

ENCLOSURE 1

PROPOSED TECHNICAL SPECIFICATIONS

SEQUOYAH NUCLEAR PLANT
UNITS 1 AND 2

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TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM CHANNEL(S) OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ALARM/TRIP SETPOINT</u>	<u>MEASUREMENT RANGE</u>	<u>ACTION</u>
1. AREA MONITORS					
a. Fuel Storage Pool Area	1	*	≤ 15 mR/hr	$10^{-1} - 10^4$ mR/hr	26
b. Containment Area	2	1, 2, 3 and 4	N/A	$1 - 10^8$ RAD/HR	30
2. PROCESS MONITORS					
a. Containment Purge Air	1	1, 2, 3, 4 & 6	$\leq 8.5 \times 10^{-3}$ μ Ci/cc	$10 - 10^7$ cpm	28
b. Containment					
i. Gaseous Activity					
a)Ventilation Isolation 1		ALL MODES	$\leq 8.5 \times 10^{-3}$ μ Ci/cc	$10 - 10^7$ cpm	28
b)RCS Leakage Detection 1		1, 2, 3 & 4	N/A	$10 - 10^7$ cpm	27
ii. Particulate Activity					
a)Ventilation Isolation 1		ALL MODES	$\leq 1.5 \times 10^{-5}$ μ Ci/cc	$10 - 10^7$ cpm	28
b)RCS Leakage Detection 1		1, 2, 3 & 4	N/A	$10 - 10^7$ cpm	27
c. Control Room Isolation	1	ALL MODES	≤ 400 cpm**	$10 - 10^7$ cpm	29
d. Noble Gas Effluent Monitors					
i. Shield Building Exhaust 1 (High Range)		1,2,4, & 4		$10^{-7} - 10^5$ μ Ci/cc	30
ii. Condenser Exhaust (High Range)		1,2,3, & 4		$10^{-7} - 10^5$ μ Ci/cc	30

*With fuel in the storage pool or building

** Equivalent to 1.0×10^{-5} μ Ci/cc

INSTRUMENTATION

TABLE 3.3-6 (Continued)

TABLE NOTATION

- ACTION 26 - With the number of OPERABLE channels less than required by the Minimum Channels OPERABLE requirement, perform area surveys of the monitored area with portable monitoring instrumentation at least once per 24 hours.
- ACTION 27 - With the number of OPERABLE channels less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.4.6.1.
- ACTION 28 - With the number of OPERABLE channels less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.9.
- ACTION 29 - With the number of OPERABLE channels less than required by the Minimum Channels OPERABLE requirement, within 1 hour initiate and maintain operation of the control room emergency ventilation system in the recirculation mode of operation.
- ACTION 30 - With the number of OPERABLE Channel(s) less than required by the Minimum Channel(s) OPERABLE requirements, initiate the preplanned alternate method of monitoring the appropriate parameter(s), within 72 hours, and:
- (1) either restore the inoperable Channel(s) to OPERABLE status within 7 days of the event, or
 - (2) prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MOSES IN WHICH SURVEILLANCE REQUIRED</u>
1. AREA MONITORS				
a. Fuel Storage Pool Area	S	R	M	*
b. Containment Area	S	R	M	1, 2, 3 & 4
2. PROCESS MONITORS				
a. Containment Purge Air Exhaust	S	R	M	1, 2, 3, 4 & 6
b. Containment				
i. Gaseous Activity				
a) Ventilation Isolation	S	R	M	ALL MODES
b) RCS Leakage Detection	S	R	M	1, 2, 3, & 4
ii. Particulate Activity				
a) Ventilation Isolation	S	R	M	ALL MODES
b) RCS Leakage Detection	S	R	M	1, 2, 3, & 4
c. Control Room Isolation	S	R	M	ALL MODES
d. Noble Gas Effluent Monitors				
i. Shield Building Exhaust (High Range)	S	R	M	1, 2, 3, & 4
ii. Condenser Exhaust (High Range)	S	R	M	1, 2, 3, & 4

