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NLR-N94009

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Gentlemen:

REGULATORY GUIDE 1.97
CONTAINMENT ISOLATION VALVE POSITION INDICATION
SALEM GENERATING STATION
UNIT NOS. 1 AND 2
DOCKET NOS. 50-272 AND 50-311

NRC Generic Letter 82-33 was issued on December 17, 1982. Generic Letter 82-33 required, among other items, that licensees submit a report describing how their facility design meets the guidance provided in Regulatory Guide 1.97, Revision 2, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident."

By letters dated April 2, 1981, April 15, 1983, September 21, 1983 and August 9, 1984 Public Service Electric and Gas (PSE&G) described how instrumentation installed at Salem Station Units 1 and 2 meets the guidance of Regulatory Guide 1.97 or is justified in deviating from the guidance. The NRC issued a Safety Evaluation Report dated June 17, 1985 concluding that the Salem Station facility either conforms to, or is justified in deviating from, the guidance of Regulatory Guide 1.97.

Since our submittals listed above, a number of engineering and construction activities have taken place including NRC inspection of Regulatory Guide 1.97 implementation at Salem Station. In response to these activities and NRC unresolved items 50-272/91-30-01 and 50-311/91-30-01, PSE&G has completed extensive re-reviews of the variables associated with Regulatory Guide 1.97. These reviews have identified additional information with regard to Regulatory Guide 1.97 containment isolation valve position indication that may have not been previously communicated to the NRC staff.

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The purpose of this letter is to communicate this additional information. The attachment to this letter identifies the additional information.

Please contact us if you should have questions in this regard.

Sincerely,

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Attachment to PSE&G Letter NLR-N94009

Regulatory Guide (RG) 1.97, Table 2 lists "Containment Isolation Valve Position" as a Type B, Category 1 variable. The range is "closed-not closed" and the purpose listed is "accomplishment of isolation."

PSE&G correspondence concerning this variable listed it as Variable #12, "Containment Isolation Valve Position Indication" (See letters to NRC dated April 2, 1981 and September 21, 1983). PSE&G correspondence indicated that containment isolation valve position instrumentation would meet RG 1.97 guidance for Type B, Category 1 variables. However, during subsequent internal reviews and NRC inspections performed to verify compliance to this RG 1.97 commitment, PSE&G determined that the scope of isolation valves referred to in our previous submittals was not explicitly identified. In order to complete our verification efforts, it was necessary to research the Salem design criteria and basis for containment isolation valve position indication. Based on this review PSE&G determined that the following definition of containment isolation valve bounds our commitment for containment isolation valve position indication with respect to RG 1.97:

> Those automatic isolation valves (listed in Salem Updated Final Safety Analysis Report Tables 6.2-10, 6.2-12 and 6.2-13) which receive an automatic isolation signal to close (accomplish containment isolation). Types of containment isolation signals are Phase A, Phase B, Main Steam, Feedwater, Steam Generator Blowdown, and Containment Purge and Pressure - Vacuum Relief Isolations.

This definition is based on the purpose stated in RG 1.97 for this variable which is "accomplishment of isolation." Containment isolation for various valves at Salem Station is accomplished via the automatic isolation signals listed in the definition or by closure of check valves in response to individual and specific system parameters. Position indication meeting RG 1.97 Category 1 recommendations is provided for valves within this definition. Note: RG 1.97 does not require position indication for check valves.

With regard to Category 1 variable environmental qualification (EQ) requirements, position indication circuits for RG 1.97 containment isolation valves which are located in mild environments have been designed for a mild environment. RG 1.97 containment isolation valves located in harsh environments have position indication circuits qualified under our EQ program for a harsh environment. Position indication circuits for four RG 1.97 containment isolation valves (DR29, FP147, VC8 and VC12) have been exempted from our EQ program since the circuits accomplish their safety function (position indication) prior to experiencing a harsh environment.

These valve position circuits are located outside containment and, over time, may experience radiation "shine." The basis for exempting these valves has been documented in controlled engineering evaluations in accordance with PSE&G EQ program procedures.

