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

SOUTHERN CALIFORNIA EDISON COMPANY

SAN DIEGO GAS AND ELECTRIC COMPANY

THE CITY OF RIVERSIDE, CALIFORNIA

THE CITY OF ANAHEIM, CALIFORNIA

DOCKET NO. 50-361

SAN ONOFRE NUCLEAR GENERATING STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 31
License No. NPF-10

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The applications for amendment to the license for San Onofre Nuclear Generating Station, Unit 2 (the facility) filed by the Southern California Edison Company on behalf of itself and San Diego Gas and Electric Company, The City of Riverside and The City of Anaheim, California (licensees) dated March 2 and April 2, 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 applications, as amended, the provisions of the Act, and the 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 set forth in 10 CFR Chapter I;

   D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public;

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 amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-10 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 31, are hereby incorporated in the license. SCE shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This amendment is effective as of the date of issuance and shall be fully implemented by January 31, 1985.

FOR THE NUCLEAR REGULATORY COMMISSION

B. C. Buckley for

George W. Knighton, Chief
Licensing Branch No. 3
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: January 11, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 31

FACILITY OPERATING LICENSE NO. NPF-10

DOCKET NO. 50-361

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 area of change. Also to be replaced are the following overleaf pages to the amended pages.

Amendment Pages	Overleaf Pages
3/4 3-18	3/4 3-17
3/4 3-21	3/4 3-22
3/4 3-25	-
3/4 3-26	-
3/4 3-33	-
3/4 3-34	-
3/4 3-35	-
3/4 3-36	-
3/4 3-37	-
3/4 3-38	-
3/4 3-39	3/4 3-40
3/4 3-51	-
3/4 3-52	-
3/4 3-53	-
3/4 3-53a	3/4 3-54
3/4 3-55	3/4 3-56
3/4 3-68	3/4 3-67
3/4 3-69	-
3/4 3-70	-
3/4 3-71	-
3/4 3-72	-
3/4 3-73	-
3/4 3-74	-
3/4 3-75	-
3/4 3-76	-
	-

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
9. CONTROL ROOM ISOLATION (CRIS)					
a. Manual CRIS (Trip Buttons)	2	1	1	All	13*#
b. Manual SIAS (Trip Buttons)	2 sets of 2/unit	1 set of 2	2 sets of 2/unit	1, 2, 3, 4	8
c. Airborne Radiation					
i. Particulate/Iodine	2	1	1	All	13*#
ii. Gaseous	2	1	1	All	13*#
d. Automatic Actuation Logic	1/train	1	1	All	13*#
10. TOXIC GAS ISOLATION (TGIS)					
a. Manual (Trip Buttons)	2	1	1	All	14*#, 15*#
b. Chlorine - High	2	1	1	All	14*#, 15*#
c. Ammonia - High	2	1	1	All	14*#, 15*#
d. Butane/Propane - High	2	1	1	All	14*#, 15*#
e. Carbon Dioxide - High	2	1	1	All	14*#, 15*#
f. Automatic Actuation Logic	1/train	1	1	All	14*#, 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
11. FUEL HANDLING ISOLATION (FHIS)					
a. Manual (Trip Buttons)	2	1	1	**	16*#
b. Airborne Radiation					
i. Gaseous	2	1	1	**	16*#
ii. Particulate/Iodine	2	1	1	**	16*#
c. Automatic Actuation Logic	1/train	1	1	**	16*#
12. CONTAINMENT PURGE ISOLATION (CPIS)					
a. Manual (Trip Buttons)	2	1	1	6	17b*#
b. Airborne Radiation (2RT7804-1 or 2RT7807-2)					
i. Gaseous	2	1	1	1,2,3,4	17a
				6	17b*#
ii. Particulate	2	1	1	1,2,3,4	17a
				6	17b*#
iii. Iodine	2	1	1	6	17b*#
c. Containment Area Radiation (Gamma) (2RT7856-1 or 2RT7857-2)	2	1	1	1,2,3,4	17
				6	17b*#
d. Automatic Actuation Logic	1/train	1	1	1,2,3,4	17
				6	17b*#

Table 3.3-3 (Continued)

TABLE NOTATION

ACTION 13 - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, within 1 hour initiate and maintain operation of the control room emergency air cleanup system in the emergency (except as required by ACTIONS 14, 15) mode of operation.

ACTION 14 - With the number of channels OPERABLE one less than the total number of channels, restore the inoperable channel to OPERABLE status within 7 days or within the next 6 hours initiate and maintain operation of the control room emergency air cleanup system in the isolation mode of operation.

ACTION 15 - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, within 1 hour initiate and maintain operation of the control room emergency air cleanup system in the isolation mode of operation.

ACTION 16 - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.12.

ACTION 17 - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, operation may continue provided that the purge valves are maintained closed.

ACTION 17a - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.4.5.1. (Mode 1, 2, 3, 4 only)

ACTION 17b - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, close each of the containment purge penetrations providing direct access from the containment atmosphere to the outside atmosphere.

TABLE 3.3-4

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP VALUES

FUNCTIONAL UNIT	TRIP VALUE	ALLOWABLE VALUES
1. SAFETY INJECTION (SIAS)		
a. Manual (Trip Buttons)	Not Applicable	Not Applicable
b. Containment Pressure - High	$\leq$ 2.95 psig	$\leq$ 3.14 psig
c. Pressurizer Pressure - Low	$\geq$ 1806 psia (1)	$\geq$ 1763 psia (1)
d. Automatic Actuation Logic	Not Applicable	Not Applicable
2. CONTAINMENT SPRAY (CSAS)		
a. Manual (Trip Buttons)	Not Applicable	Not Applicable
b. Containment Pressure -- High-High	$\leq$ 16.14 psig	$\leq$ 16.83 psig
c. Automatic Actuation Logic	Not Applicable	Not Applicable
3. CONTAINMENT ISOLATION (CIAS)		
a. Manual CIAS (Trip Buttons)	Not Applicable	Not Applicable
b. Manual SIAS (Trip Buttons)(5)	Not Applicable	Not Applicable
c. Containment Pressure - High	$\leq$ 2.95 psig	$\leq$ 3.14 psig
d. Automatic Actuation Logic	Not Applicable	Not Applicable
4. MAIN STEAM ISOLATION (MSIS)		
a. Manual (Trip Buttons)	Not Applicable	Not Applicable
b. Steam Generator Pressure - Low	$\geq$ 729 psia (2)	$\geq$ 711 psia (2)
c. Automatic Actuation Logic	Not Applicable	Not Applicable
5. RECIRCULATION (RAS)		
a. Refueling Water Storage Tank	18.5% of tap span	19.27% $\geq$ tap span $\geq$ 17.73%
b. Automatic Actuation Logic	Not Applicable	Not Applicable

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP VALUES

FUNCTIONAL UNIT	TRIP VALUE	ALLOWABLE VALUES
11. FUEL HANDLING ISOLATION (FHIS)		
a. Manual (Trip Buttons)	Not Applicable	Not Applicable
b. Airborne Radiation		
i. Gaseous	$\leq 1.3 \times 10^2$ cpm**	$\leq 1.4 \times 10^2$ cpm**
ii. Particulate/Iodine	$\leq 5.7 \times 10^4$ cpm**	$\leq 6.0 \times 10^4$ cpm**
c. Automatic Actuation Logic	Not Applicable	Not Applicable
12. CONTAINMENT PURGE ISOLATION (CPIS)		
a. Manual (Trip Buttons)	Not Applicable	Not Applicable
b. Airborne Radiation		
i. Gaseous	(6)(7)	(6)(7)
ii. Particulate	(6)(7)	(6)(7)
iii. Iodine	(6)(7)	(6)(7)
c. Containment Area Radiation (Gamma)	$\leq$ 325 mR/hr (MODES 1-4) $\leq$ 2.4 mR/hr (MODE 6)	$\leq$ 340 mR/hr (MODES 1-4) $\leq$ 2.5 mR/hr (MODE 6)
d. Automatic Actuation Logic	Not Applicable	Not Applicable

TABLE 3.3-4 (Continued)

TABLE NOTATION

(1) Value may be decreased manually, to a minimum of greater than or equal to 300 psia, as pressurizer pressure is reduced, provided the margin between the pressurizer and this value is maintained at less than or equal to 400 psia;* the setpoint shall be increased automatically as pressurizer pressure is increased until the trip setpoint is reached. Trip may be manually bypassed below 400 psia; bypass shall be automatically removed whenever pressurizer is greater than or equal to 400 psia.

(2) Value may be decreased manually as steam generator pressure is reduced, provided the margin between the steam generator pressure and this value is maintained at less than or equal to 200 psi;* the setpoint shall be increased automatically as steam generator pressure is increased until the trip setpoint is reached.

(3) % of the distance between steam generator upper and lower level instrument nozzles.

(4) Inverse time relay set value 3165V, trip will occur within the tolerances specified in Figure 3.3-1 for the range of bus voltages.

(5) Actuated equipment only; does not result in CIAS.

(6) The trip setpoint shall be set sufficiently high to prevent spurious alarms/trips yet sufficiently low to assure an alarm/trip should an inadvertent release occur.

(7) Prior to the completion of DCP 53N, the setpoints for Containment Airborne Radiation Monitor 2RT-7804-1 shall be determined by the ODCM.

*Variable setpoints are for use only during normal, controlled plant heatups and cooldowns.

