	2	374/B4	HPCI GSC Outlet Check
3-2301-76	2"	С	2	374/C4	HPCI GSLO Pump Discharge Check

#### CODE REQUIREMENT(S)

IWV-3521 Test Frequency: Check valves shall be exercised at least once every 3 months.

IWV-3522 Exercising Procedure: Check valves shall be exercised to the position required to fulfill their safety functions. Confirmation shall be obtained by visual observation, position indication, appropriate pressure or flow indications, or other positive means.

#### **BASIS FOR RELIEF**

The HPCI Aux Cooling Water pump and the HPCI Booster pump supply cooling water to the gland seal condenser through the 2301-50A and 2301-51 check valves. The cooling water exits the gland seal condenser through the 2301-75 check valve either to the HPCI Booster Pump suction line or the condensate storage tank. The steam being cooled in the condenser is pumped by the Gland Seal Leak Off (GSLO) Pump through the 2301-76 check valve either to the HPCI Booster Pump suction line or the condensate storage tank.

Exercising open these check valve requires verifying design accident flow during testing. Since there are no pressure or flow instruments in any of these lines, no direct or indirect method is available to quantitatively prove these valves open.

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# RELIEF REQUEST NUMBER RV-23G (Page 2 of 2)

## BASIS FOR RELIEF (Con't)

To verify closure requires either a reverse flow or seat leakage test. Since there is no instrumentation in the lines, testing for reverse flow cannot be performed. A seat leakage test cannot be performed because boundary valves necessary to pressurize the check valves do not exist.

## ALTERNATE TEST

Operability of these HPCI check valves will be verified by disassembly and inspection in accordance with the sampling technique discussed in TV-00C.

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# RELIEF REQUEST NUMBER RV-23H (Page 1 of 2)

## **DESCRIPTION**

Relief is requested from stroke timing the High Pressure Coolant Injection (HPCI) drain pot solenoid valves.

## **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ <u>CORD</u>	FUNCTION
2-2301-32	1"	B	2	51/C7	HPCI Drain Pot Solenoid
3-2301-32	1"	В	2	374/C7	HPCI Drain Pot Solenoid

## **CODE REQUIREMENT(S)**

IWV-3410 Valve exercising Test: Category A and B valves shall be exercised at least once every three months.

# **BASIS FOR RELIEF**

These valves function as a backup to the exhaust line drain pot steam trap. During normal operation of the turbine using high quality steam, the drain path from the drain pot to the torus via the steam trap is adequate to remove condensate from the turbine exhaust line. However, during turbine operation with low pressure and low quality steam (which is seen during HPCI surveillance testing during plant startup and as would be expected during HPCI operation during a small break LOCA), condensate collects in the drain pot faster than it can be drained through the trap. Under these conditions, valve 2301-32 opens automatically to drain to the gland seal condenser upon receipt of a signal from a drain pot level switch when the drain pot level reaches the high level alarm setpoint. A high level condition sounds an alarm in the control room.

These valves are equipped with hand switches to enable remote manual operation from the control room; however, they are not equipped with position indicators and the valves are totally enclosed, so valve position cannot be verified by direct observation. Therefore, it is impractical to exercise and stroke time these valves in accordance with Code requirements. Valve actuation may be indirectly verified by removing the HPCI system from service, filling the drain pot with water until the high level alarm is received, and observing that the high level alarm clears. It is impractical to assign a maximum limiting stroke time to these valves using this test method because the time for the alarm to clear would depend primarily on variables such as the rate of filling and the level of the drain pot when the filling is secured. The steam line drain pot is not equipped with direct level indication; therefore, the time required for the alarm to clear may vary significantly and operation of valve 2301-32 cannot be verified by operation of the hand switch.

# **RELIEF REOUEST NUMBER RV-23H**

(Page 2 of 2)

Failure of these values to perform their safety function would be indicated by a drain pot high level alarm during operation with low pressure steam. Functional tests are conducted on the drain pot level alarm switches at least once each cycle to verify their operability. Additionally, condensate entrapped in the steam would cause significant fluctuations in exhaust steam header pressure.

Compliance with the quarterly exercising and stroke timing requirements of the Code would require either system modifications to replace these valves with ones of testable design, or to purchase non-intrusive test equipment and develop new test methods and procedures. These alternatives would be burdensome due to the costs involved.

#### ALTERNATE TEST

These valves will be exercised quarterly using the handswitch. They will also be functionally tested each refueling outage by filling the drain pot and verifying that valve 2301-32 actuates as indicated by the high level alarm clearing.

Because exercising of these valves without stroke timing provides no measure of valve degradation, maintenance activities were instituted to compensate for testing deficiencies. Following discussions with the manufacturer regarding valve design and application, it was decided to disassemble, inspect and repair or replace these valves every third cycle in addition to the above testing. and the second sec

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# RELIEF REQUEST NUMBER RV-24A

(Page 1 of 1)

# **DESCRIPTION**

Relief is requested for exercising the Containment Air Monitor (CAM) containment isolation valves quarterly or during cold shutdowns.

# **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ <u>CORD</u>	FUNCTION
2-2499-28A	0.5"	AC	2	706-1/7C	CAM System Containment Isolation
2-2499-28B	0.5"	AC	2	706-1/2C	CAM System Containment Isolation
3-2499-28A	0.5"	AC	2	706-2/7C	CAM System Containment Isolation
3-2499-28B	0.5"	AC	2	706-2/2C	CAM System Containment Isolation

#### CODE REOUIREMENT(S)

IWV-3521 Test Frequency: Check valves shall be exercised at least once every 3 months.

IWV-3522 Exercising Procedure: Valves which cannot be exercised during operations shall be exercised during cold shutdowns.

# **BASIS FOR RELIEF**

These check values open during operation of the containment atmosphere monitor system (CAM) and are required to close for containment isolation. To verify closure would require disassembling the process line and back pressurizing with air. Establishing the test conditions, conducting the test, and returning the system to normal line-up renders leak testing impractical during power operation and cold shutdown outages as described in NUREG-1482, Section 4.1.4.

Additionally, disassembling the piping during cold shutdowns could delay the Unit startup.

# ALTERNATE TEST

These valves will be exercised closed each reactor refueling outage during the Appendix J leak rate test as described in NUREG 1482, Section 4.1.4.

# **RELIEF REQUEST NUMBER RV-25A**

(Page 1 of 2)

# **DESCRIPTION**

Relief is requested from exercising the Atmospheric Containment Atmosphere Dilution (ACAD) containment isolation valves quarterly or during cold shutdowns.

