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 RECIP. NAME RECIPIENT AFFILIATION
 MURLEY, T.E. Document Control Branch (Document Control Desk)

SUBJECT: Forwards revs to Inservice Testing Program which resulted from review of valves not assigned backflow checking safety function. Review performed in response to concerns raised during ESW Safety Sys Functional insp.

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AEP:NRC:0969U

Donald C. Cook Nuclear Plant Units 1 and 2
Docket Nos. DPR-58 and DPR-74
License Nos. 50-315 and 50-316
IST PROGRAM REVISION/CHECK VALVE
REVERSE FLOW

U.S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D.C. 20555

Attn: T. E. Murley

November 5, 1991

Dear Dr. Murley:

References:

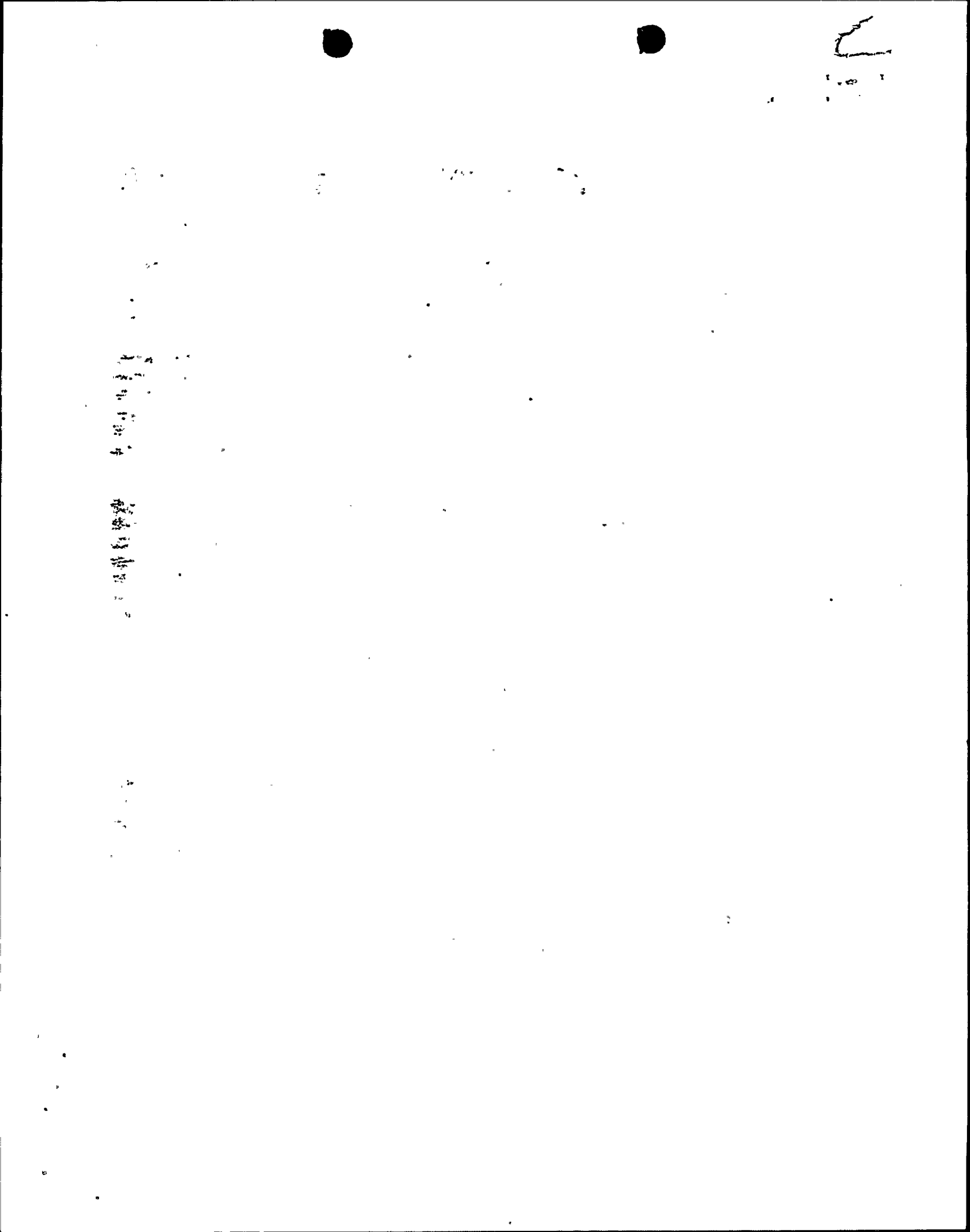
- 1) Letter AEP:NRC:0969S, E. E. Fitzpatrick to T. E. Murley, "IST Program Revision/Check Valve Reverse Flow," dated April 9, 1991
- 2) Letter AEP:NRC:1125H, M. P. Alexich to A. B. Davis, "Inspection Reports 50-315/90201 (DRS) and 50-316/90101 (DRS)," dated December 7, 1990

This letter transmits a revision to the In-service Testing Program for the Donald C. Cook Nuclear Plant. These changes result from our review of those valves that were not assigned a backflow checking safety function. This review was performed in response to concerns raised during the Essential Service Water Safety System Functional Inspection (References 1 and 2). The review was completed October 23, 1991, and additional check valves that have a closed safety function were identified. This letter transmits the results of the review.

A list of these additional valves and a summary of the IST valve program changes are contained in Attachment 1. The revised pages to the IST valve program are contained in Attachment 2.

The additions to the IST program will be made during the first post-outage three-month interval following the 1992 refueling outages for both units. This time is required to avoid diverting

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resources required to plan and perform outage-related activities, and to allow time to revise the applicable procedures.

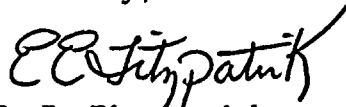
Additionally, eight check valves (four in each unit) have been identified as candidates for inclusion as valves having a closed safety function. The closed position of these valves, which are listed in Attachment 1, is, however, difficult to test because of the system configuration and the absence of instrumentation. For these valves, further evaluation is required. This evaluation includes investigation of design alternatives and further development of test methodology and acceptance criteria. Testing methods that are currently being considered for these valves included radiography, ultrasonic examination, and acoustic flow measurement. The tests or examinations necessary to verify the closed position of these valves will be incorporated into the IST Valve Program prior to the 1993 refueling outages should this be necessary.

All of the valves listed in Attachment 1 are contained in the Check Valve Program developed in response to INPO SOER 86-03 (Check Valve Failure or Degradation). As part of this program, these valves have been previously screened and reviewed for significant maintenance trends and potential misapplication (type, size, and installation). The SOER 86-03 activities, in combination with the current IST testing requirements associated with these valves, provide a reasonable mechanism to detect check valve failures and prevent occurrence of a substantial safety hazard until the procedures are revised and closed position testing commences under the IST Valve Program.

This letter has been reviewed by the Plant Nuclear Safety Review Committee.

This document has been prepared following Corporate procedures that incorporate a reasonable set of controls to ensure its accuracy and completeness prior to signature by the undersigned.

Sincerely,



E. E. Fitzpatrick
Vice President

dfw

Attachments

Dr. T. E. Murley

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AEP:NRC:0969U

cc: D. H. Williams, Jr.
A. A. Blind - Bridgman
J. R. Padgett
G. Charnoff
A. B. Davis - Region III
NFEM Section Chief
NRC Resident Inspector - Bridgman

ATTACHMENT 1 TO AEP:NRC:0969U
SUMMARY OF IST VALVE PROGRAM CHANGES

The following check valves have been assigned a closed safety function:

1/2-5135A	1/2-CCW-176E*,W* 12-CCW-170
1/2-5144	1/2-CTS-127E,W 1/2-CTS-131E,W 1/2-RH-141 1/2-RH-142
1-5151B	1-DG-127A 1-DG-129A 1-DG-151A* 1-DG-153A
1-5151C	1-DF-108C* 1-DF-109C* 1-DF-114C* 1-DF-115C*
1-5151D	1-DG-127C 1-DG-129C 1-DG-151C 1-DG-153C*
12-5131	1-CS-415-1 1-CS-415-2 2-CS-415-3 2-CS-415-4
2-5151A	2-DF-108A* 2-DF-109A* 2-DF-114A* 2-DF-115A*
2-5151B	2-DG-128A 2-DG-130A 2-DG-152A* 2-DG-154A
2-5151D	2-DG-128C 2-DG-130C 2-DG-152C 2-DG-154C

*These valves have either been inspected under the SOER 86-03 Program or will be inspected during 1992.