*With fuel in the storage pool or building

TABLE 3.3-10
ACCIDENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>REQUIRED NO OF CHANNELS</u>	<u>MINIMUM CHANNELS OPERABLE</u>
1. Reactor Coolant T _{Hot} (Wide Range)	2	1
2. Reactor Coolant T _{Cold} (Wide Range)	2	1
3. Containment Pressure (Wide Range)	2	1
4. Refueling Water Storage Tank Level	2	1
5. Reactor Coolant Pressure (Wide Range)	2	1
6. Pressurizer Level (Wide Range)	2	1
7. Steam Line Pressure	2/steam line	1/steam line
8. Steam Generator Level - Wide	1/steam generator	1/steam generator
9. Steam Generator Level - Narrow	1/steam generator	1/steam generator
10. Auxiliary Feedwater Flow Rate	1/pump	1/pump
11. Reactor Coolant System Subcooling Margin Monitor	1	0
12. Pressurizer PORV Position Indicator*	2/valve	1/valve
13. Pressurizer PORV Block Valve Position Indicator**	2/valve	1/valve
14. Safety Valve Position Indicator	2/valve	1/valve
15. Containment Water Level (Wide Range)	2	1
16. In Core Thermocouples	4/core quadrant	2/core quadrant
17. Reactor Vessel Level Instrumentation System ***	2	1

*Not applicable if the associated block valve is in the closed position.

**Not applicable if the block valve is verified in the closed position with power to the valve operator removed.

***Note: This technical specification and surveillance requirement will not be implemented until Sequoyah Specific Instructions are developed for the use of this system as committed to in our response to Supplement 1 of NUREG 0737.

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>
1. Reactor Coolant T _{Hot} (Wide Range)	M	R
2. Reactor Coolant T _{Cold} (Wide Range)	M	R
3. Containment Pressure (Wide Range)	M	R
4. Refueling Water Storage Tank Level	M	R
5. Reactor Coolant Pressure (Wide Range)	M	R
6. Pressurizer Level	M	R
7. Steam Line Pressure	M	R
8. Steam Generator Level - Wide	M	R
9. Steam Generator Level - Narrow	M	R
10. Auxiliary Feedwater Flowrate	M	R
11. Reactor Coolant System Subcooling Margin Monitor	M	R
12. Pressurizer PORV Position Indicator	M	R
13. Pressurizer PORV Block Valve Position Indicator	M	R
14. Safety Valve Position Indicator	M	R
15. Containment Water Level (Wide Range)	M	R
16. In Core Thermocouples	M	R
17. Reactor Vessel Level Instrumentation System **	M	R

** Note: This technical specification and surveillance requirement will not be implemented until Sequoyah Specific Instructions are developed for the use of this system as committed to in our response to Supplement 1 of NUREG 0737.

TABLE 3.3-13

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>		<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABILITY</u>	<u>ACTION</u>
1.	WASTE GAS DISPOSAL SYSTEM			
a.	Noble Gas Activity Monitor	1	*	40
b.	Effluent System Flow Rate Measuring Device	1	*	41
2.	WASTE GAS DISPOSAL SYSTEM EXPLOSIVE GAS MONITORING SYSTEM			
a.	Hydrogen and Oxygen Monitors	2	**	43
3.	CONDENSER VACUUM EXHAUST SYSTEM			
a.	Noble Gas Activity Monitor (Low Range)	1	*	42
b.	Flow Rate Monitor	1	*	41
4.	SHIELD BUILDING EXHAUST SYSTEM			
a.	Noble Gas Activity Monitor (Low Range)	1	***	42
b.	Iodine Sampler	1	***	44
c.	Particulate Sampler	1	***	44
d.	Flow Rate Monitor	1	***	41
e.	Sampler Flow Rate Monitor	1	***	41

TABLE 3.3-13 (Continued)

TABLE NOTATION

* At all times.

** During waste gas disposal system operation.

*** During shield building exhaust system operation.

ACTION 40 - 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 for up to 14 days 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 release of radioactive effluents via this pathway.

ACTION 41 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided the flow rate is estimated at least once per 4 hours.

ACTION 42 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided grab samples are taken at least once per 8 hours and these samples are analyzed for noble gas gross activity within 24 hours.