#### **COMPONENT IDENTIFICATION/FUNCTION**

2-2599-23A1"AC2707-1/6CACAD Containment Isolat2-2599-23B1"AC2707-1/3CACAD Containment Isolat2-2599-24A1"AC2707-1/6CACAD Containment Isolat2-2599-24B1"AC2707-1/3CACAD Containment Isolat3-2599-23A1"AC2707-2/6CACAD Containment Isolat3-2599-23B1"AC2707-2/3CACAD Containment Isolat3-2599-23B1"AC2707-2/3CACAD Containment Isolat	ION	<b>FUNC</b>	P&ID/ CORD	<u>CLASS</u>	CAT	<u>SIZE</u>	VALVE
2-2599-23B1"AC2707-1/3CACAD Containment Isolat2-2599-24A1"AC2707-1/6CACAD Containment Isolat2-2599-24B1"AC2707-1/3CACAD Containment Isolat3-2599-23A1"AC2707-2/6CACAD Containment Isolat3-2599-23B1"AC2707-2/3CACAD Containment Isolat3-2599-23B1"AC2707-2/3CACAD Containment Isolat	ment Isolation	ACAD Contai	707-1/6C	2	AC	1"	2-2599-23A
2-2599-24A1"AC2707-1/6CACAD Containment Isolat2-2599-24B1"AC2707-1/3CACAD Containment Isolat3-2599-23A1"AC2707-2/6CACAD Containment Isolat3-2599-23B1"AC2707-2/3CACAD Containment Isolat2-2599-24B1"AC2707-2/3CACAD Containment Isolat	ment Isolation	ACAD Contai	707-1/3C	2	AC	1"	2-2599-23B
2-2599-24B1"AC2707-1/3CACAD Containment Isolat3-2599-23A1"AC2707-2/6CACAD Containment Isolat3-2599-23B1"AC2707-2/3CACAD Containment Isolat2-2599-23B1"AC2707-2/3CACAD Containment Isolat	ment Isolation	ACAD Contai	707-1/6C	2	AC	1"	2-2599-24A
3-2599-23A1"AC2707-2/6CACAD Containment Isolat3-2599-23B1"AC2707-2/3CACAD Containment Isolat2-2592-24A1"AC2707-2/3CACAD Containment Isolat	ment Isolation	ACAD Contai	707-1/3C	2	AC	1"	2-2599-24B
3-2599-23B 1" AC 2 707-2/3C ACAD Containment Isolat	ment Isolation	ACAD Contai	707-2/6C	2	AC .	1"	3-2599-23A
	ment Isolation	ACAD Contai	707-2/3C	2	AC	1"	3-2599-23B
3-2599-24A I AC 2 /07-2/6C ACAD Containment Isolat	ment Isolation	ACAD Contai	707-2/6C	2	AC	1"	3-2599-24A
3-2599-24B 1" AC 2 707-2/3C ACAD Containment Isolat	ment Isolation	ACAD Contai	707-2/3C	2	AC	1"	3-2599-24B

# CODE REQUIREMENT(S)

IWV-3521 Test Frequency: Check valves shall be exercised at least once every 3 months.

IWV-3522 Exercising Procedure: Valves which cannot be exercised during operations shall be exercised during cold shutdowns.

#### **BASIS FOR RELIEF**

These valves are required to close for containment isolation and they are required to be open for proper operation of the ACAD system. To verify closure would require securing the system, disassembling the process line and back pressurizing with air. Using the installed pressure gauge and the inerted drywell as a pressure source is not practical because containment may be breached, and the drywell pressure is too low to yield repeatable results. This test is impractical to perform during normal operation or cold shutdowns because primary containment would be violated and additionally, disassembling the piping during cold shutdowns could delay the Unit startup.

To full stroke exercise open the ACAD check valves requires injecting air at a rate of 5000 scfh into the drywell and torus while inerted at 1.1 to 1.3 psig with nitrogen. The normal oxygen concentration of containment is 2.0% with alarms set at 3.5%.

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# RELIEF REQUEST NUMBER RV-25A

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#### **BASIS FOR RELIEF** (Con't)

Allowing oxygen to be injected into the drywell and torus each quarter to perform inservice testing would eventually require venting the drywell and torus and purging with nitrogen so as not to exceed the limits for containment oxygen concentration.

Injection of air into the drywell in this method has a great probability of causing significant airborne contamination in cold shutdowns and refueling conditions. To exercise these valves open during operations or cold shutdowns is undesirable because the drywell is inerted and the addition of oxygen to the drywell would require additional monitoring and operational constraints.

#### ALTERNATE TEST

These valves will be exercised closed each reactor refueling outage. The closed test will be in conjunction with the Appendix J leak rate test as described in NUREG 1482, Section 4.1.4. Open capability of these valves will be assessed during disassembly and inspection as described in TV-00C.

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# **RELIEF REQUEST NUMBER RV-37A**

(Page 1 of 1)

# **DESCRIPTION**

Relief is requested for exercising the Reactor Building Cooling Water (RBCCW) supply check valve quarterly or during cold shutdowns.

# **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ <u>CORD</u>	FUNCTION
2-3769-500	20"	AC	2	M20/3C	<b>RBCCW</b> Containment Isolation
3-3769-500	20"	AC	2	M353/3C	<b>RBCCW</b> Containment Isolation

# CODE REQUIREMENT(S)

- IWV-3521 Test Frequency: Check valves shall be exercised at least once every 3 months.
- IWV-3522 Exercising Procedure: Valves which cannot be exercised during operations shall be exercised during cold shutdowns.

# **BASIS FOR RELIEF**

These check valves are open during normal operation of RBCCW system. Testing these valves closed quarterly or during cold shutdown requires isolation of RBCCW to containment loads including the Reactor Recirculating pumps. Establishing the test conditions, conducting the test, and returning the system to normal line-up renders leak testing impractical during power operation and cold shutdown outages as described in NUREG-1482, Section 4.1.4.

#### ALTERNATE TEST

These valves will be exercised closed each reactor refueling outage during the Appendix J leak rate test as described in NUREG 1482, Section 4.1.4.

#### **RELIEF REOUEST NUMBER RV-57A**

(Page 1 of 1)

#### **DESCRIPTION**

This requests relief for full stroke exercising the Control Room HVAC Refrigerant Heat Exchanger Cooling Water Outlet Flow Control Valve.

#### **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ <u>CORD</u>	FUNCTION
2/3-5741-62	2.5"	В	3	3121/3B	Control Room HV

Control Room HVAC Refrigerant Service Water Outlet Flow Control

#### CODE REQUIREMENT(S)

IWV-3413 Power Operated Valves: The limiting full-stroke time of each power operated valve shall be specified by the owner.

#### **BASIS FOR RELIEF**

This valve controls the cooling water flow through the Control Room HVAC Refrigerant heat exchanger. The valve receives a signal from a pressure transmitter located on the refrigerant side. When the pressure increases due to the refrigerant temperature rising, the 2/3-5741-62 throttles open further to allow more cooling. Similarly, the valve throttles flow down when the pressure drops.

Since the valve open and closes based on a signal from a pressure transmitter, the valve cannot be accurately timed. Forcing the valve to stroke by disconnecting the air tubing from the transducer and connecting an external air source is cumbersome and will not yield repeatable data. The valve stem is readily visible and can easily be observed for degrading conditions.

#### ALTERNATE TEST

This valve will be exercised and fail safe tested quarterly by isolating the air to the valve. Stem conditions and motion will be observed for evidence of degrading conditions.

# TECHNICAL APPROACH AND POSITION INDEX/SUMMARIES (Page 1 of 2)

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Technical Approach & Position	Page(s)	Rev.	Date	Summary
TV-00A	16-1 to 16-2	3	08/95	Power Operated Valves Position 5 of Generic Letter 89- 04 will be followed for stroke timing valves.
TV-00B	16-3 to 16-4	3	08/95	<b>Pressure Isolation Valves</b> All pressure isolation valves will receive Appendix J type leak tests.
TV-00C	16-5 to 16-7	3	08/95	Check Valves The check valve disassembly and inspection program is summarized.
TV-00D	NA	3	08/95	Deleted.
TV-00E	NA	3	08/95	Deleted.
TV-02A	16-8	3	08/95	MSIV Accumulator Check Valves Exercise closed each reactor refueling outage.
TV-03A	16-9 to 16-10	3	08/95	<b>CRD Backup Scram and Scram</b> <b>Dump Valves</b> Exercise without timing and verify proper venting during cold shutdowns.

#### TECHNICAL APPROACH AND POSITION INDEX/SUMMARIES (Page 2 of 2)

Technical Approach & Position	Page(s)	Rev.	Date	Summary
TV-03B	16-11	3	08/95	<b>CRD Scram Inlet and Outlet</b> <b>Valves</b> Individual scram insertion times and exercising will be performed in accordance with the Technical Specifications.
. TV-03C	16-12 to 16-13	3	08/95	<b>ARI/ATWS Valves</b> Exercise without timing and verify proper operation during cold shutdowns.
TV-19A	16-14	3	08/95	Fuel Pool Cooling Check Valves Test by verification of adequate total cooling flow during normal operation.
TV-23A	NA	3	08/95	Deleted.
TV-23B	16-15	3	08/95	HPCI Turbine Exhaust Vacuum Breakers Functionally test open and closed each refueling outage as an assembly.
TV-25A	NA	3	08/95	Deleted.
TV-47A	16-16	3	08/95	<b>TIP Nitrogen Purge Valves</b> Exercise closed during reactor refueling outages.
TV-52A	16-17	3	08/95	Unit 3 Diesel Fuel Oil Transfer Solenoid Valve Stroke without timing.
TV-66A	16-18	3	08/95	Diesel Air Start Solenoid and Relay Verify operable during monthly Diesel Runs.
TV-75A	NA	3	08/95	Deleted.

