



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-327

SEQUOYAH NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 37  
License No. DPR-77

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The applications for amendment to the Sequoyah Nuclear Plant, Unit 1 (the facility) Facility Operating License No. DPR-77 filed by the Tennessee Valley Authority (licensee), dated July 21, 1983, and August 20, August 27, and August 28, 1984, comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations as set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the license, as amended, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is hereby amended by page changes to the Appendix A Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-77 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 37, are hereby incorporated into the license.

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The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*Paul A. Hood*

*for* Elinor G. Adensam, Chief  
Licensing Branch No. 4  
Division of Licensing

Attachment:  
Appendix A Technical  
Specification Changes

Date of Issuance: January 24, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 37

FACILITY OPERATING LICENSE NO. DPR-77

DOCKET NO. 50-327

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change.

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TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
6. AUXILIARY FEEDWATER					
a. Manual Initiation	2	1	2	1, 2, 3	24
b. Automatic Actuation Logic	2	1	2	1, 2, 3	23
c. Main Stm. Gen. Water Level-Low-Low					
i. Start Motor Driven Pumps	3/stm. gen.	2/stm. gen. any stm gen.	2/stm. gen.	1, 2, 3	16*
ii. Start Turbine-Driven Pump	3/stm. gen.	2/stm. gen. any 2 stm. gen.	2/stm. gen	1, 2, 3	16*
d. S.I. Start Motor-Driven Pumps and Turbine Driven Pump	See 1 above (all S.I. initiating functions and requirements)				
e. Station Blackout Start Motor-Driven Pump associated with the shutdown board and Turbine Driven Pump	2/shutdown board	1/shutdown board	2/shutdown board	1, 2, 3	20
f. Trip of Main Feedwater Pumps Start Motor-Driven Pumps and Turbine Driven Pump	1/pump	1/pump	1/pump	1, 2	20*
g. Auxiliary Feedwater Suction Pressure-Low	3/pump	2/pump	2/pump	1, 2, 3	20*

SEQUOYAH - UNIT 1

3/4 3-20

Amendment No. 37

TABLE 3.3-11

FIRE DETECTION INSTRUMENTS

<u>Fire Zone</u>	<u>Instrument Location</u>	<u>Minimum Instruments Operable</u>			
		<u>Ionization</u>	<u>Photnelectric</u>	<u>Thermal</u>	<u>Infrared</u>
235	Ctrl. Rod Dr. Eqpt. Rm. E1. 759	4			
236	Ctrl. Rod Dr. Eqpt. Rm. E1. 759	4			
237	Mech. Eqpt. Rm. E1. 749	1			
238	Mech. Eqpt. Rm. E1. 749	1			
241	480-V XFMR Rm. 1A E1. 749	3			
242	480-V XFMR Rm. 1A E1. 749	3			
243	480-V XFMR Rm. 1B E1. 749	3			
244	480-V XFMR Rm. 1B E1. 749	3			
249	125-V Batt. Rm. I E1. 749	1			
250	125-V Batt. Rm. I E1. 749	1			
251	125-V Batt. Rm. II E1. 749	1			
252	125-V Batt. Rm. II E1. 749	1			
253	125-V Batt. Rm. III E1. 749	1			
254	125-V Batt. Rm. III E1. 749	1			
255	125-V Batt. Rm. IV E1. 749	1			
256	125-V Batt. Rm. IV E1. 749	1			
257	480-V Bd. Rm. 1B E1. 749	4			
258	480-V Bd. Rm. 1B E1. 749	4			
259	480-V Bd. Rm. 1A E1. 749	4			
260	480-V Bd. Rm. 1A E1. 749	4			
153	Add. Eqpt. Bldg. E1. 740.5	4			
155	Refuel Rm. E1. 734	19			
156	RB Access Rm. E1. 734	2			
157	RB Access Rm. E1. 734	2			
160	SG Blwdn. Rm. E1. 734	4			
427	125-V Batt. Rm. V E1. 749	2			
428	125-V Batt. Rm. V E1. 749	2			

TABLE 3.3-11 (Continued)

FIRE DETECTION INSTRUMENTS

Fire Zone	Instrument Location	Minimum Instruments Operable			
		Ionization	Photoelectric	Thermal	Infrared
267	Aux. Instr. Rm. E1. 685	8			
268	Aux. Instr. Rm. E1. 685			9	
269	Computer Rm. E1. 685	4			
270	Computer Rm. E1. 685			4	
276	Intk. Pumping Sta. E1. 690 & 670.5	15			
354	Upr. Compt. Coolers, E1. 778		4		
352	Lwr. Compt. Coolers, E1. 693		4		
356	RCP 2, E1. 693			2*	
357	RCP 2, E1. 693			2	
360	RCP 1, E1. 693			2*	
361	RCP 1, E1. 693			2	
364	RCP 3, E1. 693			2*	
365	RCP 3, E1. 693			2	
368	RCP 4, E1. 693			2*	
369	RCP 4, E1. 693			2	
372	Reactor Bldg. Annulus		18		
373	Reactor Bldg. Annulus		18		
1	Diesel Gen. Rm. 2B-B, E1. 722			5	
2	Diesel Gen. Rm. 2B-B, E1. 722			5	
3	Diesel Gen. Rm. 1B-B, E1. 722			5	
4	Diesel Gen. Rm. 1B-B, E1. 722			5	
5	Diesel Gen. Rm. 2A-A, E1. 722			5	
6	Diesel Gen. Rm. 2A-A, E1. 722			5	
7	Diesel Gen. Rm. 1A-A, E1. 722			5	
8	Diesel Gen. Rm. 1A-A, E1. 722			5	

\*This change is effective upon completion of the associated modification.