In adding a closed position safety function, it was necessary to revise a Code Relief and add two program notes. The following list indicates the notes which have changed, and briefly summarizes the content of the change:

1/2-5144 Notes 3, 4, and 5: Revised to additionally indicate that the previously approved relief (disassembly and inspection at refueling frequency on a sampling basis) is considered to demonstrate the valve's ability to perform both the active open and active closed safety functions.

1-5151C and 2-5151A Note 3: Added comment regarding testing of closed position safety function.

1/2-5151B,D Note 5: Added comment regarding testing of closed position safety function.

The following valves require further evaluation:

<u>Flow Diagram</u>	<u>Valve Tag</u>
1/2-5129	1/2-SI-185
1/2-5142	1/2-SI-101
1-5151A	1-DL-115A
1-5151C	1-DL-115C
2-5151A	2-DL-116A
2-5151C	2-DL-116C



ATTACHMENT 2 TO AEP:NRC:0969U

REVISED IST VALVE PROGRAM SUMMARY SHEETS

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5144-28

Revision No: 3B

Date: 9-30-91

- NOTE 1: CTS-138E & W (Code Relief): These check valves are located in the lines which supply water from the RWST to the containment spray pumps. The valves cannot be full stroke exercised during power operation, cold shutdown or refueling without spraying the containment. The valves are part stroke exercised during containment spray pump testing on a quarterly basis. The only practical method available to verify full stroke of these valves is by disassembly. These valves are not equipped with position indicators. The valves will be disassembled, manually full stroke exercised and visually examined on a sampling basis (one of two) per GL-89-04, Attachment 1, Item #2, once every other refueling frequency.
- NOTE 2: CTS-103 E & W (Code Relief): These check valves are located in the discharge lines of containment spray pumps to the spray ring headers in the containment. These valves cannot be full stroke exercised during power operation, cold shutdown or refueling without spraying the containment. The valves are part stroke exercised during containment spray pump testing on a quarterly basis. The only practical method available to verify full stroke of these valves is by disassembly. The valves are not equipped with position indicators. The valves will be disassembled, manually full stroke exercised and visually examined on a sampling basis (one of two) per GL-89-04, Attachment 1, Item #2, once every other refueling frequency.

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5144-28

Revision No: 3B

Date: 9-30-91

NOTE 3: CTS-131E & W (Code Relief): These check valves are located in the supply lines to the (upper compartment) containment spray ring headers. These valves are in the closed position during normal plant operation. These valves perform an open safety function when containment spray is active (pass flow to the ring headers) and a subsequent closed safety function (containment isolation) if containment spray is suspended. The valves are exposed to containment atmosphere on the downstream side and are isolated from fluid pressure in the upstream side by the closed motor operated valves. The valves cannot be part or full stroke exercised during power operation, cold shutdown or refueling because flow through these valves would result in spraying the containment. This could cause problems with wet lagging, corrosion of components inside containment, etc. The only practical method available to exercise these valves is by disassembly. The valves are not equipped with position indicators. The valves will be disassembled, manually full stroke exercised and visually examined on a sampling basis (one of two) per GL-89-04, Attachment 1, Item #2, once every other refueling frequency. Disassembly, manual exercising and visual examination assure that the valves are capable of performing both the active open and active closed safety function.

NOTE 4: CTS-127E & W (Code Relief): These check valves are located in the supply lines to the (lower compartment) containment spray ring headers. These valves are in the closed position during normal plant operation. These valves perform an open safety function when containment spray is active (pass flow to the ring headers) and a subsequent closed safety function (containment isolation) if containment spray is suspended. The valves are exposed to containment atmosphere on the downstream side and are isolated from fluid pressure in the upstream side by the closed motor operated

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5144-28

Revision No: 3B

Date: 9-30-91

Note 4 (continued).

valves. The valves cannot be part or full stroke exercised during power operation, cold shutdown or refueling because flow through these valves would result in spraying the containment. This could cause problems with wet lagging, corrosion of components inside containment, etc. The only practical method available to exercise these valves is by disassembly. The valves are not equipped with position indicators. The valves will be disassembled, manually full stroke exercised and visually examined on a sampling basis (one of two) per GL-89-04, Attachment 1, Item #2, once every other refueling frequency. Disassembly, manual exercising and visual examination assure that the valves are capable of performing both the active open and active closed safety function.

NOTE 5: RH-141 & -142 (Code Relief): These check valves are located in the supply lines to the (upper compartment) containment spray ring headers from the RHR Heat Exchangers. These valves are in the closed position during normal plant operation. These valves perform an open safety function when containment spray is active (pass flow to the ring headers) and a subsequent closed safety function (containment isolation) if containment spray is suspended. The valves are exposed to containment atmosphere on the downstream side and are isolated from fluid pressure in the upstream side by the closed motor operated valves. The valves cannot be part or full stroke exercised during power operation, cold shutdown or refueling because flow through these valves would result in spraying the containment. This could cause problems with wet lagging, corrosion of components inside containment, etc. The only practical method available to exercise these valves is by disassembly. The valves are not equipped with position indicators. The valves will be disassembled, manually full stroke exercised and

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5144-28

Revision No: 3B

Date: 9-30-91

Note 5 (continued)

visually examined on a sampling basis (one of two) per GL-89-04, Attachment 1, Item #2, once every other refueling frequency. Disassembly, manual exercising and visual examination assure that the valves are capable of performing both the active open and active closed safety function.

NOTE 6: CTS-109 and -110 (Cold Shutdown Justification): These check valves function as vacuum breakers for spray additive tank. The check valves are closed during normal plant operation to maintain the tank pressurized. The valves will be verified closed quarterly during power operation and will be verified open at cold shutdown frequency.

NOTE 7: CTS-127E&W, CTS-131E&W, RH-141,-142 (Code Relief): These valves are to be seat leakage tested in accordance with the unique testing methods established in the FSAR because of the configuration at D.C. Cook Plant. The permissible seat leakage values of these valves are listed in Attachment "A".

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5151B-28

Revision No: 3B

Date: 9-30-91

NOTE 1: DG-101A, -103A, -127A, 129A, -145A, -151A and -153A (Comment): The required full stroking of the check valves is satisfied when the diesel generator successfully completes its required testing per Technical Specification 4.8.1.1.2.

NOTE 2: OT-132-1AB (Code Relief): This valve is located at the discharge of the emergency diesel engine jacket water pump. This three-way thermostatic valve functions to maintain the correct proportion of water flowing through the diesel engine water cooler and bypassing the diesel engine jacket water cooler to maintain a preset jacket water temperature. We are requesting exemption from the testing requirements since (1) this valve functions only as a regulating valve and not open/closed valve; (2) this valve is demonstrated operable during diesel generator testing. Diesel generators are tested per Technical Specification 4.8.1.1.2. The valve will be verified operable by observing proper temperatures during diesel testing.

NOTE 3: XRV-221 and 222 -Starting Air (Code Relief): The starting air valves are installed on parallel air supply lines to the emergency diesel generator (EDG). The valves are not equipped with position indication devices to directly measure valve stroke times. The valves function to provide starting air which rolls the EDG. The valves are functionally redundant to each other. These valves fail "as is," and, therefore, they have no fail safe position. Successful starting of the EDG in accordance with Technical Specification 4.8.1.1.2 (i.e., slow start at least quarterly and fast start once every 184 days within 10 seconds) will verify the

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5151B-28

Revision No: 3B

Date: 9-30-91

Note 3 (continued)

valve performance. The valve stroke timing will be verified by measuring diesel starting times during fast start testing of EDG. The valves on a staggered basis will be valved out one at a time to verify the operability of the opposite valve during slow start of EDG at least quarterly. Position indication will be confirmed during the above testing when only one starting air train is used to start the diesel generators.