## **TECHNICAL APPROACH & POSITION NUMBER TV-00A**

(Page 1 of 2)

# **DESCRIPTION**

Valve timing alert ranges for valves with stroke times greater than 2 seconds, and less than 10 seconds.

#### DISCUSSION

Most air operated (AO) and motor operated (MO) valves have maximum stroke times that are much longer than actual stroke times. Stroke times could increase moderately (less than 50%) over successive tests and not trigger any closer observations, thus not allowing detection and corrective action. Degradation in such valves could then be severe before corrective actions would be taken<sup>1</sup>.

Errors have occurred with analyzing stroke times. Some valves with stroke times that have increased by over 50% from previous tests have not been placed in the Alert Range for closer observation and to allow detection and corrective action should further degradation occur. Providing a known Alert Range and Maximum Stroke Time will eliminate these errors.

## POSITION

Dresden Nuclear Station has adopted Position 5, Limiting Valves of Full-Stroke times for Power Operated Valves, of Generic Letter 89-04.

Specifically, the test method provides for valve timing reference values, alert stroke times and maximum stroke times for the valves tested in the IST Program. A summary of the determination of these timed action ranges are provided below.

Valves that require timing have their reference values established after the first normally scheduled inservice testing of these valves. These valve timing reference values shall then be added to their respective surveillance procedure's acceptance criteria sheet for use.

Stroke time reference values are established during the first normally scheduled inservice testing of the specific valve. These reference values are used to determine the alert stroke time limits for valves under 10 seconds and for establishing a max stroke time for all valves.

Maximum stroke times for the valves tested in the IST Program are calculated through the use of multipliers as specified in the administrative procedure controlling the IST Program at Dresden station. The calculated maximum stroke time will then be compared to the Technical Specifications, FSAR and Principle LOCA Analysis. The most limiting value shall be used for the maximum stroke time.

<sup>1</sup> Institute of Nuclear Power Operations' (INPO), July 1987 Evaluation of Dresden Station. Page 37; Finding (TS.2-1).

# **TECHNICAL APPROACH & POSITION NUMBER TV-00A**

(Page 2 of 2)

# POSITION (Con't)

The alert stroke time limit for each valve is determined as follows:

For valves with a reference value stroke time from 2 to 10 seconds, the alert stroke time limit is equal to 1.5 times the reference value. If the alert stroke time limit calculated this way exceeds the maximum stroke time, then the alert stroke time is equal to 1.2 times the reference value.

NOTE: In no case will the alert stroke time limit exceed the maximum stroke time limit.

Measurement of valve stroke times is from the initiation of switch movement to the previously illuminated light going off. This is referred to as "switch-to-light" valve timing.

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#### **TECHNICAL APPROACH & POSITION NUMBER TV-00B**

(Page 1 of 2)

# **DESCRIPTION**

This Technical Approach and Position addressed and identifies Pressure Isolation Valves (PIVs). PIVs are defined for each interface as any two valves in series, within the reactor coolant pressure boundary which separate a high pressure system from an attached low pressure or low temperature system. These valves are normally closed during power operation.

## DISCUSSION

The following PIVs are Category A Valves, and Primary Containment Isolation Valves in the IST Program and receive Appendix J type leak tests.

VALVE	SIZE	CAT	CLAS	S P&ID/CORD	FUNCTION
2-0220-44	3/4"	Α	1	26-2/2E	Recirc Loop Sample Inboard
2-0220-45	3/4"	Α	1	26-2/1E	Recirc Loop Sample Outboard
2-1001-1A	16"	Α	1	32/9B	SDC Inlet Isolation
2-1001-1B	16"	Α	1	32/9E	SDC Inlet Isolation
2-1001-2A	14"	Α	1	32/8A	SDC Pump Suction Isolation
2-1001-2B	14"	Α	1	32/8C	SDC Pump Suction Isolation
2-1001-2C	14"	Α	1	32/8F	SDC Pump Suction Isolation
2-1001-5A	14"	Α .	1	32/1E	SDC Outlet Isolation
2-1001-5B	14"	Α	1	32/2E	SDC Outlet Isolation
2-1402-25A	10"	Α	1	27/2C	Core Spray Outboard Injection
2-1402-25B	10"	Α	1	27/5C	Core Spray Outboard Injection
2-1501-22A	18"	Α	1	29-1/7B	LPCI Injection
2-1501-22B	18"	Α	1	29-1/3B	LPCI Injection
2-1501-25A	14"	AC	1 -	29-1/5B	LPCI Loop I Injection Check
2-1501-25B	14"	AC	1	29-1/4B	LPCI Loop II Injection Check
3-0220-44	3/4"	Α	1	357-2/2E	Recirc Loop Sample Inboard
3-0220-45	3/4"	Α	1	357-2/1E	Recirc Loop Sample Outboard
3-1001-1A	16"	Α	1	32/9B	SDC Inlet Isolation
3-1001-1B	16"	Α	1	32/9E	SDC Inlet Isolation
3-1001-2A	14"	Α	1	32/8A	SDC Pump Suction Isolation
3-1001-2B	14"	Α	1	32/8C	SDC Pump Suction Isolation
3-1001-2C	14"	Α	1	32/8F	SDC Pump Suction Isolation
3-1001-5A	14"	Α	1	32/1E	SDC Outlet Isolation
3-1001-5B	14"	Α	1	32/2E	SDC Outlet Isolation
3-1402-25A	10"	Α	1	27/2C	Core Spray Outboard Injection
3-1402-25B	10"	Α	1	27/5C	Core Spray Outboard Injection
3-1501-22A	18"	Α	1	29-1/7B	LPCI Injection
3-1501-22B	18"	Α	1	29-1/3B	LPCI Injection
3-1501-25A	14"	AC	1	29-1/5B	LPCI Loop I Injection Check
3-1501-25B	14"	AC	1	29-1/4B	LPCI Loop II Injection Check

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# **TECHNICAL APPROACH & POSITION NUMBER TV-00B**

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#### DISCUSSION(Con't)

The following PIVs are Category A Valves in the IST program and receive a seat leakage test using high pressure water. These valves are designed to seal at higher pressure. These valves are not primary containment isolation valves.

<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/CORD	FUNCTION
10"	AC	1	27/3C	Core Spray Injection Check
10"	AC	1	27/4C	Core Spray Injection Check
10"	AC	1	358/3C	Core Spray Injection Check
10"	AC	1	358/4C	Core Spray Injection Check
	SIZE 10" 10" 10" 10"	SIZE         CAT           10"         AC           10"         AC           10"         AC           10"         AC           10"         AC	SIZE         CAT         CLASS           10"         AC         1           10"         AC         1           10"         AC         1           10"         AC         1           10"         AC         1	SIZE         CAT         CLASS         P&ID/CORD           10"         AC         1         27/3C           10"         AC         1         27/4C           10"         AC         1         358/3C           10"         AC         1         358/4C

# POSITION

These valves are tested every 2 years (refueling outage) and after valve maintenance.

# **TECHNICAL APPROACH & POSITION NUMBER TV-00C**

(Page 1 of 3)

## **DESCRIPTION**

This information is intended to provide documentation for the disassembly and inspection of Category C check valves for which relief has been requested from ASME Section XI, IWV-3522 requirements.

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# DISCUSSION

Specific valve relief requests have been submitted for the valves listed below.