TABLE 3.6-2

CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (Seconds)</u>	
A. PHASE "A" ISOLATION			
1.	FCV-1-7	SG Blow Dn	10*
2.	FCV-1-14	SG Blow Dn	10*
3.	FCV-1-25	SG Blow Dn	10*
4.	FCV-1-32	SG Blow Dn	10*
5.	FCV-1-181	SG Blow Dn	15*
6.	FCV-1-182	SG Blow Dn	15*
7.	FCV-1-183	SG Blow Dn	15*
8.	FCV-1-184	SG Blow Dn	15*
9.	FCV-31C-222	CW-Inst Room Clrs	10*
10.	FCV-31C-223	CW-Inst Room Clrs	10*
11.	FCV-31C-224	CW-Inst Room Clrs	10*
12.	FCV-31C-225	CW-Inst Room Clrs	10*
13.	FCV-31C-229	CW-Inst Room Clrs	10*
14.	FCV-31C-230	CW-Inst Room Clrs	10*
15.	FCV-31C-231	CW-Inst Room Clrs	10*
16.	FCV-31C-232	CW-Inst Room Clrs	10*
17.	FCV-43-22	Sample RC Outlet Hdrs	10*
18.	FCV-43-23	Sample RC Outlet Hdrs	10*
19.	FCV-43-55	SG Blow Dn Sample Line	10*
20.	FCV-43-58	SG Blow Dn Sample Line	10*
21.	FCV-43-61	SG Blow Dn Sample Line	10*
22.	FCV-43-64	SG Blow Dn Sample Line	10*
23.	FCV-61-96	Gylcol Inlet to Floor Cooler	30*
24.	FCV-61-97	Gylcol Inlet to Floor Cooler	30*
25.	FCV-61-110	Gylcol Outlet to Floor Cooler	30*
26.	FCV-61-122	Gylcol Outlet to Floor Cooler	30*
27.	FCV-61-191	Ice Condenser - Gylcol In	30*
28.	FCV-61-192	Ice Condenser - Gylcol In	30*
29.	FCV-61-193	Ice Condenser - Gylcol Out	30*
30.	FCV-61-194	Ice Condenser - Gylcol Out	30*
31.	FCV-62-61	RCP Seals	10

TABLE 3.6-2 (Continued)

CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (Seconds)</u>	
A. PHASE "A" ISOLATION (Cont.)			
32.	FCV-62-63	RCP Seals	10
33.	FCV-62-72	Letdown Line	10*#
34.	FCV-62-73	Letdown Line	10*#
35.	FCV-62-74	Letdown Line	10*#
36.	FCV-62-77	Letdown Line	20
37.	FCV-63-23	Accum to Hold Up Tank	10*
38.	FCV-63-64	WDS N <sub>2</sub> to Accum	10*
39.	FCV-63-71	Accum to Hold Up Tank	10*
40.	FCV-63-84	Accum to Hold Up Tank	10*
41.	FCV-68-305	WDS N <sub>2</sub> to PRT	10*
42.	FCV-68-307	PRT to Gas Analyzer	10*
43.	FCV-68-308	PRT to Gas Analyzer	10*
44.	FCV-70-85	CCS from Excess Lt Dn Hx	10*
45.	FCV-70-143	CCS to Excess Lt Dn Hx	60*
46.	FCV-77-9	RCDT Pump Disch	10*
47.	FCV-77-10	RCDT Pump Disch	10*
48.	FCV-77-16	RCDT to Gas Analyzer	10*
49.	FCV-77-17	RCDT to Gas Analyzer	10*
50.	FCV-77-18	RCDT and PRT to V H	10*
51.	FCV-77-19	RCDT and PRT to V H	10*
52.	FCV-77-20	N <sub>2</sub> to RCDT	10*
53.	FCV-77-127	Floor Sump Pump Disch	10*
54.	FCV-77-128	Floor Sump Pump Disch	10*
55.	FCV-81-12	Primary Water Makeup	10*
56.	FCV-87-7	UHI Test Line	10*
57.	FCV-87-8	UHI Test Line	10*
58.	FCV-87-9	UHI Test Line	10*
59.	FCV-87-10	UHI Test Line	10*
60.	FCV-87-11	UHI Test Line	10*
61.	FCV-26-240	Fire Protection Isol.	20
62.	FCV-26-243	Fire Protection Isol.	20



TABLE 3.6-2 (Continued)  
CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (Seconds)</u>
A. PHASE "A" ISOLATION (Cont.)		
63. FCV-43-2	Sample Przr Steam Space	10*
64. FCV-43-3	Sample Przr Steam Space	10*
65. FCV-43-11	Sample Przr Liquid	10*
66. FCV-43-12	Sample Przr Liquid	10*
67. FCV-43-34	Accum Sample	5*
68. FCV-43-35	Accum Sample	5*
69. FCV-43-75	Boron Analyzer	5*
70. FCV-43-77	Boron Analyzer	5*
B. PHASE "B" ISOLATION		
1. FCV-32-80	Control Air Supply	10
2. FCV-32-102	Control Air Supply	10
3. FCV-32-110	Control Air Supply	10
4. FCV-67-83	ERCW - LWR Cmpt Clrs	60*
5. FCV-67-87	ERCW - LWR Cmpt Clrs	60*
6. FCV-67-88	ERCW - LWR Cmpt Clrs	60*
7. FCV-67-91	ERCW - LWR Cmpt Clrs	60*
8. FCV-67-95	ERCW - LWR Cmpt Clrs	60*
9. FCV-67-96	ERCW - LWR Cmpt Clrs	60*
10. FCV-67-99	ERCW - LWR Cmpt Clrs	60*
11. FCV-67-103	ERCW - LWR Cmpt Clrs	60*
12. FCV-67-104	ERCW - LWR Cmpt Clrs	60*
13. FCV-67-107	ERCW - LWR Cmpt Clrs	60*
14. FCV-67-111	ERCW - LWR Cmpt Clrs	60*
15. FCV-67-112	ERCW - LWR Cmpt Clrs	60*
16. FCV-67-130	ERCW - Up Cmpt Clrs	60*
17. FCV-67-131	ERCW - Up Cmpt Clrs	60*
18. FCV-67-133	ERCW - Up Cmpt Clrs	60*
19. FCV-67-134	ERCW - Up Cmpt Clrs	60*
20. FCV-67-138	ERCW - Up Cmpt Clrs	60*