NOTE 4: XRV-220-Jet Assist (Code Relief): This valve's function is to facilitate the EDG fast start by providing an air boost to the turbo charger to assist in starting the EDG in its Technical Specification 4.8.1.1.2 time limitation of 10 seconds. The valve is not equipped with position indication devices; therefore, meaningful stroke times are not achievable. The valves will be full stroke and fail safe tested by verifying EDG starting time once per 184 days in accordance with Technical Specification 4.8.1.1.2.

NOTE 5: DG-127A, -129A, -151A, -153A (Comment): The closed safety function of these valves will be demonstrated by quarterly exercising/closed verification.

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5151C-26

Revision No: 3B

Date: 9-30-91

- NOTE 1: DF-108C, -109C, -114C, -115C, DL-113C, -115C, -125C, and -131C -157C (Comment): The required full stroking of the check valves is satisfied when the diesel generator successfully completes its required testing per Technical Specification 4.8.1.1.2.
- NOTE 2: OT-114-1CD (Code Relief): This valve is located at the discharge of the engine driven lube oil pump (diesel-generator). This three-way thermostatic valve functions to maintain the correct lube oil temperature by maintaining the correct proportion of oil flowing through the lube oil cooler and bypassing the lube oil cooler to maintain a preset lube oil temperature. We are requesting exemption from testing requirements since (1) this valve functions only as a regulating valve and not opened/closed valve; (2) this valve is demonstrated operable during diesel generator testing. Diesel generators are tested per Technical Specification 4.8.1.1.2. The valves will be verified operable by observing proper temperatures during diesel testing.
- NOTE 3: DF-108C, -109C, -114C, -115C (Comment): The closed safety function of these valves will be demonstrated by quarterly exercising/closed verification.

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5151D-28

Revision No: 3B

Date: 9-30-91

- NOTE 1: DG-101C, -103C, -127C, -129C, -145C, -151C and -153C (Comment): The required full stroking of the check valves is satisfied when the diesel generator successfully completes its required testing per Technical Specification 4.8.1.1.2.
- NOTE 2: OT-132-1CD (Code Relief): This valve is located at the discharge of the emergency diesel engine jacket water pump. This three-way thermostatic valve functions to maintain the correct proportion of water flowing through the diesel engine water cooler and bypassing the diesel engine jacket water cooler to maintain a preset jacket water temperature. We are requesting exemption from the testing requirements since (1) this valve functions only as a regulating valve and not open/closed valve; (2) this valve is demonstrated operable during diesel generator testing. Diesel generators are tested on a staggered basis, every 31 days per Technical Specification 4.8.1.1.2. The valve will be verified operable by observing proper temperatures during diesel testing.
- NOTE 3: XRV-226 and -227 -Starting Air (Code Relief): The starting air valves are installed on parallel air supply lines to the emergency diesel generator (EDG). The valves are not equipped with position indication devices to directly measure valve stroke times. The valves function to provide starting air which rolls the EDG. The valves are functionally redundant to each other. These valves fail "as is," and, therefore, they have no fail safe position. Successful starting of the EDG in accordance with Technical Specification 4.8.1.1.2 (i.e., slow start at least quarterly and fast start once every 184 days within 10 seconds) will verify the

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DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 1-5151D-28

Revision No: 3B

Date: 9-30-91

Note 3 (continued)

valve performance. The valve stroke timing will be verified by measuring diesel starting times during fast start testing of EDG. The valves on a staggered basis will be valved out one at a time to verify the operability of the opposite valve during slow start of EDG at least quarterly. Position indication will be confirmed during the above testing when only one starting air train is used to start the diesel generators.

NOTE 4: XRV-225 -Jet Assist (Code Relief): This valve's function is to facilitate the EDG fast start by providing an air boost to the turbo charger to assist in starting the EDG in its Technical Specification 4.8.1.1.2 time limitation of 10 seconds. The valve is not equipped with position indication devices; therefore, meaningful stroke times are not achievable. The valves will be full stroke and fail safe tested by verifying EDG starting time once per 184 days in accordance with Technical Specification 4.8.1.1.2.

NOTE 5: DG-127C, -129C, -151C, -153C (Comment): The closed safety function of these valves will be demonstrated by quarterly exercising/closed verification.

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DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 12-5131-19 - Unit-1

Revision No: 3B

Date: 9-30-91

NOTE 1: CS-427N (Cold Shutdown Justification): This valve is located in the emergency boration path. This valve cannot be tested during power operation without inserting large negative reactivity which would result in unit shutdown. The valve will be full stroke exercised at cold shutdown frequency.

SYSTEM: COMPONENT COOLING

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5135A-30

VALVE						VALVE POSITION		ASME SECTION XI						
Valve Tag	Rev	Type	Size	Actuator	Coords	Power Operation	Safety Function	Class	Active/ Passive	Category	Test Required	Test Performed	Test Frequency	Relief Request
1-CCW-176-E	3B	CK	16.00	SA	L/4	O/C	O/C	3	A	C	CF-1	CF-1	P	NO
1-CCW-176-W	3B	CK	16.00	SA	K/4	O/C	O/C	3	A	C	CF-1	CF-1	P	NO
1-CHO-410	3	BF	16.00	MO	H/4	O/C	O	3	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
1-CHO-411	3	BF	18.00	MO	H/5	O	C	3	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO, NOTE 2
1-CHO-412	3	BF	16.00	MO	L/3	O	C	3	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO, NOTE 2
1-CHO-413	3	BF	18.00	MO	L/5	O	C	3	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO, NOTE 2
1-CHO-414	3	BF	16.00	MO	K/3	O	C	3	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO, NOTE 2
1-CHO-415	3	BF	16.00	MO	H/5	O	C	3	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO, NOTE 2
1-CHO-416	3	BF	16.00	MO	G/5	O	C	3	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO, NOTE 2
1-CHO-419	3	BF	14.00	MO	E/5	C	O	3	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
1-CHO-420	3	BF	16.00	MO	H/4	O/C	O	3	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
1-CHO-429	3	BF	14.00	MO	E/5	C	O	3	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO

SYSTEM: COMPONENT COOLING

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5135A-30

VALVE						VALVE POSITION		ASME SECTION XI						
Valve Tag	Rev	Type	Size	Actuator	Coords	Power Operation	Safety Function	Class	Active/ Passive	Category	Test Required	Test Performed	Test Frequency	Relief Request
1-CRV-412	3	GL	4.00	A	K/1	O	C	3	A	B	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ET-XXX	ET-XXX	P	NO
1-SV-60	3	REL	3.00	SA	L/1	C	O	3	A	C	TF-1	TF-1	R	NO
1-SV-72	3	REL	1.00	SA	E/5	C	O	3	A	C	TF-1	TF-1	R	NO
12-CCW-170	3B	CK	16.00	SA	H/4	C	O/C	3	A	C	CF-1	CF-4	-	NO, NOTE 1

