ATTACHMENT 2

PEACH BOTTOM ATOMIC POWER STATION
UNITS 2 AND 3

Docket Nos. 50-277
50-278

License Nos. DPR-44
DPR-56

Facility Operating License Change Request
93-13

"Main Stack and Vent Stack
Radiation Monitoring System Upgrades"

List of Revised Pages

Unit 2	Unit 3
59	59
75	75
77a	77a
84	84
86a	86a
93	93
97	97
210	210
211	211
212	212
213	213
216c-1	216c-1

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.2.D. Radiation Monitoring Systems-Isolation and Initiation Functions	4.2.D. Radiation Monitoring Systems-Isolation and Initiation Functions
1. Reactor Building Isolation and Standby Gas Treatment System The limiting conditions for operation are given in Table 3.2.D.	1. Reactor Building Isolation and Standby Gas Treatment System Instrumentation shall be functionally tested, calibrated and checked as indicated in Table 4.2.D. System logic shall be functionally tested as indicated in Table 4.2.D.
2. Main Control Room The limiting conditions for operation are given in Table 3.2.D.	2. Main Control Room Instrumentation shall be functionally tested, calibrated and checked as indicated in Table 4.2.D.
E. Drywell Leak Detection The limiting conditions of operation for the instrumentation that monitors drywell leak detection are given in Section 3.6.C, "Coolant Leakage".	E. Drywell Leak Detection Instrumentation shall be calibrated and checked as indicated in table 4.2.E.
3. Main Stack Noble Gas Monitors The limiting conditions for operation are given in Table 3.2.D.	3. Main Stack Noble Gas Monitors Instrumentation shall be functionally tested, calibrated, and checked as indicated in Table 4.2.D.

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
3.2.D. Radiation Monitoring Systems-Isolation and Initiation Functions	4.2.D. Radiation Monitoring Systems-Isolation and Initiation Functions
1. Reactor Building Isolation and Standby Gas Treatment System The limiting conditions for operation are given in Table 3.2.D.	1. Reactor Building Isolation and Standby Gas Treatment System Instrumentation shall be functionally tested, calibrated and checked as indicated in Table 4.2.D. System logic shall be functionally tested as indicated in Table 4.2.D.
2. Main Control Room The limiting conditions for operation are given in Table 3.2.D.	2. Main Control Room Instrumentation shall be functionally tested, calibrated and checked as indicated in Table 4.2.D.
E. Drywell Leak Detection The limiting conditions of operation for the instrumentation that monitors drywell leak detection are given in Section 3.6.C, "Coolant Leakage".	E. Drywell Leak Detection Instrumentation shall be calibrated and checked as indicated in table 4.2.E.
3. Main Stack Noble Gas Monitors The limiting conditions for operation are given in Table 3.2.D	3. Main Stack Noble Gas Monitors Instrumentation shall be functionally tested, calibrated, and checked as indicated in Table 4.2.D

TABLE 3.2.D
RADIATION MONITORING SYSTEMS THAT INITIATE AND/OR ISOLATE SYSTEMS

Minimum No. of Operable Instrument Channels per Trip System (1)		Trip Function	Trip Level Setting	No. of Instrument Channels Provided by Design	Action (2)
2		Refuel Area Exhaust Monitor	Upscale, <16 mr/hr	4 Inst. Channels	A or B
2		Vent stack Noble Gas ~~Reactor Building Exhaust~~ Monitors	Upscale, <16 mr/hr	4 Inst. Channels	B
1	(3)	Main Stack Noble Gas Monitors	Upscale, ≤10^6 cps ≤ 1.0×10^{-1} μCi/cc	2 Inst. Channels	C
2	(4)	Main Control Room	Upscale, <400 cpm	4 Inst. Channels	D

Notes for Table 3.2.D

1. Whenever the systems are required to be operable, the specified number of instrument channels shall be operable or placed in the tripped condition. If this cannot be met, the indicated action shall be taken.

2. Action

   A. Cease operation of the refueling equipment.
   B. Isolate secondary containment and start the standby gas treatment system.
   C. Cease purging of primary containment, and close vent and purge valves greater than 2 inches in diameter.
   D. As described in LCO 3.11.A.5

3. The trip function is required to be operable only when the containment is purging through the SGTS and containment integrity is required. If both radiation monitors are out of service, action shall be taken as indicated in Note 2, (C).