TABLE 3.6-2 (Continued)  
CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (Seconds)</u>	
<b>B. PHASE "B" ISOLATION (Cont.)</b>			
21.	FCV-67-139	ERCW - Up Cmpt Clrs	60*
22.	FCV-67-141	ERCW - Up Cmpt Clrs	60*
23.	FCV-67-142	ERCW - Up Cmpt Clrs	60*
24.	FCV-67-295	ERCW - Up Cmpt Clrs	60*
25.	FCV-67-296	ERCW - Up Cmpt Clrs	60*
26.	FCV-67-297	ERCW - Up Cmpt Clrs	60*
27.	FCV-67-298	ERCW - Up Cmpt Clrs	60*
28.	FCV-70-87	RCP Thermal Barrier Ret	60
29.	FCV-70-89	CCS from RCP Oil Coolers	60
30.	FCV-70-90	RCP Thermal Barrier Ret	60
31.	FCV-70-92	CCS from RCP Oil Coolers	60
32.	FCV-70-134	To RCP Thermal Barriers	60
33.	FCV-70-140	CCS to RCP Oil Coolers	60
<b>C. PHASE "A" CONTAINMENT VENT ISOLATION</b>			
1.	FCV-30-7	Upper Cmpt Purge Air Supply	4*
2.	FCV-30-8	Upper Cmpt Purge Air Supply	4*
3.	FCV-30-9	Upper Cmpt Purge Air Supply	4*
4.	FCV-30-10	Upper Cmpt Purge Air Supply	4*
5.	FCV-30-14	Lower Cmpt Purge Air Supply	4*
6.	FCV-30-15	Lower Cmpt Purge Air Supply	4*
7.	FCV-30-16	Lower Cmpt Purge Air Supply	4*
8.	FCV-30-17	Lower Cmpt Purge Air Supply	4*
9.	FCV-30-19	Inst Room Purge Air Supply	4*
10.	FCV-30-20	Inst Room Purge Air Supply	4*
11.	FCV-30-37	Lower Cmpt Pressure Relief	4*
12.	FCV-30-40	Lower Cmpt Pressure Relief	4*

TABLE 3.6-2 (Continued)

CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (Seconds)</u>
C. PHASE "A" CONTAINMENT VENT ISOLATION (Cont.)		
13. FCV-30-50	Upper Compt Purge Air Exh	4*
14. FCV3051	Upper Compt Purge Air Exh	4*
15. FCV3052	Upper Compt Purge Air Exh	4*
16. FCV3053	Upper Compt Purge Air Exh	4*
17. FCV3056	Lower Compt Purge Air Exh	4*
18. FCV3057	Lower Compt Purge Air Exh	4*
19. FCV3058	Inst Room Purge Air Exh	4*
20. FCV3059	Inst Room Purge Air Exh	4*
21. FCV90107	Cntmt Bldg LWR Compt Air Mon	5*
22. FCV90108	Cntmt Bldg LWR Compt Air Mon	5*
23. FCV90109	Cntmt Bldg LWR Compt Air Mon	5*
24. FCV90110	Cntmt Bldg LWR Compt Air Mon	5*
25. FCV90111	Cntmt Bldg LWR Compt Air Mon	5*
26. FCV90113	Cntmt Bldg LWR Compt Air Mon	5*
27. FCV90114	Cntmt Bldg LWR Compt Air Mon	5*
28. FCV90115	Cntmt Bldg LWR Compt Air Mon	5*
29. FCV90116	Cntmt Bldg LWR Compt Air Mon	5*
30. FCV90117	Cntmt Bldg LWR Compt Air Mon	5*
D. OTHER		
1. FCV-30-46	Vacuum Relief Isolation Valve	25
2. FCV-30-47	Vacuum Relief Isolation Valve	25
3. FCV-30-48	Vacuum Relief Isolation Valve	25

\*Provisions of LCO 3.0.4 are not applicable if valve is secured in its isolated position with power removed and leakage limits of Surveillance Requirement 4.6.3.4 are satisfied.

#Provisions of LCO 3.0.4 are not applicable if valve is secured in its isolated position with power removed and either FCV-62-73 or FCV-62-74 is maintained operable.

## ELECTRICAL POWER SYSTEMS

### 3/4.8.2 ONSITE POWER DISTRIBUTION SYSTEMS

#### A.C. DISTRIBUTION - OPERATING

##### LIMITING CONDITION FOR OPERATION

3.8.2.1 The following A.C. electrical boards shall be OPERABLE and energized with tie breakers open between redundant boards:

6900	Volt Shutdown Board	1A-A
6900	Volt Shutdown Board	1B-B
6900	Volt Shutdown Board	2A-A
6900	Volt Shutdown Board	2B-B
480	Volt Shutdown Board	1A1-A
480	Volt Shutdown Board	1A2-A
480	Volt Shutdown Board	1B1-B
480	Volt Shutdown Board	1B2-B
480	Volt Shutdown Board	2A1-A
480	Volt Shutdown Board	2A2-A
480	Volt Shutdown Board	2B1-B
480	Volt Shutdown Board	2B2-B
120	Volt A.C. Vital Instrument Power Board Channels 1-I and 2-I energized from inverters 1-I and 2-I connected to D.C. Channel I*#.	
120	Volt A.C. Vital Instrument Power Board Channels 1-II and 2-II energized from inverters 1-II and 2-II connected to D.C. Channel II*#.	
120	Volt A.C. Vital Instrument Power Board Channels 1-III and 2-III energized from inverters 1-III and 2-III connected to D.C. Channel III*#.	
120	Volt A.C. Vital Instrument Power Board Channels 1-IV and 2-IV energized from inverters 1-IV and 2-IV connected to D.C. Channel IV*#.	