SYSTEM: CONTAINMENT SPRAY -

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5144-28

VALVE						VALVE POSITION		ASME SECTION XI						
Valve Tag	Rev	Type	Size	Actuator	Coords	Power Operation	Safety Function	Class	Active/ Passive	Category	Test Required	Test Performed	Test Frequency	Relief Request
1-CTS-103-E	3	CK	10.00	SA	J/9	C	O	2	A	C	CF-1	CF-3	-	YES, NOTE 2
1-CTS-103-W	3	CK	10.00	SA	L/9	C	O	2	A	C	CF-1	CF-3	-	YES, NOTE 2
1-CTS-109	3	VB	1.00	SA	M/6	C	O	2	A	C	CF-1	CF-2	C	NO, CSJ 6
1-CTS-110	3	VB	1.00	SA	M/6	C	O	2	A	C	CF-1	CF-2	C	NO, CSJ 6
1-CTS-120-E	3	CK	2.00	SA	H/8	C	O	2	A	C	CF-1	CF-1	P	NO
1-CTS-120-W	3	CK	2.00	SA	K/8	C	O	2	A	C	CF-1	CF-1	P	NO
1-CTS-127-E	3B	CK	6.00	SA	E/5	C	O/C	2	A	AC	CF-1 SLT-1	CF-2 SLT-2A	R R	YES, NOTE 4 YES, NOTE 7
1-CTS-127-W	3B	CK	6.00	SA	E/4	C	O/C	2	A	AC	SLT-1 CF-1	SLT-2A CF-2	R R	YES, NOTE 7 YES, NOTE 4
1-CTS-131-E	3B	CK	8.00	SA	E/2	C	O/C	2	A	AC	SLT-1 CF-1	SLT-2A CF-2	R R	YES, NOTE 7 YES, NOTE 3
1-CTS-131-W	3B	CK	8.00	SA	E/2	C	O/C	2	A	AC	SLT-1 CF-1	SLT-2A CF-2	R R	YES, NOTE 7 YES, NOTE 3
1-CTS-138-E	3	CK	12.00	SA	G/9	C	O/C	2	A	C	CF-1	CF-3	-	YES, NOTE 1
1-CTS-138-W	3	CK	12.00	SA	J/9	C	O/C	2	A	C	CF-1	CF-3	-	YES, NOTE 1
1-IHO-202	3	GA	2.50	MO	M/7	C	O	2	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
1-IHO-204	3	GA	2.50	MO	M/7	C	O	2	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
1-IHO-210	3	GA	10.00	MO	J/8	C	O	2	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
1-IHO-211	3	GA	10.00	MO	J/8	C	O	2	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO

SYSTEM: CONTAINMENT SPRAY

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5144-28

VALVE						VALVE POSITION		ASME SECTION XI						
Valve Tag	Rev	Type	Size	Actuator	Coords	Power Operation	Safety Function	Class	Active/ Passive	Category	Test Required	Test Performed	Test Frequency	Relief Request
1-IMO-212	3	GA	2.00	MO	H/8	O	O/C	2	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
1-IMO-215	3	GA	12.00	MO	G/9	O	O/C	2	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
1-IMO-220	3	GA	10.00	MO	L/8	C	O	2	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
1-IMO-221	3	GA	10.00	MO	L/8	C	O	2	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
1-IMO-222	3	GA	2.00	MO	L/9	O	O/C	2	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
1-IMO-225	3	GA	12.00	MO	J/9	O	O/C	2	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
1-RH-141	3B	CK	8.00	SA	E/3	C	O/C	2	A	AC	SLT-1 CF-1	SLT-2A CF-2	R R	YES, NOTE 7 YES, NOTE 5
1-RH-142	3B	CK	8.00	SA	E/3	C	O/C	2	A	AC	CF-1 SLT-1	CF-2 SLT-2A	R R	YES, NOTE 5 YES, NOTE 7
1-SV-107	3	REL	1.00	SA	H/5	C	O	2	A	C	TF-1	TF-1	R	NO

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SYSTEM: EMERGENCY DIESEL GENERATOR 'AB'

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5151B-28

VALVE						VALVE POSITION		ASME SECTION XI						
Valve Tag	Rev	Type	Size	Actuator	Coords	Power Operation	Safety Function	Class	Active/Passive	Category	Test Required	Test Performed	Test Frequency	Relief Request
1-DG-101A	3	CK	1.50	SA	H/4	O	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
1-DG-103A	3	CK	1.50	SA	F/3	O	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
1-DG-127A	3B	CK	1.00	SA	C/4	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,5
1-DG-129A	3B	CK	1.00	SA	C/4	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,5
1-DG-139A	3	CK	0.50	SA	F/1	C	O/C	3	A	C	CF-1	CF-1	P	NO
1-DG-141A	3	CK	0.50	SA	F/1	C	O/C	3	A	C	CF-1	CF-1	P	NO
1-DG-145A	3	CK	2.00	SA	A/8	O	C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
1-DG-151A	3B	CK	2.00	SA	D/8	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,5
1-DG-153A	3B	CK	4.00	SA	C/8	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,5
1-QT-132-1AB	3	3W	6.00	SA	E/8	O	O	3	A	B	EF-1	NOTE 2	P	NO, NOTE 2
1-SV-120-1AB	3	REL	0.25	SA	G/2	C	O	3	A	C	TF-1	TF-1	R	NO
1-SV-139-1AB	3	REL	1.00	SA	B/2	C	O	3	A	C	TF-1	TF-1	R	NO
1-SV-61-1AB	3	REL	1.00	SA	A/8	C	O	3	A	C	TF-1	TF-1	R	NO
1-SV-78-1AB1	3	REL	1.00	SA	E/3	C	O	3	A	C	TF-1	TF-1	R	NO
1-SV-78-1AB2	3	REL	1.00	SA	D/3	C	O	3	A	C	TF-1	TF-1	R	NO
1-SV-79-1AB1	3	REL	0.50	SA	E/1	C	O	3	A	C	TF-1	TF-1	R	NO
1-SV-79-1AB2	3	REL	0.50	SA	E/1	C	O	3	A	C	TF-1	TF-1	R	NO
1-XRV-220	3	GA	1.00	A	B/3	C	O	3	A	B	EF-1 EF-7 ET-XXX	EF-1 EF-7 NOTE 4	- - -	YES, NOTE 4 NO, NOTE 4 YES, NOTE 4
1-XRV-221	3	GL	3.00	A	B/4	C	O	3	A	B	EF-1 EF-7 ET-XXX	EF-1 NOTE 3 NOTE 3	- - -	YES, NOTE 3 YES, NOTE 3 YES, NOTE 3
1-XRV-222	3	GL	3.00	A	B/4	C	O	3	A	B	EF-1 EF-7	EF-1 NOTE 3	- -	YES, NOTE 3 YES, NOTE 3

SYSTEM: EMERGENCY DIESEL GENERATOR 'AB'

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5151B-28

VALVE						VALVE POSITION		ASME SECTION XI						
Valve Tag	Rev	Type	Size	Actuator	Coords	Power Operation	Safety Function	Class	Active/ Passive	Category	Test Required	Test Performed	Test Frequency	Relief Request
1-XRV-222	3	GL	3.00	A	B/4	C	O	3	A	B	ET-XXX	NOTE 3	-	YES, NOTE 3

SYSTEM: EMERGENCY DIESEL GENERATOR 'CD'

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5151C-26

VALVE						VALVE POSITION		ASME SECTION XI						
Valve Tag	Rev	Type	Size	Actuator	Coords	Power Operation	Safety Function	Class	Active/Passive	Category	Test Required	Test Performed	Test Frequency	Relief Request
1-DF-108C	3B	CK	1.50	SA	J/3	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,3
1-DF-109C	3B	CK	1.50	SA	K/3	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,3
1-DF-114C	3B	CK	1.50	SA	L/3	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,3
1-DF-115C	3B	CK	1.50	SA	M/3	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,3
1-DL-113C	3	CK	1.50	SA	B/9	O	C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
1-DL-115C	3	CK	1.50	SA	B/9	C	O	3	A	C	CF-1	CF-1	P	NO, NOTE 1
1-DL-125C	3	CK	2.50	SA	E/9	O	C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
1-DL-131C	3	CK	1.00	SA	F/9	O	C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
1-DL-157C	3	CK	6.00	SA	G/5	C	O	3	A	C	CF-1	CF-1	P	NO, NOTE 1
1-QT-114-1CD	3	3W	6.00	SA	H/5	O	O	3	A	B	EF-1	NOTE 2	P	NO, NOTE 2

SYSTEM: EMERGENCY DIESEL GENERATOR 'CD'

