TABLE 4.3-1 (Continued) (42)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK SR 3.3.1.1	CHANNEL CALIBRATION SR 3.3.1.10	(57) ~~ANALOG~~ CHANNEL OPERATIONAL TEST SR 3.3.1.7	TRIP ACTUATING DEVICE OPERATIONAL TEST	ACTUATION LOGIC TEST	(43) MODES FOR WHICH SURVEILLANCE IS REQUIRED		(59) RESPONSE TIME TEST
13. Steam Generator Water Level--Low-Low*	~~S~~	~~R~~	~~Q~~	N.A.	N.A.	1', 2'	1	SR 3.3.1.15
(LOOP1: LI-0517, LI-0518, LI-0519, LI-0551; LOOP2: LI-0527, LI-0528, LI-0529, LI-0552; LOOP3: LI-0537, LI-0538, LI-0539, LI-0553; LOOP4: LI-0547, LI-0548, LI-0549, LI-0554) → BASES (19)								
14. Undervoltage - Reactor Coolant Pumps	N.A.	SR 3.3.1.10 ~~R~~	N.A.	SR 3.3.1.9 (49) ~~Q~~	N.A.	1*	1	SR 3.3.1.15
15. Underfrequency - Reactor Coolant Pumps	N.A.	SR 3.3.1.10 ~~R~~	N.A.	SR 3.3.1.9 (49) ~~Q~~	N.A.	1*	1	SR 3.3.1.15
16. Turbine Trip								
a. Low Fluid Oil Pressure (PT-6161, PT-6162, PT-6163) (19)	N.A.	SR 3.3.1.10 ~~R~~	SR 3.3.1.16 (50) ~~*S/U(1, 10)~~	N.A.	N.A.	1b, f	1	N/A
b. Turbine Stop Valve Closure	N.A.	SR 3.3.1.10 ~~R~~	N.A.	SR 3.3.1.14 (50) ~~S/U(1, 10)~~	N.A.	1b		N/A
17. Safety Injection Input from ESF	N.A.	N.A.	N.A.	SR 3.3.1.13 ~~R~~	N.A.	1, 2		N/A
18. Reactor Trip System Interlocks								
a. Intermediate Range Neutron Flux, P-6 (NI-0035B,D&E, NI-0036B,D&G) (19)	N.A.	(51) SR 3.3.1.11 ~~R(4)~~	SR 3.3.1.12 ~~R~~	N.A.	N.A.	2c, f	1	N/A

*See Specification 4.3.3.6 → BASES (19)

(50) * After each MODE 3 entry for unit shutdown and prior to exceeding the P-9 interlock trip setpoint.

~~TABLE 4.3-2 (Continued)~~

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	(4.3.2.2) (33) RESPONSE Time Test ~~ACTUATION LOGIC TEST~~	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
10. Control Room Emergency Filtration System Actuation (Continued) LCO 3.3.7 TABLE 3.3.7-1								
c. Safety Injection See Functional Unit 1. above for all Safety Injection Surveillance Requirements.								
d. Intake Radiogas Monitor (RE-12116, RE-12117)	~~S~~ SR 3.3.7.1 SR 3.3.7.5	~~R~~	SR 3.3.7.2 ~~M~~ Q (18)	N.A.	(33) ~~4.3.2.2~~ ~~N.A.~~ SR 3.3.7.6	N.A.	N.A.	Either Unit ~~in~~ 1, 2, 3, 4, ~~5#~~, ~~6#~~ (26)
11. Fuel Handling Building Post Accident Ventilation Actuation (Common System) (8) NOT PART of LCO 3.3.7 (see ESFAS markup)								
a. Manual Initiation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	(2)
b. Fuel Handling Building Exhaust Duct Radiation Signal (ARE-2532 A&B ARE-2533 A&B)	S	R	M	N.A.	N.A.	N.A.	N.A.	(2)
c. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A. (18a)	N.A.	M(1)	N.A.	N.A.	(2)

31

TABLE NOTATION

(1) Each train shall be tested at least every ~~62~~ days on a STAGGERED TEST BASIS. → SR 3.3.7.3

~~(2) Whenever irradiated fuel is in either storage pool.~~ → NA 3.3.7 (8)

During movement of irradiated fuel ~~or movement of loads over irradiated fuel~~ AND CORE ALTERATIONS → LCO 3.7 APPLICABILITY (13) (14) (26)

~~#~~ (8) This function may be bypassed for surveillance testing provided that the applicable Action Statement requirements are met. NOT PART OF LCO 3.3.7 (see ESFAS markup)

VOGTLE UNITS - 1 & 2 3/4 3-44 Amendment No. 67 (Unit 1) Amendment No. 46 (Unit 2)

ESFAS INSERT

LCO 3.3.7 Control Room Emergency Filtration System Actuation Instrumentation.