APPLICABILITY: MODES 1, 2, 3 and 4.

##### ACTION:

- With less than the above complement of A.C. boards OPERABLE and energized, restore the inoperable boards to OPERABLE status within 8 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- With one inverter inoperable, energize the associated Vital Instrument Power Board within 8 hours; restore the inoperable inverter to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

##### SURVEILLANCE REQUIREMENTS

4.8.2.1 The specified A.C. boards and inverters shall be determined OPERABLE and energized with tie breakers open between redundant boards at least once per 7 days by verifying correct breaker alignment and indicated voltage on the busses.

\*Two inverters may be disconnected from their D.C. source for up to 24 hours for the purpose of performing an equalizing charge on their associated battery bank provide (1) the vital instrument power board is OPERABLE and energized, and (2) the vital instrument power boards associated with the other battery banks are OPERABLE and energized from their respective inverters connected to their respective D.C. source.

#D.C. Channel V may be substituted for any one channel of channels I-IV.

ELECTRICAL POWER SYSTEMS

A.C. DISTRIBUTION - SHUTDOWN

LIMITING CONDITION FOR OPERATION

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3.8.2.2 As a minimum, the following A.C. electrical boards and inverters shall be OPERABLE and energized:

- 2 - 6900 volt shutdown boards, either 1A-A and 2A-A or 1B-B and 2B-B,
- 4 - 480 volt shutdown boards associated with the required OPERABLE 6900 volt shutdown boards,
- 2 - 120 volt A.C. vital instrument power boards either Channels I and III or Channels II and IV energized from their respective inverters connected to their respective D.C. battery banks\*, and 480 volt shutdown boards.

APPLICABILITY: MODES 5 and 6.

ACTION:

With less than the above complement of A.C. boards and inverters OPERABLE and energized, establish CONTAINMENT INTEGRITY within 8 hours.

SURVEILLANCE REQUIREMENTS

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4.8.2.2 The specified A.C. boards and inverters shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated voltage on the bus.

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\*Any one of the inverters may be connected to D.C. Battery Bank V.



ELECTRICAL POWER SYSTEMS

D.C. DISTRIBUTION - OPERATING

LIMITING CONDITION FOR OPERATION

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3.8.2.3 The following D.C. vital battery channels shall be energized and OPERABLE:

- CHANNEL I Consisting of 125 -volt D.C. board No. I, 125 - volt D.C. battery bank No. I\* and a full capacity charger.
- CHANNEL II Consisting of 125 - volt D.C. board No. II, 125 - volt D.C. battery bank No. II\*, and a full capacity charger.
- CHANNEL III Consisting of 125 - volt D.C. board No. III, 125 - volt D.C. battery bank No. III\*, and a full capacity charger.
- CHANNEL IV Consisting of 125 - volt D.C. board No. IV, 125 - volt D. C. battery bank No. IV\*, and a full capacity charger.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

- a. With one 125-volt D.C. board inoperable, restore the inoperable board to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With one 125-volt D.C. battery bank and/or its charger inoperable, restore the inoperable battery bank and/or charger to OPERABLE status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

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\*D.C. Battery Bank may be substituted for any other Battery Bank as needed.



## ELECTRICAL POWER SYSTEMS

### SURVEILLANCE REQUIREMENTS

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4.8.2.3.1 Each D.C. bus train shall be determined OPERABLE and energized with tie breakers open between redundant busses at least once per 7 days by verifying correct breaker alignment, indicated power availability from the charger and battery, and voltage on the bus of greater than or equal to 125 volts.

4.8.2.3.2\* Each 125-volt battery bank and charger shall be demonstrated OPERABLE: |

- a. At least once per 7 days by:
  1. Verifying that the parameters in Table 4.8-2 meet the Category A limits, and
  2. Verifying total battery terminal voltage is greater than or equal to 129-volts on float charge.
- b. At least once per 92 days and within 7 days after a battery discharge (battery terminal voltage below 110-volts), or battery overcharge (battery terminal voltage above 150-volts), by:
  1. Verifying that the parameters in Table 4.8-2 meet the Category B limits,
  2. Verifying there is no visible corrosion at either terminals or connectors, or the connection resistance of these items is less than  $150 \times 10^{-6}$  ohms, and
  3. Verifying that the average electrolyte temperature of 6 connected cells is above 60 F.
- c. At least once per 18 months by verifying that:
  1. The cells, cell plates and battery racks show no visual indication of physical damage or abnormal deterioration,
  2. The cell-to-cell and terminal connections are clean, tight and coated with anti-corrosion material,
  3. The resistance of each cell-to-terminal connection is less than or equal to  $150 \times 10^{-6}$  ohms, and
  4. The battery charger will supply at least 150 amperes at 125 volts for at least 4 hours.

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\*This surveillance includes Battery Bank V, but not charger V. |

ELECTRICAL POWER SYSTEMS

D.C. DISTRIBUTION - SHUTDOWN

LIMITING CONDITION FOR OPERATION

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3.8.2.4 As a minimum, the following D.C. electrical equipment and boards shall be energized and OPERABLE:

- 2 - 125-volt D.C. boards either I and III or II and IV, and
- 2\* - 125-volt battery banks and chargers, one associated with each operable D.C. board

APPLICABILITY: MODES 5 and 6.

ACTION:

With less than the above complement of D.C. equipment and board OPERABLE, establish CONTAINMENT INTEGRITY within 8 hours.

SURVEILLANCE REQUIREMENTS

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4.8.2.4.1 The above required 125-volt D.C. vital battery boards shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated power availability with an overall battery voltage of greater than or equal to 125 volts.

4.8.2.4.2 The above required 125-volt D.C. vital battery banks and chargers shall be demonstrated OPERABLE per Surveillance Requirement 4.8.2.3.2.