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5151D-28

VALVE						VALVE POSITION		ASME SECTION XI						
Valve Tag	Rev	Type	Size	Actuator	Coords	Power Operation	Safety Function	Class	Active/Passive	Category	Test Required	Test Performed	Test Frequency	Relief Request
1-DG-101C	3	CK	1.50	SA	H/4	O	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
1-DG-103C	3	CK	1.50	SA	F/3	O	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
1-DG-127C	3B	CK	1.00	SA	C/3	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,5
1-DG-129C	3B	CK	1.00	SA	C/3	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,5
1-DG-139-CD	3	CK	0.50	SA	F/1	C	O/C	3	A	C	CF-1	CF-1	P	NO
1-DG-141-CD	3	CK	0.50	SA	F/1	C	O/C	3	A	C	CF-1	CF-1	P	NO
1-DG-145C	3	CK	2.00	SA	A/9	O	C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
1-DG-151C	3B	CK	2.00	SA	D/9	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,5
1-DG-153C	3B	CK	4.00	SA	C/9	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,5
1-QT-132-1CD	3	3W	6.00	SA	E/8	O	O	3	A	B	EF-1	NOTE 2	P	NO, NOTE 2
1-SV-120-1CD	3	REL	0.25	SA	H/2	C	O	3	A	C	TF-1	TF-1	R	NO
1-SV-139-1CD	3	REL	1.00	SA	B/2	C	O	3	A	C	TF-1	TF-1	R	NO
1-SV-61-1CD	3	REL	1.00	SA	A/8	C	O	3	A	C	TF-1	TF-1	R	NO
1-SV-78-1CD1	3	REL	1.00	SA	E/3	C	O	3	A	C	TF-1	TF-1	R	NO
1-SV-78-1CD2	3	REL	1.00	SA	D/3	C	O	3	A	C	TF-1	TF-1	R	NO
1-SV-79-1CD1	3	REL	0.50	SA	E/1	C	O	3	A	C	TF-1	TF-1	R	NO
1-SV-79-1CD2	3	REL	0.50	SA	E/1	C	O	3	A	C	TF-1	TF-1	R	NO
1-XRV-225	3	GA	1.00	A	B/3	C	O	3	A	B	EF-1 EF-7 ET-XXX	EF-1 EF-7 NOTE 4	- - -	YES, NOTE 4 YES, NOTE 4 YES, NOTE 4
1-XRV-226	3	GL	3.00	A	B/4	C	O	3	A	B	EF-1 EF-7 ET-XXX	EF-1 NOTE 3 NOTE 3	- - -	YES, NOTE 3 YES, NOTE 3 YES, NOTE 3
1-XRV-227	3	GL	3.00	A	B/4	C	O	3	A	B	EF-1 EF-7	EF-1 NOTE 3	- -	YES, NOTE 3 YES, NOTE 3

SYSTEM: EMERGENCY DIESEL GENERATOR 'CD'

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 1-5151D-28

VALVE						VALVE POSITION		ASME SECTION XI						
Valve Tag	Rev	Type	Size	Actuator	Coords	Power Operation	Safety Function	Class	Active/ Passive	Category	Test Required	Test Performed	Test Frequency	Relief Request
1-XRV-227	3	GL	3.00	A	B/4	C	O	3	A	B	ET-XXX	NOTE 3	-	YES, NOTE 3

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 1
FLOW DIAGRAM: 12-5131-19

SYSTEM: CVCS - BORON MAKE-UP

VALVE						VALVE POSITION		ASME SECTION XI						
Valve Tag	Rev	Type	Size	Actuator	Coords	Power Operation	Safety Function	Class	Active/ Passive	Category	Test Required	Test Performed	Test Frequency	Relief Request
1-CS-415-1	3B	CK	2.00	SA	H/6	O/C	O/C	3	A	C	CF-1	CF-1	P	NO
1-CS-415-2	3B	CK	2.00	SA	H/6	O/C	O/C	3	A	C	CF-1	CF-1	P	NO
1-CS-426-W	3	CK	1.00	SA	G/6	O/C	O	3	A	C	CF-1	CF-1	P	NO
1-CS-427-W	3	CK	2.00	SA	G/5	C	O	3	A	C	CF-1	CF-2	C	NO, CSJ 1
1-QHO-410	3	GL	2.00	HO	G/5	C	O	3	A	B	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											ET-XXX	ET-XXX	P	NO
1-QRV-411	3	GL	1.00	A	G/6	O/C	O	3	A	B	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ET-XXX	ET-XXX	P	NO
1-QRV-412	3	GL	2.00	A	F/7	O	C	3	A	B	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ET-XXX	ET-XXX	P	NO

SYSTEM: CVCS - BORON MAKE-UP

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 2
FLOW DIAGRAM: 12-5131-19

VALVE						VALVE POSITION		ASME SECTION XI						
Valve Tag	Rev	Type	Size	Actuator	Coords	Power Operation	Safety Function	Class	Active/ Passive	Category	Test Required	Test Performed	Test Frequency	Relief Request
2-CS-415-3	3B	CK	2.00	SA	K/6	O/C	O/C	3	A	C	CF-1	CF-1	P	NO
2-CS-415-4	3B	CK	2.00	SA	L/6	O/C	O/C	3	A	C	CF-1	CF-1	P	NO
2-CS-426-S	3	CK	1.00	SA	M/6	O/C	O	3	A	C	CF-1	CF-1	P	NO
2-CS-427-S	3	CK	2.00	SA	M/5	C	O	3	A	C	CF-1	CF-2	C	NO, CSJ 1
2-QMO-420	3	GA	2.00	MO	L/5	C	O	3	A	B	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											ET-XXX	ET-XXX	P	NO
2-QRV-421	3	GL	2.00	A	M/6	O/C	O	3	A	B	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ET-XXX	ET-XXX	P	NO
2-QRV-422	3	GL	2.00	A	M/7	O	C	3	A	B	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ET-XXX	ET-XXX	P	NO

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 2-5144-29

Revision No: 3B

Date: 9-30-91

NOTE 1: CTS-138E & W (Code Relief): These check valves are located in the lines which supply water from the RWST to the containment spray pumps. The valves cannot be full stroke exercised during power operation, cold shutdown or refueling without spraying the containment. The valves are part stroke exercised during containment spray pump testing on a quarterly basis. The only practical method available to verify full stroke of these valves is by disassembly. These valves are not equipped with position indicators. The valves will be disassembled, manually full stroke exercised and visually examined on a sampling basis (one of two) per GL-89-04, Attachment 1, Item #2, once every other refueling frequency.

NOTE 2: CTS-103 E & W (Code Relief): These check valves are located in the discharge lines of containment spray pumps to the spray ring headers in the containment. These valves cannot be full stroke exercised during power operation, cold shutdown or refueling without spraying the containment. The valves are part stroke exercised during containment spray pump testing on a quarterly basis. The only practical method available to verify full stroke of these valves is by disassembly. The valves are not equipped with position indicators. The valves will be disassembled, manually full stroke exercised and visually examined on a sampling basis (one of two) per GL-89-04, Attachment 1, Item #2, once every other refueling frequency.

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DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 2-5144-29

Revision No: 3B

Date: 9-30-91

NOTE 3: CTS-131E & W (Code Relief): These check valves are located in the supply lines to the (upper compartment) containment spray ring headers. These valves are in the closed position during normal plant operation. These valves perform an open safety function when containment spray is active (pass flow to the ring headers) and a subsequent closed safety function (containment isolation) if containment spray is suspended. The valves are exposed to containment atmosphere on the downstream side and are isolated from fluid pressure in the upstream side by the closed motor operated valves. The valves cannot be part or full stroke exercised during power operation, cold shutdown or refueling because flow through these valves would result in spraying the containment. This could cause problems with wet lagging, corrosion of components inside containment, etc. The only practical method available to exercise these valves is by disassembly. The valves are not equipped with position indicators. The valves will be disassembled, manually full stroke exercised and visually examined on a sampling basis (one of two) per GL-89-04, Attachment 1, Item #2, once every other refueling frequency. Disassembly, manual exercising and visual examination assure that the valves are capable of performing both the active open and active closed safety function.