4. The trip function is required to be operable whenever secondary containment is required on either unit.

Amendment No. 102, 156, 184

PBAPS

TABLE 3.2.D
RADIATION MONITORING SYSTEMS THAT INITIATE AND/OR ISOLATE SYSTEMS

Minimum No. of Operable Instrument Channels per Trip System (1)	Trip Function	Trip Level Setting	No. of Instrument Channels Provided by Design	Action (2)
2	Refuel Area Exhaust Monitor	Upscale, <16 mr/hr	4 Inst. Channels	A or B
2	~~Reactor Building Exhaust~~ Vent stack Noble Gas Monitors	Upscale, <16 mr/hr	4 Inst. Channels	B
1 (3)	Main Stack Noble Gas Monitors	Upscale, ≤10^6 cps ≤ 1.0×10^{-3} μCi/cc	2 Inst. Channels	C
2 (4)	Main Control Room	Upscale, <400 cpm	4 Inst. Channels	D

Notes for Table 3.2.D

1. Whenever the systems are required to be operable, the specified number of instrument channels shall be operable or placed in the tripped condition. If this cannot be met, the indicated action shall be taken.

2. Actio

   A. Cease operation of the refueling equipment.
   B. Isolate secondary containment and start the standby gas treatment system.
   C. Cease purging of primary containment, and close vent and purge valves greater than 2 inches in diameter.
   D. As described in LCO 3.11.A.5

3. The trip function is required to be operable only when the containment is purging through the SGTS and containment integrity is required. If both radiation monitors are out of service, action shall be taken as indicated in Note 2, (C).

4. The trip function is required to be operable whenever secondary containment is required on either unit.

Amendment No. 104, 158, 189
MAY 25 1994

TABLE 3.2.F (Cont'd) - SURVEILLANCE INSTRUMENTATION

Item	Minimum No. of Operable Instrument Channels	Parameter	Instrument	Type Indication and Range	Action*
11	2	Suppression Chamber Water Level (wide range)	LR-8(9)123A, B	Recorder 1-21 ft.	(10) (11)
12	1	Control Rod Position	N/A	28 Volt Indicating Lights	(1) (2) (3) (4)
13	1	Neutron Monitoring	N/A	SRM, IRM, LPRM, 0-100%	
14	1	Safety-Relief Valve Position Indication	POAM-2(3)-2-71A-L TE-2(3)-2-113A-L	Acoustic or Thermocouple	(5)
15	2	Drywell High Range Radiation Monitors	RR-8(9)103A, B	Recorder 1-1E(+8) R/hr	(7)
16	1	Main Stack ~~High~~ Wide Range Gas Radiation Monitor	RR-0-17-051 B	Recorder ~~10^3 to 10^{11} CPS (Log Scale)~~ 1.0×10^{-7} to 1.0×10^{5} uCi/cc	(7)
17	1	~~Reactor Building Roof Vent High Range~~ Vent Stack Wide Range Gas Radiation Monitor	~~RR-2979 (Unit 2)~~ RR-2979 B ~~RR-3979 (Unit 3)~~	Recorder ~~10^7 to 10^{13} CPM (Log Scale)~~ 1.0×10^{-7} to 1.0×10^{5} uCi/cc	(7)
18	2	Drywell Hydrogen Concentration Analyzer and Monitor	2(3)AC872, 2(3)BC872 XR-8(9)0411A, XR-8(9)0411B	Analyzer and Recorder 0-30% volume	(13)
19	2	Suppression Chamber Hydrogen Concentration Analyzer and Monitor	2(3)AC872, 2(3)BC872 XR-8(9)0411A, XR-8(9)0411B	Analyzer and Recorder 0-30% volume	(13)

* Notes for Table 3.2.F appear on pages 78 and 78a.