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\*D.C. Battery Bank V may be substituted for any other Battery Bank.



UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D. C. 20555

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-328

SEQUOYAH NUCLEAR PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 29  
License No. DPR-79

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The applications for amendment to the Sequoyah Nuclear Plant, Unit 2 (the facility) Facility Operating License No. DPR-79 filed by the Tennessee Valley Authority (licensee), dated July 21, 1983, and August 20, August 27, and August 28, 1984, comply with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations as set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the license, as amended, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is hereby amended by page changes to the Appendix A Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-79 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 29, are hereby incorporated into the license.

The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

*Paul A. Hood*  
*for* Elinor G. Adensam, Chief  
Licensing Branch No. 4  
Division of Licensing

Attachment:  
Appendix A Technical  
Specification Changes

Date of Issuance: January 24, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 29

FACILITY OPERATING LICENSE NO. DPR-79

DOCKET NO. 50-328

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the areas of change.

<u>Amended</u>	<u>Page</u>
3/4	3-20
3/4	3-66
3/4	3-67
3/4	6-19
3/4	6-20
3/4	6-21
3/4	6-22
3/4	6-23
3/4	8-10
3/4	8-11
3/4	8-12
3/4	8-15

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
6. AUXILIARY FEEDWATER					
a. Manual Initiation	2	1	2	1, 2, 3	24
b. Automatic Actuation Logic	2	1	2	1, 2, 3	23
c. Main Stm. Gen. Water Level-Low-Low					
i. Start Motor Driven Pumps	3/stm. gen.	2/stm. gen. any stm gen.	2/stm. gen.	1, 2, 3	15*
ii. Start Turbine-Driven Pump	3/stm. gen.	2/stm. gen. any 2 stm. gen.	2/stm. gen.	1, 2, 3	16*
d. S.I. Start Motor-Driven Pumps and Turbine Driven Pump	See 1 above (all S.I. initiating functions and requirements)				
e. Station Blackout Start Motor-Driven Pump associated with the shutdown board and Turbine Driven Pump	2/shutdown board	1/shutdown board	2/shutdown board	1, 2, 3	20
f. Trip of Main Feedwater Pumps Start Motor-Driven Pumps and Turbine Driven Pump	1/pump	1/pump	1/pump	1, 2	20*
g. Auxiliary Feedwater Suction Pressure-Low	3/pump	2/pump	2/pump	1, 2, 3	20*

SEQUOYAH - UNIT 2

3/4 3-20

Amendment No. 29



TABLE 3.3-11 (Continued)

FIRE DETECTION INSTRUMENTS

FIRE ZONE	INSTRUMENT LOCATION	Ionization	MINIMUM INSTRUMENTS OPERABLE		Infrared
			Photoelectric	Thermal	
241	480-V XFMR Rm. 1A, E1. 749	3			
242	480-V XFMR Rm. 1A, E1. 749	3			
243	480-V XFMR Rm. 1B, E1. 749	3			
244	480-V XFMR Rm. 1B, E1. 749	3			
245	480-V XFMR Rm. 2A, E1. 749	3			
246	480-V XFMR Rm. 2A, E1. 749	3			
247	480-V XFMR Rm. 2B, E1. 749	3			
248	480-V XFMR Rm. 2B, E1. 749	3			
249	125-V Batt. Rm. I, E1. 749	1			
250	125-V Batt. Rm. I, E1. 749	1			
251	125-V Batt. Rm. II, E1. 749	1			
252	125-V Batt. Rm. II, E1. 749	1			
253	125-V Batt. Rm. III, E1. 749	1			
254	125-V Batt. Rm. III, E1. 749	1			
255	125-V Batt. Rm. IV, E1. 749	1			
256	125-V Batt. Rm. IV, E1. 749	1			
257	480-V Bd. Rm. 1B, E1. 749	4			
258	480-V Bd. Rm. 1B, E1. 749	4			
259	480-V Bd. Rm. 1A, E1. 749	4			
260	480-V Bd. Rm. 1A, E1. 749	4			
261	480-V Bd. Rm. 2A, E1. 749	4			
262	480-V Bd. Rm. 2A, E1. 749	4			
263	480-V Bd. Rm. 2B, E1. 749	4			
264	480-V Bd. Rm. 2B, E1. 749	4			
269	Computer Rm. E1. 685	4			
270	Computer Rm. E1. 685				
271	Aux. Inst. Rm. E1. 685	8		4	
272	Aux. Inst. Rm. E1. 685			9	
273	Computer Rm. Corridor, E1. 685	3			
275	Intake Pump Sta. E1. 690 & 670.5	15			
277	ERCW Pump Sta. E1. 704	21			
427	125-V Batt. Rm. V E1. 749	2			
428	125-V Batt. Rm. V E1. 749	2			

SEQUOYAH - UNIT 1

3/4 3-66

Amendment No. 29

TABLE 3.3-11 (Continued)

FIRE DETECTION INSTRUMENTS

SEQUOYAH - UNIT 1

3/4 3-67

FIRE ZONE	INSTRUMENT LOCATION	Ionization	MINIMUM INSTRUMENTS OPERABLE			Infrared
			Photoelectric	Thermal		
296	Aux. CR Bds. L-4B, 4D, & 11B E1 732	6				
297	Main CR Bds. E1. 732	9				
298	Common MCR Bds. E1 732	9				
387	Turbine Cont. Bldg. Wall, E1. 706			18		
353	Lwr. Compt. Coolers, E1. 693		4			
355	Upr. Compt. Coolers, E1. 778		4			
374	Reactor Building Annulus		18			
375	Reactor Building Annulus		18			
362	RCP 1 E1. 693				2*	
363	RCP 1 E1. 693				2	
358	RCP 2 E1. 693				2*	
359	RCP 2 E1. 693				2	
366	RCP 3 E1. 693				2*	
367	RCP 3 E1. 693				2	
370	RCP 4 E1. 693				2*	
371	RCP 4 E1. 693				2	

\*This change is effective upon completion of the modifications.