NOTE 4: CTS-127E & W (Code Relief): These check valves are located in the supply lines to the (lower compartment) containment spray ring headers. These valves are in the closed position during normal plant operation. These valves perform an open safety function when containment spray is active (pass flow to the ring headers) and a subsequent closed safety function (containment isolation) if containment spray is suspended. The valves are exposed to containment atmosphere on the downstream side and are isolated from fluid pressure in the upstream side by the closed motor operated

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 2-5144-29

Revision No: 3B

Date: 9-30-91

Note 4 (continued)

valves. The valves cannot be part or full stroke exercised during power operation, cold shutdown or refueling because flow through these valves would result in spraying the containment. This could cause problems with wet lagging, corrosion of components inside containment, etc. The only practical method available to exercise these valves is by disassembly. The valves are not equipped with position indicators. The valves will be disassembled, manually full stroke exercised and visually examined on a sampling basis (one of two) per GL-89-04, Attachment 1, Item #2, once every other refueling frequency. Disassembly, manual exercising and visual examination assure that the valves are capable of performing both the active open and active closed safety function.

NOTE 5: RH-141 & -142 (Code Relief): These check valves are located in the supply lines to the (upper compartment) containment spray ring headers from the RHR Heat Exchangers. These valves are in the closed position during normal plant operation. These valves perform an open safety function when containment spray is active (pass flow to the ring headers) and a subsequent closed safety function (containment isolation) if containment spray is suspended. The valves are exposed to containment atmosphere on the downstream side and are isolated from fluid pressure in the upstream side by the closed motor operated valves. The valves cannot be part or full stroke exercised during power operation, cold shutdown or refueling because flow through these valves would result in spraying the containment. This could cause problems with wet lagging, corrosion of components inside containment, etc. The only practical method available to exercise these valves is by disassembly. The valves are not equipped with position indicators. The valves will be disassembled, manually full stroke exercised and

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 2-5144-29

Revision No: 3B

Date: 9-30-91

Note 5 (continued)

visually examined on a sampling basis (one of two) per GL-89-04, Attachment 1, Item #2, once every other refueling frequency. Disassembly, manual exercising and visual examination assure that the valves are capable of performing both the active open and active closed safety function.

NOTE 6: CTS-109 and -110 (Cold Shutdown Justification): These check valves function as vacuum breakers for spray additive tank. The check valves are closed during normal plant operation to maintain the tank pressurized. The valves will be verified closed quarterly during power operation and will be verified open at cold shutdown frequency.

NOTE 7: CTS-127E&W, CTS-131E&W, RH-141,-142 (Code Relief): These valves are to be seat leakage tested in accordance with the unique testing methods established in the FSAR because of the configuration at D.C. Cook Plant. The permissible seat leakage values of these valves are listed in Attachment "A".

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 2-5151A-26

Revision No: 3B

Date: 9-30-91

- NOTE 1: DF-108A, -109A, -114A, -115A, DL-114A, -116A, -126A, -132A, -158A
(Comment): The required full stroking of the check valves is satisfied when the diesel generator successfully completes its required testing per Technical Specification 4.8.1.1.2.
- NOTE 2: QT-114-2AB (Code Relief): This valve is located at the discharge of the engine driven lube oil pump (diesel-generator). This three-way thermostatic valve functions to maintain the correct lube oil temperature by maintaining the correct proportion of oil flowing through the lube oil cooler and bypassing the lube oil cooler to maintain a preset lube oil temperature. We are requesting exemption from testing requirements since (1) this valve functions only as a regulating valve and not opened/closed; (2) this valve is demonstrated operable during diesel generator testing. Diesel generators are tested basis per Technical Specification 4.8.1.1.2. The valves will be verified operable by observing proper temperatures during diesel testing.
- NOTE 3: DF-108A, -109A, -114A, -115A (Comment): The closed safety function of these valves will be demonstrated by quarterly exercising/closed verification.

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 2-5151B-27

Revision No: 3B

Date: 9-30-91

- NOTE 1: DG-102A, -104A, -128A, 130A, -146A, -152A and -154A (Comment):
The required full stroking of the check valves is satisfied when the diesel generator successfully completes its required testing per Technical Specification 4.8.1.1.2.
- NOTE 2: QT-132-2AB (Code Relief): This valve is located at the discharge of the emergency diesel engine jacket water pump. This three-way thermostatic valve functions to maintain the correct proportion of water flowing through the diesel engine water cooler and bypassing the diesel engine jacket water cooler to maintain a preset jacket water temperature. We are requesting exemption from the testing requirements since (1) this valve functions only as a regulating valve and not open/closed valve; (2) this valve is demonstrated operable during diesel generator testing. Diesel generators are tested per Technical Specification 4.8.1.1.2. The valve will be verified operable by observing proper temperatures during diesel testing.
- NOTE 3: XRV-221 and 222 -Starting Air (Code Relief): The starting air valves are installed on parallel air supply lines to the emergency diesel generator (EDG). The valves are not equipped with position indication devices to directly measure valve stroke times. The valves function to provide starting air which rolls the EDG. The valves are functionally redundant to each other. These valves fail "as is," and, therefore, they have no fail safe position. Successful starting of the EDG in accordance with Technical Specification 4.8.1.1.2 (i.e., slow start at least quarterly and fast start once every 184 days within 10 seconds) will verify the valve performance. The valve stroke timing will be verified by

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 2-5151B-27

Revision No: 3B

Date: 9-30-91

Note 3 (continued)

measuring diesel starting times during fast start testing of EDG. The valves on a staggered basis will be valved out one at a time to verify the operability of the opposite valve during slow start of EDG at least quarterly. Position indication will be confirmed during the above testing when only one starting air train is used to start the diesel generators.

NOTE 4: XRV-220-Jet Assist (Code Relief): This valve's function is to facilitate the EDG fast start by providing an air boost to the turbo charger to assist in starting the EDG in its Technical Specification 4.8.1.1.2 time limitation of 10 seconds. The valve is not equipped with position indication devices; therefore, meaningful stroke times are not achievable. The valves will be full stroke and fail safe tested by verifying EDG starting time once per 184 days in accordance with Technical Specification 4.8.1.1.2.

NOTE 5: DG-128A, -130A, -152A, -154A (Comment): The closed safety function of these valves will be demonstrated by quarterly exercising/closed verification.

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 2-5151D-27

Revision No: 3B

Date: 9-30-91

- NOTE 1: DG-102C, -104C, -128C, -130C, -146C, -152C and -154C (Comment): The required full stroking of the check valves is satisfied when the diesel generator successfully completes its required testing per Technical Specification 4.8.1.1.2.
- NOTE 2: OT-132-2CD (Code Relief): This valve is located at the discharge of the emergency diesel engine jacket water pump. This three-way thermostatic valve functions to maintain the correct proportion of water flowing through the diesel engine water cooler and bypassing the diesel engine jacket water cooler to maintain a preset jacket water temperature. We are requesting exemption from the testing requirements since (1) this valve functions only as a regulating valve and not open/closed valve; (2) this valve is demonstrated operable during diesel generator testing. Diesel generators are tested on a staggered basis, every 31 days per Technical Specification 4.8.1.1.2. The valve will be verified operable by observing proper temperatures during diesel testing.
- NOTE 3: XRV-226 and -227 -Starting Air (Code Relief): The starting air valves are installed on parallel air supply lines to the emergency diesel generator (EDG). The valves are not equipped with position indication devices to directly measure valve stroke times. The valves function to provide starting air which rolls the EDG. The valves are functionally redundant to each other. These valves fail "as is," and, therefore, they have no fail safe position. Successful starting of the EDG in accordance with Technical Specification 4.8.1.1.2 (i.e., slow start at least quarterly and fast start once every 184 days within 10 seconds) will verify the

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 2-5151D-27

Revision No: 3B

Date: 9-30-91

Note 3 (continued)

valve performance. The valve stroke timing will be verified by measuring diesel starting times during fast start testing of EDG. The valves on a staggered basis will be valved out one at a time to verify the operability of the opposite valve during slow start of EDG at least quarterly. Position indication will be confirmed during the above testing when only one starting air train is used to start the diesel generators.