ACTION 43 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, operation of this waste gas disposal system may continue for up to 7 days provided grab samples are collected at least once per 4 hours and analyzed within the following 4 hours. With the hydrogen and oxygen monitors inoperable, be in at least HOT STANDBY within 6 hours.

ACTION 44 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via the affected pathway may continue for up to 30 days provided that within 4 hours after the channel has been declared inoperable 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

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
1. WASTE GAS DISPOSAL SYSTEM					
a. Noble Gas Activity Monitor	P	P	R(3)	Q(1)	*
b. Flow Rate Monitor	D	N.A.	R	Q	****
2. WASTE GAS DISPOSAL SYSTEM EXPLOSIVE GAS MONITORING SYSTEM					
a. Hydrogen Monitor	D	N.A.	Q(4)	M	**
b. Oxygen Monitor	D	N.A.	Q(5)	M	**
3. CONDENSER VACUUM EXHAUST SYSTEM					
a. Noble Gas Activity Monitor (Low	D	M	R(3)	Q(2)	*
b. Flow Rate Monitor Range) D		N.A.	R	Q	*
4. SHIELD BUILDING EXHAUST SYSTEM					
a. Noble Gas Activity Monitor (Low	D	M	R(3)	Q(2)	***
b. Iodine Sampler Range) W		N.A.	N.A.	N.A.	***
c. Particulate Sampler	W	N.A.	N.A.	N.A.	***
d. Flow Rate Monitor	D	N.A.	R	Q	***
e. Sampler Flow Rate Monitor	D	N.A.	R	Q	***

REACTOR COOLANT SYSTEM

REACTOR COOLANT SYSTEM VENTS

LIMITING CONDITION FOR OPERATION

3.4.11 Two Reactor Coolant System Vent (RCSV) paths shall be OPERABLE. *

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. With only one RCSV path OPERABLE, STARTUP and/or POWER OPERATION may continue provided the inoperable path is maintained closed with power removed from the valve actuators; restore the inoperable path to OPERABLE status within 30 days; or be in HOT STANDBY within 6 hours and HOT SHUTDOWN within the following 6 hours.
- b. With no RCSV path OPERABLE, restore at least one path to OPERABLE status within 72 hours or be in HOT STANDBY within 6 hours and HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.4.11 Each RCSV path shall be demonstrated OPERABLE at least once per 18 months by:

- a. Verifying that the upstream manual isolation valve is locked in the open position for the head vent.
- b. Operating each remotely controlled valve through at least one cycle from the control room, and
- c. Verifying flow through the RCSV paths during venting.

* Use of Power Operated Relief Valves (PORV's) with associated blocked valves is considered one system. Closure of one or both block valves does not make the vent path inoperable provided the valve(s) can be opened.

Note: This technical specification and surveillance requirement will not be implemented until Sequoyah Specific Instructions are developed for the use of this system as committed to in our response to Supplement 1 of NUREG 0737.

REACTOR COOLANT SYSTEM

BASES

3/4.4.11 REACTOR COOLANT SYSTEM VENTS

The function of the RCS vents is to remove noncondensable or steam from the reactor vessel head and/or pressurizer. This system is designed to mitigate a possible condition of inadequate core cooling, inadequate natural circulation, or inability to depressurize the RHR System initiated conditions resulting from the accumulation of noncondensable gases in the Reactor Coolant System. The reactor vessel head vent and the pressurizer vent are each designed with redundant safety grade vent paths. Having either system OPERABLE or having one path in each system from opposite trains OPERABLE is sufficient to meet the provisions of Specificaticn 3.4.11.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