VALVE CLASS		RELIEF REQUEST NUMBER	GROUP	FUNCTION		
2-1301-11	3	RV-13A	1	Iso Condenser Makeup		
2-1402-13A	2	RV-14A	2 · ·	Core Spray Min Flow		
2-1402-13B	2	RV-14A	· .2	Core Spray Min Flow		
2-1501-65A	2	RV-15A	3	LPCI Min Flow		
2-1501-65B	2	<b>RV-15A</b>	3	LPCI Min Flow		
2-1501-65C	2	RV-15A	3	LPCI Min Flow		
2-1501-65D	2	RV-15A	3	LPCI Min Flow		
2-2301-39	2	RV-23A	4	HPCI Suction from Torus		
2-2301-40	3	RV-23F	5	HPCI Min Flow		
2-2301-50A	2	RV-23G	6	HPCI GSC Check		
2-2301-75	2	RV-23G	6	HPCI GSC Check		
2-2301-51	2	RV-23G	7	HPCI GSC Check		
2-2301-76	2	RV-23G	8	HPCI GSLO Check		
2-2599-23A	1	RV-25A	9 🤤	ACAD Containment Isolation		
2-2599-23B	1	RV-25A	9	ACAD Containment Isolation		
2-2599-24A	1	RV-25A	9	ACAD Containment Isolation		
2-2599-24B	1	RV-25A	9	ACAD Containment Isolation		
3-1301-11	3	RV-13A	10	Iso Condenser Makeup		
3-1402-13A	2	RV-14A	11	Core Spray Min Flow		
3-1402-13B	2	RV-14A	11	Core Spray Min Flow		
3-1501-65A	2	RV-15A	12	LPCI Min Flow		
3-1501-65B	2	RV-15A	12	LPCI Min Flow		
3-1501-65C	2	RV-15A	12	LPCI Min Flow		
3-1501-65D	2	RV-15A	12	LPCI Min Flow		
3-2301-39	2	RV-23A	13	HPCI Suction from Torus		
3-2301-40	3	RV-23F	14	HPCI Min Flow		
3-2301-50A	2	RV-23G	15	HPCI GSC Check		
3-2301-75	2	RV-23G	15	HPCI GSC Check		

# **TECHNICAL APPROACH & POSITION NUMBER TV-00C**

(Page 2 of 3)

VALVE	CLASS	RELIEF REQUEST NUMBER	GROUP	FUNCTION
3-2301-51	2	RV-23G	16	HPCI GSC Check
3-2301-76	2	RV-23G	17	HPCI GSLO Check
3-2599-23A	1	RV-25A	18	ACAD Containment Isolation
3-2599-23B	1	RV-25A	18	ACAD Containment Isolation
3-2599-24A	1	RV-25A	18	ACAD Containment Isolation
3-2599-24B	1	RV-25A	18	ACAD Containment Isolation
POSITION				i i i i i i i i i i i i i i i i i i i

# **Check Valve Exercising**

ASME Section XI provides an exercise procedure for Category C valves. When direct or indirect methods of exercising check valves are not available or when it is impractical to exercise a valve using system flow, the check valve will be disassembled and inspected using a sampling technique.

For check valves which cannot be verified operable by standard ASME test procedures, Dresden Station will prove operability by disassembly/inspection.

#### **Test Frequency**

Check valves will be disassembled and inspected on a refueling outage basis only.

# Sampling Technique

The sampling technique utilized by Dresden requires that one valve from each valve Unit Grouping be disassembled and inspected each reactor refueling outage. A different valve in each valve Group will be disassembled and inspected at subsequent refueling outages. The scheduling will continue for subsequent inspections.

# **Check Valve Grouping**

Valve Groups are defined as each valve in a group having the following identical characteristics:

- a. Unit
- b. Manufacturer
- c. Size
- d. Model number
- e. Material of construction
- f. Service conditions (i.e. process fluid, temperature, pressure, flow, etc.)

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# **TECHNICAL APPROACH & POSITION NUMBER TV-00C**

(Page 3 of 3)

# **POSITION** (cont.)

# **Disassembly/Inspection (Exercising)**

Upon valve disassembly, a visual inspection of the valve internals is performed to ensure that all parts are intact and structurally sound (no loose or corroded parts).

During the visual inspection, the valve disk is manually exercised to ensure the valve is capable of full-stroking.

## **Corrective Actions**

If the disassembled valve's full stroke capability is in question, the remaining valves in that group will be disassembled, inspected and full-stroke exercised during the same refueling outage.

If any valve fails to exhibit full stroke capability, the valve shall be repaired or replaced in accordance with the corrective actions of IWV-3427(a).

#### **TECHNICAL APPROACH & POSITION NUMBER TV-02A**

(Page 1 of 1)

# **DESCRIPTION**

The Main Steam Isolation Valve (MSIV) Accumulator check valves will not be exercised quarterly or during cold shutdowns.

				P&ID/	
VALVE	<u>SIZE</u>	<u>CAT</u>	<u>CLASS</u>	CORD	FUNCTION
2-0220-84A	0.5"	С	SR	M-12-1/3F	MSIV Accumulator Check
2-0220-84B	0.5"	С	SR	M-12-1/3F	MSIV Accumulator Check
2-0220-84C	0.5"	С	SR	M-12-1/3F	MSIV Accumulator Check
2-0220-84D	0.5"	C	SR	M-12-2/3F	MSIV Accumulator Check
2-0220-85A	0.5"	С	SR	M-12-2/3F	MSIV Accumulator Check
2-2200-85B	0.5"	С	SR	M-12-2/7F	MSIV Accumulator Check
2-2200-85C	0.5"	С	SR	M-12-2/3F	MSIV Accumulator Check
2-2200-85D	0.5"	С	SR	M-12-2/7F	MSIV Accumulator Check
3-0220-84A	0.5"	С	SR	M-345-1/3F	MSIV Accumulator Check
3-0220-84B	0.5"	С	SR	M-345-1/3F	MSIV Accumulator Check
3-0220-84C	0.5"	С	SR	M-345-1/3F	MSIV Accumulator Check
3-0220-84D	0.5"	С	SR	M-345-1/3F	MSIV Accumulator Check
3-0220-85A	0.5"	С	SR	M-345-2/7F	MSIV Accumulator Check
3-0220-85B	0.5"	С	SR	M-345-2/7F	MSIV Accumulator Check
3-0220-85C	0.5"	С	SR	M-345-2/7F	MSIV Accumulator Check
3-0220-85D	0.5"	С	SR	M-345-2/7F	MSIV Accumulator Check

#### DISCUSSION

Verifying closure of these valves during power operation or cold shutdown requires deinerting and entering the drywell and X-area to perform the appropriate leak rate tests. The average dose rates for these areas is considered to be extremely high. Additionally, to perform the necessary leak test, an extensive amount of accumulator piping must be disassembled to isolate the check valves. This extensive maintenance will delay unit startup if the unit is in cold shutdown. This test is impractical to perform during normal operation or cold shutdown due to the dose considerations and the burden of disassembling the MSIV accumulator piping.

#### POSITION

These valves will be exercised closed each reactor refueling.

# **TECHNICAL APPROACH & POSITION NUMBER TV-03A**

(Page 1 of 2)

#### **DESCRIPTION**

The Control Rod Drive Backup Scram and Scram Dump Valves will not be exercised or timed quarterly or during cold shutdown periods.

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ CORD	FUNCTION
2-0302-19A	0.5"	Α	SR	M34/7E	CRD Backup Scram Valve
2-0302-19B	0.5"	Α	SR <sup>r</sup>	M34/7E	CRD Backup Scram Valve
2-0301-122	0.5"	С	SR	M34/7E	CRD Backup Scram Bypass
2-0302-20A	0.5"	Α	SR	M34/8E	CRD Scram Dump Valve
2-0302-20B	0.5"	Α	SR	M34/8E	CRD Scram Dump Valve
3-0302-19A	0.5"	Α	SR	M365/7E	CRD Backup Scram Valve
3-0302-19B	0.5"	Α	SR	M365/7E	CRD Backup Scram Valve
3-0301-122	0.5"	C	SR	M365/7E	CRD Backup Scram Bypass
3-0302-20A	0.5"	Α	SR	M365/8E	CRD Scram Dump Valve
3-0302-20B	0.5"	Α	SR	M365/8E	CRD Scram Dump Valve

# DISCUSSION

To exercise these valves requires inserting all of the control rod drives. This is not considered practical during normal operation.