Amendment No. 29

TABLE 3.6-2  
CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (Seconds)</u>
A.	PHASE "A" ISOLATION	
1.	FCV-1-7	SG Blow Dn 10*
2.	FCV-1-14	SG Blow Dn 10*
3.	FCV-1-25	SG Blow Dn 10*
4.	FCV-1-32	SG Blow Dn 10*
5.	FCV-1-181	SG Blow Dn 15*
6.	FCV-1-182	SG Blow Dn 15*
7.	FCV-1-183	SG Blow Dn 15*
8.	FCV-1-184	SG Blow Dn 15*
9.	FCV-31C-222	CW-Inst Room Clrs 10*
10.	FCV-31C-223	CW-Inst Room Clrs 10*
11.	FCV-31C-224	CW-Inst Room Clrs 10*
12.	FCV-31C-225	CW-Inst Room Clrs 10*
13.	FCV-31C-229	CW-Inst Room Clrs 10*
14.	FCV-31C-230	CW-Inst Room Clrs 10*
15.	FCV-31C-231	CW-Inst Room Clrs 10*
16.	FCV-31C-232	CW-Inst Room Clrs 10*
17.	FCV-43-22	Sample RC Outlet Hdrs 10*
18.	FCV-43-23	Sample RC Outlet Hdrs 10*
19.	FCV-43-55	SG Blow Dn Sample Line 10*
20.	FCV-43-58	SG Blow Dn Sample Line 10*
21.	FCV-43-61	SG Blow Dn Sample Line 10*
22.	FCV-43-64	SG Blow Dn Sample Line 10*
23.	FCV-61-96	Gylcol Inlet to Floor Cooler 30*
24.	FCV-61-97	Gylcol Inlet to Floor Cooler 30*
25.	FCV-61-110	Gylcol Outlet to Floor Cooler 30*
26.	FCV-61-122	Gylcol Outlet to Floor Cooler 30*
27.	FCV-61-191	Ice Condenser - Gylcol In 30*
28.	FCV-61-192	Ice Condenser - Gylcol In 30*
29.	FCV-61-193	Ice Condenser - Gylcol Out 30*
30.	FCV-61-194	Ice Condenser - Gylcol Out 30*
31.	FCV-62-61	RCP Seals 10

TABLE 3.6-2 (Continued)  
CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (Seconds)</u>
A. PHASE "A" ISOLATION (Cont.)		
32.	FCV-62-63 RCP Seals	10
33.	FCV-62-72 Letdown Line	10*#
34.	FCV-62-73 Letdown Line	10*#
35.	FCV-62-74 Letdown Line	10*#
36.	FCV-62-77 Letdown Line	20
37.	FCV-63-23 Accum to Hold Up Tank	10*
38.	FCV-63-64 WDS N <sub>2</sub> to Accum	10*
39.	FCV-63-71 Accum to Hold Up Tank	10*
40.	FCV-63-84 Accum to Hold Up Tank	10*
41.	FCV-68-305 WDS N <sub>2</sub> to PRT	10*
42.	FCV-68-307 PRT to Gas Analyzer	10*
43.	FCV-68-308 PRT to Gas Analyzer	10*
44.	FCV-70-85 CCS from Excess Lt Dn Hx	10*
45.	FCV-70-143 CCS to Excess Lt Dn Hx	60*
46.	FCV-77-9 RCDT Pump Disch	10*
47.	FCV-77-10 RCDT Pump Disch	10*
48.	FCV-77-16 RCDT to Gas Analyzer	10*
49.	FCV-77-17 RCDT to Gas Analyzer	10*
50.	FCV-77-18 RCDT and PRT to V H	10*
51.	FCV-77-19 RCDT and PRT to V H	10*
52.	FCV-77-20 N <sub>2</sub> to RCDT	10*
53.	FCV-77-127 Floor Sump Pump Disch	10*
54.	FCV-77-128 Floor Sump Pump Disch	10*
55.	FCV-81-12 Primary Water Makeup	10*
56.	FCV-87-7 UHI Test Line	10*
57.	FCV-87-8 UHI Test Line	10*
58.	FCV-87-9 UHI Test Line	10*
59.	FCV-87-10 UHI Test Line	10*
60.	FCV-87-11 UHI Test Line	10*
61.	FCV-26-240 Fire Protection Isol.	20
62.	FCV-26-243 Fire Protection Isol.	20

TABLE 3.6-2 (Continued)  
CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (Seconds)</u>
A. PHASE "A" ISOLATION (Cont.)		
63. FCV-43-2	Sample Przr Steam Space	10*
64. FCV-43-3	Sample Przr Steam Space	10*
65. FCV-43-11	Sample Przr Liquid	10*
66. FCV-43-12	Sample Przr Liquid	10*
67. FCV-43-34	Accum Sample	5*
68. FCV-43-35	Accum Sample	5*
69. FCV-43-75	Boron Analyzer	5*
70. FCV-43-77	Boron Analyzer	5*
B. PHASE "B" ISOLATION		
1. FCV-32-81	Control Air Supply	10
2. FCV-32-103	Control Air Supply	10
3. FCV-32-111	Control Air Supply	10
4. FCV-67-83	ERCW - LWR Cmpt Clrs	60*
5. FCV-67-87	ERCW - LWR Cmpt Clrs	60*
6. FCV-67-88	ERCW - LWR Cmpt Clrs	60*
7. FCV-67-91	ERCW - LWR Cmpt Clrs	60*
8. FCV-67-95	ERCW - LWR Cmpt Clrs	60*
9. FCV-67-96	ERCW - LWR Cmpt Clrs	60*
10. FCV-67-99	ERCW - LWR Cmpt Clrs	60*
11. FCV-67-103	ERCW - LWR Cmpt Clrs	60*
12. FCV-67-104	ERCW - LWR Cmpt Clrs	60*
13. FCV-67-107	ERCW - LWR Cmpt Clrs	60*
14. FCV-67-111	ERCW - LWR Cmpt Clrs	60*
15. FCV-67-112	ERCW - LWR Cmpt Clrs	60*
16. FCV-67-130	ERCW - Up Cmpt Clrs	60*
17. FCV-67-131	ERCW - Up Cmpt Clrs	60*
18. FCV-67-133	ERCW - Up Cmpt Clrs	60*
19. FCV-67-134	ERCW - Up Cmpt Clrs	60*
20. FCV-67-138	ERCW - Up Cmpt Clrs	60*