4. Simulating a loss of offsite power by itself, and:
 - a) Verifying de-energization of the shutdown boards and load shedding from the shutdown boards.
 - b) Verifying the diesel starts on the auto-start signal, energizes the shutdown boards with permanently connected loads within 10 seconds, energizes the auto-connected shutdown loads through the load sequencers and operates for greater than or equal to 5 minutes while its generator is loaded with the shutdown loads. After energization, the steady state voltage and frequency of the shutdown boards shall be maintained at 6900 ± 690 volts and 60 ± 1.2 Hz during this test. ;
5. Verifying that on a ESF actuation test signal, without loss of offsite power, the diesel generator starts on the auto-start signal and operates on standby for greater than or equal to 5 minutes. The generator voltage and frequency shall be 6900 ± 690 volts and 60 ± 1.2 Hz within 10 seconds after the auto-start signal; the steady state generator voltage and frequency shall be maintained within these limits during this test.
6. Simulating a loss of offsite power in conjunction with an ESF actuation test signal, and
 - a) Verifying de-energization of the shutdown boards and load shedding from the shutdown boards.
 - b) Verifying the diesel starts on the auto-start signal, energizes the shutdown boards with permanently connected loads within 10 seconds, energizes the auto-connected emergency (accident) loads through the load sequencers and operates for greater than or equal to 5 minutes while its generator is loaded with the emergency loads. After energization, the steady state voltage and frequency of the emergency busses shall be maintained at 6900 ± 690 volts and 60 ± 1.2 Hz during this test.
 - c) Verifying that all automatic diesel generator trips, except engine overspeed and generator differential, are automatically bypassed upon loss of voltage on the shutdown board and/or safety injection actuation signal.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

7. Verifying the diesel generator operates for at least 24 hours. During the first 2 hours of this test, the diesel generator shall be loaded to greater than or equal to 4400 kw and during the remaining 22 hours of this test, the diesel generator shall be loaded to greater than or equal to 4000 kw. The generator voltage and frequency shall be 6900 ± 690 volts and 60 ± 1.2 Hz within 10 seconds after the start signal; the steady state generator voltage and frequency shall be maintained within these limits during this test. Within 5 minutes after completing this 24 hour test, perform Specification 4.8.1.1.2.d.4.b
8. Verifying that the auto-connected loads to each diesel generator do not exceed the 2000 hour rating of 4000 kw.
9. Verifying the diesel generator's capability to:
 - a) Synchronize with the offsite power source while the generator is loaded with its emergency loads upon a simulated restoration of offsite power.
 - b) Transfer its loads to the offsite power source, and
 - c) Be restored to its shutdown status.
10. Verifying that the automatic load sequence timers are OPERABLE with the setpoint for each sequence timer within ± 5 percent of its design setpoint.
11. Verifying that the following diesel generator lockout features prevent diesel generator starting only when required:
 - a) Engine overspeed
 - b) 86 GA lockout relay
- e. At least once per 10 years or after any modifications which could affect diesel generator interdependence by starting the diesel generators simultaneously, during shutdown, and verifying that the diesel generators accelerate to at least 900 rpm in less than or equal to 10 seconds.

TABLE 3.3-6
RADIATION MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	APPLICABLE MODES	ALARM/TRIP SETPOINT	MEASUREMENT RANGE	ACTION
1. AREA MONITORS					
a. Fuel Storage Pool Area	1	*	< 15 mR/hr	10^{-1} - 10^4 mR/hr	26
b. Containment Area	2	1, 2, 3 & 4	N/A	1 - 10^8 RAD/HR	30
2. PROCESS MONITORS					
a. Containment Purge Air	1	1, 2, 3, 4 & 6	$< 8.5 \times 10^{-3}$ μ Ci/cc	10 - 10^7 cpm	28
b. Containment					
i. Gaseous Activity					
a) Ventilation Isolation	1	ALL MODES	$< 8.5 \times 10^{-3}$ μ Ci/cc	10 - 10^7 cpm	28
b) RCS Leakage Detection	1	1, 2, 3 & 4	N/A	10 - 10^7 cpm	27
ii. Particulate Activity					
a) Ventilation Isolation	1	ALL MODES	$< 1.5 \times 10^{-5}$ μ Ci/cc	10 - 10^7 cpm	28
b) RCS Leakage Detection	1	1, 2, 3 & 4	N/A	10 - 10^7 cpm	27
c. Control Room Isolation	1	ALL MODES	≤ 400 cpm**	10 - 10^7 cpm	29
d. Noble Gas Effluent Monitors					
i. Shield Building Exhaust (High Range)	1	1, 2, 3, & 4	*	10^{-7} - 10^5 μ Ci/cc	30
ii. Condenser Exhaust (High Range)	1	1, 2, 3, & 4		10^{-7} - 10^5 μ Ci/cc	30

*With fuel in the storage pool or building

**Equivalent to 1.0×10^{-5} μ Ci/cc

TABLE 3.3-6 (Continued)