Valves listed in the Salem UFSAR Tables 6.2-10, 6.2-12 and 6.2-13 which do not meet the above definition for RG 1.97 containment isolation valves (do not receive an automatic isolation signal) are subject to the following administrative controls as applicable to each valve type:

1) the power supply is removed from motor operated valves which are not operated during the response to an accident,

2) the air supply is isolated from air operated valves which are not operated during the response to an accident,

3) manual isolation valves are locked in position,

4) remote manual operated valves which are exercised during the response to an accident are controlled by station operating procedures.

With regard to valves in #4 above, while these valves do not fall within the definition of RG 1.97 containment isolation valves, they do have position indication circuits which are qualified in accordance with the Salem environmental qualification (EQ) program as follows:

Non-RG 1.97 remote manual containment isolation valves located in mild environments have position indication circuits designed for a mild environment. With the exception noted below regarding service water valves, non-RG 1.97 remote manual containment isolation valves located in harsh environments either have position indication circuits qualified under our EQ program for a harsh environment or are exempted from our EQ program since they accomplish their safety function prior to experiencing a harsh environment.

Service water inlet (SW58) and outlet valves (SW72) to the containment fan coil units (CFCUs) are air operated butterfly valves located outside containment. They provide isolation capability to the service water supply and return lines for the CFCUs. The valves have no control function and fail to the safe position (open) on loss of air and/or power. As an alternative to qualified valve position indication circuitry, environmentally qualified flow instrumentation for each line is available in the control room. This flow indication provides qualified alternate indication of valve position.

The application of the stated definition to the containment isolation valves listed in the Salem Station Updated Final Safety Analysis Report (UFSAR) Tables 6.2-10, 6.2-12, and 6.2-13 is provided in the attached table. For each valve the table lists the valve identification, valve name, valve type and whether it is considered to be a RG 1.97 containment isolation valve. The final column on the right indicates whether valve position indication is provided.

This list of valves has been issued within a controlled engineering evaluation document. In conjunction, a checklist has been added to the design change process procedure to ensure that commitments to RG 1.97 recommendations are maintained during future design modifications. This checklist references the engineering evaluation and will function to ensure that position indication circuits for RG 1.97 containment isolation valves continue to meet RG 1.97 Category 1 design recommendations.

This information is being provided as a clarification to our previous Salem docketed correspondence on RG 1.97. It provides additional detail as to the method by which the Salem design incorporates the guidance of RG 1.97 for containment isolation valve position indication.

CONTAINMENT ISOLATION VALVES
PER UFSAR TABLES 6.2-10, 6.2-12, AND 6.2-13

VALVE #	NAME	TYPE	RG 1.97 CIV (Y/N)	IND. (Y/N)
11AF11	11 AUX FDW SG INLET	AOV	N	Y
12AF11	12 AUX FDW SG INLET	AOV	N	Y
13AF11	13 AUX FDW SG INLET	AOV	N	Y
14AF11	14 AUX FDW SG INLET	AOV	N	Y
11AF21	11 AUX FDW SG INLET	AOV	N	Y
12AF21	12 AUX FDW SG INLET	AOV	N	Y
13AF21	13 AUX FDW SG INLET	AOV	N	Y
14AF21	14 AUX FDW SG INLET	AOV	N	Y
11BF19	11 SG FEED & COND SG FDW INLET	AOV	N	Y
12BF19	12 SG FEED & COND SG FDW INLET	AOV	N	Y
13BF19	13 SG FEED & COND SG FDW INLET	AOV	N	Y
14BF19	14 SG FEED & COND SG FDW INLET	AOV	N	Y
11BF22	11 SG FEED & COND SG FDW INLET	MOV	N	Y
12BF22	12 SG FEED & COND SG FDW INLET	MOV	N	Y
13BF22	13 SG FEED & COND SG FDW INLET	MOV	N	Y
14BF22	14 SG FEED & COND SG FDW INLET	MOV	N	Y
11BF40	12 SG FEED & COND SG FDW INLET	AOV	N	Y
12BF40	12 SG FEED & COND SG FDW INLET	AOV	N	Y
13BF40	13 SG FEED & COND SG FDW INLET	AOV	N	Y
14BF40	14 SG FEED & COND SG FDW INLET	AOV	N	Y
11CA330	**11 CONT AIR HDR 1A SPLY**	**AOV**	**Y**	**Y**
12CA330	**12 CONT AIR HDR 1B SPLY**	**AOV**	**Y**	**Y**
11CA360	11 CONT AIR HDR 1A CNTMNT	CKVL	N	N
12CA360	12 CONT AIR HDR 1B CNTMNT BLDG	CKVL	N	N
1CA1714	1 CONT AIR 100 ELEV. AIR LOCK	VLV	N	N
1CA1715	1 CONT AIR 130 ELEV. AIRLOCK	VLV	N	N
1CC109	1 CMPNT CLG EXCESS LETDWN	CKVL	N	N
1CC113	**1 CMPNT CLG EXCESS LETDWN**	**AOV**	**Y**	**Y**
1CC118	**1 CMPNT CLG REAC COOL PP**	**MOV**	**Y**	**Y**