NOTE 4: XRV-225 -Jet Assist (Code Relief): This valve's function is to facilitate the EDG fast start by providing an air boost to the turbo charger to assist in starting the EDG in its Technical Specification 4.8.1.1.2 time limitation of 10 seconds. The valve is not equipped with position indication devices; therefore, meaningful stroke times are not achievable. The valves will be full stroke and fail safe tested by verifying EDG starting time once per 184 days in accordance with Technical Specification 4.8.1.1.2.

NOTE 5: DG-128C, -130C, -152C, -154C (Comment): The closed safety function of these valves will be demonstrated by quarterly exercising/closed verification.

DONALD C. COOK NUCLEAR PLANT

VALVE TEST PROGRAM

RELIEF REQUEST NOTES

Flow Diagram No: 12-5131-19 - Unit-2

Revision No: 3B

Date: 9-30-91

NOTE 1: CS-427S (Cold Shutdown Justification): This valve is located in the emergency boration path. This valve cannot be tested during power operation without inserting large negative reactivity which would result in unit shutdown. The valve will be full stroke exercised at cold shutdown frequency.

SYSTEM: COMPONENT COOLING

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 2
FLOW DIAGRAM: 2-5135A-30

VALVE						VALVE POSITION		ASME SECTION XI						
Valve Tag	Rev	Type	Size	Actuator	Coords	Power Operation	Safety Function	Class	Active/ Passive	Category	Test Required	Test Performed	Test Frequency	Relief Request
2-CCW-176-E	3B	CK	16.00	SA	L/4	O/C	O/C	3	A	C	CF-1	CF-1	P	NO
2-CCW-176-W	3B	CK	16.00	SA	K/4	O/C	O/C	3	A	C	CF-1	CF-1	P	NO
2-CHO-410	3	BF	16.00	MO	H/4	O/C	O	3	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
2-CHO-411	3	BF	18.00	MO	H/5	O	C	3	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO, NOTE 1
2-CHO-412	3	BF	16.00	MO	L/3	O	C	3	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO, NOTE 1
2-CHO-413	3	BF	18.00	MO	L/5	O	C	3	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO, NOTE 1
2-CHO-414	3	BF	16.00	MO	K/3	O	C	3	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO, NOTE 1
2-CHO-415	3	BF	16.00	MO	H/5	O	C	3	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO, NOTE 1
2-CHO-416	3	BF	16.00	MO	G/5	O	C	3	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO, NOTE 1
2-CHO-419	3	BF	14.00	MO	E/5	C	O	3	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
2-CHO-420	3	BF	16.00	MO	H/4	O/C	O	3	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
2-CHO-429	3	BF	14.00	MO	E/5	C	O	3	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO

SYSTEM: COMPONENT COOLING

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 2
FLOW DIAGRAM: 2-5135A-30

VALVE						VALVE POSITION		ASME SECTION XI						
Valve Tag	Rev	Type	Size	Actuator	Coords	Power Operation	Safety Function	Class	Active/ Passive	Category	Test Required	Test Performed	Test Frequency	Relief Request
2-CRV-412	3	GL	4.00	A	K/1	O	C	3	A	B	EF-1	EF-1	P	NO
											EF-5	EF-5	-	NO
											EF-7	EF-7	P	NO
											ET-XXX	ET-XXX	P	NO
2-SV-60	3	REL	3.00	SA	L/1	C	O	3	A	C	TF-1	TF-1	R	NO
2-SV-72	3	REL	1.00	SA	E/5	C	O	3	A	C	TF-1	TF-1	R	NO

SYSTEM: CONTAINMENT SPRAY

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 2
FLOW DIAGRAM: 2-5144-29

VALVE						VALVE POSITION		ASME SECTION XI						
Valve Tag	Rev	Type	Size	Actuator	Coords	Power Operation	Safety Function	Class	Active/ Passive	Category	Test Required	Test Performed	Test Frequency	Relief Request
2-CTS-103-E	3	CK	10.00	SA	J/9	C	O	2	A	C	CF-1	CF-3	-	YES, NOTE 2
2-CTS-103-W	3	CK	10.00	SA	L/9	C	O	2	A	C	CF-1	CF-3	-	YES, NOTE 2
2-CTS-109	3	VB	1.00	SA	M/6	C	O	2	A	C	CF-1	CF-2	C	NO, CSJ 6
2-CTS-110	3	VB	1.00	SA	M/6	C	O	2	A	C	CF-1	CF-2	C	NO, CSJ 6
2-CTS-120-E	3	CK	2.00	SA	H/8	C	O	2	A	C	CF-1	CF-1	P	NO
2-CTS-120-W	3	CK	2.00	SA	K/8	C	O	2	A	C	CF-1	CF-1	P	NO
2-CTS-127-E	3B	CK	6.00	SA	E/5	C	O/C	2	A	AC	SLT-1 CF-1	SLT-2A CF-2	R R	YES, NOTE 7 YES, NOTE 4
2-CTS-127-W	3B	CK	6.00	SA	E/4	C	O/C	2	A	AC	SLT-1 CF-1	SLT-2A CF-2	R R	YES, NOTE 7 YES, NOTE 4
2-CTS-131-E	3B	CK	8.00	SA	E/2	C	O/C	2	A	AC	SLT-1 CF-1	SLT-2A CF-2	R R	YES, NOTE 7 YES, NOTE 3
2-CTS-131-W	3B	CK	8.00	SA	E/2	C	O/C	2	A	AC	SLT-1 CF-1	SLT-2A CF-2	R R	YES, NOTE 7 YES, NOTE 3
2-CTS-138-E	3	CK	12.00	SA	G/9	C	O/C	2	A	C	CF-1	CF-3	-	YES, NOTE 1
2-CTS-138-W	3	CK	12.00	SA	J/9	C	O/C	2	A	C	CF-1	CF-3	-	YES, NOTE 1
2-IMO-202	3	GA	2.50	MO	M/7	C	O	2	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
2-IMO-204	3	GA	2.50	MO	M/7	C	O	2	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
2-IMO-210	3	GA	10.00	MO	J/8	C	O	2	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
2-IMO-211	3	GA	10.00	MO	J/8	C	O	2	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO

SYSTEM: CONTAINMENT SPRAY

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 2
FLOW DIAGRAM: 2-5144-29

VALVE						VALVE POSITION		ASME SECTION XI						
Valve Tag	Rev	Type	Size	Actuator	Coords	Power Operation	Safety Function	Class	Active/Passive	Category	Test Required	Test Performed	Test Frequency	Relief Request
2-IH0-212	3	GA	2.00	HO	H/8	O	O/C	2	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
2-IH0-215	3	GA	12.00	HO	G/9	O	O/C	2	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
2-IH0-220	3	GA	10.00	HO	L/8	C	O	2	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
2-IH0-221	3	GA	10.00	HO	L/8	C	O	2	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
2-IH0-222	3	GA	2.00	HO	L/9	O	O/C	2	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
2-IH0-225	3	GA	12.00	HO	J/9	O	O/C	2	A	B	EF-1 EF-5 ET-XXX	EF-1 EF-5 ET-XXX	P - P	NO NO NO
2-RH-141	3B	CK	8.00	SA	E/3	C	O/C	2	A	AC	CF-1 SLT-1	CF-2 SLT-2A	R R	YES, NOTE 5 YES, NOTE 7
2-RH-142	3B	CK	8.00	SA	E/3	C	O/C	2	A	AC	CF-1 SLT-1	CF-2 SLT-2A	R R	YES, NOTE 5 YES, NOTE 7
2-SV-107	3	REL	1.00	SA	H/5	C	O	2	A	C	TF-1	TF-1	R	NO

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 2
FLOW DIAGRAM: 2-5151A-26

SYSTEM: EMERGENCY DIESEL GENERATOR 'AB'