ACTION STATEMENTS

- ACTION 26 - With the number of OPERABLE channels less than required by the Minimum Channels OPERABLE requirement, perform area surveys of the monitored area with portable monitoring instrumentation at least once per 24 hours.
- ACTION 27 - With the number of OPERABLE channels less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.4.6.1.
- ACTION 28 - With the number of OPERABLE channels less than required by the Minimum Channels OPERABLE requirement, comply with the ACTION requirements of Specification 3.9.9.
- ACTION 29 - With the number of OPERABLE channels less than required by the Minimum Channels OPERABLE requirement, within 1 hour initiate and maintain operation of the control room emergency ventilation system in the recirculation mode of operation.
- ACTION 30 - With the number of OPERABLE Channel(s) less than required by the Minimum Channels OPERABLE requirements, initiate the preplanned alternate method of monitoring the appropriate parameter(s), within 72 hours, and:
- (1) either restore the inoperable Channel(s) to OPERABLE status within 7 days of the event, or
 - (2) prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within 14 days following the event outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

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. Fuel Storage Pool Area	S	R	M	^a
b. Containment Area	S	R	M	1, 2, 3 & 4
2. PROCESS MONITORS				
a. Containment Purge Air Exhaust	S	R	M	1, 2, 3, 4 & 6
b. Containment				
i. Gaseous Activity				
a) Ventilation Isolation	S	R	M	ALL MODES
b) RCS Leakage Detection	S	R	M	1, 2, 3, & 4
ii. Particulate Activity				
a) Ventilation Isolation	S	R	M	ALL MODES
b) RCS Leakage Detection	S	R	M	1, 2, 3 & 4
c. Control Room Isolation	S	R	M	ALL MODES
d. Noble Gas Effluent Monitors				
i. Shield Building Exhaust (High Range)	S	R	M	1, 2, 3, & 4
ii. Condenser Exhaust (High Range)	S	R	M	1, 2, 3, & 4

^aWith fuel in the storage pool or building.

TABLE 3.3-10

ACCIDENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>REQUIRED NO. OF CHANNELS</u>	<u>MINIMUM CHANNELS OPERABLE</u>
1. Reactor Coolant T _{Hot} (Wide Range)	2	1
2. Reactor Coolant T _{Cold} (Wide Range)	2	1
3. Containment Pressure (Wide Range)	2	1
4. Refueling Water Storage Tank Level	2	1
5. Reactor Coolant Pressure (Wide Range)	2	1
6. Pressurizer Level (Wide Range)	2	1
7. Steam Line Pressure	2/steam line	1/steam line
8. Steam Generator Level - (Wide Range)	1/steam generator	1/steam generator
9. Steam Generator Level - (Narrow Range)	1/steam generator	1/steam generator
10. Auxiliary Feedwater Flow Rate	1/pump	1/pump
11. Reactor Coolant System Subcooling Margin Monitor	1	0
12. Pressurizer PORV Position Indicator*	2/valve	1/valve
13. Pressurizer PORV Block Valve Position Indicator**	2/valve	1/valve
14. Safety Valve Position Indicator	2/valve	1/valve
15. Containment Water Level (Wide Range)	2	1
16. In Core Thermocouples	*** 4/core quadrant 2	2/core quadrant 1
17. Reactor Vessel Level Instrumentation System		

*Not applicable if the associated block valve is in the closed position.

**Not applicable if the block valve is verified in the closed position with power to the valve operator removed.

***NOTE: This technical specification and surveillance requirement will not be implemented until Sequoyah Specific Instructions are developed for the use of this system as committed to in our response to Supplement 1 of NUREG 0737.