INSERT From ESFAS Page 7 of 7

LCO 3.3.5 ESF Bus Loss of Power Instrumentation

ESFAS INSERT
Page 7 of 8

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	~~MASTER RELAY TEST~~ RESPONSE TIME TEST ~~ACTUATION LOGIC TEST~~ (13) 4.3.2.2	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
6. Auxiliary Feedwater								
a. Automatic Actuation Logic and Actuation Relays	N.A.	N.A	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3
b. Steam Generator Water Level-Low-Low*								
(LOOP1 LI-0517 LI-0518 LI-0519 LI-0551	LOOP2 LI-0527 LI-0528 LI-0529 LI-0552	LOOP3 LI-0537 LI-0538 LI-0539 LI-0553	LOOP4 LI-0547 LI-0548 LI-0549 LI-0554)					
1) Start Motor-Driven Pumps	S	R	Q	N.A.	N.A.	N.A	N.A	1##, 2##, 3##
2) Start Turbine Driven Pump	S	R	Q	N.A.	N.A.	N.A	N.A	1##, 2##, 3##
c. Safety Injection Start Motor-Driven Pumps	See Functional Unit 1. above for all Safety Injection Surveillance Requirements.							
d. Loss of or Degraded 4.16 kV ESF Bus Voltage	N.A.	~~R~~ SR3.3.5.2	Q SR3.3.5.1	N.A.	~~N.A.~~ (13) SR3.3.5.3	N.A.	N.A	1, 2, 3
e. Trip of All Main Feed-Water Pumps, Start Motor-Driven Pumps	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A	1, 2
f. Manual Initiation	N.A.	N.A.	N.A.	R	N.A.	N.A.	N.A.	1, 2, 3

*See Specification 4.3.3.6

(1) NOT PART OF LCO 3.3.5 (see ESFAS markup)

(1) NOT PART OF LCO 3.3.5 SEE ESFAS MARKUP

ESFAS INSERT 3/4 3-41

VOGTLE UNITS - 1 & 2

Amendment No. 67 (Unit 1)
Amendment No. 46 (Unit 2)

ESFAS Insert
Page 8 of 8

LCO 3.3.5 ESF BUS Loss of Power Instrumentation

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURES ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS (14)

FUNCTIONAL UNIT	CHANNEL CHECK	CHANNEL CALIBRATION	ANALOG CHANNEL OPERATIONAL TEST	TRIP ACTUATING DEVICE OPERATIONAL TEST	~~ACTUATION LOGIC TEST~~ RESPONSE TIME TEST (4.3.2.2)	MASTER RELAY TEST	SLAVE RELAY TEST	MODES FOR WHICH SURVEILLANCE IS REQUIRED
7. ~~Semi-Automatic~~ Switchover to Containment ~~Emergency~~ Sump	(1) NOT PART OF LCO 3.3.5 (see ESFAS markup)							
a. Automatic Actuation Logic and Actuation Relays	N.A.	N.A.	N.A.	N.A.	M(1)	M(1)	Q	1, 2, 3, 4
b. RWST Level-Low-Low* Coincident With Safety Injection (LI-0990A&B, LI-0991A&B, LI-0992A, LI-0993A)	S	R	M	N.A.	N.A.	N.A.	N.A	1##, 2##, 3##, 4##
8. Loss of Power to 4.16 kV ESF Bus								
a. 4.16 kV ESF Bus Undervoltage-Loss of Voltage	N.A.	~~R~~ SR 3.3.5.2	~~M~~ Q (12) SR 3.3.5.1	N.A.	~~4.3.2.2~~ ~~N.A.~~ (14)	N.A.	N.A.	1, 2, 3, 4
b. 4.16 kV ESF Bus Undervoltage-Degraded Voltage	N.A.	~~R~~ SR 3.3.5.2	~~M~~ Q (12) SR 3.3.5.1	N.A.	~~N.A.~~ ~~4.3.2.2~~ (14)	N.A.	N.A.	1, 2, 3, 4

*See Specification 4.3.3.6

The following pages replace and
supplement the existing pages behind the
Enclosure 2 tab for Chapter 3.3, Volume 3.