CONTAINMENT ISOLATION VALVES
PER UFSAR TABLES 6.2-10, 6.2-12, AND 6.2-13

VALVE #	NAME	TYPE	RG 1.97 CIV (Y/N)	IND. (Y/N)
1CC119	1 CMPNT CLG REACT COOL PP	CKVL	N	N
1CC131	**1 CMPNT REAC COOL PP**	**MOV**	**Y**	**Y**
1CC136	**1 CMPNT CLG REAC COOL PP**	**MOV**	**Y**	**Y**
1CC186	1 CMPNT CLG COOL PP	CKVL	N	N
1CC187	**1 CMPNT CLG REAC COOL PP**	**MOV**	**Y**	**Y**
1CC190	**1 CMPNT CLG REAC COOL PP**	**MOV**	**Y**	**Y**
1CC208	1 CMPNT CLG REAC COOL PP	CKVL	N	N
1CC215	**1 CMPNT CLG EXCESS LETDWN**	**AOV**	**Y**	**Y**
11CS2	11 CONT SPRAY PP DISCH	MOV	N	Y
12CS2	12 CONT SPRAY PP DISCH	MOV	N	Y
11CS5	11 CONT SPRAY PEN AREA	SRV	N	N
12CS5	12 CONT SPRAY PEN AREA	SRV	N	N
11CS36	11 CONT SRRY RES HT EXCH	MOV	N	Y
12CS36	12 CONT SRRY RES. HT EXCH	MOV	N	Y
11CS48	11 CONT SPRAY PP DISCH	CKVL	N	N
12CS48	12 CONT SPRAY PP DISCH SWG	CKVL	N	N
1CS900	1 CONT SPRAY SMPL TEST CONN	VLV	N	N
1CS901	1 CONT SPRAY SMPL TEST CONN	VLV	N	N
1CS902	1 CONT SPRAY TEST CONN	VLV	N	N
1CS903	1 CONT SPRAY TEST CONN	VLV	N	N
1CV3	**1 CVC LET DWN ORIFICE ISO**	**AOV**	**Y**	**Y**
1CV4	**1 CVC REGEN HT EXCH**	**AOV**	**Y**	**Y**
1CV5	**1 CVC LET DWN ORIFICE**	**AOV**	**Y**	**Y**
1CV7	**1 CVC LET DWN HT EXCH INLET**	**AOV**	**Y**	**Y**
1CV43	1 CVC CHG SAF INJ SUCT HDR	SRV	N	N
1CV68	**1 CVC REGEN HT EXCH.**	**MOV**	**Y**	**Y**
1CV69	**1 CVC REGEN HT EXCH**	**MOV**	**Y**	**Y**
1CV74	1 CVC REGEN HT EXCH	CKVL	N	N
11CV98	11 CVC SEAL WTR SPLY TO REAC COOL PP	VLV	N	N
12CV98	12 CVC SEAL WTR SPLY TO REAC COOL	VLV	N	N
13CV98	13 CVC SEAL WTR SPLY TO REAC COOL	VLV	N	N