TABLE 4.3-7

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>
1. Reactor Coolant T _{Hot} (Wide Range)	M	R
2. Reactor Coolant T _{Cold} (Wide Range)	M	R
3. Containment Pressure (Wide Range)	M	R
4. Refueling Water Storage Tank Level	M	R
5. Reactor Coolant Pressure (Wide Range)	M	R
6. Pressurizer Level	M	R
7. Steam Line Pressure	M	R
8. Steam Generator Level - (Wide)	M	R
9. Steam Generator Level - (Narrow)	M	R
10. Auxiliary Feedwater Flowrate	M	R
11. Reactor Coolant System Subcooling Margin Monitor	M	R
12. Pressurizer PORV Position Indicator	M	R
13. Pressurizer PORV Block Valve Position Indicator	M	R
14. Safety Valve Position Indicator	M	R
15. Containment Water Level (Wide Range)	M	R
16. In Core Thermocouples	M	R
17. Reactor Vessel Level Instrumentation System *	M	R

*Note: This technical specification and surveillance requirement will not be implemented until Sequoyah Specific Instructions are developed for the use of this system as committed to in our response to Supplement 1 of NUREG 0737.

TABLE 3.3-13

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

INSTRUMENT		MINIMUM CHANNELS OFTABLE	APPLICABILITY	ACTION
1.	WASTE GAS DISPOSAL SYSTEM			
a.	Noble Gas Activity Monitor	1	*	40
b.	Effluent System Flow Rate Measuring Device	1	*	41
2.	WASTE GAS DISPOSAL SYSTEM EXPLOSIVE GAS MONITORING SYSTEM			
a.	Hydrogen and Oxygen Monitors	2	**	43
3.	CONDENSER VACUUM EXHAUST SYSTEM			
a.	Noble Gas Activity Monitor (Low Range)	1	*	42
b.	Flow Rate Monitor	1	*	41
4.	SHIELD BUILDING EXHAUST SYSTEM			
a.	Noble Gas Activity Monitor (Low Range)	1	***	42
b.	Iodine Sampler	1	***	44
c.	Particulate Sampler	1	***	44
d.	Flow Rate Monitor	1	***	41
e.	Sampler Flow Rate Monitor	1	***	41

TABLE 3.3-13 (Continued)

TABLE NOTATION

* At all times.

** During waste gas disposal system operation.

*** During shield building exhaust system operation.

ACTION 40 - 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 for up to 14 days 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 release of radioactive effluents via this pathway.

ACTION 41 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided the flow rate is estimated at least once per 4 hours.

ACTION 42 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided grab samples are taken at least once per 8 hours and these samples are analyzed for noble gas gross activity within 24 hours.

ACTION 43 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, operation of this waste gas disposal system may continue for up to 7 days provided grab samples are collected at least once per 4 hours and analyzed within the following 4 hours. With the hydrogen and oxygen monitors inoperable, be in at least HOT STANDBY within 6 hours.

ACTION 44 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via the affected pathway may continue for up to 30 days provided that within 4 hours after the channel has been declared inoperable 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

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
1. WASTE GAS DISPOSAL SYSTEM					
a. Noble Gas Activity Monitor	P	P	R(3)	Q(1)	A
b. Flow Rate Monitor	D	N.A.	R	Q	AAAAA
2. WASTE GAS DISPOSAL SYSTEM EXPLOSIVE GAS MONITORING SYSTEM					
a. Hydrogen Monitor	D	N.A.	Q(4)	M	AA
b. Oxygen Monitor	D	N.A.	Q(5)	M	AA
3. CONDENSER VACUUM EXHAUST SYSTEM					
a. Noble Gas Activity Monitor (Low Range)	D	M	R(3)	Q(2)	A
b. Flow Rate Monitor	D	N.A.	R	Q	A
4. SHIELD BUILDING EXHAUST SYSTEM					
a. Noble Gas Activity Monitor (Low Range)	D	M	R(3)	Q(2)	AAAA
b. Iodine Sampler	W	N.A.	N.A.	N.A.	AAAA
c. Particulate Sampler	W	N.A.	N.A.	N.A.	AAAA
d. Flow Rate Monitor	D	N.A.	R	Q	AAAA
e. Sampler Flow Rate Monitor	D	N.A.	R	Q	AAAA