3/4.3.1 RTS INSTRUMENTATION

CHANGE NUMBER	SHE	DISCUSSION
		required Channel Calibration is adequate to ensure the setpoint remains within the required tolerance. This change is considered less restrictive for VEGP but is consistent with NUREG-1431.
50	A	The Notes affecting the Turbine Trip functions are incorporated into VEGP ITS SRs 3.3.1.14 and 3.3.1.16 and their associated frequencies, consistent with NUREG-1431. In addition, the frequency for the low fluid oil pressure turbine trip function is revised to be consistent with the applicability for this function (above P-9 or 50 % RTP). The TS require that surveillances be performed prior to the Mode of Applicability. The current TS frequency of this surveillance "S/U" (meaning reactor startup) does not clearly state the performance requirement for a function with an applicability of above 50% RTP. Therefore, the frequency of the corresponding VEGP ITS SR 3.3.1.16 is revised to "After each Mode 3 entry for unit shutdown and prior to exceeding the P-9 interlock trip setpoint." This revision is intended as a clarification and is consistent with the intent of the original surveillance frequency and with the Applicability of the instrument function (above P-9). Therefore the revision of this frequency is considered an administrative change.
51	A	The VTS Note 4 to exclude neutron detectors from the Channel Calibration is incorporated into the ITS SR 3.3.1.11. This change is considered administrative and is consistent with NUREG-1431.
52	A	The VTS Note 7 that modifies the frequency of the applicable surveillances, is incorporated into the frequency for ITS SR 3.3.1.4 and SR 3.3.1.5. In addition, since the definition of Staggered Test Basis has been revised the test frequency is now stated as 31 days on a staggered test basis instead of 62 days on a staggered test basis. The actual test frequency for a given channel is not changed. Only the definition of staggered test basis has changed. This change is considered administrative and is consistent with NUREG-1431.

3/4.3.1 RTS INSTRUMENTATION

CHANGE NUMBER	SHE	DISCUSSION
53	LG	Note 11 that provides descriptive information regarding the content of the required test is moved into the Bases discussion for the corresponding ITS TADOT SR 3.3.1.4. This change is less restrictive due to the Bases being controlled by the licensee under the Bases Control Program in the Administrative Controls Section of the ITS. This change is consistent with NUREG-1431.
54	LG	Notes 15 and 16 that provide descriptive information regarding the content of the required test are moved to the bases for the applicable ITS SR. This change is less restrictive due to the Bases being controlled by the licensee under the Bases Control Program in the Administrative Controls Section of the ITS. This change is consistent with NUREG-1431.
55	A	A separate line item for the undervoltage and shunt trip mechanisms is provided in the ITS. The separation of these functions facilitates

3/4.3.3 MONITORING INSTRUMENTATION
RADIATION MONITORING FOR PLANT OPERATIONS AND
APPLICABLE ESFAS PAGES FOR NEW NUREG-1431 LCOS
CONTAINMENT VENTILATION ISOLATION AND
CONTROL ROOM EMERGENCY FILTRATION

CHANGE NUMBER	SHE	
		with the requirements of the NUREG-1431 LCO that now contains the setpoints.
32		Not used.
33	A	A specific SR is identified for Response Time Testing of the Control Room Emergency Filtration Function. This addition of a specific surveillance requirement for Response Time Testing is consistent with NUREG-1431 as the generic surveillance requirement of the current ESFAS TS for Response Time Testing is not used in the NUREG-1431 format. Each instrument function has the required surveillances identified.

APPLICABLE ESFAS PAGES FOR
THE NEW NUREG-1431 LCO 3.3.5
ESF BUS LOSS OF POWER (LOP) INSTRUMENTATION

CHANGE NUMBER	SHE	
		At VEGP the loss of power instrument channels are similar to the protection channels used in the ESFAS and RTS, in that a processed signal from a sensor is used to trip an output bistable that inputs a signal to actuation logic and relays. Similar instrument channels in the ESFAS and RTS currently have quarterly ACOT requirements that have proven adequate, based on operating experience, to ensure operability. Furthermore, the sensors for the loss of power channels are potential transformers (not uv relays) and have no moving parts. The potential transformers are inherently more reliable than the pressure transmitters typically used in RTS and ESFAS instrument channels. The loss of power instrumentation channels at VEGP are at least as reliable as similar channels in the ESFAS and RTS that are tested quarterly. Therefore, a quarterly ACOT on the loss of power instrument channels is adequate to ensure their operability.
13	A	A specific SR is identified for Response Time Testing of the AFW system initiation on the LOP Functions. This addition of a specific surveillance requirement for Response Time Testing is consistent with NUREG-1431 as the generic surveillance requirement of the current ESFAS TS for Response Time Testing is not used in the NUREG-1431 format. Each instrument function has the required surveillances identified.
14	LS23	The requirement to perform specific response time testing of the Loss of Power (LOP) instrumentation Diesel Generator start is deleted consistent with NUREG-1431 as modified by NRC-22 change package and marked-up on page 3/4 3-42 in Enc 1. The requirement for this testing is redundant to the response time tests performed for the ESF equipment including the Emergency Diesels (in LCO 3.8.1) and Auxiliary Feedwater pumps (SR 3.3.5.3) and the Channel Operational Tests and Channel Calibrations performed on the LOP instrumentation to verify the correct time delays and sensor operation. Note that the ESFAS surveillance requirement (4.3.2.2) for response time testing of the AFW system for LOP initiation is retained as SR 3.3.5.3 as marked

APPLICABLE ESFAS PAGES FOR
THE NEW NUREG-1431 LCO 3.3.5
ESF BUS LOSS OF POWER (LOP) INSTRUMENTATION

CHANGE NUMBER	SHE	
		on page 3/4 3-41 in Enc 1. The LOP response time SR for the AFW system initiation is retained consistent with the verification of the VEGP safety analyses assumptions for AFW system initiation with and without offsite power.