**Above normal background.

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
11. FUEL HANDLING ISOLATION (FHIS)				
a. Manual (Trip Buttons)	N.A.	N.A.	R	N.A.
b. Airborne Radiation				
i. Gaseous	S	R	M	*
ii. Particulate/Iodine	S	R	M	*
c. Automatic Actuation Logic	N.A.	N.A.	R(3)	*
12. CONTAINMENT PURGE ISOLATION (CPIS)				
a. Manual (Trip Buttons)	N.A.	N.A.	R	N.A.
b. Airborne Radiation				
i. Gaseous	S	R	M	1,2,3,4,6
ii. Particulate	W	R	M	1,2,3,4,6
iii. Iodine	W	R	M	6
c. Containment Area Radiation (Gamma)	S	R	M	1,2,3,4,6
d. Automatic Actuation Logic	N.A.	N.A.	R (3)	1,2,3,4,6

TABLE NOTATION

(1) Each train or logic channel shall be tested at least every 62 days on a STAGGERED TEST BASIS.

(2) Deleted.

(3) Testing of Automatic Actuation Logic shall include energization/de-energization of each initiation relay and verification of the OPERABILITY of each initiation relay.

(4) A subgroup relay test shall be performed which shall include the energization/de-energization of each subgroup relay and verification of the OPERABILITY of each subgroup relay. Relays exempt from testing during plant operation shall be limited to only those relays associated with plant equipment which cannot be operated during plant operation. Relays not testable during plant operation shall be tested during each COLD SHUTDOWN exceeding 24 hours unless tested during the previous 6 months.

(5) Actuated equipment only; does not result in CIAS.

* With irradiated fuel in the storage pool.

INSTRUMENTATION

3/4.3.3 MONITORING INSTRUMENTATION

RADIATION MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.1 The radiation monitoring instrumentation channels shown in Table 3.3-6 shall be OPERABLE with their alarm/trip setpoints within the specified limits.

APPLICABILITY: As shown in Table 3.3-6.*

ACTION:

a. With a radiation monitoring channel alarm/trip setpoint exceeding the value shown in Table 3.3-6, adjust the setpoint to within the limit within 4 hours or declare the channel inoperable.

b. With one or more radiation monitoring channels inoperable, take the ACTION shown in Table 3.3-6.

c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.1 Each radiation monitoring instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations for the MODES and at the frequencies shown in Table 4.3-3.

*See Special Test Exception 3.10.5.

TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
1. Area Monitors					
a. Containment - High Range (2RT-7820-1 and 2RT-7820-2)	2	1, 2, 3 4	10 R/hr 10 R/hr	$1-10^8$ R/hr	18, 18a 19
b. Containment - Purge Isolation (2RT-7856-1 or 2RT-7857-2)	1	1, 2, 3, 4 6	# #	$10^{-1}-10^5$ mR/hr	17 17b
c. Main Steam Line A Channel consist of 2RT-7874A and 2RT-7875A or 2RT-7874B and 2RT-7875B	1/line	1, 2, 3 4	1 mR/hr (low); 1 R/hr (high) 1 mR/hr (low); 1 R/hr (high)	$10^{-1}-10^4$ mR/hr;	18 19
2. Process Monitors					
a. Fuel Storage Pool Airborne (2RT-7822-1 or 2RT-7823-2)					
i. Gaseous	1	*	#	10^1-10^7 cpm	16
ii. Particulate/Iodine	1	*	#	10^1-10^7 cpm	16
b. Containment Airborne (2RT-7804-1 or 2RT-7807-2)					
i. Gaseous	1	1, 2, 3, 4 6	# #	$10^1 - 10^7$ cpm	17a 17b
ii. Particulate	1	1, 2, 3, 4 6	# #	$10^1 - 10^7$ cpm	17a 17b
iii. Iodine	1	6	#	$10^1 - 10^7$ cpm	17b
c. Control Room Airborne (2/3 RT-7824-1 or 2/3 RT-7825-2)					
i. Particulate	1	All	#	$10^1 - 10^7$ cpm	13
ii. Gaseous	1	All	#	$10^1 - 10^7$ cpm	13

TABLE 3.3-6 (Continued)

RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
3. Noble Gas Monitors					
a. Plant Vent Stack Wide Range (2RT-7865-1 or 3RT-7865-1)	1	1,2,3	Per ODCM	10^{-7}-10^{5} µCi/cm^3	19
Normal Range(2RT-7865-1, 3RT-7865-1 or 2/3RT-7808)	1	4	Per ODCM	10^{-6}-10^{-1} µCi/cm^3	19
b. Condenser Evacuation System Wide Range (2RT-7870-1)	1	1,2,3(1)	Per ODCM	10^{-7}-10^{5} µCi/cm^3	19
Normal Range (2RT-7818 or 2RT-7870-1)	1	4 (1)	Per ODCM	10^{-6}-10^{2} µCi/cm^3	19

(1) With any main steam isolation valve and/or any main steam isolating valve bypass valve not fully closed.

TABLE 3.3-6 (Continued)

ACTION STATEMENTS

ACTION 13 - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, within 1 hour initiate and maintain operation of the control room emergency air cleanup system in the emergency (except as required by ACTIONS 14, 15) mode of operation.

ACTION 16 - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.12.

ACTION 17 - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, operation may continue provided that the purge valves are maintained closed.

ACTION 17a - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.4.5.1. (Mode 1, 2, 3, 4 only)

ACTION 17b - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, close each of the containment purge penetrations providing direct access from the containment atmosphere to the outside atmosphere.

ACTION 18 - With the number of channels OPERABLE one less than the Minimum Channels OPERABLE requirement, either restore the inoperable channel to OPERABLE status within 30 days, or be in HOT SHUTDOWN within the next 12 hours.

ACTION 18a - With both channels inoperable, restore the inoperable channel(s) to OPERABLE status within 48 hours, or be in HOT SHUTDOWN within the next 12 hours.

ACTION 19 - With the number of OPERABLE Channels less than required by the Minimum Channels OPERABLE requirement, either restore the inoperable Channel(s) to OPERABLE status within 72 hours, or:

1) Initiate the preplanned alternate method of monitoring the appropriate parameter(s), and

2) Prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following initiation of the pre-planned alternate outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

#In accordance with Engineered Safety Feature trip value specified by Table 3.3-4.
*With irradiated fuel in the storage pool.

ACTIONS 13, 16, 17, 17a and 17b are repeated from Table 3.3-3 for reference.

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
1. Area Monitors				
a. Containment - High Range (2RT-7820-1, 2RT-7820-2)	S	R	M	1, 2, 3, 4
b. Containment - Purge Isolation (2RT-7856-1, 2RT-7857-2)	S	R	M	1, 2, 3, 4, 6
c. Main Steam Line (2RT-7874A, 2RT-7875A, 2RT-7874B, 2RT-7875B)	S	R	M	1, 2, 3, 4
2. Process Monitors				
a. Fuel Storage Pool Airborne (2RT-7822-1, 2RT-7823-2)				
i. Gaseous	#	#	#	*
ii. Particulate/Iodine	#	#	#	*
b. Containment Airborne (2RT-7804-1, 2RT-7807-2)				
i. Gaseous	#	#	#	1, 2, 3, 4, 6
ii. Particulate	#	#	#	1, 2, 3, 4, 6
iii. Iodine	#	#	#	6
c. Control Room Airborne (2/3RT-7824-1, 2/3RT-7825-2)				
i. Particulate	#	#	#	All
ii. Gaseous	#	#	#	All

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
PROCESS MONITORS (Continued)				
3. Noble Gas Monitors				
a. Plant Vent Stack (2RT-7865-1, 3RT-7865-1, 2/3RT-7808)	D	R	Q	1, 2, 3, 4
b. Condenser Evacuation System (2RT-7870-1, 2RT-7818-1)	D	R	Q	1, 2, 3, 4(1)

NOTES:

#In accordance with Table 4.3-2 surveillance requirements for these instrument channels.

*With irradiated fuel in the storage pool.

(1) With any main steam isolation valve and/or any main steam isolating valve bypass valve not fully closed.