OCT 3 1984

Amendment No. 113, 128, 189, 193

TABLE 3.2.F (Cont'd) - SURVEILLANCE INSTRUMENTATION

Item	Minimum No. of Operable Instrument Channels	Parameter	Instrument	Type Indication and Range	Action*
11	2	Suppression Chamber Water Level (wide range)	LR-8(9)123A, B	Recorder 1-21 ft.	(10) (11)
12	1	Control Rod Position	N/A	28 Volt Indicating Lights	(1) (2) (3) (4)
13	1	Neutron Monitoring	N/A	SRM, IRM, LPRM, 0-100%	
14	1	Safety-Relief Valve Position Indication	POAM-2(3)-2-71A-L TE-2(3)-2-113A-L	Acoustic or Thermocouple	(5)
15	2	Drywell High Range Radiation Monitors	RR-8(9)103A, B	Recorder 1-1E(+8) R/hr	(7)
16	1	Main Stack ~~High~~ wide Range Radiation Monitor	RR-0-17-051 B	Recorder ~~10^2 to 10^{11} CPS (Log Scale)~~ 1.0×10^{-7} to 1.0×10^{5} uCi/cc	(7)
17	1	~~Reactor Building Roof Vent High Range~~ Vent Stack Wide Range Gas Radiation Monitor	~~RR-2979 (Unit 2)~~ RR-3979 B ~~(Unit 3)~~	Recorder ~~10^7 to 10^{13} CPM (Log Scale)~~ 1.0×10^{-7} to 1.0×10^{5} uCi/cc	(7)
18	2	Drywell Hydrogen Concentration Analyzer and Monitor	2(3)AC872, 2(3)BC872 XR-8(9)0411A, XR-8(9)0411B	Analyzer and Recorder 0-30% volume	(13)
19	2	Suppression Chamber Hydrogen Concentration Analyzer and Monitor	2(3)AC872, 2(3)BC872 XR-8(9)0411A, XR-8(9)0411B	Analyzer and Recorder 0-30% volume	(13)

* Notes for Table 3.2.F appear on pages 78 and 78a.

Amendment No. 117, 131, 180, 194, 197

OCT 3 1994

PBAPS

TABLE 4.2.D

MINIMUM TEST & CALIBRATION FREQUENCY FOR RADIATION MONITORING SYSTEMS

	Instrument Channels	Instrument Functional Test	Calibration	Instrument Check (2)
1)	Refuel Area Exhaust Monitors - Upscale	(1)	Once/3 months	Once/day
2)	Reactor Building Area	(1)	Once/3 months	Once/day
3)	Main Stack Noble Gas Monitors	Once/3 months	Once/~~18~~ 18 months as described in 4.8.C.4.a	Once/day
4)	Main Control Room	Once/3 months	Once/18 months as described in 4.11.A.5	Once/day

	Logic System Functional Test (4) (6)	Frequency
1)	Reactor Building Isolation	Once/Operating Cycle
2)	Standby Gas Treatment System Actuation	Once/Operating Cycle

Amendment No. 102, 156, 178, 184

PBAPS

TABLE 4.2.D

MINIMUM TEST & CALIBRATION FREQUENCY FOR RADIATION MONITORING SYSTEMS

	Instrument Channels	Instrument Functional Test	Calibration	Instrument Check (2)
1)	Refuel Area Exhaust Monitors - Upscale	(1)	Once/3 months	Once/day
2)	Reactor Building Area	(1)	Once/3 months	Once/day
3)	Main Stack Noble Gas Monitors	Once/3 months	Once/~~12~~ 18 months as described in 4.8.C.4.a	Once/day
4)	Main Control Room	Once/3 months	Once/18 months as described in 4.11.A.5	Once/day

Logic System Functional Test (4) (6)	Frequency
1) Reactor Building Isolation	Once/Operating Cycle
2) Standby Gas Treatment System Actuation	Once/Operating Cycle

Amendment No. 104, 138, 181, 189
MAY 05 1994

TABLE 4.2.F
MINIMUM TEST AND CALIBRATION FREQUENCY FOR SURVEILLANCE INSTRUMENTATION

Instrument Channel		Calibration Frequency	Instrument Check
18)	Drywell High Range Radiation Monitors	Once/operating cycle**	Once/month
19)	Main Stack ~~High~~ Wide Range Gas Radiation Monitor	Once/eighteen months	Once/~~month~~ Day
20)	~~Reactor Bldg. Roof Vent High Range~~ Vent Stack Wide Range Gas Radiation Monitor	Once/eighteen months	Once/~~month~~ Day
21)	Drywell and Suppression Chamber Hydrogen Concentration Analyzer and Monitor	Quarterly***	Once/month

(1)

* Perform instrument functional check once per operating cycle.

** Channel calibration shall consist of an electronic calibration of the channel, not including the detector, for range decades above 10R/hr and a one point calibration check of the detector below 10R/hr with an installed or portable gamma source.

*** At least a two-point calibration using sample gas.

Amendment No. 112, 179, 193

OCT 3 1994

TABLE 4.2.F
MINIMUM TEST AND CALIBRATION FREQUENCY FOR SURVEILLANCE INSTRUMENTATION

Instrument Channel		Calibration Frequency	Instrument Check
18)	Drywell High Range Radiation Monitors	Once/operating cycle**	Once/month
19)	Main Stack ~~High~~ Wide Range Gas Radiation Monitor	Once/eighteen months	Once/~~month~~ Day
20)	~~Reactor Bldg. Roof Vent High Range~~ Vent Stack Wide Range Gas Radiation Monitor	Once/eighteen months	Once/~~month~~ Day
21)	Drywell and Suppression Chamber Hydrogen Concentration Analyzer and Monitor	Quarterly***	Once/month

(1)

* Perform instrument functional check once per operating cycle.