The following pages replace the
corresponding pages behind the
Enclosure 3 tab for Chapter 3.3, Volume 3.

IV. SPECIFIC SIGNIFICANT HAZARDS EVALUATIONS
LCO 3.3.5 ESF BUS LOSS OF POWER (LOP) INSTRUMENTATION
"LS23"

The requirement to perform specific response time testing of the Loss of Power (LOP) instrumentation Diesel Generator start is deleted consistent with NUREG-1431 as modified by NRC-22 change package and marked-up on page 3/4 3-42 in Enc 1. The requirement for this testing is redundant to the response time tests performed for the ESF equipment including the Emergency Diesels (in LCO 3.8.1) and Auxiliary Feedwater pumps (SR 3.3.5.3) and the Channel Operational Tests and Channel Calibrations performed on the LOP instrumentation to verify the correct time delays and sensor operation. Note that the ESFAS surveillance requirement (4.3.2.2) for response time testing of the AFW system for LOP initiation is retained as SR 3.3.5.3 as marked on page 3/4 3-41 in Enc 1. The LOP response time SR for the AFW system initiation is retained consistent with the verification of the VEGP safety analyses assumptions for AFW system initiation with and without offsite power.

1. Does the change involve a significant increase in the probability or consequences of an accident previously evaluated?

   The proposed change involves changing the TS surveillance requirements for the ESF Bus Loss of Power Instrumentation to more closely agree with the Westinghouse Standard ITS (NUREG-1431) and does not result in any hardware changes. The Loss of Power Instrumentation is not assumed to be an initiator of any analyzed event. The role of the Loss of Power Instrumentation is to monitor and ensure an adequate voltage is maintained on the ESF Busses as well as providing an anticipatory start of the Auxiliary Feedwater Pumps. The proposed change still ensures the Loss of Power instrumentation remains capable of providing the required monitoring and actuation functions as described in the FSAR and that the results of the analyses in the FSAR remain bounding. Additionally, the proposed change does not impose any new safety analyses limits or alter the plants ability to detect and mitigate events. Therefore, this change does not involve a significant increase in the probability or consequences of an accident previously

2. Does the change create the possibility of a new or different kind of accident from any accident previously evaluated?

   The proposed change involves changing the TS requirements for the Loss of Power Instrumentation to more closely agree with the Westinghouse Standard ITS (NUREG-1431) requirements and does not necessitate a physical alteration of the plant (no new or different type of equipment will be installed) or changes in parameters governing normal plant operation. Thus, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. Does this change involve a significant reduction in a margin of safety?

The proposed change, which revises the TS requirements for the Loss of Power Instrumentation to be consistent with the Westinghouse Standard ITS (NUREG-1431) requirements does not involve a significant reduction in a margin of safety. The proposed change still requires the Loss of Power Instrumentation to be operable and ensures the monitoring and actuation capability of the instrumentation is available when necessary to assist in the mitigation of accidents. In addition, the proposed change eliminates duplicative testing requirements. As such, any reduction in the margin of safety is insignificant and will likely be offset by the benefit gained through the improved use of utility resources.

The following pages replace the
corresponding pages behind the
Enclosure 4a tab for Chapter 3.3, Volume 3.

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.3.1.~~14~~ 13 (15) ----------NOTE---------- Verification of setpoint is not required. ---------- Perform TADOT.	~~92~~ 184 days
SR 3.3.1.~~15~~ 14 (15) ----------NOTE---------- 2. Verification of setpoint is not required. ---------- (27) Perform TADOT.	-----NOTE----- 1. Only required when not performed within previous 31 days ---------- Prior to reactor startup
SR 3.3.1.~~16~~ 15 (15) ----------NOTE---------- Neutron detectors are excluded from response time testing. ---------- Verify RTS RESPONSE TIME is within limits.	~~92~~ 184 days on a STAGGERED TEST BASIS
SR 3.3.1.16 ---------- 1. Only required when not performed within previous 31 days. 2. Verification of setpoint is not required. ---------- Perform COT. (29)	After each MODE 3 entry for unit shutdown and prior to exceeding the P-9 interlock trip setpoint