CONTAINMENT ISOLATION VALVES
PER UFSAR TABLES 6.2-10, 6.2-12, AND 6.2-13

VALVE #	NAME	TYPE	RG 1.97 CIV (Y/N)	IND. (Y/N)
14CV98	14 CVC SEAL WTR SPLY TO REAC COOL PP	VLV	N	N
11CV99	11 CVC REAC COOL EMP SUCT	CKVL	N	N
12CV99	12 CVC REAC COOL EMP SUCT	CKVL	N	N
13CV99	13 CVC REAC COOL EMP SUCT	CKVL	N	N
14CV99	14 CVC REAC COOL EMP SUCT	CKVL	N	N
1CV116	**1 CVC SEAL WTR FILTER**	**MOV**	**Y**	**Y**
1CV284	**1 CVC REAC COOL PP DSCHRG HDR**	**MOV**	**Y**	**Y**
1CV296	1 CVC REAC COOL PMP DISCH HDR	CKVL	N	N
1DR29	**1 DEMIN WTR UNIT 2**	**AOV**	**Y**	**Y**
1DR30	1 DEMIN WTR UNIT 1 INLET	CKVL	N	N
1FP147	**1 FIRE PROT REAC CONTMNT**	**AOV**	**Y**	**Y**
1FP148	1 FIRE PROT REAC CONTMNT	CKVL	N	N
11GB4	**11 STM GEN DRN & BLDWN STM GEN**	**AOV**	**Y**	**Y**
12GB4	**12 STM GEN DRN & BLDWN STM GEN**	**AOV**	**Y**	**Y**
13GB4	**13 STM GEN DRN & BLDWN STM GEN**	**AOV**	**Y**	**Y**
14GB4	**14 STM GEN DRN & BLDWN STM GEN**	**AOV**	**Y**	**Y**
11MS7	**11 MN STM & TURB BYPASS HDR STM**	**AOV**	**Y**	**Y**
12MS7	**12 MN STM & TURB BYPASS**	**AOV**	**Y**	**Y**
13MS7	**13 MN STM & TURB BYPASS**	**AOV**	**Y**	**Y**
14MS7	**14 MN STM & TURB BYPASS**	**AOV**	**Y**	**Y**
11MS18	**11 MN STM & TURB BYPASS**	**AOV**	**Y**	**Y**
12MS18	**12 MN STM & TURB BYPASS**	**AOV**	**Y**	**Y**
13MS18	**13 MN STM & TURB BYPASS**	**AOV**	**Y**	**Y**
14MS18	**14 MN STM & TURB BYPASS**	**AOV**	**Y**	**Y**
1MS132	1 MN STM & TURB BYPASS	AOV	N	Y
11MS167 (Channel C)	**11 MN STM & TURB BYPASS STM GEN**	**HOV**	**Y**	**Y**
11MS167 (Channel D)	**11 MN STM & TURB BYPASS STM GEN**	**HOV**	**Y**	**Y**
12MS167 (Channel C)	**12 MN STM & TURB BYPASS STM GEN**	**HOV**	**Y**	**Y**
12MS167 (Channel D)	**12 MN STM & TURB BYPASS STM GEN**	**HOV**	**Y**	**Y**