** Channel calibration shall consist of an electronic calibration of the channel, not including the detector, for range decades above 10R/hr and a one point calibration check of the detector below 10R/hr with an installed or portable gamma source.

*** At least a two-point calibration using sample gas.

Amendment No. 117, 182, 197

3 1984

3.2 BASES (Cont'd)

Four sets of two radiation monitors are provided which initiate the Reactor Building Isolation function and operation of the standby gas treatment system. Four instrument channels monitor the radiation from the refueling area ventilation exhaust ducts and four instrument channels monitor the building ventilation below the refueling floor. Each set of instrument channels is arranged in a 1 out of 2 twice trip logic.

Trip settings of less than 16 mr/hr for the monitors in the refueling area ventilation exhaust ducts are based upon initiating normal ventilation isolation and standby gas treatment system operation so that none of the activity released during the refueling accident leaves the Reactor Building via the normal ventilation path but rather all the activity is processed by the standby gas treatment system.

Two channels of nonsafety-related radiation monitors are provided in the main stack. Trip signals from these monitors are required only when purging the containment through the SGTS and containment integrity is required. The trip signals isolate primary containment vent and purge valves greater than 2 inches in diameter to prevent accidental releases of radioactivity offsite when the valves are open. This signal is added to fulfill the requirements of item II.E.4.2(7) of NUREG-0737.

Four channels of in-duct radiation monitors are provided which initiate the Main Control Room Emergency Ventilation System. Each set of instrument channels are arranged in a one (1) out of two (2) twice trip logic.

Flow integrators are used to record the integrated flow of liquid from the drywell sumps. The integrated flow is indicative of reactor coolant leakage. A Drywell Atmosphere Radioactivity Monitor is provided to give supporting information to that supplied by the reactor coolant leakage monitoring system. (See Bases for 3.6.C and 4.6.C)

Some of the surveillance instrumentation listed in Table 3.2.F are required to meet the accident monitoring requirements of NUREG-0737, Clarification of TMI Action Plan Requirements. This instrumentation and the applicable NUREG-0737 requirements are:

1. Wide range drywell pressure (II.F.1.4)
2. Subatmospheric drywell pressure (II.F.1.4)
3. Wide range suppression chamber water level (II.F.1.5)
4. Main stack ~~high range~~ radiation monitor (II.F.1.1)
5. ~~Reactor building roof vent high~~ range radiation monitor (II.F.1.1)
6. Drywell hydrogen concentration analyzer and monitor (II.F.1.6)
7. Drywell high range radiation monitors (II.F.1.3)
8. Reactor Water Level - wide and fuel range (II.F.2)
9. Safety-Relief Valve position indication (II.D.3)

The suppression chamber hydrogen concentration analyzer and monitor are listed as an enhancement made by Mod 5274 (see 3.7.A Bases for a discussion of the CAD hydrogen and oxygen analyzers).

3.2 BASES (Cont'd)

Four sets of two radiation monitors are provided which initiate the Reactor Building Isolation function and operation of the standby gas treatment system. Four instrument channels monitor the radiation from the refueling area ventilation exhaust ducts and four instrument channels monitor the building ventilation below the refueling floor. Each set of instrument channels is arranged in a 1 out of 2 twice trip logic.

Trip settings of less than 16 mr/hr for the monitors in the refueling area ventilation exhaust ducts are based upon initiating normal ventilation isolation and standby gas treatment system operation so that none of the activity released during the refueling accident leaves the Reactor Building via the normal ventilation path but rather all the activity is processed by the standby gas treatment system.

Two channels of nonsafety-related radiation monitors are provided in the main stack. Trip signals from these monitors are required only when purging the containment through the SGTS and containment integrity is required. The trip signals isolate primary containment vent and purge valves greater than 2 inches in diameter to prevent accidental releases of radioactivity offsite when the valves are open. This signal is added to fulfill the requirements of item II.E.4.2(7) of NUREG-0737.

Four channels of in-duct radiation monitors are provided which initiate the Main Control Room Emergency Ventilation System. Each set of instrument channels are arranged in a one (1) out of two (2) twice trip logic.