Since all control rods are fully inserted during cold shutdowns, exercising these valves during cold shutdowns could damage the CRD seals by trying to force the control rod further in. The only way to prevent damaging the CRD seals is by draining the water side of each accumulator. To drain the accumulators requires opening 177 manual drain valves, waiting for the water to stop flowing out, and then closing the valve. This operation also requires independent verification by another operator and would be labor intensive during cold shutdowns and could delay the unit startup. Radiation levels at the manual drain valves are significantly high and result in a relatively large dose to the operators.

Approximately 1200 gallons of water would be discharged to radwaste when the accumulators are drained. This is approximately 10% of the radwaste capacity and therefore the potential to overload the radwaste system exists.

These 0.5" valves operate too rapidly and there is no position indication for any practical timing measurements. The backup scram and scram dump valves operate to vent instrument air from the scram valves and the scram discharge volume vent and drain valves. Valves 0302-19A and 0302-19B are in series and each shift to vent air. Check valve, 0301-122, bypasses 0302-19A to provide flow to 0302-19B. The series of valves provide multiple vent paths. Valve 0302-20B and 0302-20A are in series. Valve 0302-20B shifts to provide flow to 0302-20A.

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#### **TECHNICAL APPROACH & POSITION NUMBER TV-03A**

(Page 2 of 2)

#### **DISCUSSION**(cont.)

Valves 0302-19A and 0302-19B vent directly to atmosphere, and air flow can be verified to exit through both ports. Flow through 0302-19B and 0301-122 cannot be independently quantified. Flow only vents from 0302-20A if both 0302-20A and 0302-20B shift. Additional system manipulations are not necessary to verify that all valves stroke.

# **POSITION**

These valves will be exercised, without timing, and proper venting will be verified during reactor refuel outages. The time to depressurize the scram air header from 75 psig to 10 psig or under will be measured and verified to be under 15 seconds.

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# **TECHNICAL APPROACH & POSITION NUMBER TV-03B**

(Page 1 of 1)

## **DESCRIPTION**

These valves will be exercised in accordance with Technical Specifications.

VALVE	SIZE	CAT	<u>CLASS</u>	P&ID/ <u>CORD</u>	FUNCTION
2-0305-117	0.5"	B	SR	34/0D	CRD Scram Pilot Valve
2-0305-118	0.5"	B	SR	34/0D	CRD Scram Pilot Valve
3-0305-117	0.5"	B	SR	365/0D	CRD Scram Pilot Valve
3-0305-118	0.5"	B	SR	365/0D	CRD Scram Pilot Valve

#### **DISCUSSION**

To exercise these valves requires scramming the individual CRD's.

The proper operation of each of the valves is demonstrated by the Technical Specification required scram testing. To exercise these valves more than the current Technical Specification requirements is not practical.

These valves are exercised and each individual control rod drive scram insertion is timed and must meet specific time increments as stated in the Technical Specifications. This individual rod timing ensures that the valves function properly.

# **POSITION**

Individual scram insertion times and subsequent valve exercising will be performed per the Technical Specification requirements.

# **TECHNICAL APPROACH & POSITION NUMBER TV-03C**

(Page 1 of 2)

#### **DESCRIPTION**

The Alternate Rod Insertion/Anticipated Transient Without Scram (ARI/ATWS) Air Header Bleed Off valves quarterly or during cold shutdown periods will not be exercised or timed quarterly or during cold shutdowns.

				P&ID/	
VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	CORD	FUNCTION
2-0399-524A	0.5"	Α	SR	M34/8D	ARI/ATWS Air Header Bleed Off
2-0399-524B	0.5"	Α	SR	M34/8D	ARI/ATWS Air Header Bleed Off
2-0399-525	0.5"	С	SR	M34/8D	ARI/ATWS Air Header Bleed Off
					Bypass
2-0399-548A	0.5"	Α	SR	M34/9C	ARI/ATWS Air Header Bleed Off
2-0399-548B	0.5"	Α	SR	M34/9C	ARI/ATWS Air Header Bleed Off
2-0399-549A	0.5"	Α	SR	M34/8E	ARI/ATWS Air Header Bleed Off
2-0399-549B	0.5"	Α	SR	M34/8E	ARI/ATWS Air Header Bleed Off
3-0399-524A	0.5"	Α	SR	M365/8D	ARI/ATWS Air Header Bleed Off
3-0399-524B	0.5"	Α	SR	M365/8D	ARI/ATWS Air Header Bleed Off
3-0399-525	0.5"	С	SR	M365/8D	ARI/ATWS Air Header Bleed Off
					Bypass
3-0399-548A	0.5"	Α	SR	M365/9C	ARI/ATWS Air Header Bleed Off
3-0399-548B	0.5"	Α	SR	M365/9C	ARI/ATWS Air Header Bleed Off
3-0399-549A	0.5"	Α	SR	M365/8E	ARI/ATWS Air Header Bleed Off
3-0399-549B	0.5"	Α	SR	M365/8E	ARI/ATWS Air Header Bleed Off

#### DISCUSSION

These solenoid operated valves provide an alternate method of relieving the CRD scram air header pressure so as to provide CRD insertion.

To exercise these valves requires inserting all of the control rod drives. This is not considered practical during normal operation.

Since all control rods are fully inserted during cold shutdowns, exercising these valves during cold shutdowns could damage the CRD seals by trying to force the control rod further in. The only way to prevent damaging the CRD seals is by draining the water side of each accumulator. To drain the accumulators requires opening 177 manual drain valves, waiting for the water to stop flowing out, and then closing the valve. This operation also requires independent verification by another operator and would be labor intensive during cold shutdowns and could delay the unit startup. Radiation levels at the manual drain valves are up to 2 Rem at 6 inches, which results in a relatively large dose to the operators.

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#### **TECHNICAL APPROACH & POSITION NUMBER TV-03C**

(Page 2 of 2)

#### **DISCUSSION**(cont.)

Approximately 1200 gallons of water would be discharge to radwaste when the accumulators are drained. This is approximately 10% of the radwaste capacity and therefore the potential to overload the radwaste system exists.

These 0.5" values operate too rapidly and there is no position indication for any practical timing measurements. Check value, 0399-525, bypasses 0399-524A to provide flow to 0399-524B. Values 0399-524A and 0399-524B vent directly to atmosphere, and air flow can be verified to exit through both ports. Flow through 0399-524B and 0399-525 cannot be independently quantified.

#### **POSITION**

These valves will be exercised, without timing, and proper venting will be verified during reactor refuel outages. The time to depressurize the scram air header from 75 psig to 10 psig or under will be measured and verified to be under 15 seconds.

#### **TECHNICAL APPROACH & POSITION NUMBER TV-19A**

(Page 1 of 1)

#### **DESCRIPTION**

The full flow through the independent discharge paths into the fuel pool will not be measured. In addition, shifting of the operating pumps will not be performed solely for the collection of IST data.