Table 3.3.2-1 (page 8 of 8)
Engineered Safety Feature Actuation System Instrumentation

FUNCTION	APPLICABLE MODES OR OTHER SPECIFIED CONDITIONS	REQUIRED CHANNELS	CONDITIONS	SURVEILLANCE REQUIREMENTS (11)	ALLOWABLE VALUE (12)	TRIP SETPOINT ~~(a)~~
(13) ~~7. Automatic Switchover to Containment Sump (continued)~~						
~~c. RWST Level — Low Low~~	~~1,2,3,4~~	~~4~~	~~K~~	~~SR 3.3.2.1 SR 3.3.2.5 SR 3.3.2.9 SR 3.3.2.10~~	~~≥ [15]%~~	~~≥ [18]%~~
~~Coincident with Safety Injection~~	~~Refer to Function 1 (Safety Injection) for all initiation functions and requirements.~~					
~~and~~						
~~Coincident with Containment Sump Level — High~~	~~1,2,3,4~~	~~4~~	~~K~~	~~SR 3.3.2.1 SR 3.3.2.5 SR 3.3.2.9 SR 3.3.2.10~~	~~≥ [50] in. above el. [703] ft~~	~~≥ [ ] in. above el. [ ]ft~~
8. ESFAS Interlocks						
a. Reactor Trip, P-4	1,2,3	1 per train, 2 trains	F	SR 3.3.2.~~1~~9	NA	NA
b. Pressurizer Pressure, P-11	1,2,3	3	L	(29) ~~SR 3.3.2.1~~ SR 3.3.2.~~5~~4 SR 3.3.2.~~9~~7	≤ ~~[1996]~~ 2010 psig	≤ ~~[ ]~~ 2000 psig
(24) ~~c. T_{avg} — Low Low, P-12~~	~~1,2,3~~	~~[1] per loop~~	~~L~~	~~SR 3.3.2.1 SR 3.3.2.5 SR 3.3.2.9~~	~~≥ [550.6]°F~~	~~≥ [553]°F~~
(25) ~~d. SG Water Level — High High, P-14~~	~~1,2~~	~~[3] per SG~~	~~M~~	~~SR 3.3.2.1 SR 3.3.2.5 SR 3.3.2.9~~	~~≤ [84.2]%~~	~~≤ [82.4]%~~

~~(a) Reviewer Note: Unit specific implementations may contain only Allowable Value depending on Setpoint Study methodology used by the unit.~~

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
SR 3.3.5.~~1~~ 2. (10) Perform CHANNEL CALIBRATION. ~~with [setpoint Allowable Value] [Trip Setpoint and Allowable Value] as follows:~~	18 months
a. Loss of voltage Allowable Value ≥ [2912] V with a time delay of [0.8] ~~± [ ]~~ second. Loss of voltage Trip Setpoint ≥ [2975] V with a time delay of [0.8] ~~± [ ]~~ second.	(11) Moved to Bases SR 3.3.5.3
b. Degraded voltage Allowable Value ≥ [3683] V with a time delay of [20] ~~± [ ]~~ seconds. Degraded voltage Trip Setpoint ≥ [3746] V with a time delay of [20] ~~± [ ]~~ seconds.	
SR 3.3.5.3 (13) NOTE — Not required to be performed for the turbine driven AFW pump until 24 hours after SG pressure is ≥ 900 psig. Verify Auxiliary Feedwater System ESF RESPONSE TIME for Loss of Voltage and Degraded Voltage on the 4.16 kV ESF buses within Limit.	18 months on a STAGGERED TEST BASIS

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE		FREQUENCY
SR 3.3.7.3	Perform ACTUATION LOGIC TEST.	31 days on a STAGGERED TEST BASIS
~~SR 3.3.7.4~~	~~Perform MASTER RELAY TEST.~~ N/A VEGP (3)	~~31 days on a STAGGERED TEST BASIS~~
~~SR 3.3.7.5~~	~~Perform SLAVE RELAY TEST.~~ N/A VEGP	~~{92} days~~
SR 3.3.7.4	NOTE VERIFICATION OF SETPOINT IS NOT Required. Perform TADOT.	WOG-25-3 18 months
SR 3.3.7.5	Perform CHANNEL CALIBRATION.	18 months
SR 3.3.7.6	Verify ESF RESPONSE TIME for radio-gas monitors within Limit. (7)	18 months on a STAGGERED TEST BASIS.