Flow integrators are used to record the integrated flow of liquid from the drywell sumps. The integrated flow is indicative of reactor coolant leakage. A Drywell Atmosphere Radioactivity Monitor is provided to give supporting information to that supplied by the reactor coolant leakage monitoring system. (See Bases for 3.6.C and 4.6.C)

Some of the surveillance instrumentation listed in Table 3.2.F are required to meet the accident monitoring requirements of NUREG-0737, Clarification of TMI Action Plan Requirements. This instrumentation and the applicable NUREG-0737 requirements are:

1. Wide range drywell pressure (II.F.1.4)
2. Subatmospheric drywell pressure (II.F.1.4)
3. Wide range suppression chamber water level (II.F.1.5)
4. Main stack ~~high range~~ radiation monitor (II.F.1.1)
5. ~~Reactor building roof vent high~~ range gas radiation monitor (II.F.1.1)
6. Drywell hydrogen concentration analyzer and monitor (II.F.1.6)
7. Drywell high range radiation monitors (II.F.1.3)
8. Reactor Water Level - wide and fuel range (II.F.2)
9. Safety-Relief Valve position indication (II.D.3)

The suppression chamber hydrogen concentration analyzer and monitor are listed as an enhancement made by Mod 5274 (see 3.7.A Bases for a discussion of the CAD hydrogen and oxygen analyzers).

4.2 BASES (cont'd)

The radiation monitors in the refueling area ventilation duct which initiate building isolation and standby gas treatment operation are arranged in a 1 out of 2 twice logic system. The bases given above for the rod blocks apply here also and were used to arrive at the functional testing frequency. The air ejector off-gas monitors are connected in a 2 out of 2 logic arrangement. Based on the experience with instruments of similar design, a testing interval of once every three months has been found adequate.

Radiation monitors in the main stack which initiate containment isolation are not safety-related and are required only during containment purging through the SGTS and when containment integrity is required, an activity which occurs infrequently. Therefore, a twelve (12) month calibration interval is appropriate.

The Control Room Intake Air Radiation Monitors are safety-related and are required to be operable at all times when secondary containment is required. The calibration interval is as described in Section 4.11.A.

The automatic pressure relief instrumentation can be considered to be a 1 out of 2 logic system and the discussion above applies also.

The calibration interval is as described in Section 4.2.D

4.2 BASES (cont'd)

The radiation monitors in the refueling area ventilation duct which initiate building isolation and standby gas treatment operation are arranged in a 1 out of 2 twice logic system. The bases given above for the rod blocks apply here also and were used to arrive at the functional testing frequency. The air ejector off-gas monitors are connected in a 2 out of 2 logic arrangement. Based on the experience with instruments of similar design, a testing interval of once every three months has been found adequate.

Radiation monitors in the main stack which initiate containment isolation are not safety-related and are required only during containment purging through the SGTS and when containment integrity is required, an activity which occurs infrequently. ~~Therefore, a twelve (12) month calibration interval is appropriate.~~

The Control Room Intake Air Radiation Monitors are safety-related and are required to be operable at all times when secondary containment is required. The calibration interval is as described in Section 4.11.A.

The automatic pressure relief instrumentation can be considered to be a 1 out of 2 logic system and the discussion above applies also.

The calibration interval is as described in Section 4.2.D.

LIMITING CONDITIONS FOR OPERATION

half-lives greater than 8 days in gaseous effluents released from the two reactors at the site to areas at and beyond the SITE BOUNDARY (see Figure 3.8.1) shall be limited to the following:

a. During any calendar quarter: ≤ 15 mrem.

b. During any calendar year: ≤ 30 mrem.

When the calculated dose from the release of iodine-131, iodine-133, tritium and radionuclides in particulate form, with half-lives greater than 8 days in gaseous effluents exceeds any of the above limits, prepare and submit to the Commission within 21 working days, pursuant to Specification 6.9.2, a Special Report. The report shall identify the causes for exceeding the limits and define the corrective actions that have been taken and proposed corrective actions to to assure that subsequent releases will be within the above limits. Reactor shutdown is not required.

4. During release of gaseous wastes the following conditions shall be met to avoid exceeding the limits specified in 3.8.C.1:
   a. The main off-gas stack minimum dilution flow of 10,000 cfm shall be maintained. Vent stack
   b. One ~~Reactor Building Exhaust Vent~~ monitor

SURVEILLANCE REQUIREMENTS

shall be determined in accordance with the methodology and parameters in the ODCM at least once per month.