VALVE						VALVE POSITION		ASME SECTION XI						
Valve Tag	Rev	Type	Size	Actuator	Coords	Power Operation	Safety Function	Class	Active/ Passive	Category	Test Required	Test Performed	Test Frequency	Relief Request
2-DF-108A	3B	CK	1.50	SA	L/3	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,3
2-DF-109A	3B	CK	1.50	SA	K/3	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,3
2-DF-114A	3B	CK	1.50	SA	J/3	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,3
2-DF-115A	3B	CK	1.50	SA	H/3	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,3
2-DL-114A	3	CK	1.50	SA	B/9	O	C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
2-DL-116A	3	CK	1.50	SA	B/9	C	O	3	A	C	CF-1	CF-1	P	NO, NOTE 1
2-DL-126A	3	CK	2.50	SA	E/9	O	C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
2-DL-132A	3	CK	1.00	SA	F/9	O	C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
2-DL-158A	3	CK	6.00	SA	G/6	C	O	3	A	C	CF-1	CF-1	P	NO, NOTE 1
2-QT-114-2AB	3	3W	6.00	SA	H/5	O	O	3	A	B	EF-1	NOTE 2	P	NO, NOTE 2

SYSTEM: EMERGENCY DIESEL GENERATOR 'AB'

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 2
FLOW DIAGRAM: 2-5151B-27

VALVE						VALVE POSITION		ASME SECTION XI						
Valve Tag	Rev	Type	Size	Actuator	Coords	Power Operation	Safety Function	Class	Active/ Passive	Category	Test Required	Test Performed	Test Frequency	Relief Request
2-DG-102A	3	CK	1.50	SA	H/4	O	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
2-DG-104A	3	CK	1.50	SA	G/4	O	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
2-DG-128A	3B	CK	1.00	SA	C/4	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,5
2-DG-130A	3B	CK	1.00	SA	C/4	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,5
2-DG-140A	3	CK	0.50	SA	F/1	C	O/C	3	A	C	CF-1	CF-1	P	NO
2-DG-142A	3	CK	0.50	SA	F/1	C	O/C	3	A	C	CF-1	CF-1	P	NO
2-DG-146A	3	CK	2.00	SA	A/8	O	C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
2-DG-152A	3B	CK	4.00	SA	D/8	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,5
2-DG-154A	3B	CK	4.00	SA	C/8	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,5
2-QT-132-2AB	3	3W	6.00	SA	E/8	O	O	3	A	B	EF-1	NOTE 2	P	NO, NOTE 2
2-SV-120-AB	3	REL	0.25	SA	G/2	C	O	3	A	C	TF-1	TF-1	R	NO
2-SV-139-AB	3	REL	1.00	SA	B/2	C	O	3	A	C	TF-1	TF-1	R	NO
2-SV-61-AB	3	REL	1.00	SA	A/8	C	O	3	A	C	TF-1	TF-1	R	NO
2-SV-78-AB1	3	REL	1.00	SA	E/3	C	O	3	A	C	TF-1	TF-1	R	NO
2-SV-78-AB2	3	REL	1.00	SA	D/3	C	O	3	A	C	TF-1	TF-1	R	NO
2-SV-79-AB1	3	REL	0.50	SA	E/1	C	O	3	A	C	TF-1	TF-1	R	NO
2-SV-79-AB2	3	REL	0.50	SA	E/1	C	O	3	A	C	TF-1	TF-1	R	NO
2-XRV-220	3	GA	1.00	A	B/3	C	O	3	A	B	EF-1 EF-7 ET-XXX	EF-1 EF-7 NOTE 4	- - -	YES, NOTE 4 YES, NOTE 4 YES, NOTE 4
2-XRV-221	3	GL	3.00	A	B/4	C	O	3	A	B	EF-1 EF-7 ET-XXX	EF-1 NOTE 3 NOTE 3	- - -	YES, NOTE 3 YES, NOTE 3 YES, NOTE 3
2-XRV-222	3	GL	3.00	A	B/4	C	O	3	A	B	EF-1 EF-7	EF-1 NOTE 3	- -	YES, NOTE 3 YES, NOTE 3

SYSTEM: EMERGENCY DIESEL GENERATOR 'AB'

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 2
FLOW DIAGRAM: 2-5151B-27

VALVE						VALVE POSITION		ASME SECTION XI						
Valve Tag	Rev	Type	Size	Actuator	Coords	Power Operation	Safety Function	Class	Active/ Passive	Category	Test Required	Test Performed	Test Frequency	Relief Request
2-XRV-222	3	GL	3.00	A	B/4	C	O	3	A	B	ET-XXX	NOTE 3	-	YES, NOTE 3

SYSTEM: EMERGENCY DIESEL GENERATOR 'CD'

DONALD C. COOK NUCLEAR PLANT
SECOND TEN YEAR INTERVAL
VALVE SUMMARY SHEET - UNIT 2
FLOW DIAGRAM: 2-5151D-27

VALVE						VALVE POSITION		ASME SECTION XI						
Valve Tag	Rev	Type	Size	Actuator	Coords	Power Operation	Safety Function	Class	Active/Passive	Category	Test Required	Test Performed	Test Frequency	Relief Request
2-DG-102C	3	CK	1.50	SA	H/4	O	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
2-DG-104C	3	CK	1.50	SA	F/4	O	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
2-DG-128C	3B	CK	1.00	SA	C/3	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,5
2-DG-130C	3B	CK	1.00	SA	C/3	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,5
2-DG-140C	3	CK	0.50	SA	F/1	C	O/C	3	A	C	CF-1	CF-1	P	NO
2-DG-142C	3	CK	0.50	SA	F/1	C	O/C	3	A	C	CF-1	CF-1	P	NO
2-DG-146C	3	CK	2.00	SA	A/9	O	C	3	A	C	CF-1	CF-1	P	NO, NOTE 1
2-DG-152C	3B	CK	4.00	SA	D/9	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,5
2-DG-154C	3B	CK	4.00	SA	C/9	C	O/C	3	A	C	CF-1	CF-1	P	NO, NOTE 1,5
2-QT-132-2CD	3	3W	6.00	SA	E/8	O	O	3	A	B	EF-1	NOTE 1	P	NO, NOTE 2
2-SV-120-CD	3	REL	0.25	SA	H/2	C	O	3	A	C	TF-1	TF-1	R	NO
2-SV-139-CD	3	REL	1.00	SA	B/2	C	O	3	A	C	TF-1	TF-1	R	NO
2-SV-61-CD	3	REL	1.00	SA	A/8	C	O	3	A	C	TF-1	TF-1	R	NO
2-SV-78-CD1	3	REL	1.00	SA	E/3	C	O	3	A	C	TF-1	TF-1	R	NO
2-SV-78-CD2	3	REL	1.00	SA	D/3	C	O	3	A	C	TF-1	TF-1	R	NO
2-SV-79-CD1	3	REL	0.50	SA	E/1	C	O	3	A	C	TF-1	TF-1	R	NO
2-SV-79-CD2	3	REL	0.50	SA	E/1	C	O	3	A	C	TF-1	TF-1	R	NO
2-XRV-225	3	GA	1.00	A	B/3	C	O	3	A	B	EF-1 EF-7 ET-XXX	EF-1 EF-7 NOTE 4	- - -	YES, NOTE 4 YES, NOTE 4 YES, NOTE 4
2-XRV-226	3	GL	3.00	A	B/4	C	O	3	A	B	EF-1 EF-7 ET-XXX	EF-1 NOTE 3 NOTE 3	- - -	YES, NOTE 3 YES, NOTE 3 YES, NOTE 3
2-XRV-227	3	GL	3.00	A	B/4	C	O	3	A	B	EF-1 EF-7	EF-1 NOTE 3	P -	YES, NOTE 3 YES, NOTE 3

DONALD C. COOK NUCLEAR PLANT
 SECOND TEN YEAR INTERVAL
 VALVE SUMMARY SHEET - UNIT 2
 FLOW DIAGRAM: 2-5151D-27

SYSTEM: EMERGENCY DIESEL GENERATOR 'CD'

VALVE						VALVE POSITION		ASME SECTION XI						
Valve Tag	Rev	Type	Size	Actuator	Coords	Power Operation	Safety Function	Class	Active/ Passive	Category	Test Required	Test Performed	Test Frequency	Relief Request
2-XRV-227	3	GL	3.00	A	B/4	C	O	3	A	B	ET-XXX	NOTE 3	P	YES, NOTE 3