VALVE SIZE CAT CLASS CORD FUNCT	ION
2-1901-16A 6.0" C NSR M31/6A Fuel Pool Cool	ing Return
2-1901-16B 6.0" C NSR M31/6A Fuel Pool Cool	ing Return
2-1901-27A 6.0" C NSR M31/3E Fuel Pool Cool	ing Pump Discharge
2-1901-27B 6.0" C NSR M31/3F Fuel Pool Cool	ing Pump Discharge
2-1901-55 6.0" C NSR M31/10C Fuel Pool Filte	r Return
3-1901-16A 6.0" C NSR M362/5B Fuel Pool Cool	ing Return
3-1901-16B 6.0" C NSR M362/5B Fuel Pool Cool	ing Return
3-1901-27A 6.0" C NSR M362/3E Fuel Pool Cool	ing Pump Discharge
3-1901-27B 6.0" C NSR M362/3F Fuel Pool Cool	ing Pump Discharge
3-1901-55 6.0" C NSR M362/10D Fuel Pool Filte	r Return

#### DISCUSSION

The fuel pool cooling system is in continuous operation and is monitored by operations personnel. Shifting pumps to test idle check valves causes unnecessary transients on the system including loss of the filter precoats, with no corresponding increase in the level of safety due to additional testing. The return system branches into two separate discharge paths when entering the pool. These independent branch lines are not equipped with any means of measuring flow.

#### **POSITION**

The fuel pool cooling filter d/p, system flow rate, and pool temperature will be monitored by plant operating personnel department.

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# **TECHNICAL APPROACH & POSITION NUMBER TV-23B**

(Page 1 of 1)

# **DESCRIPTION**

The High Pressure Coolant Injection (HPCI) turbine exhaust vacuum breakers will not be tested individually and will not be partial or full stoke exercised quarterly or at cold shutdown.

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ <u>CORD</u>	FUNCTION
2-2399-77A	1.0"	C	SR	M51/8D	HPCI Vacuum Breaker
2-2399-77B	1.0"	C	SR	M51/8D	HPCI Vacuum Breaker
3-2399-77A	1.0"	C	SR	M374/8D	HPCI Vacuum Breaker
3-2399-77B	1.0"	C	SR	M374/8D	HPCI Vacuum Breaker

# **DISCUSSION**

The vacuum breaker assembly consists of two parallel trains of two check valves in series. The trains are cross connected between the series check valves. Test connections and isolations are not available to individually test each of the four valves, or individual trains. Because normal system instrumentation does not exist to verify operability of the valve assembly, the torus must be entered to conduct functional testing.

This testing is impractical during power operations since the torus is inaccessible because it is inerted and at a negative pressure. This testing would require the violation of Primary Containment to enter.

Functional testing of these valves during cold shutdowns is extremely burdensome because entering the torus requires removal of the 4.0 ft. diameter manway cover. Once the cover is replaced, a local leak rate test must be performed to verify the primary containment boundary. This added maintenance and testing burden would invariably delay unit startup.

#### POSITION

This set of valves will be functionally tested open and closed each refueling outage. When functional testing indicates that the operability of the valve assembly is questionable, all valves in the assembly will be repaired or replaced.

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# TECHNICAL APPROACH & POSITION NUMBER TV-47A (Page 1 of 1)

#### **DESCRIPTION**

The Traversing In-core Probe (TIP) containment isolation valves will not be exercised quarterly or during cold shutdowns.

## **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ <u>CORD</u>	FUNCTIO	ON
2-4799-514	0.5	AC	SR	37-2/4F	TIP Nitrogen I Isolation	Purge Containment
3-4799-514	0.5	AC.	SR	367-2/4F	TIP Nitrogen I Isolation	Purge Containment

#### DISCUSSION

This valve is normally open and required to close for containment isolation. It is required to be open during operation to maintain a constant Nitrogen purge. To verify closure would require securing the system, disassembling the process line and back pressurizing with air. This test is impractical to perform during normal operation or cold shutdowns because primary containment would be violated and additionally, disassembling the piping during cold shutdowns could delay the Unit startup.

#### POSITION

This valve will be exercised closed each reactor refueling outage.
#### TECHNICAL APPROACH & POSITION NUMBER TV-52A (Page 1 of 1)

#### **DESCRIPTION**

The Unit 3 Diesel Fuel Oil Transfer solenoid valve will not be timed.

VALVE	SIZE	CAT	<u>CLASS</u>	P&ID/ <u>CORD</u>	FUNCTION
3-5202C-500	1.5	В	SR (	41-2/5C	D/G Fuel Oil Transfer Pump to Day
DISCUSSIO	N				<b>1</b> 21

This valve is solenoid operated and has no external means of position indication to facilitate timing. The valve is directly in line for filling the Emergency Diesel Generator Day Tank, and is operated by a level switch. Audible detection of valve movement can be difficult and inconsistent because of the noise of the Diesel Generator. Filling the day tank during a normal Emergency Diesel Generator Surveillances verifies the valve opens.

#### **POSITION**

This valve will be verified open during normal Emergency Diesel Generator Surveillances.

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# TECHNICAL APPROACH & POSITION NUMBER TV-66A

(Page 1 of 1)

#### **DESCRIPTION**

The Diesel Air Start Solenoid valves will not be timed.

VALVE	<u>SIZE</u>	CAT	<u>CLASS</u>	P&ID/ <u>CORD</u>	FUNCTION
2-6699-103	3/8"	B	SR	173/0A	Diesel Air Start Solenoid
2-6699-105	3/8"	B	SR	173/0A	Diesel Air Start Relay
2/3-6699-103	3/8"	B	SR	173/0A	Diesel Air Start Solenoid
2/3-6699-105	3/8"	B	SR	173/0A	Diesel Air Start Relay
3-6699-103	3/8"	B	SR	173/0A	Diesel Air Start Solenoid
3-6699-105	3/8"	B	SR	173/0A	Diesel Air Start Relay

#### **DISCUSSION**

These solenoid valves and relays must open to allow air to be admitted to the diesel generator air start motors. This causes the diesel engine pinion gear to engage the motor. After the diesel reaches a speed of 200 rpm, the solenoid valves close to disengage the air start motors.

Since the valves full stroke open and closed in less than 1 second and are not equipped with position indicators, the valves cannot be accurately timed.

During monthly diesel surveillance testing, the acceptance criteria for diesel start time is 15 seconds. If the diesel does not start in 15 seconds, the "Fail to Start" alarm will come in and the cause will be investigated.

These 0.375" valves operate too rapidly and there is no positive indication for any practical timing measurements. Their operational readiness and safety-related function are verified during the monthly diesel generated surveillances. Additional timing is considered impractical.

#### **POSITION**

These valves will be verified operable by verifying that the diesel generator meets the start time limits set forth in the monthly surveillance.

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# COLD SHUTDOWN JUSTIFICATION INDEX/SUMMARIES

Cold Shutdown Just.	Page(s)	Rev.	Date	Summary
CS-00A	18-1	0	03/92	CS & LPCI Injection Check Valves Reactor pressure is too high during operations to exercise these valves.
CS-00B	NA	3	08/95	Deleted.
CS-02A	18-2	0	03/92	<b>Recirc Pump Discharge Valves</b> Load drops during operations would be required to stroke the valves.
CS-02B	18-3	0	03/92	MSIV's Air lines to the valves must be disconnected in order to perform fail safe testing.
CS-02C	18-4	3	08/95	Main Steam Relief Valve Discharge Piping Vacuum Breakers Require entry into Primary Containment in order to manually exercise these valves.
CS-03A	18-5	0	03/92	CRD Accumulator Charging Water Check Valve To verify closure requires securing the CRD pump which could damage the recirc pump mechanical seals.
CS-10A	18-6	0	03/92	SDC Inlet/Outlet Valves SDC is isolated over 350°F.
CS-15A	NA	3	08/95	Deleted.
CS-16A	18-7	0	03/92	<b>Torus Vent Isolation Valves</b> Repositioning valves during operation would render system inoperable.
CS-23A	18-8	3	08/95	HPCI Injection Check Valves Operation at elevated temperature causes excessive thermal shock.
CS-37A	18-9	0	03/92	<b>RBCCW Containment Isolation Valves</b> Both recirc pumps need to be secured prior to exercising these valves closed.
CS-47A	18-10	0	03/92	<b>Instrument Air Containment Isolation Valves</b> Closing these valves could cause the MSIV's close.