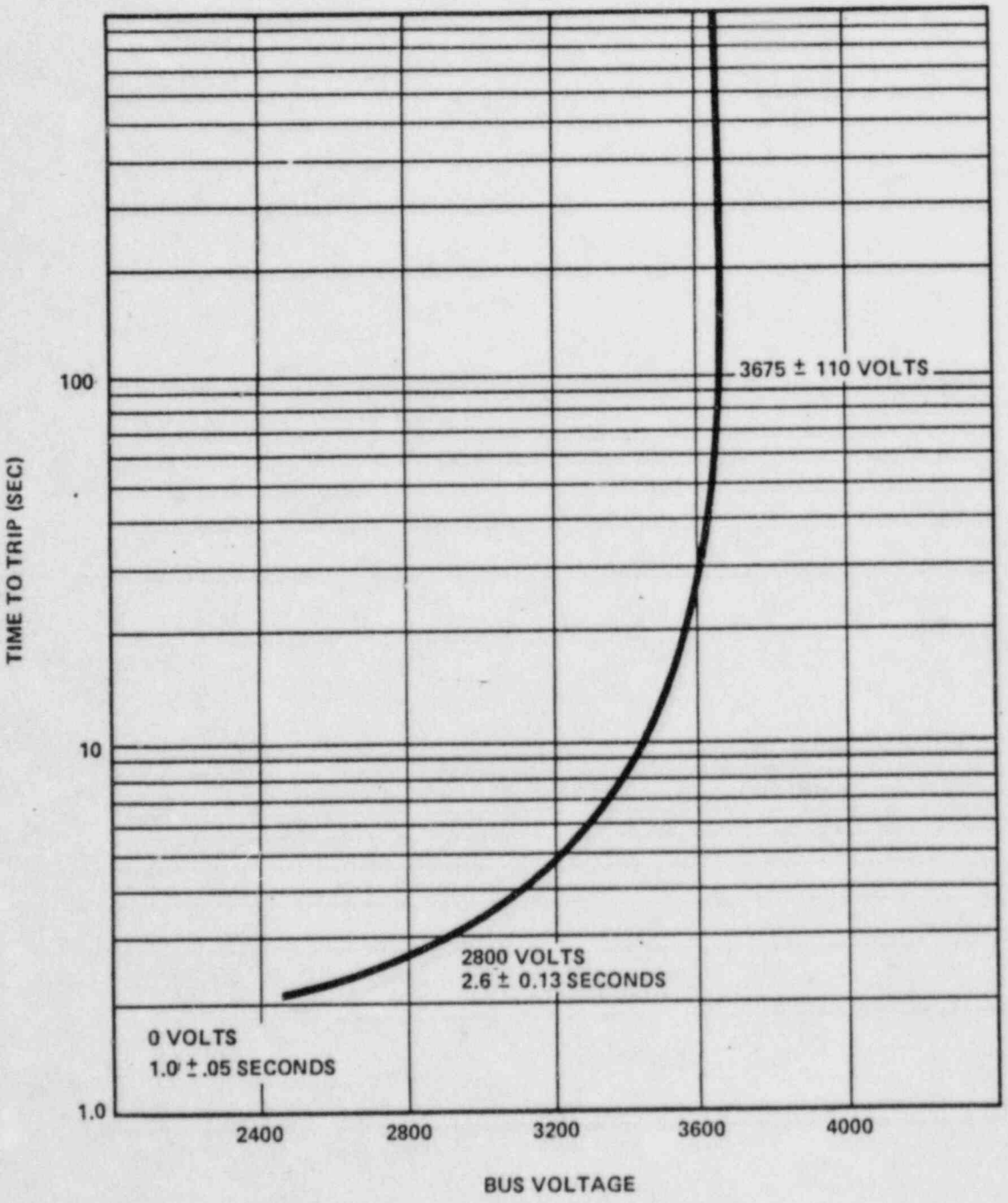

Figure 3.3-1
DEGRADED BUS VOLTAGE TRIP SETTING

INSTRUMENTATION

ACCIDENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.6 The accident monitoring instrumentation channels shown in Table 3.3-10 shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.*

ACTION:

a. With one or more accident monitoring channels inoperable, take the ACTION shown in Table 3.3-10.

b. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.6 Each accident monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-7.

*See Special Test Exception 3.10.5.

TABLE 3.3-10

ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT		REQUIRED NUMBER OF CHANNELS	MINIMUM CHANNELS OPERABLE	ACTION
1.	Containment Pressure - Narrow Range	2	1	20, 21
2.	Containment Pressure - Wide Range	2	1	20, 21
3.	Reactor Coolant Outlet Temperature - T_{Hot} (Wide Range)	2	1	20, 21
4.	Reactor Coolant Inlet Temperature - T_{Cold} (Wide Range)	2	1	20, 21
5.	Pressurizer Pressure - Wide Range	2	1	20, 21
6.	Pressurizer Water Level	2	1	20, 21
7.	Steam Line Pressure	2/steam generator	1/steam generator	20, 21
8.	Steam Generator Water Level - Wide Range	2/steam generator	1/steam generator	20, 21
9.	Refueling Water Storage Tank Water Level	2	1	20, 21
10.	Auxiliary Feedwater Flow Rate	1/steam generator	N.A.	20
11.	Reactor Coolant System Subcooling Margin Monitor	2	1	20, 21
12.	Safety Valve Position Indicator	1/valve	N.A.	20
13.	Spray System Pressure	2	1	20, 21
14.	LPSI Header Temperature	2	1	20, 21
15.	Containment Temperature	2	1	20, 21
16.	Containment Water Level - Narrow Range	2	1	20, 21

TABLE 3.3-10

ACCIDENT MONITORING INSTRUMENTATION (CONTINUED)

INSTRUMENT		REQUIRED NUMBER OF CHANNELS	MINIMUM CHANNELS OPERABLE	ACTION
17.	Containment Water Level - Wide Range	2	1	20, 21
18.	Core Exit Thermocouples	7/core quadrant	4/core quadrant	20, 21
19.	Cold Leg HPSI Flow	1/cold leg	N.A.	20
20.	Hot Leg HPSI Flow	1/hot leg	N.A.	20

TABLE 3.3-10 (Continued)

ACTION STATEMENTS

ACTION 20 - With the number of OPERABLE accident monitoring channels less than the Required Number of Channels, either restore the inoperable channel to OPERABLE status within 7 days, or be in HOT SHUTDOWN within the next 12 hours.

ACTION 21 - With the number of OPERABLE accident monitoring channels less than the Minimum Channels OPERABLE requirement, either restore the inoperable channel(s) to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours.

TABLE 4.3-7

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
1. Containment Pressure - Narrow Range	M	R
2. Containment Pressure - Wide Range	M	R
3. Reactor Coolant Outlet Temperature - T_{Hot} (Wide Range)	M	R
4. Reactor Coolant Inlet Temperature -T_{Cold} (Wide Range)	M	R
5. Pressurizer Pressure (Wide Range)	M	R
6. Pressurizer Water Level	M	R
7. Steam Line Pressure	M	R
8. Steam Generator Water Level (Wide Range)	M	R
9. Refueling Water Storage Tank Water Level	M	R
10. Auxiliary Feedwater Flow Rate	M	R
11. Reactor Coolant System Subcooling Margin Monitor	M	R
12. Safety Valve Position Indicator	M	R
13. Spray System Pressure	M	R
14. LPSI Header Temperature	M	R
15. Containment Temperature	M	R
16. Containment Water Level (Narrow Range)	M	R
17. Containment Water Level (Wide Range)	M	R
18. Core Exit Thermocouples	M	R

TABLE 4.3-7

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS (CONTINUED)

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
19. Cold Leg HPSI Flow	M	R
20. Hot Leg HPSI Flow	M	R

INSTRUMENTATION

FIRE DETECTION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.7 As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.3-11 shall be OPERABLE.

APPLICABILITY: Whenever equipment protected by the fire detection instrument is required to be OPERABLE.

ACTION:

With the number of OPERABLE fire detection instrument(s) less than the minimum number OPERABLE requirement of Table 3.3-11:

a. Within 1 hour establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour, unless the instrument(s) is located inside the containment, then inspect the containment at least once per 8 hours or monitor the containment air temperature at least once per hour at the locations listed in Specification 4.6.1.5.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.7.1 Each of the above required fire detection instruments which are accessible during plant operation shall be demonstrated OPERABLE at least once per 6 months by performance of a CHANNEL FUNCTIONAL TEST. Fire detectors which are not accessible during plant operation shall be demonstrated OPERABLE by the performance of a CHANNEL FUNCTIONAL TEST during each COLD SHUTDOWN exceeding 24 hours unless performed in the previous 6 months.

4.3.3.7.2 The NFPA Standard 72D supervised circuits supervision associated with the detector alarms of each of the above required fire detection instruments shall be demonstrated OPERABLE at least once per 6 months.

4.3.3.7.3 The non-supervised circuits associated with detector alarms between the instruments and the control room shall be demonstrated OPERABLE at least once per 31 days.

4.3.3.7.4 Following a seismic event (basemat acceleration greater than or equal to 0.05 g):

a. Within 2 hours each zone shown in Table 3.3-11 shall be inspected for fires, and

b. Within 72 hours an engineering evaluation shall be performed to verify the OPERABILITY of the fire detection system in each zone shown in Table 3.3-11.

TABLE 4.3-8 (Continued)

TABLE NOTATION

(1) The CHANNEL FUNCTIONAL TEST shall also demonstrate that automatic isolation of this pathway and control room alarm annunciation occurs if any of the following conditions exists:*

1. Instrument indicates measured levels above the alarm/trip setpoint.

2. Circuit failure.

3. Instrument indicates a downscale failure.

(2) The initial CHANNEL CALIBRATION shall be performed using one or more of the reference standards certified by the National Bureau of Standards or using standards that have been obtained from suppliers that participate in measurement assurance activities with NBS. These standards shall permit calibrating the system over its intended range of energy and measurement range. For subsequent CHANNEL CALIBRATION, sources that have been related to the initial calibration shall be used.

(3) CHANNEL CHECK shall consist of verifying indication of flow during periods of release. CHANNEL CHECK shall be made at least once per 24 hours on days on which continuous, periodic, or batch releases are made.

*If the instrument controls are not in the operate mode, procedures shall require that the channel be declared inoperable.

INSTRUMENTATION

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.9 The radioactive gaseous effluent monitoring instrumentation channels shown in Table 3.3-13 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of Specification 3.11.2.1 are not exceeded. The alarm/trip setpoints of these channels shall be determined in accordance with the ODCM.

APPLICABILITY: As shown in Table 3.3-13*

ACTION:

a. With a radioactive gaseous effluent monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above Specification, immediately suspend the release of radioactive gaseous effluents monitored by the affected channel or declare the channel inoperable.

b. With less than the minimum number of radioactive gaseous effluent monitoring instrumentation channels OPERABLE, take the ACTION shown in Table 3.3-13. Exert best efforts to return the instrument to OPERABLE status within 30 days and, additionally, if the inoperable instrument(s) remain inoperable for greater than 30 days, explain in the next Semiannual Radioactive Effluent Release Report why the inoperability was not corrected in a timely manner.

c. The provisions of Specifications 3.0.3, 3.0.4, and 6.9.1.13b are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.9 Each radioactive gaseous effluent monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, SOURCE CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3-9.