1

1

REACTOR COOLANT SYSTEM

REACTOR COOLANT SYSTEM VENTS

LIMITING CONDITION FOR OPERATION

3.4.11 Two Reactor Coolant System Vent (RCSV) paths shall be OPERABLE. *

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. With only one RCSV path OPERABLE, STARTUP and/or POWER OPERATION may continue provided the inoperable path is maintained closed with power removed from the valve actuators; restore the inoperable path to OPERABLE status within 30 days; or be in HOT STANDBY within 6 hours and HOT SHUTDOWN within the following 6 hours.
- b. With no RCSV path OPERABLE, restore at least one path to OPERABLE status within 72 hours or be in HOT STANDBY within 6 hours and HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.4.11 Each RCSV path shall be demonstrated OPERABLE at least once per 18 months by:

- a. Verifying that the upstream manual isolation valve is locked in the open position for the head vent.
- b. Operating each remotely controlled valve through at least one cycle from the control room, and
- c. Verifying flow through the RCSV paths during venting.

*Use of Power Operated Relief Valves (PORV's) with associated blocked valves is considered one system. Closure of one or both block valves does not make the vent path inoperable provided the valve(s) can be opened.

Note: This technical specification and surveillance requirement will not be implemented until Sequoyah Specific Instructions are developed for the use of this system as committed to in our response to Supplement 1 of NUREG 0737.

REACTOR COOLANT SYSTEM

BASES

3/4.4.11 REACTOR COOLANT SYSTEM VENTS

The function of the RCS vents is to remove noncondensable or steam from the reactor vessel head and/or pressurizer. This system is designed to mitigate a possible condition of inadequate core cooling, inadequate natural circulation, or inability to depressurize the RHR System initiated conditions resulting from the accumulation of noncondensable gases in the Reactor Coolant System. The reactor vessel head vent and the pressurizer vent are each designed with redundant safety grade vent paths. Having either system OPERABLE or having one path in each system from opposite trains OPERABLE is sufficient to meet the provisions of Specification 3.4.11.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

4. Simulating a loss of offsite power by itself, and:
 - a) Verifying de-energization of the shutdown boards and load shedding from the shutdown boards.
 - b) Verifying the diesel starts on the auto-start signal, energizes the shutdown boards with permanently connected loads within 10 seconds, energizes the auto-connected shutdown loads through the load sequencers and operates for greater than or equal to 5 minutes while its generator is loaded with the shutdown loads. After energization, the steady state voltage and frequency of the shutdown boards shall be maintained at 6900 ± 690 volts and 60 ± 1.2 Hz during this test.
5. Verifying that on a ESF actuation test signal (without loss of offsite power) the diesel generator starts on the auto-start signal and operates on standby for greater than or equal to 5 minutes. The generator voltage and frequency shall be 6900 ± 690 volts and 60 ± 1.2 Hz within 10 seconds after the auto-start signal; the steady state generator voltage and frequency shall be maintained within these limits during this test.
6. Simulating a loss of offsite power in conjunction with an ESF actuation test signal, and
 - a) Verifying de-energization of the shutdown boards and load shedding from the shutdown boards.
 - b) Verifying the diesel starts from ambient condition on the auto-start signal, energizes the shutdown boards with permanently connected loads within 10 seconds, energizes the auto-connected emergency (accident) loads through the load sequencers and operates for greater than or equal to 5 minutes while its generator is loaded with the emergency loads. After energization, the steady state voltage and frequency of the emergency busses shall be maintained at 6900 ± 690 volts and 60 ± 1.2 Hz during this test.
 - c) Verifying that all automatic diesel generator trips, except engine overspeed and generator differential, are automatically bypassed upon loss of voltage on the shutdown board and/or safety injection actuation signal.
7. Verifying the diesel generator operates for at least 24 hours. During the first 2 hours of this test, the diesel generator shall be loaded to greater than or equal to 4400 kw and during the remaining 22 hours of this test, the diesel generator shall be loaded to greater than or equal to 4000 kw.

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

Within 5 minutes after completing this 24 hour test, perform Specification 4.8.1.1.2.c.4. The generator voltage and frequency shall be 6900 ± 690 volts and 60 ± 1.2 Hz within 10 seconds after the start signal; the steady state generator voltage and frequency shall be maintained within these limits during this test.