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# COLD SHUTDOWN JUSTIFICATION NUMBER CS-00A

(Page 1 of 1)

# **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	SIZE	CAT	CLASS	P&ID/ CORD	FUNCTION
	101	10		07/00	
2-1402 <b>-</b> 9A	10"	AC	1	27/3C	Core Spray Injection Check
2-1402-9B	10"	AC	1	27/4C	Core Spray Injection Check
2-1501-25A	14"	AC	1	29-1/5B	LPCI Injection Check
2-1501-25B	14"	AC	1	29-1/4B	LPCI Injection Check
3-1402-9A	10"	AC	1	358/3C	Core Spray Injection Check
3-1402-9B	10"	AC	1	358/4C	Core Spray Injection Check
3-1501-25A	14"	AC	1	360-1/4B	LPCI Injection Check
3-1501-25B	14"	AC	1	360-1/4B	LPCI Injection Check

## **JUSTIFICATION**

Core Spray and LPCI are both low pressure systems. During normal plant operation, reactor pressure is too high for these systems to be able to inject into the reactor.

Therefore, these valves will be exercised during cold shutdown.

#### **COLD SHUTDOWN JUSTIFICATION NUMBER CS-02A**

(Page 1 of 1)

### **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	SIZE	CAT	CLASS	P&ID/ CORD	FUNCTION
2-0202-5A	28"	B	1	26-2/6D	Recirc Pump Discharge Valve
2-0202-5B	28"	B	1	26-2/3C	Recirc Pump Discharge Valve
3-0202-5A	28"	B	1	357-2/6D	Recirc Pump Discharge Valve
3-0202-5B	28"	B	1	357-2/3D	Recirc Pump Discharge Valve

#### **JUSTIFICATION**

For Unit 2, the discharge valves cannot be full stroke tested during reactor operation because it would require a load drop (of approximately 400 megawatts) to a minimum recirculation pump speed of 28%. This is deemed impractical.

For Unit 3, the discharge valves cannot be full stroke tested during reactor operation because it would require a load drop to a minimum recirculation pump speed of 28% and insertion of control rods to achieve less than 80% Flow Control Line. The closure logic for these valves would result in the recirculation pump trip and would place the plant in an unwanted system/power transient, in a Technical Specifications LCO, and in an un-analyzed condition for the reactor recirculation piping.

The potential of operating in the prohibited region of the power flow map [above 80% Flow Control Line (FCL), below 39% core flow] exists when one (1) recirculation pump is shut down. The low flow/high power region of the operating map typically exhibits less margin to stability than other regions. Instabilities result in LPRM and APRM Oscillations significantly greater than normal noise levels.

To place the plant in this potential condition is deemed impractical.

Therefore, these valves will be full stroke tested during cold shutdown.

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#### **COLD SHUTDOWN JUSTIFICATION NUMBER CS-02B**

(Page 1 of 1)

#### **COMPONENT IDENTIFICATION/FUNCTION**

				P&ID/	
VALVE	SIZE	CAT	CLASS	CORD	FUNCTION
2-0203-1A	20"	Α	1	12-1/4E	Main Steam Isolation Valve
2-0203-1B	20"	Α	1	12-1/4D	Main Steam Isolation Valve
2-0203-1C	20"	Α	1	12-1/4C	Main Steam Isolation Valve
2-0203-1D	20"	Α	1	12-1/4B	Main Steam Isolation Valve
2-0203-2A	20"	Α	1	12-2/7F	Main Steam Isolation Valve
2-0203-2B	20"	Α	1	12-2/7E	Main Steam Isolation Valve
2-0203-2C	20"	Α	1	12-2/7D	Main Steam Isolation Valve
2-0203-2D	20"	A	1	12-2/7C	Main Steam Isolation Valve
3-0203-1A	20"	Α	1	345-1/4E	Main Steam Isolation Valve
3-0203-1B	20"	Α	1	345-1/4D	Main Steam Isolation Valve
3-0203-1C	20"	Α	1	345-1/4C	Main Steam Isolation Valve
3-0203-1D	20"	Α	1	345-1/4B	Main Steam Isolation Valve
3-0203-2A	20"	Α	1	345-2/7F	Main Steam Isolation Valve
3-0203-2B	20"	Α	1	345-2/7E	Main Steam Isolation Valve
3-0203-2C	20"	Α	1	345-2/7D	Main Steam Isolation Valve
3-0203-2D	20"	Α	1	345-2/7C	Main Steam Isolation Valve

#### **JUSTIFICATION**

These valves are normally open and are required to close for containment isolation. They provide primary containment isolation for the main steam system. These valves are air operated open and air to close with spring assist. To completely fail-safe exercise these valves to the closed position, the air lines to the valves must be disconnected. Thus, with the loss of air, the fail-safe mechanism (springs) would be demonstrated. The resultant exercising of the MSIV's could place the plant in an unsafe mode of operation causing transient conditions which would result in a reactor scram. Furthermore, the inboard MSIVs are inaccessible during power operation.

These valves will be exercised during cold shutdown.

#### Dresden Station 3rd Interval Inservice Testing Plan

#### COLD SHUTDOWN JUSTIFICATION NUMBER CS-02C

(Page 1 of 1)

#### **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	SIZE	CAT	CLASS	P&ID/ CORD	FUNCTION
, · · · ·					
2-0220-105A	8"	С	3	25/5E	Main Steam Relief Valve Discharge
					Piping Vacuum Breakers
2-0220-105B	8"	С	3	25/5E	"
2-0220-105C	8"	С	3	25/5E	Ħ
2-0220-105D	8"	С	3	25/5E	<b>n</b> .
2-0220-105E	8"	Ċ	3	25/5E	n
3-0220-105A	8"	С	3	25/5E	Main Steam Relief Valve Discharge
					Piping Vacuum Breakers
3-0220-105B	8"	С	3	25/5E	
3-0220-105C	8"	С	3	25/5E	n
3-0220-105D	8"	Ċ	3	25/5E	, <b>H</b> ,
3-0220-105E	8"	Č	3	25/5E	na an a

#### **JUSTIFICATION**

These valves provide vacuum relief on the main steam electromatic and target rock relief valve piping to the torus. They are normally closed and are required to open on vacuum when steam, which has been blown down to the torus, is condensing.

Exercising these valves during power operations would require reducing reactor power, deinerting and entering the Drywell, and manually exercising the valves. Entering the Drywell during power operation once each quarter to exercise these valves would expose personnel to undo safety and radiation hazards.

Therefore, these valves will be exercised during cold shutdowns when the drywell is deinerted and accessible.

Also see Relief Request RV-02E.

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### **COLD SHUTDOWN JUSTIFICATION NUMBER CS-03A**

(Page 1 of 1)

#### **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	SIZE	CAT	CLASS	P&ID/ CORD	FUNCTION
2-0305-115	.5"	С	1	34/0E	CRD Accumulator Backflow Check to Charging Water Line
3-0305-115	.5" FION	С	1	365/0E	CRD Accumulator Backflow Check to Charging Water Line

In order to verify closure of these valves, the control rod drive pump would need to be secured. In doing this, the seal purge water flow to the recirculation pump seals and cooling water to the control rod drive seals would be stopped and possible damage to these seals could result. Procedures dictate that loss of CRD pumps require a manual reactor scram.

Therefore, these valves will be exercised during cold shutdowns when the charging water header can be depressurized. Monitoring individual accumulator pressure and alarms will be performed to verify that the check valves have closed on reversed flow.