*See Special Test Exception 3.10.5

TABLE 3.3-13

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

	INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABILITY	ACTION
1.	WASTE GAS HOLDUP SYSTEM			
a.	Noble Gas Activity Monitor - Providing Alarm and Automatic Termination of Release - 2/3 RT-7808, 2 RT-7865-1 or 3 RT - 7865-1	1	*	35
b.	Process Flow Rate Monitoring Device	1	*	36
2.	WASTE GAS HOLDUP SYSTEM EXPLOSIVE GAS MONITORING SYSTEM			
a.	Hydrogen Monitor	2	**	39
b.	Oxygen Monitor	2	**	39
3.	CONDENSER EVACUATION SYSTEM			
a.	Noble Gas Activity Monitor - 2RT - 7818 or 2RT - 7870-1	1	***	37
b.	Iodine Sampler	1	***	40
c.	Particulate Sampler	1	***	40
d.	Associated Sample Flow Measuring Device	1	***	36
e.	Process Flow Rate Monitoring Device	1(4)	***	36
4.	PLANT VENT STACK			
a.	Noble Gas Activity Monitor - - 2/3 RT - 7808, 2RT-7865-1 or 3RT-7865-1	1	*	37
b.	Iodine Sampler	1	*	40
c.	Particulate Sampler	1	*	40
d.	Associated Sample Flow Measuring Device	1	*	36
e.	Process Flow Rate Monitoring Device	1(5)	*	36
5.	CONTAINMENT PURGE SYSTEM			
a.	Noble Gas Activity Monitor - Providing Alarm and Automatic Termination of Release - 2RT - 7828 or 2 RT-7865-1(1)	1(2)	*	38
b.	Iodine Sampler	1(2)	*	40
c.	Particulate Sampler	1(2)	*	40
d.	Process Flow Rate Monitoring Device	1(3)	*	36
e.	Associated Sample Flow Measuring Device	1(2)	*	36

TABLE 3.3-13 (Continued)

TABLE NOTATION

* At all times.

** During waste gas holdup system operation (treatment for primary system offgases).

*** MODES 1-4 with any main steam isolation valve and/or any main steam isolating bypass valve not fully closed.

(1) Provided 2RT-7865-1 is equipped to automatically terminate containment purge release.

(2) Prior to completion of DCP53N, Containment Airborne Radiation Monitor 2RT-7804-1 performs the functions of 2RT-7828. 2RT-7804-1 is not equipped to monitor purge flow.

(3) Prior to completion of DCP53N, 2RT-7865-1 may perform this function for minipurge only. Otherwise comply with ACTION 36 if another means of continuously monitoring purge flow is not available.

(4) 2RT-7818 is not equipped to monitor process flow. If another means of continously monitoring process flow is not available, then comply with ACTION 36.

(5) 2/3 RT-7808 is not equipped to monitor plant vent stack flow. If another means of continuously monitoring plant vent stack flow is not available, then comply with ACTION 36.

ACTION 35 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, the contents of the tank(s) may be released to the environment provided that prior to initiating the release:

a. At least two independent samples of the tank's contents are analyzed, and

b. At least two technically qualified members of the Facility Staff independently verify the release rate calculations and discharge valve lineup;

Otherwise, suspend releases of radioactive effluents via this pathway.

ACTION 36 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided the flow rate is estimated at least once per 8 hours. System design characteristics may be used to estimate flow.

ACTION 37 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided grab samples are taken at least once per 12 hours and these samples are analyzed for gross activity within 24 hours.

TABLE 3.3-13 (Continued)

TABLE NOTATION

ACTION 38 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, immediately suspend PURGING of radioactive effluents via this pathway

OR

Prior to completion of DCP53N, and with Plant Vent Stack Monitor 2RT-7865-1 not capable of terminating containment purge release, PURGING may continue using 2RT-7865-1 provided that:

1) Plant Vent Stack Monitor 2RT-7865-1 is aligned to the purge stack for the duration of the purge; and,

2) Plant Vent Stack Monitor 2/3 RT-7808 or 3RT-7865-1 is OPERABLE and aligned to the plant vent stack; and,

3) When PURGING is complete, 2RT-7865-1 is realigned to the plant vent stack; and,

4) In the event of a high activity alarm during the PURGE from any of 2RT-7865-1, 3RT-7865-1 or 2/3 RT-7808, an operator immediately suspends containment PURGING and realigns 2RT-7865-1 to the Plant Vent Stack.

ACTION 39 - With the number of channnels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, operation of this system may continue provided that the remaining OPERABLE channel is aligned to the waste gas surge tank. With two channels inoperable, operation of this system may continue provided that grab samples are taken at least once per 4 hours and analyzed within the following 4 hours.

ACTION 40 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via the affected pathway may continue provided samples are continuously collected with auxiliary sampling equipment as required in Table 4.11-2.

TABLE 4.3-9

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	SOURCE CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
1. WASTE GAS HOLDUP SYSTEM					
a. Noble Gas Activity Monitor - Providing Alarm and Automatic Termination of Release - 2/3 RT-7808, 2RT-7865-1, 3RT-7865-1	P	P	R(3)	Q(1)	*
b. Process Flow Monitoring Device	P	N.A.	R	Q	*
2. WASTE GAS HOLDUP SYSTEM EXPLOSIVE GAS MONITORING SYSTEM					
a. Hydrogen Monitor (continuous)	D	N.A.	Q(4)	M	**
b. Oxygen Monitor (continuous)	D	N.A.	Q(5)	M	**
c. Hydrogen Monitor (periodic)	D	N.A.	Q(4)	M	**
d. Oxygen Monitor (periodic)	D	N.A.	Q(5)	M	**
3. CONDENSER EVACUATION SYSTEM					
a. Noble Gas Activity Monitor - 2RT - 7818, 2RT - 7870-1	D	M	R(3)	Q(2)	***
b. Iodine Sampler	W	N.A.	N.A.	N.A.	***
c. Particulate Sampler	W	N.A.	N.A.	N.A.	***
d. Associated Sample Flow Measuring Device	D	N.A.	R	Q	***
e. Process Flow Rate Monitoring Device (2RT-7870-1)	D	N.A.	R	Q	***

TABLE 4.3-9 (Continued)

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	SOURCE CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
4. PLANT VENT STACK					
a. Noble Gas Activity Monitor - 2/3 RT - 7808, 2RT - 7865-1, 3RT-7365-1	D	M	R(3)	Q(2)	*
b. Iodine Sampler	W	N.A.	N.A.	N.A.	*
c. Particulate Sampler	W	N.A.	N.A.	N.A.	*
d. Associated Sample Flow Measuring Device	D	N.A.	R	Q	*
e. Process Flow Rate Monitoring Device	D	N.A.	R	Q	*
5. CONTAINMENT PURGE SYSTEM(7)					
a. Noble Gas Activity Monitor - Providing Alarm and Automatic Termination of Release - 2 RT - 7828, 2 RT-7865-1	D	P(6)	R(3)	Q(1)	*
b. Iodine Sampler	W	N.A.	N.A.	N.A.	*
c. Particulate Sampler	W	N.A.	N.A.	N.A.	*
d. Process Flow Rate Monitoring Device	D	N.A.	R	Q	*
e. Associated Sample Flow Measuring Device	D	N.A.	R	Q	*

TABLE 4.3-9 (Continued)

TABLE NOTATION

* At all times.

** During waste gas holdup system operation (treatment for primary system offgases).

*** Modes 1-4 with any main steam isolation valve and/or any main steam isolating valve bypass valve not fully closed.

(1) The CHANNEL FUNCTIONAL TEST shall also demonstrate that automatic isolation of this pathway and control room alarm annunciation occurs if any of the following conditions exists:#

1. Instrument indicates measured levels above the alarm/trip setpoint.
2. Circuit failure.
3. Instrument indicates a downscale failure.

(2) The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exists#:

1. Instrument indicates measured levels above the alarm setpoint.
2. Circuit failure.
3. Instrument indicates a downscale failure.

(3) The initial CHANNEL CALIBRATION shall be performed using one or more of the reference standards certified by the National Bureau of Standards or using standards that have been obtained from suppliers that participate in measurement assurance activities with NBS. These standards shall permit calibrating the system over its intended range of energy and measurement range. For subsequent CHANNEL CALIBRATION, sources that have been related to the initial calibration shall be used.

(4) The CHANNEL CALIBRATION shall include the use of standard gas samples containing a nominal:

1. One volume percent hydrogen, balance nitrogen, and
2. Four volume percent hydrogen, balance nitrogen.

(5) The CHANNEL CALIBRATION shall include the use of standard gas samples containing a nominal:

1. One volume percent oxygen, balance nitrogen, and
2. Four volume percent oxygen, balance nitrogen.

(6) Prior to each release and at least once per month.

(7) Prior to completion of DCP53N, these surveillance requirements are to be performed on the instrumentation indicated by Table 3.3-13.

#If the instrument controls are not set in the operate mode, procedures shall call for declaring the channel inoperable.

INSTRUMENTATION

LOOSE-PART DETECTION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.10 The loose-part detection system shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

a. With one or more loose part detection system channels inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the channel(s) to OPERABLE status.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.10 Each channel of the loose-part detection system shall be demonstrated OPERABLE by performance of a:

a. CHANNEL CHECK at least once per 24 hours,

b. CHANNEL FUNCTIONAL TEST at least once per 31 days, and

c. CHANNEL CALIBRATION at least once per 18 months.

INSTRUMENTATION

3/4.3.4 TURBINE OVERSPEED PROTECTION

LIMITING CONDITION FOR OPERATION

3.3.4 At least one turbine overspeed protection system shall be OPERABLE.

APPLICABILITY: MODES 1, 2* and 3.*

ACTION:

a. With one stop valve or one control valve per high pressure turbine steam lead inoperable and/or with one reheat stop valve or one reheat intercept valve per low pressure turbine steam lead inoperable, restore the inoperable valve(s) to OPERABLE status within 72 hours, or close at least one valve in the affected steam lead or isolate the turbine from the steam supply within the next 6 hours.

b. With the above required turbine overspeed protection system otherwise inoperable, within 6 hours isolate the turbine from the steam supply.

SURVEILLANCE REQUIREMENTS

4.3.4 The above required turbine overspeed protection system shall be demonstrated OPERABLE:

a. At least once per 7 days by cycling each of the following valves through at least one complete cycle from the running position.

