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RECIP.NAME RECIPIENT AFFILIATION
MILLER,C.L. Project Directorate I-2

SUBJECT: Provides update to Generic Ltr 89-10 completion plan. Attachments B,C & D (originally provided in 940429 ltr) revised to include RCIC valve being tested after 940628 & RWCU return isolation valves being reclassified.

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JUL 11 1994

Director of Nuclear Reactor Regulation
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U.S. Nuclear Regulatory Commission
Washington, DC 20555

SUSQUEHANNA STEAM ELECTRIC STATION
UPDATE TO THE GENERIC LETTER 89-10
COMPLETION PLAN
PLA-4163 **FILE R41-2**

Docket Nos. 50-387
and 50-388

Reference: Letter PLA-4124, 'Revision to Generic Letter 89-10 Completion Plan,' dated April 29, 1994, from R.G. Byram (PP&L) to C.L. Miller (NRC)

Dear Mr. Miller:

The purpose of this letter is to provide the staff with an update to our Generic Letter 89-10 completion plan. We have determined that the dynamic testing for the RCIC pump minimum flow bypass valve (HV149F019) on Unit 1 will not be completed by June 28, 1994, along with revisions to our valve groupings.

The RCIC pump minimum flow bypass valve is normally closed and will open under a low flow condition, and reclose when flow is greater than the minimum flow setpoint. The safety function is to open to provide minimum flow to the RCIC pump, to close to ensure that sufficient RCIC flow is sent to the reactor pressure vessel, and to provide containment isolation.

This valve and its counterpart on Unit 2 were statically tested during their respective refueling outages. As these are rising-rotating valves, both thrust and torque data were taken to fully characterize the valve response. The difficulty in obtaining and analyzing test data in the static condition requires further refinement of the techniques prior to attempting to perform a dynamic test. The rising-rotating design coupled with being a globe valve presents additional challenges. Since this is a local leak rate tested valve on a safety system that can only be tested with the unit at 100% power while in an LCO, it is required that the evolution be well planned and executed to

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minimize out of service time and not jeopardize the operation of the unit. Because of the complexity of this test, other scheduled dynamic testing (10 dynamic tests) and Unit 2 in a power uprate ascension program, the test has been rescheduled to a work window prior to the end of the 4th quarter of 1994. The static test results have indicated an acceptable margin to indicate the valve is operable under all defined design basis condition. Deferral of this testing also defers the similarity analysis for the Unit 2 valve.

In reviewing our program, we determined that the RWCU return isolation valves should have been classified as valves having zero differential pressure and not classified as non-testable valves. This reclassification does not change the number of dynamic tests to be performed.

The above changes have been reflected in the following revised table which was originally provided in the above referenced letter.

GROUP	OPERABILITY ASSESSMENT	TOTAL	AFTER 6/28/94
In-Situ Dynamic Tests w/Diags. w/o Diags.	Test Test	37 8	10 (Notes 3 & 5) 4 (Notes 3 & 5)
Diff. Press. = 0	Note 1	20	
Excessive Margins	Note 1	12	
Globes - Flow under Seat and Open Only Safety Function	Note 1	2	
Similarity to In-Situ Tested Valve	Similarity Analysis	7	1 (Note 5)
NON-TESTABLES	Note 2	84	84 (Notes 4 & 5)
TOTAL		170	

Note 1: Static test sufficient to determine operability.
Note 2: Non-Testables rely on either EPRI tests and EPRI methodology or engineering analysis to assess operability.
Note 3: Physical description contained in Attachment B.
Note 4: Physical description contained in Attachment C.
Note 5: Safety function description provided in Attachment D.

Attachments B, C, and D (Originally provided in PLA-4124) have been revised to include the RCIC valve being tested after June 28, 1994, and the RWCU return isolation valves being reclassified as valves having zero differential flow.

The extended length of the Unit 2 Sixth Refueling Outage has delayed the planned post outage dynamic tests until late June. Although the dynamic tests will be completed prior to or close to June 28, 1994, the associated closure packages (i.e., functionality assessments) for valves tested in June will not be completed until 7/31/94.

If you have any questions or comments, please contact Mr. C.T. Coddington at (610) 774-7915.