CONTAINMENT ISOLATION VALVES
PER UFSAR TABLES 6.2-10, 6.2-12, AND 6.2-13

VALVE #	NAME	TYPE	RG 1.97 CIV (Y/N)	IND. (Y/N)
13MS167 (Channel C)	**13 MN STM & TURB BYPASS STM GEN**	**HOV**	**Y**	**Y**
13MS167 (Channel D)	**13 MN STM & TURB BYPASS STM GEN**	**HOV**	**Y**	**Y**
14MS167 (Channel C)	**14 MN STM & TURB BYPASS STM GEN**	**HOV**	**Y**	**Y**
14MS167 (Channel D)	**14 MN STM & TURB BYPASS STM GEN**	**HOV**	**Y**	**Y**
1NT25	**REAC COOL PRESS. RELIEF TNK NITROG SPLY**	**AOV**	**Y**	**Y**
1NT26	REAC COOL NITROG. SPLY	CKVL	N	N
1NT32	**1 SFTY INJ BTTLD H.P. N2**	**AOV**	**Y**	**Y**
1NT34	1 SFTY INJ BTTLD H.P. N2	CKVL	N	N
1PR17	**1 POPS PRESS. RELIEF TANK TO GAS SAMPLE**	**AOV**	**Y**	**Y**
1PR18	**1 POPS PRESS. RELIEF TANK TO GAS SAMPLE**	**AOV**	**Y**	**Y**
1PR25	POPS PRESS. RELIEF TNK	CKVL	N	N
1RH1	RHR COMMON SUCT MTR	MOV	N	Y
1RH2	1 RHR COMMON SUCT MTR	MOV	N	Y
11RH4	11 RHR PP SUCT MOV	MOV	N	Y
12RH4	12 RHR PP SUCT MOV	MOV	N	Y
11RH19	11 RHR HX DISCH	MOV	N	Y
12RH19	12 RHR HX DISCH	MOV	N	Y
1RH26	1 RHR HOT LEG ISOL GATE	MOV	N	Y
1SA118	1 STAT AIR HDR CNTMNT	VLV	N	N
1SA119	1 STAT AIR CNTMNT HDR	CKVL	N	N
1SA262	1 STAT AIR CNTMNT PRESS	VLV	N	N
1SA264	1 STAT AIR CNTMNT PRESS	VLV	N	N
1SA265	1 STAT AIR CNTMNT PRESS	VLV	N	N
1SA267	1 STAT AIR CNTMNT PRESS	VLV	N	N
1SA268	1 STAT AIR CNTMNT PRESS	VLV	N	N
1SA270	1 STAT AIR CNTMNT PRESS	VLV	N	N
1SF22	1 SPNT FUEL CLG REFUEL WTR PURIF	VLV	N	N
1SF36	1 SPNT FUEL CLG RFL WTR	VLV	N	N
1SJ12	1 SFTY INJ BORON INJ TK	MOV	N	Y

CONTAINMENT ISOLATION VALVES
PER UFSAR TABLES 6.2-10, 6.2-12, AND 6.2-13

VALVE #	NAME	TYPE	RG 1.97 CIV (Y/N)	IND. (Y/N)
1SJ13	1 SFTY INJ BORON TK OUTLET	MOV	N	Y
1SJ32	1 SFTY INJ PMP SUCT SAF RLF VLV	SRV	N	N
11SJ39	11 SFTY INS HDR SAF RLF VLV	SRV	N	N
12SJ39	12 SFTY INS HDR SAF RLF VLV	SRV	N	N
11SJ40	11 SFTY INJ PP DISCH TO HOT LEG	MOV	N	Y
12SJ40	12 SFTY INJ HDR STOP MOV	MOV	N	Y
11SJ43	11 SFTY INJ RESID HT REM	CKVL	N	N
12SJ43	12 SFTY INJ RESID HT REM	CKVL	N	N
13SJ43	13 SFTY INJ RESID HT REM	CKVL	N	N
14SJ43	14 SFTY INJ RESID HT REM	CKVL	N	N
11SJ44	11 SFTY INJ CNTNMNT SUMP	MOV	N	Y
12SJ44	12 SFTY INJ CNTMNT SUMP	MOV	N	Y
11SJ48	11 SFTY INJ LOW HEAD LINE	SRV	N	N
12SJ48	12 SFTY INJ LOW HEAD LINE	SRV	N	N
11SJ49	11 SFTY INJ RESD HT REM	MOV	N	Y
12SJ49	12 SFTY INJ RESD HT REM	MOV	N	Y
1SJ53	**1 SFTY INJ HDR TEST LINE**	**AOV**	**Y**	**Y**
1SJ60	**1 SFTY INJ ACCUM TEST LINE**	**AOV**	**Y**	**Y**
1SJ123	**1 SFTY INJ ACCUM TEST LINE**	**AOV**	**Y**	**Y**
1SJ135	1 SFTY INJ PMPS TO COLD LEG MOV	MOV	N	Y
11SJ139	11 SFTY INJ HOT LEG CKVL	CKVL	N	N
12SJ139	12 SFTY INJ HOT LEG CKVL	CKVL	N	N
13SJ139	13 SFTY INJ HOT LEG CKVL	CKVL	N	N
14SJ139	14 SFTY INJ HOT LEG CKVL	CKVL	N	N
11SJ144	11 SFTY INJ COLD LEG LINE	CKVL	N	N
12SJ144	12 SFTY INJ COLD LEG LINE	CKVL	N	N
13SJ144	13 SFTY INJ COLD LEG LINE	CKVL	N	N
14SJ144	14 SFTY INJ COLD LEG LINE	CKVL	N	N
1SJ150	1 SFTY INJ BORON TK	CKVL	N	N
1SJ167	1 SFTY INJ COLD LEG SAF RLF VLV	SRV	N	N
1SS27	**1 SMPLG SYS ACCUM SMPL HDR**	**AOV**	**Y**	**Y**