1. Four high pressure turbine stop valves.
2. Four high pressure turbine control valves.
3. Six low pressure turbine reheat stop valves.
4. Six low pressure turbine reheat intercept valves.

b. At least once per 31 days by direct observation of the movement of each of the above valves through one complete cycle from the running position.

c. At least once per 18 months by performance of a CHANNEL CALIBRATION on the turbine overspeed protection systems.

d. At least once per 40 months by disassembling at least one of each of the above valves and performing a visual and surface inspection of valve seats, disks and stems and verifying no unacceptable flaws or corrosion.

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*With any main steam line isolation valve and/or any main steam line isolation valve bypass valve not fully closed.

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

SOUTHERN CALIFORNIA EDISON COMPANY

SAN DIEGO GAS AND ELECTRIC COMPANY

THE CITY OF RIVERSIDE, CALIFORNIA

THE CITY OF ANAHEIM, CALIFORNIA

DOCKET NO. 50-362

SAN ONOFRE NUCLEAR GENERATING STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 20
License No. NPF-15

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The applications for amendment to the license for San Onofre Nuclear Generating Station, Unit 3 (the facility) filed by the Southern California Edison Company on behalf of itself and San Diego Gas and Electric Company, The City of Riverside and The City of Anaheim, California (licensees) dated March 2 and April 2, 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 applications, as amended, the provisions of the Act, and the 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 set forth in 10 CFR Chapter I;

   D. The issuance of this license amendment will not be inimical to the common defense and security or to the health and safety of the public;

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 amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C(2) of Facility Operating License No. NPF-15 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 20, are hereby incorporated in the license. SCE shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This amendment is effective as of the date of issuance and shall be fully implemented by January 31, 1985.

FOR THE NUCLEAR REGULATORY COMMISSION

B. C. Buckley for

George W. Knighton, Chief
Licensing Branch No. 3
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: January 11, 1985

ATTACHMENT TO LICENSE AMENDMENT NO. 20

FACILITY OPERATING LICENSE NO. NPF-15

DOCKET NO. 50-362

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 area of change. Also to be replaced are the following overleaf pages to the amended pages.

Amendment Pages	Overleaf Pages
3/4 3-18	3/4 3-17
3/4 3-21	3/4 3-22
3/4 3-25	-
3/4 3-26	-
3/4 3-33	-
3/4 3-34	-
3/4 3-35	-
3/4 3-36	-
3/4 3-37	-
3/4 3-38	-
3/4 3-39	3/4 3-40
3/4 3-51	-
3/4 3-52	-
3/4 3-53	-
3/4 3-54	-
3/4 3-55	-
3/4 3-56	-
3/4 3-69	-
3/4 3-70	-
3/4 3-71	-
3/4 3-72	-
3/4 3-73	-
3/4 3-74	-
3/4 3-75	-
3/4 3-76	-
3/4 3-77	-

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
9. CONTROL ROOM ISOLATION (CRIS)					
a. Manual CRIS (Trip Buttons)	2	1	1	All	13*#
b. Manual SIAS (Trip Buttons)	2 sets of 2/unit	1 set of 2	2 sets of 2/unit	1, 2, 3, 4	8
c. Airborne Radiation					
i. Particulate/Iodine	2	1	1	All	13*#
ii. Gaseous	2	1	1	All	13*#
d. Automatic Actuation Logic	1/train	1	1	All	13*#
10. TOXIC GAS ISOLATION (TGIS)					
a. Manual (Trip Buttons)	2	1	1	All	14*#, 15*#
b. Chlorine - High	2	1	1	All	14*#, 15*#
c. Ammonia - High	2	1	1	All	14*#, 15*#
d. Butane/Propane - High	2	1	1	All	14*#, 15*#
e. Carbon Dioxide - High	2	1	1	All	14*#, 15*#
f. Automatic Actuation Logic	1/train	1	1	All	14*#, 15*#

TABLE 3.3-3 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION

FUNCTIONAL UNIT	TOTAL NO. OF CHANNELS	CHANNELS TO TRIP	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ACTION
11. FUEL HANDLING ISOLATION (FHIS)					
a. Manual (Trip Buttons)	2	1	1	**	16*#
b. Airborne Radiation					
i. Gaseous	2	1	1	**	16*#
ii. Particulate/Iodine	2	1	1	**	16*#
c. Automatic Actuation Logic	1/train	1	1	**	16*#
12. CONTAINMENT PURGE ISOLATION (CPIS)					
a. Manual (Trip Buttons)	2	1	1	6	17b*#
b. Airborne Radiation (3RT-7804-1 or 3RT-7807-2					
i. Gaseous	2	1	1	1,2,3,4	17a
				6	17b*#
ii. Particulate	2	1	1	1,2,3,4	17a
				6	17b*#
iii. Iodine	2	1	1	6	17b*#
c. Containment Area Radiation (Gamma) (3RT-7856-1 or 3RT-7857-2)	2	1	1	1,2,3,4	17
				6	17b*#
d. Automatic Actuation Logic	1/train	1	1	1,2,3,4	17
				6	17b*#

Table 3.3-3 (Continued)

TABLE NOTATION

ACTION 13 - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, within 1 hour initiate and maintain operation of the control room emergency air cleanup system in the emergency (except as required by ACTIONS 14, 15) mode of operation.

ACTION 14 - With the number of channels OPERABLE one less than the total number of channels, restore the inoperable channel to OPERABLE status within 7 days or within the next 6 hours initiate and maintain operation of the control room emergency air cleanup system in the isolation mode of operation.

ACTION 15 - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, within 1 hour initiate and maintain operation of the control room emergency air cleanup system in the isolation mode of operation.

ACTION 16 - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.12.

ACTION 17 - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, operation may continue provided that the purge valves are maintained closed.

ACTION 17a - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.4.5.1. (MODE 1, 2, 3,4 only)

ACTION 17b - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, close each of the containment purge penetrations providing direct access from the containment atmosphere to the outside atmosphere.

TABLE 3.3-4

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP VALUES

FUNCTIONAL UNIT	TRIP VALUE	ALLOWABLE VALUES
1. SAFETY INJECTION (SIAS)		
a. Manual (Trip Buttons)	Not Applicable	Not Applicable
b. Containment Pressure - High	$\leq$ 2.95 psig	$\leq$ 3.14 psig
c. Pressurizer Pressure - Low	$\geq$ 1806 psia (1)	$\geq$ 1763 psia (1)
d. Automatic Actuation Logic	Not Applicable	Not Applicable
2. CONTAINMENT SPRAY (CSAS)		
a. Manual (Trip Buttons)	Not Applicable	Not Applicable
b. Containment Pressure -- High-High	$\leq$ 16.14 psig	$\leq$ 16.83 psig
c. Automatic Actuation Logic	Not Applicable	Not Applicable
3. CONTAINMENT ISOLATION (CIAS)		
a. Manual CIAS (Trip Buttons)	Not Applicable	Not Applicable
b. Manual SIAS (Trip Buttons)(5)	Not Applicable	Not Applicable
c. Containment Pressure - High	$\leq$ 2.95 psig	$\leq$ 3.14 psig
d. Automatic Actuation Logic	Not Applicable	Not Applicable
4. MAIN STEAM ISOLATION (MSIS)		
a. Manual (Trip Buttons)	Not Applicable	Not Applicable
b. Steam Generator Pressure - Low	$\geq$ 729 psia (2)	$\geq$ 711 psia (2)
c. Automatic Actuation Logic	Not Applicable	Not Applicable
5. RECIRCULATION (RAS)		
a. Refueling Water Storage Tank	18.5% of tap span	19.27% $\geq$ tap span $\geq$ 17.73%
b. Automatic Actuation Logic	Not Applicable	Not Applicable

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION TRIP VALUES

FUNCTIONAL UNIT	TRIP VALUE	ALLOWABLE VALUES
11. FUEL HANDLING ISOLATION (FHIS)		
a. Manual (Trip Buttons)	Not Applicable	Not Applicable
b. Airborne Radiation		
i. Gaseous	$\leq 1.3 \times 10^2$ cpm**	$\leq 1.4 \times 10^2$ cpm**
ii. Particulate/Iodine	$\leq 5.7 \times 10^4$ cpm**	$\leq 6.0 \times 10^4$ cpm**
c. Automatic Actuation Logic	Not Applicable	Not Applicable
12. CONTAINMENT PURGE ISOLATION (CPIS)		
a. Manual (Trip Buttons)	Not Applicable	Not Applicable
b. Airborne Radiation		
i. Gaseous	(6)(7)	(6)(7)
ii. Particulate	(6)(7)	(6)(7)
iii. Iodine	(6)(7)	(6)(7)
c. Containment Area Radiation (Gamma)	$\leq$ 325 mR/hr (MODES 1-4) $\leq$ 2.4 mR/hr (Mode 6)	$\leq$ 340 mR/hr (MODES 1-4) $\leq$ 2.5 mR/hr (MODE 6)
d. Automatic Actuation Logic	Not Applicable	Not Applicable

TABLE 3.3-4 (Continued)

TABLE NOTATION

(1) Value may be decreased manually, to a minimum of greater than or equal to 300 psia, as pressurizer pressure is reduced, provided the margin between the pressurizer and this value is maintained at less than or equal to 400 psia;* the setpoint shall be increased automatically as pressurizer pressure is increased until the trip setpoint is reached. Trip may be manually bypassed below 400 psia; bypass shall be automatically removed whenever pressurizer is greater than or equal to 400 psia.

(2) Value may be decreased manually as steam generator pressure is reduced, provided the margin between the steam generator pressure and this value is maintained at less than or equal to 200 psi;* the setpoint shall be increased automatically as steam generator pressure is increased until the trip setpoint is reached.

(3) % of the distance between steam generator upper and lower level instrument nozzles.

(4) Inverse time relay set value 3165V, trip will occur within the tolerances specified in Figure 3.3-1 for the range of bus voltages.