4a. The ~~Reactor Building Exhaust Vent~~ Vent Stack and main stack noble gas radiation monitors shall be calibrated every ~~18~~ 12 months with a known radioactive source positioned in a reproducible geometry with respect to the sensor, and every quarter by means of a functional test. The channel functional test

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
half-lives greater than 8 days in gaseous effluents released from the two reactors at the site to areas at and beyond the SITE BOUNDARY (see Figure 3.8 ... shall be limited to the following:	shall be determined in accordance with the methodology and parameters in the ODCM at least once per month.
a. During any calendar quarter: ≤ 15 mrem.	
b. During any calendar year: ≤ 30 mrem.	
When the calculated dose from the release of iodine-131, iodine-133, tritium and radionuclides in particulate form, with half-lives greater than 8 days in gaseous effluents exceeds any of the above limits, prepare and submit to the Commission within 21 working days, pursuant to Specification 6.9.2, a Special Report. The report shall identify the causes for exceeding the limits and define the corrective actions that have been taken and proposed corrective actions to to assure that subsequent releases will be within the above limits. Reactor shutdown is not required.	
4. During release of gaseous wastes the following conditions shall be met to avoid exceeding the limits specified in 3.8.C.1:	4a. The ~~reactor building exhaust vent~~ vent stack and main stack noble gas radiation monitors shall be calibrated every ~~18~~ 18 months with a known radioactive source positioned in a reproducible geometry with respect to the sensor, and every quarter by means of a functional test. The channel functional test
a. The main ~~off gas~~ stack minimum dilution flow of 10,000 cfm shall be maintained.	
b. One ~~reactor building exhaust vent~~ vent stack monitor	

LIMITING CONDITIONS FOR OPERATION

and one main stack noble gas monitor shall be operable and set to alarm in accordance with the methodology and parameters in the ODCM. From and after the date that both ~~reactor building exhaust vent~~ vent stack monitors or both main stack noble gas monitors are made or found to be inoperable for any reason, effluent releases via their respective pathway may continue provided at least two independent grab samples are taken at least once per 8 hrs. and these samples are analyzed for gross activity within 24 hours, and at least two technically qualified members of the facility staff independently verify the release rate calculations.

c. One ~~reactor building exhaust vent~~ vent stack iodine filter and one main stack iodine filter and one ~~reactor building exhaust vent~~ vent stack particulate filter and one main stack particulate filter with their respective flow rate monitors shall be operable. From and after the date that all iodine filters or all particulate filters for either the vent stack ~~reactor building exhaust vent~~ monitor or the main stack monitor are made or found to be inoperable for any reason, effluent releases via their respective pathway may

SURVEILLANCE REQUIREMENTS

shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exist:

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

Additionally, an instrument check shall be performed every day.

4b. The ~~reactor building exhaust vent~~ vent stack and the main stack flow rate monitors shall be calibrated every ~~12~~ 18 months. Additionally, an instrument check shall be performed every day.

4c. The ~~reactor building exhaust vent~~ vent stack and the main stack iodine and particulate sample flow rate monitors shall be calibrated every ~~12~~ 18 months. ~~Additionally, an instrument check shall be performed every day for the reactor building exhaust vent sample flow rate monitors, and every week for the main stack sample flow rate monitor.~~

~~4d. The main stack sample flow line Hi/Lo pressure switches shall be functionally tested every 6 months and calibrated every 24 months.~~

3
1

LIMITING CONDITIONS FOR OPERATION

and one main stack noble gas monitor shall be operable and set to alarm in accordance with the methodology and parameters in the ODCM. From and after the date that both ~~reactor building exhaust vent~~ Vent Stack monitors or both main stack noble gas monitors are made or found to be inoperable for any reason, effluent releases via their respective pathway may continue provided at least two independent grab samples are taken at least once per 8 hrs. and these samples are analyzed for gross activity within 24 hours, and at least two technically qualified members of the facility staff independently verify the release rate calculations.

c. One ~~reactor building exhaust vent~~ Vent Stack iodine filter and one main stack iodine filter and one ~~reactor building exhaust vent~~ Vent Stack particulate filter and one main stack particulate filter with their respective flow rate monitors shall be operable. From and after the date that all iodine filters or all particulate filters for either the Vent Stack ~~reactor building exhaust vent~~ monitor or the main stack monitor are made or found to be inoperable for any reason, effluent releases via their respective pathway may

SURVEILLANCE REQUIREMENTS

shall also demonstrate that control room alarm annunciation occurs if any of the following conditions exist:

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

Additionally, an instrument check shall be performed every day.