Very truly yours,

R. G. Byram

Attachments

cc: NRC Document Control Desk (original)
NRC Region I
Mr. G. S. Barber, NRC Sr. Resident Inspector - SSES
Mr. C. Poslusny, Jr., NRC Sr. Project Manager - Rockville

ATTACHMENT B

RISING STEM VALVES SET-UP OR HAVE STATIC RETEST AFTER 6/94

VALVE TAG #	SYSTEM	TYPE	SIZE	SAFETY FUNCTION	RISK PRIORITY	MAXIMUM DP (PSID)*	MAXIMUM FLOW (GPM)*
HV-151F007A	RHR	GT	6	O/C	3	498	2000
HV-151F009	RHR	GT	20	C	3	126	24721
HV-151F023	RHR	GB	6	C	3	404	500

RISING STEM VALVES WITH DYNAMIC TEST AFTER 6/94

VALVE TAG #	SYSTEM	TYPE	SIZE	SAFETY FUNCTION	RISK PRIORITY	MAXIMUM DP (PSID)*	MAXIMUM FLOW (GPM)*
HV-149F007	RCIC	GT	4	C	3	1175	87900
HV-149F008	RCIC	GT	4	C	3	1175	87900
HV-149F019	RCIC	R/R	2	O/C	3	1335	75
HV-152F005A	CS	GT	12	O/C	3	371	7900
HV-155F001	HPCI	GT	10	O	1	1187	220000**
HV-155F002	HPCI	GT	10	C	1	1175	672000**
HV-155F003	HPCI	GT	10	C	1	1175	672000**
HV-212F073A	RHRSW	GT	6	O	2	165	5000
HV-212F073B	RHRSW	GT	6	O	2	165	5000
HV-249F007	RCIC	GT	4	C	3	1175	87900
HV-249F008	RCIC	GT	4	C	3	1175	87900
HV-255F002	HPCI	GT	10	C	1	1175	672000**
HV-255F003	HPCI	GT	10	C	1	1175	672000**
HV-255F012	HPCI	GT	4	O/C	1	1474	500

RISK PRIORITY SCHEME

PRIORITY	DEFINITION
1	Causes the loss of a safety function
2	Causes loss of 1 of 2 systems used for a safety function.
3	Not 1 or 2, but within Generic Letter 89-10 scope.

* Worst Case
** lbs/hr steam flow

ATTACHMENT C

NON-TESTABLE VALVES

VALVE TAG NUMBE	SYSTEM	VALVE TYPE	VALVE SIZE	SAFETY FUNCTION	RISK PRIORITY	MAXIMUM DP (PSIG) *	MAXIMUM FLOW (GPM) *
HV 112F075A	RHRSW	GT	6	O	2	33.3	0
HV 112F075B	RHRSW	GT	6	O	2	33.3	0
HV 11313	RBCCW	GT	4	C	3	91	128
HV 11314	RBCCW	GT	4	C	3	91	128
HV 11345	RBCCW	GT	4	C	3	91	128
HV 11346	RBCCW	GT	4	C	3	91	128
HV 12603	CIG	GB	2	C	3	60	40
HV 143F031A	Recirc	GT	28	C	2	200	19500
HV 143F031B	Recirc	GT	28	C	2	200	19500
HV 143F032A	Recirc	GT	4	C	3	1066	591
HV 143F032B	Recirc	GT	4	C	3	1066	591
HV 144F001	RWCU	GT	6	C	3	1083	436
HV 144F004	RWCU	GT	6	C	3	1083	436
HV 149F010	RCIC	GT	6	O/C	3	29	0
HV 149F013	RCIC	GT	6	O/C	3	1220	600
HV 149F031	RCIC	GT	6	O/C	3	36	600
HV 149F059	RCIC	GT	10	C	3	16	0
HV 149F060	RCIC	GB	2	C	3	16	0
HV 151F004A	RHR	GT	24	O/C	3	41	100
HV 151F004B	RHR	GT	24	O/C	3	41	100
HV 151F004C	RHR	GT	24	O/C	3	41	100
HV 151F004D	RHR	GT	24	O/C	3	41	100
HV 151F008	RHR	GT	20	C	3	1070	24721
HV 151F009	RHR	GT	20	C	3	126	24721
HV 151F015A	RHR	GT	24	O/C	2	359	21300
HV 151F015B	RHR	GT	24	O/C	2	359	21300
HV 151F016A	RHR	GB	12	O/C	2	316	10000
HV 151F016B	RHR	GB	12	O/C	2	316	10000
HV 151F017A	RHR	DG	20	O/C	2	478	21300
HV 151F017B	RHR	DG	20	O/C	2	478	21300
HV 151F021A	RHR	GT	12	O/C	2	305	9500
HV 151F021B	RHR	GT	12	O/C	2	305	9500
HV 151F027A	RHR	GB	6	O/C	3	340	750
HV 151F027B	RHR	GB	6	O/C	3	340	750
HV 152F001A	CS	GT	16	C	3	23	100
HV 152F001B	CS	GT	16	C	3	23	100
HV 155F004	HPCI	GT	16	O/C	3	33	5000
HV 155F006	HPCI	GT	14	O/C	1	1223	5000
HV 155F042	HPCI	GT	16	O/C	3	41	5000
HV 155F066	HPCI	GT	20	C	1	16	0