(5) Actuated equipment only; does not result in CIAS.

(6) The trip setpoint shall be set sufficiently high to prevent spurious alarms/trips yet sufficiently low to assure an alarm/trip should an inadvertent release occur.

(7) Prior to the completion of DCP 53N, the setpoints for Containment Airborne Radiation Monitor 3RT-7804-1 shall be determined by the ODCM.

*Variable setpoints are for use only during normal, controlled plant heatups and cooldowns.

**Above normal background.

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
11. FUEL HANDLING ISOLATION (FHIS)				
a. Manual (Trip Buttons)	N.A.	N.A.	R	N.A.
b. Airborne Radiation				
i. Gaseous	S	R	M	*
ii. Particulate/Iodine	S	R	M	*
c. Automatic Actuation Logic	N.A.	N.A.	R(3)	*
12. CONTAINMENT PURGE ISOLATION (CPIS)				
a. Manual (Trip Buttons)	N.A.	N.A.	R	N.A.
b. Airborne Radiation				
i. Gaseous	S	R	M	1,2,3,4,6
ii. Particulate	W	R	M	1,2,3,4,6
iii. Iodine	W	R	M	6
c. Containment Area Radiation (Gamma)	S	R	M	1,3,3,4,6
d. Automatic Actuation Logic	N.A.	N.A.	R (3)	1,2,3,4,6

TABLE NOTATION

(1) Each train or logic channel shall be tested at least every 62 days on a STAGGERED TEST BASIS.

(2) Deleted.

(3) Testing of Automatic Actuation Logic shall include energization/de-energization of each initiation relay and verification of the OPERABILITY of each initiation relay.

(4) A subgroup relay test shall be performed which shall include the energization/de-energization of each subgroup relay and verification of the OPERABILITY of each subgroup relay. Relays exempt from testing during plant operation shall be limited to only those relays associated with plant equipment which cannot be operated during plant operation. Relays not testable during plant operation shall be tested during each COLD SHUTDOWN exceeding 24 hours unless tested during the previous 6 months.

(5) Actuated equipment only; does not result in CIAS.

* With irradiated fuel in the storage pool.

INSTRUMENTATION

3/4.3.3 MONITORING INSTRUMENTATION

RADIATION MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.1 The radiation monitoring instrumentation channels shown in Table 3.3-6 shall be OPERABLE with their alarm/trip setpoints within the specified limits.*

APPLICABILITY: As shown in Table 3.3-6.

ACTION:

a. With a radiation monitoring channel alarm/trip setpoint exceeding the value shown in Table 3.3-6, adjust the setpoint to within the limit within 4 hours or declare the channel inoperable.

b. With one or more radiation monitoring channels inoperable, take the ACTION shown in Table 3.3-6.

c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.1 Each radiation monitoring instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations for the MODES and at the frequencies shown in Table 4.3-3.

*Continuous monitoring and sampling of the containment purge exhaust directly from the purge stack shall be provided for the low and high volume (8-inch and 42-inch) containment purge prior to startup following the first refueling outage. Containment airborne monitor 3RT-7804-1 or 3RT-7807-2 and associated sampling media shall perform these functions prior to initial criticality. From initial criticality to the startup following the first refueling outage containment airborne monitor 3RT-7804-1 and associated sampling media shall perform the above required functions.

TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
1. Area Monitors					
a. Containment - High Range (3RT-7820-1 and 3RT-7820-2)	2	1, 2, 3	10 R/hr	$1-10^8$ R/hr	18, 18a
		4	10 R/hr		19
b. Containment - Purge Isolation (3RT-7856-1 or 3RT-7857-2)	1	1, 2, 3, 4	#	$10^{-1}-10^5$ mR/hr	17
		6	#		17b
c. Main Steam Line A channel consists of 3RT-7874A and 3RT-7875A or 3RT-7874B and 3RT-7875B	1/line	1, 2, 3	1 mR/hr (low); 1 R/hr (high)	$10^{-1}-10^4$ mR/hr;	18
		4	1 mR/hr (low); 1 R/hr (high)		19
2. Process Monitors					
a. Fuel Storage Pool Airborne (3RT-7822-1 or 3RT-7823-2)					
i. Gaseous	1	*	#	10^1-10^7 cpm	16
ii. Particulate/Iodine	1	*	#	10^1-10^7 cpm	16
b. Containment Airborne (3RT-7804-1 or 3RT-7807-2)					
i. Gaseous	1	1, 2, 3, 4	#	10^1-10^7 cpm	17a
		6	#		17b
ii. Particulate	1	1, 2, 3, 4	#	10^1-10^7 cpm	17a
		6	#		17b
iii. Iodine	1	6	#	10^1-10^7 cpm	17b
c. Control Room Airborne (2/3 RT-7824-1 or 2/3 RT-7825-2)					
i. Particulate/Iodine	1	All	#	10^1-10^7 cpm	13
ii. Gaseous	1	All	#	10^1-10^7 cpm	13

TABLE 3.3-6 (Continued)

RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
3. Noble Gas Monitors					
a. Plant Vent Stack					
Wide Range (2RT-7865-1 or 3RT-7865-1)	1	1, 2, 3	Per ODCM	10^{-7} - 10^{5} $\mu Ci/cm^3$	19
Normal Range (2/3RT-7808 or 2RT-7865-1 or 3RT-7865-1)	1	4	Per ODCM	10^{-6} - 10^{-1} $\mu Ci/cm^3$	19
b. Condenser Evacuation System					
Wide Range (3RT-7870-1)	1	1, 2, 3(1)	Per ODCM	10^{-7} - 10^{5} $\mu Ci/cm^3$	19
Normal Range (3RT-7818 or 3RT-7870-1)	1	4 (1)	Per ODCM	10^{-6} - 10^{2} $\mu Ci/cm^3$	19

(1) With any main steam line isolation valve and/or any main steam isolating valve bypass valve not fully closed.

TABLE 3.3-6 (Continued)

ACTION STATEMENTS

ACTION 13 - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, within 1 hour initiate and maintain operation of the control room emergency air cleanup system in the emergency (except as required by ACTIONS 14, 15) mode of operation.

ACTION 16 - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.12.

ACTION 17 - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, operation may continue provided that the purge valves are maintained closed.

ACTION 17a - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.4.5.1 (Mode 1, 2, 3, 4 only)

ACTION 17b - With the number of channels OPERABLE less than required by the minimum channels OPERABLE requirement, close each of the containment purge penetrations providing direct access from the containment atmosphere to the outside atmosphere.

ACTION 18 - With the number of channels OPERABLE one ess than Minimum Channels OPERABLE requirement, either restore the inoperable channel to OPERABLE status within 30 days, or be in HOT SHUTDOWN within the next 12 hours.

ACTION 18a - With both channels inoperable, restore the inoperable channel(s) to OPERABLE status within 48 hours, or be in HOT SHUTDOWN within the next 12 hours.

ACTION 19 - With the number of OPERABLE Channels less than required by the Minimum Channels OPERABLE requirement, either restore the inoperable Channel(s) to OPERABLE status within 72 hours, or:

1) Initiate the preplanned alternate method of monitoring the appropriate parameter(s), and

2) Prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following initiation of the pre-planned alternate outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

#In accordance with Engineered Safety Feature trip value specified by Table 3.3-4.

*With irradiated fuel in the storage pool.

ACTIONS 13, 16, 17, 17a and 17b are repeated from Table 3.3-3 for reference.

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
1. Area Monitors				
a. Containment - High Range (3RT-7820-1, 3RT-7820-2)	S	R	M	1, 2, 3, 4
b. Containment - Purge Isolation (3RT-7856-1, 3RT-7857-2)	S	R	M	1, 2, 3, 4, 6
c. Main Steam Line (3RT-7874A, 3RT-7875A, 3RT-7874B, 3RT-7875B)	S	R	M	1, 2, 3, 4
2. Process Monitors				
a. Fuel Storage Pool Airborne (3RT-7822-1, 3RT-7823-2)				
i. Gaseous	#	#	#	*
ii. Particulate/Iodine	#	#	#	*
b. Containment Airborne (3RT-7804-1, 3RT-7807-2)				
i. Gaseous	#	#	#	1, 2, 3, 4, 6
ii. Particulate	#	#	#	1, 3, 3, 4, 6
iii. Iodine	#	#	#	6
c. Control Room Airborne (2/3RT-7824-1, 2/3RT-7825-2)				
i. Particulate	#	#	#	All
ii. Gaseous	#	#	#	All

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
PROCESS MONITORS (Continued)				
3. Noble Gas Monitors				
a. Plant Vent Stack (2/3 RT-7808, 2RT-7865-1, 3RT-7865-1)	D	R	Q	1, 2, 3, 4
b. Condenser Evacuation System (3RT-7818, 3RT-7870-1)	D	R	Q	1, 2, 3, 4(1)

NOTES:

#In accordance with Table 4.3-2 surveillance requirements for these instrument channels.
*With irradiated fuel in the storage pool.

(1) With any main steam isolation valve and/or any main steam isolating valve bypass valve not fully closed.