CONTAINMENT ISOLATION VALVES
PER UFSAR TABLES 6.2-10, 6.2-12, AND 6.2-13

VALVE #	NAME	TYPE	RG 1.97 CIV (Y/N)	IND. (Y/N)
1SS33	**1 SMPLG SYS REAC COOL HDR**	**AOV**	**Y**	**Y**
1SS49	**1 SMPLG SYS PZR LIQ ISLN**	**AOV**	**Y**	**Y**
1SS64	**1 SMLG SYS PZR STM SMPL**	**AOV**	**Y**	**Y**
11SS94	**11 SMPLG SYS FROM STM GEN**	**AOV**	**Y**	**Y**
12SS94	**12 SMPLG SYS FROM STM GEN**	**AOV**	**Y**	**Y**
13SS94	**13 SMPLG SYS FROM STM GEN**	**AOV**	**Y**	**Y**
14SS94	**14 SMPLG SYS FROM STM GEN**	**AOV**	**Y**	**Y**
1SS103	**1 SMPLG SYS ACCUM**	**AOV**	**Y**	**Y**
1SS104	**1 SMPLG SYS REAC COOL SMPL**	**AOV**	**Y**	**Y**
1SS107	**1 SMPLG SYS PZR LIQ HDR**	**AOV**	**Y**	**Y**
1SS110	**1 SMPLG SYS 92R STM SMPL**	**AOV**	**Y**	**Y**
11SS181	11 SMPLG SYS INBRD HOT LEG	AOV	N	Y
13SS181	13 SMPLG SYS OUTBRD HOT LEG	AOV	N	Y
11SS182	11 SMPLG SYS INBRD HOT LEG	AOV	N	Y
13SS182	13 SMPLG SYS INBRD HOT LEG	AOV	N	Y
13SS184	13 SMPLG SYS INBRD HOT LEG	AOV	N	Y
13SS185	13 SMPLG SYS OUTBRD HOT LEG	AOV	N	Y
11SS188	11 SMPL SYS TO CNTMNT SUMP	AOV	N	Y
11SS189	11 SMPLG SYS TO CNTMNT SUMP	AOV	N	Y
1SS900	1 SMPLG SYS PZR DEADWEIGHT CLBRTR	VLV	N	N
1SS901	1 SMPLG SYS PZR DEADWEIGHT CLBRTR	VLV	N	N
11SW58	11 SRVC WTR CONT FAN COIL	AOV	N	Y
12SW58	12 SRVC WTR CONT FAN COIL	AOV	N	Y
13SW58	13 SRVC WTR CONT FAN COIL	AOV	N	Y
14SW58	14 SRVC WTR CONT FAN COIL	AOV	N	Y
15SW58	15 SRVC WTR CONT FAN COIL	AOV	N	Y
11SW72	11 SRVC WTR CONT FAN COIL	AOV	N	Y
12SW72	12 SRVC WTR CONT FAN COIL	AOV	N	Y
13SW72	13 SRVC WTR CONT FAN COIL	AOV	N	Y
14SW72	14 SRVC WTR CONT FAN COIL	AOV	N	Y
15SW72	15 SRVC WTR CONT FAN COIL	AOV	N	Y