4b. The ~~reactor building exhaust vent~~ Vent Stack and the main stack flow rate monitors shall be calibrated every ~~12~~ 18 months. Additionally, an instrument check shall be performed every day.

4c. The ~~reactor building exhaust vent~~ Vent Stack and the main stack iodine and particulate sample flow rate monitors shall be calibrated every 18 ~~12~~ months. ~~Additionally, an instrument check shall be performed every day for the reactor building exhaust vent sample flow rate monitors, and every week for the main stack sample flow rate monitor.~~

~~4d. The main stack sample flow line Hi/Lo pressure switches shall be functionally tested every 6 months and calibrated every 24 months.~~

(1)

LIMITING CONDITIONS FOR OPERATION

SURVEILLANCE REQUIREMENTS

continue provided samples are continuously collected with auxiliary sampling equipment for periods on the order of 7 days and analyzed within 48 hours after the end of the sampling period.

d. One ~~reactor building exhaust vent~~ vent stack flow rate monitor and one main stack flow rate monitor shall be operable and set to alarm in accordance with the methodology and parameters in the ODCM. From and after the date that both ~~reactor building exhaust~~ vent stack flow rate monitors or both main stack flow rate monitors are made or found to be inoperable for any reason, effluent releases via their respective pathway may continue provided the flow rate is estimated at least once per 4 hours.

e. with less than the minimum number of radioactive gaseous effluent monitoring instrumentation channels OPERABLE exert best efforts to return the instruments to OPERABLE status within 30 days and if unsuccessful explain in the next Annual Radioactive Effluent Release Report why the inoperability was not corrected in a timely manner.

5. Gaseous effluents shall be processed through the appropriate gaseous waste treatment system as described below prior to discharge

5a. Doses due to gaseous effluent releases to areas at and beyond the SITE BOUNDARY shall be projected at least once per

LIMITING CONDITIONS FOR OPERATION

SURVEILLANCE REQUIREMENTS

continue provided samples are continuously collected with auxiliary sampling equipment for periods on the order of 7 days and analyzed within 48 hours after the end of the sampling period.

d. One ~~reactor building exhaust vent~~ vent stack flow rate monitor and one main stack flow rate monitor shall be operable and set to alarm in accordance with the methodology and parameters in the ODCM. From and after the date that both ~~reactor building exhaust vent~~ vent stack flow rate monitors or both main stack flow rate monitors are made or found to be inoperable for any reason, effluent releases via their respective pathway may continue provided the flow rate is estimated at least once per 4 hours.

e. with less than the minimum number of radioactive gaseous effluent monitoring instrumentation channels OPERABLE exert best efforts to return the instruments to OPERABLE status within 30 days and if unsuccessful explain in the next Annual Radioactive Effluent Release Report why the inoperability was not corrected in a timely manner.

5. Gaseous effluents shall be processed through the appropriate gaseous waste treatment system as described below prior to discharge

5a. Doses due to gaseous effluent releases to areas at and beyond the SITE BOUNDARY shall be projected at least once per

Unit 2

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
a. Gases from the Steam Jet Air Ejector Discharge shall be processed through the recombiner, holdup pipe, off-gas filter, and off-gas stack.	month in accordance with the methodology and parameters in the ODCM.
b. Gases from the Mechanical Vacuum Pump and Gland Steam Exhauster discharge shall be processed through the off-gas stack.	5b. The appropriate gaseous radioactive waste system equipment as described in Specification 3.8.C.5 shall be demonstrated operable every quarter, unless utilized to process gaseous waste during the previous 13 weeks, by analyzing the gaseous waste processed through the appropriate equipment to determine that it meets the requirements of Specification 3.8.C.1.
c. Reactor, turbine, radwaste, and recombiner building atmospheres shall be processed through permanently or temporarily installed equipment in the appropriate building ventilation system and the ~~Reactor Building Ventilation Exhaust~~ Vent Stack, with the exception of the following unmonitored exhausts: 1. Recirculation M-G Set and Reactor Building Cooling Water equipment rooms. 2. Control room utility and toilet rooms. 3. Cable spread room. 4. Emergency switchgear rooms. 5. 125/250 VDC Battery rooms and the 250 VDC Battery rooms. 6. Administration Building maintenance decontamination area.	5c. An air sample shall be obtained and analyzed from all building areas with an unmonitored exhaust once per month.
With gaseous waste being discharged without treatment as required above, prepare and submit to the Commission within 21 working days	