Table 3.3.7-1 (page 1 of 1)
CREFS Actuation Instrumentation

FUNCTION	REQUIRED CHANNELS	SURVEILLANCE REQUIREMENTS	TRIP SETPOINT
1. Manual Initiation	1 ~~2 trains~~	SR 3.3.7.4 (3)	NA
2. Automatic Actuation Logic and Actuation Relays	4 (2 per unit) ~~2 trains~~	SR 3.3.7.3 ~~SR 3.3.7.4~~ ~~SR 3.3.7.6~~ (3)	NA
3. ~~General Area Radiation~~			
~~a. Control Room Atmosphere~~	~~2~~ (4)	SR ~~3.3.7.1~~ SR ~~3.3.7.2~~ SR 3.3.7.7	≤ [2] mR/hr
X Control Room Air Intake Radiogas monitors	~~2~~ 4 (2 per unit)	SR 3.3.7.1 SR 3.3.7.2 SR 3.3.7.5 (3)	(5) ≤ ~~[2] mR/hr~~ 3 X background
4. Safety Injection	Refer to LCO 3.3.2, "ESFAS Instrumentation," Function 1, for all initiation functions and requirements.		

SR 3.3.7.6 (7)

The following pages replace and
supplement the existing pages behind the
Enclosure 4b tab for Chapter 3.3, Volume 3.

INSERT FOR PAGE B 3.3-58 (RTS)

SR 3.3.1.16

SR 3.3.1.16 is the performance of a COT for the low fluid oil pressure portion of the Turbine Trip Functions as described in SR 3.3.1.7 except that the Frequency is after each entry into MODE 3 for a unit shutdown and prior to exceeding the P-9 interlock trip setpoint. The surveillance is modified by two Notes. Note 1 states that the surveillance may be satisfied if performed within the previous 31 days. Note 2 states that verification of the setpoint is not required. The Frequency ensures that the turbine trip on low fluid oil pressure channels is OPERABLE after each unit shutdown and prior to entering the Mode of Applicability (above the P-9 power range neutron flux interlock) for this instrument function.

BASES

SURVEILLANCE REQUIREMENTS

SR 3.3.5.4 (continued)

verification that the trip occurs within the required time delay, ~~as shown in Reference 1~~.

A CHANNEL CALIBRATION is performed every 18 months, or approximately at every refueling. CHANNEL CALIBRATION is a complete check of the instrument loop, including the sensor. The test verifies that the channel responds to a measured parameter within the necessary range and accuracy.

The Frequency of 18 months is based on operating experience and consistency with the typical industry refueling cycle and is justified by the assumption of an 18 month calibration interval in the determination of the magnitude of equipment drift in the setpoint analysis.

REFERENCES

1. FSAR, Section 8.3.
2. FSAR, Chapter 15.
3. ~~Unit Specific RTS/ESFAS Setpoint Methodology Study.~~
4. ~~Technical Requirements Manual, Section 15, "Response Times."~~
3. FSAR, Chapter 16.

INSERT SR 3.3.5.3 bases discussion

TSC

PSC

The setpoints are as follows:

a. Loss of voltage Allowable Value
≥ 2912 V with a time delay of ≤ 0.8 second

Loss of voltage Trip Setpoint
≥ 2975 V with a time delay of ≤ 0.8 second

b. Degraded voltage Allowable Value
≥ 3683 V with a time delay of ≤ 20 seconds

Degraded voltage Trip Setpoint
≥ 3746 V with a time delay of ≤ 20 seconds

TSC

INSERT SR 3.3.5.3 RESPONSE TIME TEST
BASES DISCUSSION
ON PAGE B 3.3-150 OF ESF LOSS OF POWER TS BASES

SR 3.3.5.3

This SR ensures the individual channel ESF RESPONSE TIMES with and without offsite power for the AFW System are less than or equal to the maximum values assumed in the accident analysis. Response Time testing acceptance criteria are included in the FSAR, Chapter 16 (Ref. 3). Individual component response times are not modeled in the analyses. The analyses model the overall or total elapsed time, from the point at which the parameter exceeds the Trip Setpoint value at the sensor, to the point at which the equipment in both trains reaches the required functional state (e.g., pumps at rated discharge pressure, valves in full open or closed position).

For channels that include dynamic transfer functions (e.g., lag, lead/lag, rate/lag, etc.), the response time test may be performed with the transfer functions set to one with the resulting measured response time compared to the appropriate FSAR response time. Alternately, the response time test can be performed with the time constants set to their nominal value provided the required response time is analytically calculated assuming the time constants are set at their nominal values. The response time may be measured by a series of overlapping tests such that the entire response time is measured.

ESF RESPONSE TIME tests are conducted on an 18 month STAGGERED TEST BASIS. Testing of the final actuation devices, which make up the bulk of the response time, is included in the testing of each channel. The final actuation device in one train is tested with each channel. Therefore, staggered testing results in response time verification of these devices every 18 months. The 18 month Frequency is consistent with the typical refueling cycle and is based on unit operating experience, which shows that random failures of instrumentation components causing serious response time degradation, but not channel failure, are infrequent occurrences.