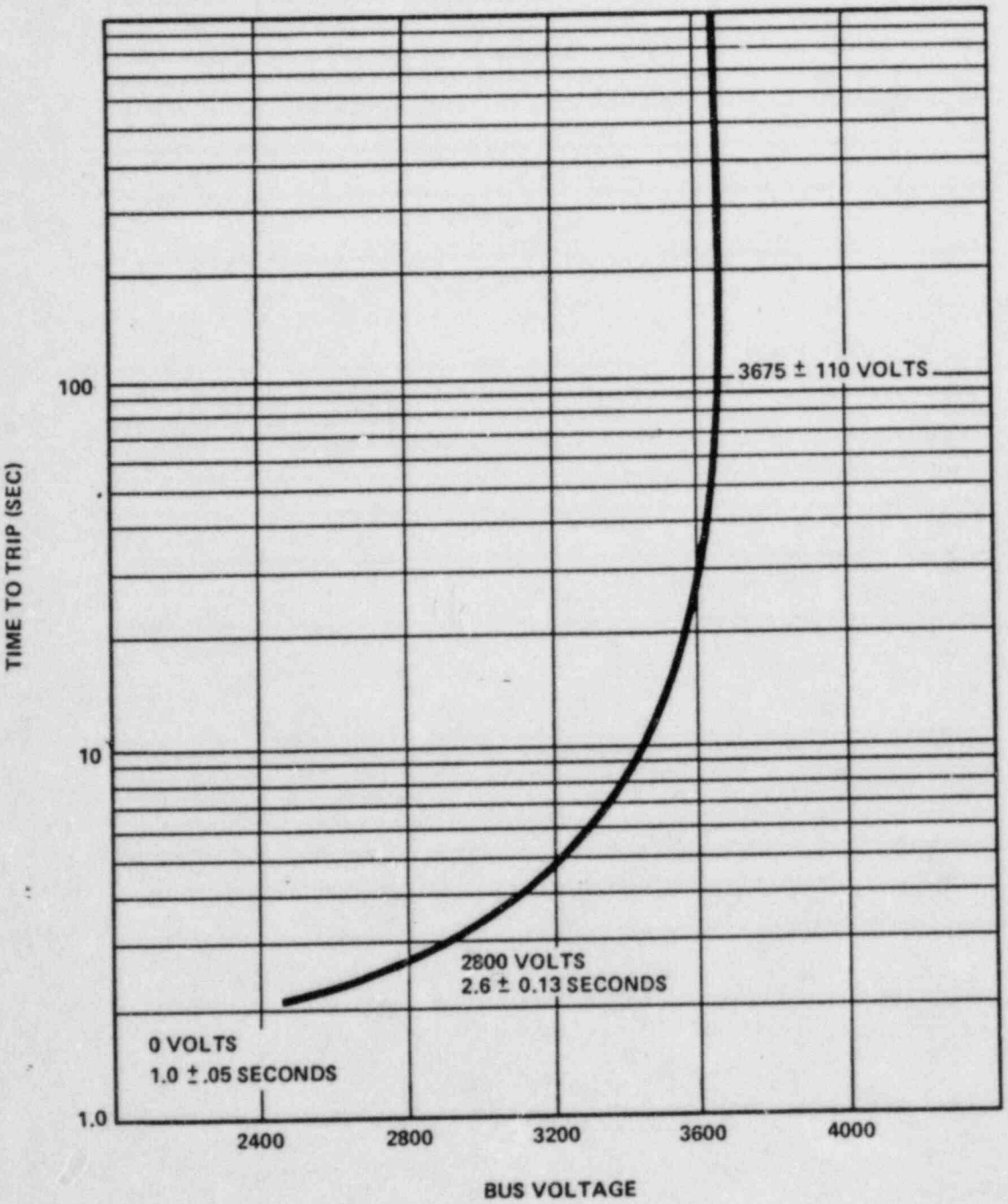

Figure 3.3-1
DEGRADED BUS VOLTAGE TRIP SETTING

INSTRUMENTATION

ACCIDENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.6 The accident monitoring instrumentation channels shown in Table 3.3-10 shall be OPERABLE.

APPLICABILITY: MODES 1, 2 and 3.

ACTION:

a. With one or more accident monitoring channels inoperable, take the ACTION shown in Table 3.3-10.

b. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.6 Each accident monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-7.

TABLE 3.3-10

ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	REQUIRED NUMBER OF CHANNELS	MINIMUM CHANNELS OPERABLE	ACTION
1. Containment Pressure - Narrow Range	2	1	20, 21
2. Containment Pressure - Wide Range	2	1	20, 21
3. Reactor Coolant Outlet Temperature - T_{Hot} (Wide Range)	2	1	20, 21
4. Reactor Coolant Inlet Temperature - T_{Cold} (Wide Range)	2	1	20, 21
5. Pressurizer Pressure - Wide Range	2	1	20, 21
6. Pressurizer Water Level	2	1	20, 21
7. Steam Line Pressure	2/steam generator	1/steam generator	20, 21
8. Steam Generator Water Level - Wide Range	2/steam generator	1/steam generator	20, 21
9. Refueling Water Storage Tank Water Level	2	1	20, 21
10. Auxiliary Feedwater Flow Rate	1/steam generator	N.A.	20
11. Reactor Coolant System Subcooling Margin Monitor	2	1	20, 21
12. Safety Valve Position Indicator	1/valve	N.A.	20
13. Spray System Pressure	2	1	20, 21
14. LPSI Header Temperature	2	1	20, 21
15. Containment Temperature	2	1	20, 21
16. Containment Water Level - Narrow Range	2	1	20, 21
17. Containment Water Level - Wide Range	2	1	20, 21
18. Core Exit Thermocouples	7/core quadrant	4/core quadrant	20, 21
19. Cold Leg HPSI Flow	1/cold leg	N.A.	20
20. Hot Leg HPSI Flow	1/hot leg	N.A.	20

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TABLE 3.3-10 (Continued)

ACTION STATEMENTS

ACTION 20 - With the number of OPERABLE accident monitoring channels less than the Required Number of Channels, either restore the inoperable channel to OPERABLE status within 7 days, or be in HOT SHUTDOWN within the next 12 hours.

ACTION 21 - With the number of OPERABLE accident monitoring channels less than the Minimum Channels OPERABLE requirement, either restore the inoperable channel(s) to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours.

TABLE 4.3-7

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
1. Containment Pressure - Narrow Range	M	R
2. Containment Pressure - Wide Range	M	R
3. Reactor Coolant Outlet Temperature - T_{Hot} (Wide Range)	M	R
4. Reactor Coolant Inlet Temperature -T_{Cold} (Wide Range)	M	R
5. Pressurizer Pressure (Wide Range)	M	R
6. Pressurizer Water Level	M	R
7. Steam Line Pressure	M	R
8. Steam Generator Water Level (Wide Range)	M	R
9. Refueling Water Storage Tank Water Level	M	R
10. Auxiliary Feedwater Flow Rate	M	R
11. Reactor Coolant System Subcooling Margin Monitor	M	R
12. Safety Valve Position Indicator	M	R
13. Spray System Pressure	M	R
14. LPSI Header Temperature	M	R
15. Containment Temperature	M	R
16. Containment Water Level (Narrow Range)	M	R
17. Containment Water Level (Wide Range)	M	R
18. Core Exit Thermocouples	M	R
19. Cold Leg HPSI Flow	M	R
20. Hot Leg HPSI Flow	M	R

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INSTRUMENTATION

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.9 The radioactive gaseous effluent monitoring instrumentation channels shown in Table 3.3-13 shall be OPERABLE with their alarm/trip setpoints set to ensure that the limits of Specification 3.11.2.1 are not exceeded. The alarm/trip setpoints of these channels shall be determined in accordance with the ODCM.*

APPLICABILITY: As shown in Table 3.3-13

ACTION:

a. With a radioactive gaseous effluent monitoring instrumentation channel alarm/trip setpoint less conservative than required by the above Specification, immediately suspend the release of radioactive gaseous effluents monitored by the affected channel or declare the channel inoperable.

b. With less than the minimum number of radioactive gaseous effluent monitoring instrumentation channels OPERABLE, take the ACTION shown in Table 3.3-13. Exert best efforts to return the instrument to OPERABLE status within 30 days and, additionally, if the inoperable instrument(s) remain inoperable for greater than 30 days, explain in the next Semiannual Radioactive Effluent Release Report why the inoperability was not corrected in a timely manner.

c. The provisions of Specifications 3.0.3, 3.0.4, and 6.9.1.13b are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.9 Each radioactive gaseous effluent monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK, SOURCE CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations at the frequencies shown in Table 4.3-9.

*Continuous monitoring and sampling of the containment purge exhaust directly from the purge stack shall be provided for the low and high volume (8-inch and 42-inch) containment purge prior to startup following the first refueling outage. Containment airborne monitor 3RT-7804-1 or 3RT-7807-2 and associated sampling media shall perform these functions prior to initial criticality. From initial criticality to the startup following the first refueling outage containment airborne monitor 3RT-7804-1 and associated sampling media shall perform the above required functions.

TABLE 3.3-13

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

	INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABILITY	ACTION
1.	WASTE GAS HOLDUP SYSTEM			
a.	Noble Gas Activity Monitor - Providing Alarm and Automatic Termination of Release - 2/3 RT -7808, 2RT-7865-1 or 3RT-7865-1	1	*	35
b.	Process Flow Rate Monitoring Device	1	*	36
2.	WASTE GAS HOLDUP SYSTEM EXPLOSIVE GAS MONITORING SYSTEM			
a.	Hydrogen Monitor	2	**	39
b.	Oxygen Monitor	2	**	39
3.	CONDENSER EVACUATION SYSTEM			
a.	Noble Gas Activity Monitor - 3RT - 7818 or 3RT - 7870-1	1	***	37
b.	Iodine Sampler	1	***	40
c.	Particulate Sampler	1	***	40
d.	Associated Sample Flow Measuring Device	1	***	36
e.	Process Flow Rate Monitoring Device	1(4)	***	36
4.	PLANT VENT STACK			
a.	Noble Gas Activity Monitor - - 2/3 RT - 7808, 2RT-7865-1 or 3RT-7865-1	1	*	37
b.	Iodine Sampler	1	*	40
c.	Particulate Sampler	1	*	40
d.	Associated Sample Flow Measuring Device	1	*	36
e.	Process Flow Rate Monitoring Device	1(5)	*	36
5.	CONTAINMENT PURGE SYSTEM			
a.	Noble Gas Activity Monitor - Providing Alarm and Automatic Termination of Release 3RT-7828 or 3RT-7865-1 (1)	1 (2)	*	38
b.	Iodine Sampler	1 (2)	*	40
c.	Particulate Sampler	1 (2)	*	40
d.	Process Flow Rate Monitoring Device	1 (3)	*	36
e.	Associated Sample Flow Measuring Device	1 (2)	*	36

TABLE 3.3-13 (Continued)

TABLE NOTATION

* At all times.
** During waste gas holdup system operation (treatment for primary system offgases).