LIMITING CONDITIONS FOR OPERATION	SURVEILLANCE REQUIREMENTS
a. Gases from the Steam Jet Air Ejector Discharge shall be processed through the recombiner, holdup pipe, off-gas filter, and off-gas stack.	month in accordance with the methodology and parameters in the ODCM.
b. Gases from the Mechanical Vacuum Pump and Gland Steam Exhauster discharge shall be processed through the off-gas stack.	5b. The appropriate gaseous radioactive waste system equipment as described in Specification 3.8.C.5 shall be demonstrated operable every quarter, unless utilized to process gaseous waste during the previous 13 weeks, by analyzing the gaseous waste processed through the appropriate equipment to determine that it meets the requirements of Specification 3.8.C.1.
c. Reactor, turbine, radwaste, and recombiner building atmospheres shall be processed through permanently or temporarily installed equipment in the appropriate building ventilation system and the ~~Reactor Building Ventilation Exhaust~~ Vent Stack, with the exception of the following unmonitored exhausts: 1. Recirculation M-G Set and Reactor Building Cooling Water equipment rooms. 2. Control room utility and toilet rooms. 3. Cable spread room. 4. Emergency switchgear rooms. 5. 125/250 VDC Battery rooms and the 250 VDC Battery rooms. 6. Administration Building maintenance decontamination area.	5c. An air sample shall be obtained and analyzed from all building areas with an unmonitored exhaust once per month.
With gaseous waste being discharged without treatment as required above, prepare and submit to the Commission within 21 working days	

Unit 2

TABLE 4.8.2

RADIOACTIVE GASEOUS WASTE SAMPLING AND ANALYSIS FROM MAIN ~~OFF-GAS~~ STACK AND ~~REACTOR BUILDING VENT EXHAUST STACK~~ Vent Stack

Sample Type	Sample Frequency	Sample Analysis	Sample Lower Limit of Detection (LLD)(1)(4)
Grab Sample	Monthly(2)	Quantitative Analysis of Identifiable Gamma Emitters	1×10^{-4} uCi/cc(3)
Grab Sample	Quarterly	Tritium	1×10^{-6} uCi/cc
Charcoal Filters	Weekly(3)	I-131	1×10^{-12} uCi/cc(3)
Particulate Filters	Weekly(3)	Quantitative Analysis of Identifiable Gamma Emitters	1×10^{-10} uCi/cc(3)
		I-131	1×10^{-12} uCi/cc(3)
Particulate Filters (composite of weekly filters)	Monthly	Gross Alpha	1×10^{-11} uCi/cc
Particulate Filters (composite of weekly filters)	Monthly	Sr-89	1×10^{-11} uCi/cc
		Sr-90	1×10^{-11} uCi/cc
Noble Gas Monitor (Main Stack)	Continuously	Noble Gas Gross β or γ	1×10^{-6} uCi/cc
Noble Gas Monitor (Roof Vents)	Continuously	Noble Gas Gross β or γ	1×10^{-6} uCi/cc

Unit 3

TABLE 4.8.2

RADIOACTIVE GASEOUS WASTE SAMPLING AND ANALYSIS FROM MAIN ~~OFF GAS~~ STACK AND ~~REACTOR BUILDING VENT EXHAUST~~ VENT STACK

Sample Type	Sample Frequency	Sample Analysis	Sample Lower Limit of Detection (LLD)(1)(4)
Grab Sample	Monthly(2)	Quantitative Analysis of Identifiable Gamma Emitters	1×10^{-4} uCi/cc(3)
Grab Sample	Quarterly	Tritium	1×10^{-6} uCi/cc
Charcoal Filters	Weekly(3)	I-131	1×10^{-12} uCi/cc(3)
Particulate Filters	Weekly(3)	Quantitative Analysis of Identifiable Gamma Emitters	1×10^{-10} uCi/cc(3)
		I-131	1×10^{-12} uCi/cc(3)
Particulate Filters (composite of weekly filters)	Monthly	Gross Alpha	1×10^{-11} uCi/cc
Particulate Filters (composite of weekly filters)	Monthly	Sr-89	1×10^{-11} uCi/cc
		Sr-90	1×10^{-11} uCi/cc
Noble Gas Monitor (Main Stack)	Continuously	Noble Gas Gross β or γ	1×10^{-4} / $^{-6}$ uCi/cc
Noble Gas Monitor (Reactor Bldg Vents)	Continuously	Noble Gas Gross β or γ	1×10^{-6} uCi/cc