This SR is modified by a Note that clarifies that the turbine driven AFW pump is tested within 24 hours after reaching 900 psig in the SGs.

PSC

BASES

SURVEILLANCE REQUIREMENTS (continued)

SR 3.3.7.1 5

A CHANNEL CALIBRATION is performed every ~~18~~ 24 months, or approximately at every refueling. CHANNEL CALIBRATION is a complete check of the instrument loop, including the sensor. The test verifies that the channel responds to a measured parameter within the necessary range and accuracy.

The Frequency is based on operating experience and is consistent with the typical industry refueling cycle.

REFERENCES

~~1. WCAP-10271-P-A, Supplement 2, Rev 1, June 1990.~~ WOG-25-10

1. Westinghouse to SCS Letter BBGP-G-0025, dated May 23, 1988. Transmittal of PMTC FSAR changes.
2. VEGP CALCULATION NO. X6CNA.09.01, Control Room HVAC Technical Specifications, 21 October, 1988.
3. FSAR, Chapter 16

INSERT SR 3.3.7.6 Bases discussion

INSERT SR 3.3.7.6 RESPONSE TIME TEST
BASES DISCUSSION
ON PAGE B 3.3-168 OF CREFS ACTUATION INSTRUMENTATION TS BASES

SR 3.3.7.6

This SR ensures the individual channel ESF RESPONSE TIME for the CREFS radiogas monitor actuation instrumentation is less than or equal to the maximum values assumed in the accident analysis. Response Time testing acceptance criteria are included in the FSAR, Chapter 16 (Ref. 3). Individual component response times are not modeled in the analyses. The analyses model the overall or total elapsed time, from the point at which the parameter exceeds the Trip Setpoint value at the sensor, to the point at which the equipment in both trains reaches the required functional state (e.g., pumps at rated discharge pressure, valves in full open or closed position).

For channels that include dynamic transfer functions (e.g., lag, lead/lag, rate/lag, etc.), the response time test may be performed with the transfer functions set to one with the resulting measured response time compared to the appropriate FSAR response time. Alternately, the response time test can be performed with the time constants set to their nominal value provided the required response time is analytically calculated assuming the time constants are set at their nominal values. The response time may be measured by a series of overlapping tests such that the entire response time is measured.

ESF RESPONSE TIME tests are conducted on an 18 month STAGGERED TEST BASIS. Testing of the final actuation devices, which make up the bulk of the response time, is included in the testing of each channel. The final actuation device in one train is tested with each channel. Therefore, staggered testing results in response time verification of these devices every 18 months. The 18 month Frequency is consistent with the typical refueling cycle and is based on unit operating experience, which shows that random failures of instrumentation components causing serious response time degradation, but not channel failure, are infrequent occurrences.

The following pages replace
and supplement the existing pages behind the
Enclosure 5 tab for Chapter 3.3, Volume 3.

LCO 3.3.2 ESFAS

CHANGE NUMBER	JUSTIFICATION
26	The format of the Note modifying Conditions C, D, E, G, H, I, and K was corrected to show that it modifies all the Required Actions.
27	The frequency of SR 3.3.2.9 is revised to 18 months from once per reactor trip breaker cycle consistent with current licensing basis.
28	A Note is added to the Mode of Applicability for Function 7a "Semi-Automatic Switchover to Containment Sump, Automatic Actuation Logic and Actuation Relays". The new Note (h) requires only one train of actuation logic and relays to be operable in Mode 4. This change is consistent with the requirement in LCO 3.5.3 for only one train of RHR to be operable in this Mode. This change provides consistency between the instrument and system LCOs.
29	The NUREG-1431 requirement for a Channel Check of the Pressurizer Pressure P-11 ESFAS function on Table 3.3.2-1 is deleted. This Channel Check is not required by the current VEGP TS for the ESFAS P-11 function. The actual P-11 interlock function is verified operable by the performance of a 92-day COT and an 18-month Channel Calibration. The operation of the pressurizer pressure channels associated with the P-11 interlock are also confirmed operable by the Pressurizer Pressure reactor trip and SI function Channel Checks required by the RTS and ESFAS TS for the same channels. Therefore, the Channel Check of the interlock status lights required by NUREG-1431 has no impact on the reliability or operability of the P-11 interlock at VEGP.