***MODES 1-4 with any main steam isolation valve and/or any main steam isolating valve bypass valve not fully closed.

(1) Provided 3RT-7865-1 is equipped to automatically terminate containment purge release.
(2) Prior to completion of DCP53N, Containment Airborne Radiation Monitor 3RT-7804-1 performs the functions of 3RT-7828. 3RT-7804-1 is not equipped to monitor purge flow.
(3) Prior to completion of DCP53N, 3RT-7865-1 may perform this function for minipurge only. Otherwise comply with Action 36 if another means of continuously monitoring purge flow is not available.
(4) 3RT-7818 is not equipped to monitor process flow. If another means of continuously monitoring process flow is not available, then comply with ACTION 36.
(5) 2/3 RT-7808 is not equipped to monitor plant vent stack flow. If another means of continuously monitoring plant vent stack flow is not available, then comply with ACTION 36.

ACTION 35 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, the contents of the tank(s) may be released to the environment provided that prior to initiating the release:

a. At least two independent samples of the tank's contents are analyzed, and

b. At least two technically qualified members of the Facility Staff independently verify the release rate calculations and discharge valve lineup;

Otherwise, suspend releases of radioactive effluents via this pathway.

ACTION 36 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided the flow rate is estimated at least once per 8 hours. System design characteristics may be used to estimate flow.

ACTION 37 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue provided grab samples are taken at least once per 12 hours and these samples are analyzed for gross activity within 24 hours.

ACTION 38 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, immediately suspend PURGING of radioactive effluents via this pathway

OR

Prior to completion of DCP53N, and with Plant Vent Stack Monitor 3RT-7865-1 <u>not</u> capable of terminating containment purge release, PURGING may continue using 3RT-7865-1 provided that:

TABLE 3.3-13 (Continued)

TABLE NOTATION

1) Plant Vent Stack Monitor 3RT-7865-1 is aligned to the purge stack for the duration of the purge; and,

2) Plant Vent Stack Monitor 2/3 RT-7808 or 2RT-7865-1 is OPERABLE and aligned to the plant vent stack; and,

3) When PURGING is complete, 3RT-7865-1 is realigned to the plant vent stack; and,

4) In the event of a high activity alarm during the PURGE from any of 3RT-7865-1, 2RT-7865-1 or 2/3 RT-7808, an operator immediately suspends containment PURGING and realigns 3RT-7865-1 to the Plant Vent Stack.

ACTION 39 - With the number of channnels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, operation of this system may continue provided that the remaining OPERABLE channel is aligned to the waste gas surge tank. With two channels inoperable, operation of this system may continue provided that grab samples are taken at least once per 4 hours and analyzed within the following four hours.

ACTION 40 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via the affected pathway may continue provided samples are continuously collected with auxiliary sampling equipment as required in Table 4.11-2.

TABLE 4.3-9

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	SOURCE CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
1. WASTE GAS HOLDUP SYSTEM					
a. Noble Gas Activity Monitor - Providing Alarm and Automatic Termination of Release - 2/3 RT-7808, 2RT-7865-1 or 3RT-7865-1	P	P	R(3)	Q(1)	*
b. Process Flow Rate Monitoring Device	P	N.A.	R	Q	*
2. WASTE GAS HOLDUP SYSTEM EXPLOSIVE GAS MONITORING SYSTEM					
a. Hydrogen Monitor (continuous)	D	N.A.	Q(4)	M	**
b. Oxygen Monitor (continuous)	D	N.A.	Q(5)	M	**
c. Hydrogen Monitor (periodic)	D	N.A.	Q(4)	M	**
d. Oxygen Monitor (periodic)	D	N.A.	Q(5)	M	**
3. CONDENSER EVACUATION SYSTEM					
a. Noble Gas Activity Monitor - 3RT - 7818, 3RT - 7870-1	D	M	R(3)	Q(2)	***
b. Iodine Sampler	W	N.A.	N.A.	N.A.	***
c. Particulate Sampler	W	N.A.	N.A.	N.A.	***
d. Associated Sample Flow Measuring Device	D	N.A.	R	Q	***
e. Process Flow Rate Monitoring Device (3RT-7870-1)	D	N.A.	R	Q	***
4. PLANT VENT STACK					
a. Noble Gas Activity Monitor - 2/3 RT-7808, 2RT-7865-1, or 3RT-7865-1	D	M	R(3)	Q(2)	*

TABLE 4.3-9 (Continued)

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	SOURCE CHECK	CHANNEL CALIBRATION	CHANNEL FUNCTIONAL TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
4. PLANT VENT STACK (Continued)					
b. Iodine Sampler	W	N.A.	N.A.	N.A.	*
c. Particulate Sampler	W	N.A.	N.A.	N.A.	*
d. Associated Sample Flow Measuring Device	D	N.A.	R	Q	*
e. Process Flow Monitoring Device	D	N.A.	R	Q	*
5. CONTAINMENT PURGE SYSTEM(7)					
a. Noble Gas Activity Monitor - Providing Alarm and Automatic Termination of Release - 3RT-7828 or 3RT-7865-1	D	P(6)	R(3)	Q(1)	*
b. Iodine Sampler	W	N.A.	N.A.	N.A.	*
c. Particulate Sampler	W	N.A.	N.A.	N.A.	*
d. Process Flow Rate Monitoring Device	D	N.A.	R	Q	*
e. Associated Sample Flow Measuring Device	D	N.A.	R	Q	*

TABLE 4.3-9 (Continued)

TABLE NOTATION

*At all times.

**During waste gas holdup system operation (treatment for primary system offgases).

***MODES 1-4 with any main steam isolation valve and/or any main steam isolating valbe bypass valve not fully closed.

(1) The CHANNEL FUNCTIONAL TEST shall also demonstrate that automatic isolation of this pathway and control room alarm annunciation occurs if any of the following conditions exists:#

1. Instrument indicates measured levels above the alarm/trip setpoint.
2. Circuit failure.
3. Instrument indicates a downscale failure.

(2) The CHANNEL FUNCTIONAL TEST shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exists#:

1. Instrument indicates measured levels above the alarm setpoint.
2. Circuit failure.
3. Instrument indicates a downscale failure.

(3) The initial CHANNEL CALIBRATION shall be performed using one or more of the reference standards certified by the National Bureau of Standards or using standards that have been obtained from suppliers that participate in measurement assurance activities with NBS. These standards shall permit calibrating the system over its intended range of energy and measurement range. For subsequent CHANNEL CALIBRATION, sources that have been related to the initial calibration shall be used.

(4) The CHANNEL CALIBRATION shall include the use of standard gas samples containing a nominal:

1. One volume percent hydrogen, balance nitrogen, and
2. Four volume percent hydrogen, balance nitrogen.

(5) The CHANNEL CALIBRATION shall include the use of standard gas samples containing a nominal:

1. One volume percent oxygen, balance nitrogen, and
2. Four volume percent oxygen, balance nitrogen.

(6) Prior to each release and at least once per month.

(7) Prior to completion of DCP53N, these surveillance requirements are to be performed on the instruments indicated by Table 3.3-13.

#If the instrument controls are not set in the operate mode, procedures shall call for declaring the channel inoperable.

INSTRUMENTATION

LOOSE-PART DETECTION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.10 The loose-part detection system shall be OPERABLE.

APPLICABILITY: MODES 1 and 2.

ACTION:

a. With one or more loose part detection system channels inoperable for more than 30 days, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 10 days outlining the cause of the malfunction and the plans for restoring the channel(s) to OPERABLE status.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.10 Each channel of the loose-part detection system shall be demonstrated OPERABLE by performance of a:

a. CHANNEL CHECK at least once per 24 hours,

b. CHANNEL FUNCTIONAL TEST at least once per 31 days, and

c. CHANNEL CALIBRATION at least once per 18 months.

INSTRUMENTATION

3/4.3.4 TURBINE OVERSPEED PROTECTION

LIMITING CONDITION FOR OPERATION

3.3.4 At least one turbine overspeed protection system shall be OPERABLE.

APPLICABILITY: MODES 1, 2* and 3*.

ACTION:

a. With one stop valve or one control valve per high pressure turbine steam lead inoperable and/or with one reheat stop valve or one reheat intercept valve per low pressure turbine steam lead inoperable, restore the inoperable valve(s) to OPERABLE status within 72 hours, or close at least one valve in the affected steam lead or isolate the turbine from the steam supply within the next 6 hours.

b. With the above required turbine overspeed protection system otherwise inoperable, within 6 hours isolate the turbine from the steam supply.

SURVEILLANCE REQUIREMENTS

4.3.4 The above required turbine overspeed protection system shall be demonstrated OPERABLE:

a. At least once per 7 days by cycling each of the following valves through at least one complete cycle from the running position.

   1. Four high pressure turbine stop valves.
   2. Four high pressure turbine control valves.
   3. Six low pressure turbine reheat stop valves.
   4. Six low pressure turbine reheat intercept valves.

b. At least once per 31 days by direct observation of the movement of each of the above valves through one complete cycle from the running position.

c. At least once per 18 months by performance of a CHANNEL CALIBRATION on the turbine overspeed protection systems.

d. At least once per 40 months by disassembling at least one of each of the above valves and performing a visual and surface inspection of valve seats, disks and stems and verifying no unacceptable flaws or corrosion.

---

* With any main steam line isolation valve and/or any main steam line isolation valve bypass valve not fully closed.