CONTAINMENT ISOLATION VALVES
PER UFSAR TABLES 6.2-10, 6.2-12, AND 6.2-13

VALVE #	NAME	TYPE	RG 1.97 CIV (Y/N)	IND. (Y/N)
1VC1	**1 CNTMNT VENT PURGE SPLY**	**AOV**	**Y**	**Y**
1VC2	**1 CNTMNT VENT PURGE SPLY**	**AOV**	**Y**	**Y**
1VC3	**1 CNTMNT VENT PURGE EXHAUST**	**AOV**	**Y**	**Y**
1VC4	**1 CNTMNT VENT PURGE EXHAUST**	**AOV**	**Y**	**Y**
1VC5	**1 CNTMNT VENT PRESS-VACUUM**	**AOV**	**Y**	**Y**
1VC6	**1 CNTMNT VENT PRESS-VACUUM**	**AOV**	**Y**	**Y**
1VC7	**1 CNTMNT VENT RAD MON SYS**	**AOV**	**Y**	**Y**
1VC8	**1 CNTMNT VENT RAD MON SYS**	**AOV**	**Y**	**Y**
1VC9	1 CNTMNT VENT RAD MON SYS	AOV	N	Y
1VC10	1 CNTMNT VENT RAD MON SYS	AOV	N	Y
1VC11	**1 CNTMNT VENT RAD MON SYS**	**AOV**	**Y**	**Y**
1VC12	**1 CNTMNT VENT RAD MON SYS**	**AOV**	**Y**	**Y**
1VC13	1 CNTMNT VENT RAD MON SYS	AOV	N	Y
1VC14	1 CNTMNT VENT RAD MON SYS	AOV	N	Y
11VC17	11 POST ACC SAMP PEN 36	AOV	N	Y
12VC17	12 POST ACC SAMP PEN 30	AOV	N	Y
11VC18	11 POST ACC SAMP PEN 36	AOV	N	Y
12VC18	12 POST ACC SAMP PEN 30	AOV	N	Y
11VC19	11 POST ACC SAMP PEN 36	AOV	N	Y
12VC19	12 POST ACC SAMP PEN 30	AOV	N	Y
11VC20	11 POST ACC SAMP PEN 36	AOV	N	Y
12VC20	12 POST ACC SAMP PEN 30	AOV	N	Y
1WL12	**1 RAD WASTE LQD REACT COOL DR PP**	**AOV**	**Y**	**Y**
1WL13	**1 RAD WASTE LQD RC DR PP**	**AOV**	**Y**	**Y**
1WL16	**1 RAD WST LQD CONTMNT SUMP**	**AOV**	**Y**	**Y**
1WL17	**1 RAD WST LQD CONTMNT SUMP**	**AOV**	**Y**	**Y**
1WL96	**1 RAD WASTE LQD RC DR TK**	**AOV**	**Y**	**Y**
1WL97	**1 RAD WASTE LQD RC DR TK**	**AOV**	**Y**	**Y**
1WL98	**1 RAD WASTE LQD RC DR TK**	**AOV**	**Y**	**Y**
1WL99	**1 RAD WASTE LQD RC DR TK**	**AOV**	**Y**	**Y**
1WL108	**1 RAD WASTE LQD N2 VNT LINE**	**AOV**	**Y**	**Y**

CONTAINMENT ISOLATION VALVES
PER UFSAR TABLES 6.2-10, 6.2-12, AND 6.2-13

VALVE #	NAME	TYPE	RG 1.97 CIV (Y/N)	IND. (Y/N)
1WL190	1 RAD WST LQD REFUEL WTR PURIF	VLV	N	N
1WL191	1 RAD WASTE LQD REFUEL CANAL	VLV	N	N
1WR80	**REAC COOL PRIM WTR SPLY**	**AOV**	**Y**	**Y**
1WR81	REAC COOL PRIM WTR SPLY	CKVL	N	N

NOTES

Valve designations are shown for Salem Unit 1. Salem Unit 2 is similar (i.e., 1PR17 vs 2PR17).

21-24 BF19s & 40s are no longer credited as CIVs per Unit 2 Tech Spec Ammendment 128.
11-14 BF19s & 40s will no longer be credited as CIVs after approval of LCR 93-25.

KEY:

AOV - Air Operated Valve
VLV - Manually Operated Valve*
HOV - Hydraulically Operated Valve
SRV - Safety Relief Valve*
CKVL - Check Valve*
MOV - Motor Operated Valve

*These valves do not receive a containment isolation signal.