LCO 3.3.5
LOSS OF POWER (LOP) DIESEL GENERATOR (DG) START INSTRUMENTATION

CHANGE NUMBER	JUSTIFICATION
	VEGP specific Trip Setpoint and Allowable Value. The revised surveillance is consistent with the current VEGP TS requirements.
11	Due to the complexity of the setpoints and allowable values for loss of and degraded voltage, this information will be moved to the Bases for SR 3.3.5.3.
12	The Note modifying Required Action A.1 would be revised to allow either the inoperable channel or the channel to be tested to be bypassed for surveillance testing of the remaining operable channels. The net effect is the same. If the inoperable channel is bypassed, the operable channel must be tested in trip. If the operable channel is tested while it is bypassed, the inoperable channel must remain in trip. Either way, one channel will be bypassed and one channel will be in trip. The existing VEGP TS currently provide for this. Therefore, the proposed change is consistent with current licensing basis.
13	At VEGP the Loss of Power instrumentation actuates the Auxiliary Feedwater pumps as well as the Diesel Generator. The Loss of Voltage and Degraded Voltage AFW Functions were moved from the ESFAS TS into the proposed ESF Bus Loss of Power TS to consolidate the functions performed by this instrumentation. Generic change NRC-022-C1 deleted the response time testing requirement (NUREG-1431 SR 3.3.5.3) for the Emergency Diesel Generator on loss of voltage and degraded voltage signals. However, the VEGP safety analyses include assumptions for the AFW system response to automatic start signals with and without offsite power available. The VEGP FSAR (Table 16.3-2) contains an explicit line item for the AFW system response to both loss of voltage and degraded voltage on the ESF buses. In addition, the current ESFAS TS contains an SR for response time testing this instrument function. Therefore, a VEGP specific SR 3.3.5.3 to verify the AFW system response time to loss of voltage and degraded voltage on the 4.16 kV ESF buses is

LCO 3.3.5
LOSS OF POWER (LOP) DIESEL GENERATOR (DG) START INSTRUMENTATION

CHANGE NUMBER	JUSTIFICATION
	added to the ESF Bus Loss of Power TS. The proposed SR is the equivalent of the Current TS ESFAS response time test requirement (4.3.2.2) that applies to the current AFW Loss of Voltage and Degraded Voltage Functions in the ESFAS TS. The proposed SR also includes a Note that allows a delay in testing the turbine-driven AFW pump until steam generator pressure reaches an appropriate value for operating the pump. The Note in proposed SR 3.3.5.3 is consistent with the Note in the NUREG-1431 ESFAS TS for other AFW response time testing.

LCO 3.3.7 CONTROL ROOM EMERGENCY FILTRATION SYSTEM (CREFS)

CHANGE NUMBER	JUSTIFICATION
7	A VEGP specific SR for response time testing the radiogas monitor actuation instrumentation has been added to the Improved CREFS TS. The radiogas monitors are required to actuate CREFS for a fuel handling accident in the fuel handling building. The analysis associated with this postulated event assumes a response time which includes the radiogas monitor actuation. The CREFS radiogas monitors are specified in the current VEGP ESFAS TS which has a surveillance requirement for response time testing. The addition of this SR to the Improved CREFS TS is consistent with the surveillance requirement (4.3.2.2) in the current VEGP ESFAS TS.

The following page replaces the
corresponding page behind the
Enclosure 4b tab for Chapter 3.7, Volume 6.

BASES (continued)

PSE

SURVEILLANCE REQUIREMENTS

The correct position is the position of the valves necessary to support the operational needs of the plant at that time, including during low power operation and surveillance testing, provided that the requirements of the Technical Specification safety analysis are met.

SR 3.7.5.1

Verifying the correct alignment for manual, power operated, and automatic valves in the AFW System water and steam supply flow paths provides assurance that the proper flow paths will exist for AFW operation. This SR does not apply to valves that are locked, sealed, or otherwise secured in position, since they are verified to be in the correct position prior to locking, sealing, or securing. This SR also does not apply to valves that cannot be inadvertently misaligned, such as check valves. This Surveillance does not require any testing or valve manipulation; rather, it involves verification that those valves capable of being mispositioned are in the correct position.

The 31 day Frequency is based on engineering judgment, is consistent with the procedural controls governing valve operation, and ensures correct valve positions.

SR 3.7.5.2

NRC-13-C1-R1

INSERT →

~~This SR verifies that the AFW pumps develop sufficient discharge pressure to deliver the required flow at the full open pressure of the MSSVs. Because it is undesirable to introduce cold AFW into the steam generators while they are operating, this testing is performed on recirculation flow. Periodically comparing the reference differential pressure developed at this reduced flow detects trends that might be indicative of incipient failure. Performance of inservice testing discussed in the ASME Code, Section XI (Ref. 2) (only required at 3 month intervals) satisfies this requirement. The [31] day Frequency on a STAGGERED TEST BASIS results in testing each pump once every 3 months, as required by Reference 2.~~

This SR is modified by a Note indicating that the SR should be deferred until suitable test conditions are established. This deferral is required because there is insufficient steam pressure to perform the test.

SR 3.7.5.3

This SR verifies that AFW can be delivered to the appropriate steam generator in the event of any accident or

(continued)