ATTACHMENT C (continued)

VALVE TAG NUMBER	SYSTEM	VALVE TYPE	VALVE SIZE	SAFETY FUNCTION	RISK PRIORITY	MAXIMUM DP (PSIG) *	MAXIMUM FLOW (GPM) *
HV 15766	SPCU	GT	6	C	3	50	295
HV 15768	SPCU	GT	6	C	3	50	295
HV 212F075A	RHRSW	GT	6	O	2	33.3	0
HV 212F075B	RHRSW	GT	6	O	2	33.3	0
HV 21313	RBCCW	GT	4	C	3	91	128
HV 21314	RBCCW	GT	4	C	3	91	128
HV 21345	RBCCW	GT	4	C	3	91	128
HV 21346	RBCCW	GT	4	C	3	91	128
HV 22603	CIG	GB	2	C	3	60	40
HV 243F031A	Recirc	GT	28	C	2	200	19500
HV 243F031B	Recirc	GT	28	C	2	200	19500
HV 243F032A	Recirc	GT	4	C	3	1066	591
HV 243F032B	Recirc	GT	4	C	3	1066	591
HV 244F001	RWCU	GT	6	C	3	1083	436
HV 244F004	RWCU	GT	6	C	3	1083	436
HV 249F010	RCIC	GT	6	O/C	3	29	0
HV 249F013	RCIC	GT	6	O/C	3	1220	600
HV 249F031	RCIC	GT	6	O/C	3	36	600
HV 249F059	RCIC	GT	10	C	3	16	0
HV 249F060	RCIC	GB	2	C	3	16	0
HV 251F004A	RHR	GT	24	O/C	3	41	100
HV 251F004B	RHR	GT	24	O/C	3	41	100
HV 251F004C	RHR	GT	24	O/C	3	41	100
HV 251F004D	RHR	GT	24	O/C	3	41	100
HV 251F008	RHR	GT	20	C	3	1070	24721
HV 251F009	RHR	GT	20	C	3	126	24721
HV 251F015A	RHR	GT	24	O/C	2	359	21300
HV 251F015B	RHR	GT	24	O/C	2	359	21300
HV 251F016A	RHR	GB	12	O/C	2	316	10000
HV 251F016B	RHR	GB	12	O/C	2	316	10000
HV 251F017A	RHR	DG	20	O/C	2	478	21300
HV 251F017B	RHR	DG	20	O/C	2	478	21300
HV 251F021A	RHR	GT	12	O/C	2	305	9500
HV 251F021B	RHR	GT	12	O/C	2	305	9500
HV 251F027A	RHR	GB	6	O/C	3	340	750
HV 251F027B	RHR	GB	6	O/C	3	340	750
HV 252F001A	CS	GT	16	C	3	23	100
HV 252F001B	CS	GT	16	C	3	23	100
HV 255F004	HPCI	GT	16	O/C	3	33	5000
HV 255F006	HPCI	GT	14	O/C	1	1223	5000
HV 255F042	HPCI	GT	16	O/C	3	41	5000
HV 255F066	HPCI	GT	20	C	1	16	0
HV 25766	SPCU	GT	6	C	3	50	295
HV 25768	SPCU	GT	6	C	3	50	295