#### Dresden Station 3rd Interval Inservice Testing Plan

#### **COLD SHUTDOWN JUSTIFICATION NUMBER CS-10A**

(Page 1 of 1)

#### **COMPONENT IDENTIFICATION/FUNCTION**

				P&ID/	
VALVE	SIZE	CAT	CLASS	CORD	FUNCTION
2-1001-1A	16"	Α	1	32/9B	"A" SDC Loop Inlet
2-1001-1B	16"	Α	1	32/9E	"B" SDC Loop Inlet
2-1001-2A	14"	Α	1	32/8A	"A" SDC Pump Suction
2-1001-2B	14"	Α	1	32/8C	"B" SDC Pump Suction
2-1001-2C	14"	Α	1	32/8F	"B" SDC Pump Suction
2-1001-5A	14"	Α	1	32/1E	"A" SDC Loop Outlet
2-1001-5B	14"	Α	1	32/2E	"B" SDC Loop Outlet
		•		0 ( 0 \ D	
3-1001-1A	16"	Α	l	363/9B	"A" SDC Loop Inlet
3-1001-1B	16"	Α	1	363/9E	"B" SDC Loop Inlet
3-1001-2A	14"	А·	1	363/8A	"A" SDC Pump Suction
3-1001-2B	14"	Α	1	363/8C	"B" SDC Pump Suction
3-1001-2C	14"	Α	1	363/8F	"B" SDC Pump Suction
3-1001-5A	14"	Α	1	363/1E	"A" SDC Loop Outlet
3-1001-5B	14"	Α	1	363/2E	"B" SDC Loop Outlet

#### **JUSTIFICATION**

These SDC inlet and outlet isolation valves are normally closed during operations and open when the SDC system is being used during shutdowns. They are required to close for containment isolation.

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Since the primary function of the SDC system is to cool the reactor water from 350°F to 125°F, these valves are interlocked closed when the Recirc Loop temperature exceeds 350°F and therefore cannot be exercised every 3 months.

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These valves will be exercised during cold shutdown.

#### **COLD SHUTDOWN JUSTIFICATION NUMBER CS-16A**

(Page 1 of 1)

# **COMPONENT IDENTIFICATION/FUNCTION**

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VALVE	SIZE	CAT	CLASS	P&ID/ CORD	FUNCTION
2-1601-91	18"	В	NSR	25/2B	Vent to Rx. Bldg. Exhaust System
2-1601-92	10"	В	NSR	25/2B	Vent to Main Chimney
3-1601-91	18"	В	NSR	356/2B	Vent to Rx. Bldg. Exhaust System
3-1601-92	10"	B	NSR	356/2B	Vent to Main Chimney

#### **JUSTIFICATION**

These values are part of the Hardened Vent Modification and are non-safety related. They have been added to the IST Plan in order to ensure testing on a regular basis. Since the 1601-91 value is required to close and the 1601-92 is required to open during system operation, logic testing will be performed for these two values during reactor refuel outages. These values will be exercised and timed during Cold Shutdowns.

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#### Dresden Station 3rd Interval Inservice Testing Plan

# **COLD SHUTDOWN JUSTIFICATION NUMBER CS-23A**

(Page 1 of 1)

#### **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	SIZE	CAT	CLASS	P&ID/ CORD	FUNCTION
2-2301-7	14.0"	С	2	M51/6E	HPCI Injection Check
3-2301-7	14.0"	С	2	M374/6E	HPCI Injection Check

# JUSTIFICATION

To full stroke exercise these values open quarterly requires injecting approximately 5,000 gpm of condensate storage tank water at 70°F into the reactor vessel at 540°F. This type of test is impractical because repeating this test will eventually fatigue and crack the injection nozzles due to the induced thermal shock. In addition to the nozzle cracking concerns, a cold water transient in the vessel will cause a reactor trip.

The 2301-7 valve will be full stroke exercised open during cold shutdowns and the torque measured as required by IWV-3522.

# **COLD SHUTDOWN JUSTIFICATION NUMBER CS-37A**

(Page 1 of 1)

#### **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	SIZE	CAT	CLASS	P&ID/ CORD	FUNCTION
2-3702	6"	A	2	20/3B	Reactor Building Closed Cooling Water Containment Isolation
2-3703	6"	Α	2	20/1B	11
2-3706	6"	Α	2	20/1B	11
3-3702	6"	Α	2	353/3B	Reactor Building Closed Cooling Water Containment Isolation
3-3703	6"	Α	2	353/1B	n
3-3706	6"	Α	2	353/1B	

## **JUSTIFICATION**

These valves are normally open and are required to close for containment isolation. They provide primary containment isolation for the reactor building cooling water system. To exercise these valves to the closed position would require both recirculation pumps to be out of service because the recirculation pumps require RBCCW cooling water for the pump seal and lube oil coolers in order to remain operable. This action is considered impractical during normal operation.

These valves will be exercised during cold shutdowns.

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# **COLD SHUTDOWN JUSTIFICATION NUMBER CS-47A**

(Page 1 of 1)

# **COMPONENT IDENTIFICATION/FUNCTION**

VALVE	SIZE	CAT	CLASS	P&ID/ CORD	FUNCTION
2-4722	1"	Α	SR	37-2/2E	Instrument Air Containment Isolation (drywell pneumatic)
3-4722	1"	Α	SR	367-2/7C	Instrument Air Containment Isolation (drywell pneumatic)

#### **JUSTIFICATION**

The 2(3)-4722 valves provide the containment isolation function for the drywell instrument air system which supplies various fail-safe valves, including the Main Steam Isolation Valves (MSIV's). Exercising and fail-safe testing of the 2(3)-4722 valves during reactor operation could cause the instrument air system to bleed down should the 2(3)-4722 fail closed. Without air to hold open the MSIV's, the MSIV's would be exercised to their fail-safe position (closed). Closure of the MSIV's during reactor operation would cause transient conditions which would result in a reactor scram and loss of the reactor's primary heat sink.

Therefore, these valves will be exercised and fail-safe tested during cold shutdown periods.

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#### ATTACHMENT 4

#### Process Used to Develop Dresden's IST Plan

This attachment is provided in response to the NRC's Request for Additional Information (cover letter Reference (e)) on the developmental process used in preparing the Dresden IST Plan.

- 1. The following list contains the documents used in developing the IST Plan:
  - a. Technical Specifications
  - b. Final Safety Analysis Report
  - c. Piping and Instrument Diagrams (P&IDs)
  - d. Master Equipment List (MEL)
  - e. Generic Letter 89-04
  - f. SERs from past IST Programs
- 2. For determining if a component should be in the IST Program, Section XI of the 1986 Edition of the ASME Code and ANSI/ASME OMa-1988 PART 6 were consulted. Subsection IWV-1000 and Section 1 from ANSI/ASME OMa-1988 PART 6 provide the methodology for selecting pumps and valves. These subsections specify testing the ASME Class 1, 2, and 3 pumps and valves that are required to perform a specific function in shutting down a reactor or in mitigating the consequences of an accident. Additionally, the pumps also have to be powered by an emergency power source. Since Dresden Units 2 and 3 were built prior to the establishment of ASME Class 1, 2, or 3 components, the system classifications for the Inservice Testing Program were based on the requirements set forth in 10 CFR 50 and Regulatory Guide 1.26.

Additionally, safety-related pumps and valves are included in the IST Plan. These pumps and valves were put in the IST Plan in anticipation of the issuance of Generic Letter 89-04. In addition to safety-related pumps and valves, some non-safety related pumps and valves have been included in the IST Plan per the NRC's request (i.e. Fuel Pool Cooling).

- 3. The basis for testing required by the IST Plan can be found in the 1986 Edition of the ASME Code, Section XI, Subsection IWV-3000, Test Requirements, and ANSI/ASME OMa-1988 PART 6, Section 4, Testing Requirements.
- 4. The basis for categorizing valves can be found in IWV-2100, Categories of Valves.
  - a. Category A valves are valves for which seat leakage is limited to a specific maximum amount in the closed position for fulfillment of their function. These include all Appendix J an Pressure Isolation Valves.
  - b. Category B valves are valves for which seat leakage in the closed position is inconsequential for fulfillment of their function.
  - c. Category C valves include all safety, relief, and check valves.
  - d. Category D valves include all explosively actuated valves and rupture disks.
- 5. In order to keep the IST Plan current, the IST Coordinator review and signs all modifications. This is coordinated by Dresden Administrative Procedure (DAP) 5-1, Plant Modification Program.