TABLE 3.6-2 (Continued)  
CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (Seconds)</u>
B. PHASE "B" ISOLATION (Cont.)		
21. FCV-67-139	ERCW - Up Cmpt Clrs	60*
22. FCV-67-141	ERCW - Up Cmpt Clrs	60*
23. FCV-67-142	ERCW - Up Cmpt Clrs	60*
24. FCV-67-295	ERCW - Up Cmpt Clrs	60*
25. FCV-67-296	ERCW - Up Cmpt Clrs	60*
26. FCV-67-297	ERCW - Up Cmpt Clrs	60*
27. FCV-67-298	ERCW - Up Cmpt Clrs	60*
28. FCV-70-87	RCP Thermal Barrier Ret	60
29. FCV-70-89	CCS from RCP Oil Coolers	60
30. FCV-70-90	RCP Thermal Barrier Ret	60
31. FCV-70-92	CCS from RCP Oil Coolers	60
32. FCV-70-134	To RCP Thermal Barriers	60
33. FCV-70-140	CCS to RCP Oil Coolers	60
C. PHASE "A" CONTAINMENT VENT ISOLATION		
1. FCV-30-7	Upper Cmpt Purge Air Supply	4*
2. FCV-30-8	Upper Cmpt Purge Air Supply	4*
3. FCV-30-9	Upper Cmpt Purge Air Supply	4*
4. FCV-30-10	Upper Cmpt Purge Air Supply	4*
5. FCV-30-14	Lower Cmpt Purge Air Supply	4*
6. FCV-30-15	Lower Cmpt Purge Air Supply	4*
7. FCV-30-16	Lower Cmpt Purge Air Supply	4*
8. FCV-30-17	Lower Cmpt Purge Air Supply	4*
9. FCV-30-19	Inst Room Purge Air Supply	4*
10. FCV-30-20	Inst Room Purge Air Supply	4*
11. FCV-30-37	Lower Cmpt Pressure Relief	4*
12. FCV-30-40	Lower Cmpt Pressure Relief	4*



TABLE 3.6-2 (Continued)

CONTAINMENT ISOLATION VALVES

<u>VALVE NUMBER</u>	<u>FUNCTION</u>	<u>MAXIMUM ISOLATION TIME (Seconds)</u>	
C. PHASE "A" CONTAINMENT VENT ISOLATION (Cont.)			
13.	FCV-30-50	Upper Compt Purge Air Exh	4*
14.	FCV-30-51	Upper Compt Purge Air Exh	4*
15.	FCV-30-52	Upper Compt Purge Air Exh	4*
16.	FCV-30-53	Upper Compt Purge Air Exh	4*
17.	FCV-30-56	Lower Compt Purge Air Exh	4*
18.	FCV-30-57	Lower Compt Purge Air Exh	4*
19.	FCV-30-58	Inst Room Purge Air Exh	4*
20.	FCV-30-59	Inst Room Purge Air Exh	4*
21.	FCV-90-107	Cntmt Bldg LWR Compt Air Mon	5*
22.	FCV-90-108	Cntmt Bldg LWR Compt Air Mon	5*
23.	FCV-90-109	Cntmt Bldg LWR Compt Air Mon	5*
24.	FCV-90-110	Cntmt Bldg LWR Compt Air Mon	5*
25.	FCV-90-111	Cntmt* Bldg LWR Compt Air Mon	5*
26.	FCV-90-113	Cntmt Bldg LWR Compt Air Mon	5*
27.	FCV-90-114	Cntmt Bldg LWR Compt Air Mon	5*
28.	FCV-90-115	Cntmt Bldg LWR Compt Air Mon	5*
29.	FCV-90-116	Cntmt Bldg LWR Compt Air Mon	5*
30.	FCV-90-117	Cntmt Bldg LWR Compt Air Mon	5*
D. OTHER			
1.	FCV-30-46	Vacuum Relief Isolation Valve	25
2.	FCV-30-47	Vacuum Relief Isolation Valve	25
3.	FCV-30-48	Vacuum Relief Isolation Valve	25

\*Provisions of LCO 3.0.4 are not applicable if valve is secured in its isolated position with power removed and leakage limits of Surveillance Requirement 4.6.3.4 are satisfied.

#Provisions of LCO 3.0.4 are not applicable if valve is secured in its isolated position with power removed and either FCV-62-73 or FCV-62-74 is maintained operable.

## ELECTRICAL POWER SYSTEMS

### 3/4.8.2 ONSITE POWER DISTRIBUTION SYSTEMS

#### A.C. DISTRIBUTION - OPERATING

##### LIMITING CONDITION FOR OPERATION

3.8.2.1 The following A.C. electrical boards and inverters shall be OPERABLE and energized with tie breakers open between redundant boards:

6900	Volt Shutdown Board	1A-A
6900	Volt Shutdown Board	1B-B
6900	Volt Shutdown Board	2A-A
6900	Volt Shutdown Board	2B-B
480	Volt Shutdown Board	1A1-A
480	Volt Shutdown Board	1A2-A
480	Volt Shutdown Board	1B1-B
480	Volt Shutdown Board	1B2-B
480	Volt Shutdown Board	2A1-A
480	Volt Shutdown Board	2A2-A
480	Volt Shutdown Board	2B1-B
480	Volt Shutdown Board	2B2-B
120	Volt A.C. Vital Instrument Power Board Channels 1-I and 2-I energized from inverters 1-I and 2-I connected to D.C. Channel I*#.	
120	Volt A.C. Vital Instrument Power Board Channels 1-II and 2-II energized from inverter 1-II and 2-II connected to D.C. Channel II*#.	
120	Volt A.C. Vital Instrument Power Board Channels 1-III and 2-III energized from inverter 1-III and 2-III connected to D.C. Channel III*#.	
120	Volt A.C. Vital Instrument Power Board Channels 1-IV and 2-IV energized from inverter 1-IV and 2-IV connected to D.C. Channel IV*#.	