* Worst case

ATTACHMENT D

SAFETY FUNCTION DESCRIPTIONS

HV-212F073A HV-212F073B	These valves are the RHR/RHRSW cross-tie valves. These valves are normally closed and their safety function is to open to provide a flowpath from the RHRSW system to the RPV or containment, via the RHR system, for RPV/containment flooding or suppression pool make-up.
HV-112F075A HV-112F075B HV-212F075A HV-212F075B	These valves are the RHR/RHRSW cross-tie valves. These valves are normally closed and their safety function is to open to provide a flowpath from the RHRSW system to the RPV or containment, via the RHR system, for RPV/containment flooding or suppression pool make-up.
HV-11313 HV-11314 HV-11345 HV-11346 HV-21313 HV-21314 HV-21345 HV-21346	These valves are containment isolation valves for the RBCCW to the reactor recirculation pump seal and motor oil coolers. These valves' safety function is to close for containment isolation on a high drywell pressure or low reactor level 1 signal.
HV-12603 HV-22603	These valves are the Containment Instrument Gas compressor suction inboard containment isolation valves. These valves are normally open to provide a suction path for the containment instrument gas compressors. The valves' safety function is to close on a containment isolation signal.

HV-143F031A HV-143F031B HV-243F031A HV-243F031B	These valves are the reactor recirculation pump discharge valves. These valves are normally open to provide a discharge path for the recirculation system. The safety function of these valves is to close on a LOCA plus low reactor pressure signal, to assure the proper alignment for LPCI injection.
HV-143F032A HV-143F032B HV-243F032A HV-243F032B	These valves are the reactor recirculation pump discharge bypass valves. These valves are normally open and provide a discharge path for the recirculation system during pump start-up. The safety function of these valves is to close on a LOCA plus low reactor pressure signal, to assure the proper alignment for LPCI injection.
HV-144F001 HV-244F001	These valves are the RWCU inboard containment isolation valves. These valves are normally open and their safety function is to close on a reactor low level signal or on indication of a RWCU system break from the steam leak detection system.
HV-144F004 HV-244F004	These valves are the RWCU outboard containment isolation valves. These valves are normally open and their safety function is to close on a reactor low level signal, on indication of a RWCU system break from the steam leak detection system, on initiation of Standby Liquid Control system, and on RWCU nonregenerative heat exchanger high outlet temperature.
HV-149F007 HV-149F008 HV-249F007 HV-249F008	These valves are the RCIC steam supply line to the RCIC turbine containment isolation valves. These valves are normally open for RCIC operation and their safety function is to close for containment isolation when RCIC is not operating.

HV-149F010 HV-249F010	These valves are the RCIC suction valves from the condensate storage tank and are normally open. These valves' safety function is to close on suction transfer from the CST to the suppression pool.
HV-149F013 HV-249F013	These valves are the RCIC injection shutoff containment isolation valves. These valves are normally closed and their safety function is to open on RCIC initiation, and to close for containment isolation when RCIC is not operating.
HV-149F019 HV-249F019	These valves are the RCIC minimum flow bypass valves. These valves are normally closed. The safety function is to open to provide minimum flow to the RCIC pump, to close to ensure that sufficient RCIC flow is sent to the reactor pressure vessel, and to provide containment isolation.
HV-149F031 HV-249F031	These valves are the RCIC suppression pool suction containment isolation valves. These valves are normally closed and will open on low level conditions in the CST. The valves' safety function is to open on automatic RCIC suction transfer from CST to suppression pool, and to remote manually close for containment isolation.
HV-149F059 HV-249F059	These valves are the containment isolation valves on the RCIC turbine exhaust to the suppression pool. These valves are normally open and their safety function is to remote manually close if required to provide long term containment isolation.

HV-149F060 HV-249F060	These valves are the RCIC barometric condenser vacuum pump discharge to the suppression pool containment isolation valves. These valves are normally open and their safety function is to perform a manual containment isolation function.
HV-151F004A HV-151F004B HV-151F004C HV-151F004D HV-251F004A HV-251F004B HV-251F004C HV-251F004D	These valves are the RHR suppression pool suction manual containment isolation valves. These valves are normally open to provide a suction path for LPCI and their safety function is to remote manually close to provide long term containment isolation.
HV-151F007A	This valve is the RHR pump minimum flow bypass valve. This valve is normally closed and its safety function is to open to prevent damage to the pumps during low flow condition and to close when sufficient flow exists to assure maximum LPCI flow to the vessel.
HV-151F008 HV-251F008	These valves are the shutdown cooling supply outboard containment isolation valves. These valves are normally closed and are opened for shutdown cooling mode of RHR. The safety function of these valves is to close on a shutdown cooling isolation signal.
HV-151F009 HV-251F009	These valves are the shutdown cooling supply inboard containment isolation valves. These valves are normally closed and are opened for shutdown cooling mode of RHR. The safety function of these valves is to close on a shutdown cooling isolation signal.