8. Verifying that the auto-connected loads to each diesel generator do not exceed the 2000 hour rating of 4000 kw.
9. Verifying the diesel generator's capability to:
 - a) Synchronize with the offsite power source while the generator is loaded with its emergency loads upon a simulated restoration of offsite power.
 - b) Transfer its loads to the offsite power source, and
 - c) Be restored to its shutdown status.
10. Verifying that the automatic load sequence timers are OPERABLE with the setpoint for each sequence timer within ± 5 percent of its design setpoint.
11. Verifying that the following diesel generator lockout features prevent diesel generator starting only when required:
 - a) Engine overspeed
 - b) 86 GA lockout relay
- e. At least once per 10 years or after any modifications which could affect diesel generator interdependence by starting the diesel generators simultaneously, during shutdown, and verifying that the diesel generators accelerate to at least 900 rpm in less than or equal to 10 seconds.
- f. At least once per 10 years* by:
 1. Draining each fuel oil storage tank, removing the accumulated sediment and cleaning the tank using a sodium hypochlorite solution, and
 2. Performing a pressure test of those portions of the diesel fuel oil system design to Section III, subsection ND of the ASME Code at a test pressure equal to 110 percent of the system design pressure.

*These requirements are waived for the initial surveillance.

ENCLOSURE 2

JUSTIFICATION FOR THE PROPOSED TECHNICAL SPECIFICATION CHANGES

SEQUOYAH NUCLEAR PLANT
UNITS 1 AND 2

The proposed technical specification changes are submitted to comply with the NUREG-0737 requirements and as a result of modifications to comply with operating license conditions. As noted in the November 1, 1983 letter (Generic Letter 83-27) from D. G. Eisenhower to "All Pressurized Water Reactor Licensees," the limiting conditions for operation (LCO) involved in the changes are consistent with the NRC Standard Review Plans (SRPs) and are similar to those recommended in Generic Letter 83-37. The proposed technical specification changes for the diesel generator, delete surveillance requirement (S/R) 4.8.1.1.2.d.6, is being submitted as requested by NRC in the July 25, 1983 letter (Generic Letter 83-30) from D. G. Eisenhower. As stated in Generic Letter 83-30, the requirements of S/R 4.8.1.1.2.d.6 were not consistent with General Design Criteria (GDC) No. 17, Regulatory Guide 1.108, or the NRC SRPs. The significant hazards consideration determination (SHCD) for the NUREG-0737 technical specifications is provided in attachment 1. The SHCD for the diesel generator technical specification is provided in attachment 2. The SHCD revealed that no significant hazards considerations are involved.

ATTACHMENT 1

SIGNIFICANT HAZARDS CONSIDERATIONS

1. Is the probability of an occurrence or the consequences of an accident or malfunction of equipment important to safety previously evaluated in the safety analysis report increased?

No. The consequences of an accident or malfunction may actually be reduced because of the installation of additional mitigation and diagnostic equipment. The probability of an occurrence has not been increased because the reactor coolant pressure boundary penetrations made for reactor coolant vent and level systems were made in accordance with codes, standards, and quality assurance requirements consistent with the design and fabrication of the rest of reactor coolant pressure boundary. Installation of the high-range radiation monitors does not increase the probability for accidents or malfunctions because they only connect to the release paths.

2. Is the possibility for an accident or malfunction of a different type than evaluated previously in the safety analysis report created?

No. The installation of the reactor coolant pressure boundary penetrations will not create the possibility for an accident or malfunction of a different type than previously analyzed. The penetrations were made in accordance with codes, standards, and quality assurance requirements consistent with the design and fabrication of the rest of the reactor coolant pressure boundary. Installation of the high-range radiation monitors does not create the possibility for an accident or malfunction of a different type than previously analyzed. The monitors only connect to the release paths.

3. Is the margin of safety as defined in the basis of any technical specification reduced?

No. The margin of safety provided by the technical specifications is actually increased because additional mitigation and diagnostic equipment is required to be operable, and out-of-service times for this equipment are limited by the action statements.

ATTACHMENT 2

SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The provisions of GDC 17, Regulatory Guide 1.108, and NRC Standard Review Plans 8.2, 8.3.1 ensure that the public safety and health will be protected. The deletion of SR 4.8.1.1.2.d.6 is consistent with these guides and Generic Letter 83-30. No new or previously analyzed accident or malfunction possibility is created or increased by deletion of this surveillance requirement. The margin of safety is not reduced.

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