APPLICABILITY: MODES 1, 2, 3 and 4.

##### ACTION:

- With less than the above complement of A.C. boards OPERABLE and energized, restore the inoperable boards to OPERABLE status within 8 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- With one inverter inoperable, energize the associated Vital Instrument Power Board within 8 hours; restore the inoperable inverter to OPERABLE status within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

##### SURVEILLANCE REQUIREMENTS

4.8.2.1 The specified A.C. boards and inverters shall be determined OPERABLE and energized with tie breakers open between redundant boards at least once per 7 days by verifying correct breaker alignment and indicated voltage on the busses.

\*Two inverters may be disconnected from their D.C. source for up to 24 hours for the purpose of performing an equalizing charge on their associated battery bank provided (1) the vital instrument power board is OPERABLE and energized, and (2) the vital instrument power boards associated with the other battery banks are OPERABLE and energized from their respective inverters connected to their respective D.C. sources.

#D.C. Channel V may be substituted for any one channel of channels I -IV.

ELECTRICAL POWER SYSTEMS

A.C. DISTRIBUTION - SHUTDOWN

LIMITING CONDITION FOR OPERATION

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3.8.2.2 As a minimum, the following A.C. electrical boards and inverters shall be OPERABLE and energized:

- 2 - 6900 volt shutdown boards, either 1A-A and 2A-A or 1B-B and 2B-B,
- 4 - 480 volt shutdown boards associated with the required OPERABLE 6900 volt shutdown boards,
- 2 - 120 volt A.C. vital instrument power boards either Channels I and III or Channels II and IV energized from their respective inverters connected to their respective D.C. battery banks,\* and 480 volt shutdown boards.

APPLICABILITY: MODES 5 and 6.

ACTION:

With less than the above complement of A.C. boards and inverters OPERABLE and energized, establish CONTAINMENT INTEGRITY within 8 hours.

SURVEILLANCE REQUIREMENTS

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4.8.2.2 The specified A.C. boards and inverters shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and indicated voltage on the bus.

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\*Any one of the inverters may be connected to D.C. Battery Bank V.

## ELECTRICAL POWER SYSTEMS

### D.C. DISTRIBUTION - OPERATING

#### LIMITING CONDITION FOR OPERATION

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3.8.2.3 The following D.C. vital battery channels shall be OPERABLE and energized:

- CHANNEL I Consisting of 125 -volt D.C. board No. I, 125 - volt D.C. battery bank No. I\* and a full capacity charger.
- CHANNEL II Consisting of 125 - volt D.C. board No. II, 125 - volt D.C. battery bank No. II\*, and a full capacity charger.
- CHANNEL III Consisting of 125 - volt D.C. board No. III, 125 - volt D.C. battery bank No. III\*, and a full capacity charger.
- CHANNEL IV Consisting of 125 - volt D.C. board No. IV, 125 - volt D. C. battery bank No. IV\*, and a full capacity charger.

APPLICABILITY: MODES 1, 2, 3 and 4.

#### ACTION:

- a. With one 125-volt D.C. board inoperable or not energized, restore the inoperable board to OPERABLE and energized status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With one 125-volt D.C. battery bank and/or its charger inoperable or not energized, restore the inoperable battery bank and/or charger to OPERABLE and energized status within 2 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

#### SURVEILLANCE REQUIREMENTS

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4.8.2.3.1 Each D.C. bus train shall be determined OPERABLE and energized with tie breakers open between redundant busses at least once per 7 days by verifying correct breaker alignment, indicated power availability from the charger and battery, and voltage on the bus of greater than or equal to 125 volts.

4.8.2.3.2\*\* Each 125-volt battery bank and charger shall be demonstrated OPERABLE:

- a. At least once per 7 days by:
  1. Verifying that the parameters in Table 4.8-2 meet the Category A limits, and

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\*D.C. Battery Bank V may be substituted for any other Battery Bank as needed.  
\*\*This surveillance includes Battery Bank V, but not Charger V.

## ELECTRICAL POWER SYSTEMS

### D.C. DISTRIBUTION - SHUTDOWN

#### LIMITING CONDITION FOR OPERATION

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3.8.2.4 As a minimum, the following D.C. electrical equipment and boards shall be and OPERABLE and energized:

- 2 - 125-volt D.C. boards either I and III or II and IV, and
- 2\* - 125-volt battery banks and chargers, one associated with each operable D.C. board

APPLICABILITY: MODES 5 and 6.

#### ACTION:

With less than the above complement of D.C. equipment and board OPERABLE and energized, establish CONTAINMENT INTEGRITY within 8 hours.

#### SURVEILLANCE REQUIREMENTS

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4.8.2.4.1 The above required 125-volt D.C. vital battery boards shall be determined OPERABLE and energized at least once per 7 days by verifying correct breaker alignment and voltage on the board with an overall battery voltage of greater than or equal to 125 volts.

4.8.2.4.2 The above required 125-volt D.C. vital battery banks and chargers shall be demonstrated OPERABLE per Surveillance Requirement 4.8.2.3.2.

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\*D.C. Battery Bank V may be substituted for any other Battery Bank.