HV-151F015A HV-151F015B HV-251F015A HV-251F015B	These valves are the RHR injection inboard containment isolation valves. These valves are normally closed and their safety function is to open on LPCI initiation during LOCA, and to close on low level 3 when in shutdown cooling.
HV-151F016A HV-151F016B HV-251F016A HV-251F016B	These valves are the drywell spray header outboard containment isolation valves. These valves are normally closed. The safety function of these valves is to open for containment spray and to close for containment isolation.
HV-151F017A HV-151F017B HV-251F017A HV-251F017B	These valves are the RHR outboard injection control valves. These valves are normally open and their safety function is to open and close as required to control injection flow during LPCI and containment cooling modes of RHR.
HV-151F021A HV-151F021B HV-251F021A HV-251F021B	These valves are the drywell spray header inboard containment isolation valves. These valves are normally closed. The safety function of these valves is to open for containment spray and to subsequently close for containment isolation.
HV-151F023	This valve is the RHR head spray outboard containment isolation valve. This valve is normally closed and its safety function is to close, if open, on a reactor low level 3, RHR isolation, High Drywell pressure, or reactor pressure greater than allowable for shutdown cooling.
HV-151F027A HV-151F027B HV-251F027A HV-251F027B	These valves are the suppression chamber spray header inboard containment isolation valves. These valves are normally closed. The safety function of these valves is to open for suppression chamber spray.

HV-152F001A HV-152F001B HV-252F001A HV-252F001B	These valves are the Core Spray suppression pool suction manual containment isolation valves. These valves are normally open to provide a suction path for core spray injection and their safety function is to remote manually close to provide long term containment isolation.
HV-152F005A	This valve is the Core Spray injection inboard containment isolation valve. This valve is normally closed and its safety function is to open on Core Spray initiation and low reactor pressure, and to close to provide containment isolation.
HV-155F001	This valve is the HPCI injection valve. This valve is normally open, and the safety function of this valve is to open on a HPCI injection signal.
HV-155F002 HV-255F002	This valve is the HPCI steam supply line inboard containment isolation valve. This valve is normally open, and the safety function of this valve is to close on a HPCI isolation signal.
HV-155F003 HV-255F003	This valve is the HPCI steam supply line outboard containment isolation valve. This valve is normally open, and the safety function of this valve is to close on a HPCI isolation signal.
HV-155F004 HV-255F004	These valves are the HPCI suction valves from the condensate storage tank and are normally open. These valves' safety function is to automatically close on suction transfer from the CST to the suppression pool.

HV-155F006 HV-255F006	These valves are the HPCI injection shutoff containment isolation valves. These valves are normally closed and their safety function is to open on HPCI initiation, and to close for containment isolation when HPCI is not operating.
HV-255F012	This valve is the HPCI minimum flow bypass valve. This valve is normally closed and will open when HPCI is operating with inadequate flow, and will reclose when adequate HPCI flow is developed. The valves safety function is to open to provide minimum flow to the HPCI pump, and to close to ensure sufficient HPCI flow is sent to the RPV and to also provide containment isolation.
HV-155F042 HV-255F042	These valves are the HPCI suppression pool suction containment isolation valves. These valves are normally closed and will open on low level conditions in the CST or high water level in the suppression pool. The valves' safety function is to open on automatic HPCI suction transfer from CST to suppression pool, and to remote manually close for containment isolation or realignment of HPCI suction to the CST.
HV-155F066 HV-255F066	These valves are the containment isolation valves on the HPCI turbine exhaust to the suppression pool. These valves are normally open and their safety function is to remote manually close if required to provide long term containment isolation.
HV-15766 HV-25766	These valves are the suppression pool cleanup system inboard containment isolation valves. These valves are normally closed and their safety function is to close, if open, on a LOCA signal.

HV-15768 HV-25768	These valves are the suppression pool cleanup system outboard containment isolation valves. These valves are normally closed and their safety function is to close, if open, on a LOCA signal.