

PROPOSED TECHNICAL SPECIFICATION CHANGE

BROWNS FERRY NUCLEAR PLANT

UNIT 1

(TVA BFN TECHNICAL SPECIFICATION NO. 313)

TABLE 3.2.F (Cont'd)  
Surveillance Instrumentation

Unit	BEN	Minimum # of Operable Instrument Channels	Instrument #	Instrument	Type Indication and Range	Notes
3.2/4.2-32	1	2	H <sub>2</sub> M - 76 - 94 H <sub>2</sub> M - 76 - 104	Drywell and Torus Hydrogen Concentration	0.1 - 20%	(1)
		2	PdI-64-137 PdI-64-138	Drywell to Suppression Chamber Differential Pressure	Indicator 0 to 2 psid	(1) (2) (3)
		1/Valve		Relief Valve Tailpipe Thermocouple Temperature or Acoustic Monitor on Relief Valve Tailpipe		(5)
		2	LI-64-159A XR-64-159	Suppression Chamber Water Level-Wide Range	Indicator, Recorder 0-240"	(1) (2) (3)
		2	PI-64-39A XR-64-159 PI-64-160A XR-64-159	Drywell Pressure Low Range Drywell Pressure Wide Range	Indicator, Recorder) -5 to +5 psig ) Indicator, Recorder) 0-300 psig )	(1) (2) (3)
		2	TI-64-161 TI-64-162 TR-64-162	Suppression Pool Bulk Temperature	Indicator, Recorder) 30° - 230° F )	(1) (2) (3) (4) (6)
		1	RR-90-272 RR-90-273 RM-90-272A RM-90-273A	High Range Primary Containment Radiation Monitors and Recorders	Monitor, Recorder 1-10 <sup>7</sup> R/Hr	(7) (8)
		1	RM-90-306 RR-90-360	Wide Range Gaseous Effluent Radiation Monitor and Recorder	Monitor, Recorder (Noble Gas 10 <sup>-7</sup> - 10 <sup>+5</sup> µCi/cc)	(7) (8) (9)

#### NOTES FOR TABLE 3.2.F

- (1) From and after the date that one of these parameters is reduced to one indication, continued operation is permissible during the succeeding 30 days unless such instrumentation is sooner made operable.
- (2) From and after the date that one of these parameters is not indicated in the control room, continued operation is permissible during the succeeding seven days unless such instrumentation is sooner made operable.
- (3) If the requirements of notes (1) and (2) cannot be met, and if one of the indications cannot be restored in (6) hours, an orderly shutdown shall be initiated and the reactor shall be in a COLD SHUTDOWN CONDITION within 24 hours.
- (4) These surveillance instruments are considered to be redundant to each other.
- (5) From and after the date that both the acoustic monitor and the temperature indication on any one valve fails to indicate in the control room, continued operation is permissible during the succeeding 30 days, unless one of the two monitoring channels is sooner made available. If both the primary and secondary indication on any SRV tailpipe is inoperable, the torus temperature will be monitored at least once per shift to observe any unexplained temperature increase which might be indicative of an open SRV.
- (6) A channel consists of eight sensors, one from each alternating torus bay. Seven sensors must be operable for the channel to be operable.
- (7) When one of these instruments is inoperable for more than seven days, in lieu of any other report required by Specification 6.9.1.4, prepare and submit a Special report to the Commission pursuant to Specification 6.9.2 within the next seven days outlining the action taken, the cause of inoperability, and the plans and schedule for restoring the system to OPERABLE status.
- (8) With the plant in REACTOR POWER OPERATION, STARTUP CONDITION, HOT STANDBY CONDITION OR HOT SHUTDOWN CONDITION and with the number of OPERABLE channels less than the required OPERABLE channels, either restore the inoperable channel(s) to OPERABLE Status within 72 hours, or initiate the preplanned alternate method of monitoring the appropriate parameter.
- (9) Noble Gas only

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

<u>Instrument Channel</u>	<u>Calibration Frequency</u>	<u>Instrument Check</u>
16) Drywell to Suppression Chamber Differential Pressure	Once/6 months	Each Shift
17) Relief Valve Tailpipe Thermocouple Temperature	N/A	Once/month (24)
18) Acoustic Monitor on Relief Valve Tailpipe	Once/cycle (25)	Once/month (26)
19) Suppression Chamber Water Level-Wide Range (LI-64-159A) (XR-64-159)	Once/cycle	Once/month
20) Drywell Pressure - Low Range (PI-64-39A) (XR-64-159)	Once/cycle	Once/shift
21) Drywell Pressure - Wide Range (PI-64-160A) (XR-64-159)	Once/cycle	Once/shift
22) Suppression Pool Bulk Temperature (TI-64-161) (TR-64-161) (TI-64-162) (TR-64-162)	Once/cycle	Once shift
23) High Range Primary Containment Radiation Monitors and Recorders (RR-90-272, RR-90-273, RM-90-272A and RM-90-273A)	Once/18 months (31)	Once/month
24) Wide Range Gaseous Effluent Radiation Monitor and Recorder (RM-90-306 and RR-90-360)	Once/18 months	Once/shift

Unit 1  
BFN

3.2/4.2-55

NOTES FOR TABLES 4.2.A THROUGH 4.2.L except 4.2.D AND 4.2.K (Cont'd)

26. This instrument check consists of comparing the background signal levels for all valves for consistency and for nominal expected values (not required during refueling outages).
27. Functional test consists of the injection of a simulated signal into the electronic trip circuitry in place of the sensor signal to verify OPERABILITY of the trip and alarm functions.
28. Calibration consists of the adjustment of the primary sensor and associated components so that they correspond within acceptable range and accuracy to known values of the parameter which the channel monitors, including adjustment of the electronic trip circuitry, so that its output relay changes state at or more conservatively than the analog equivalent of the trip level setting.
29. The functional test frequency decreased to once/3 months to reduce challenges to relief valves per NUREG-0737, Item II.K.3.16.
30. Functional testing for the Reactor Building Ventilation Radiation Monitoring System (RBVRMS) shall consist of verifying the High Voltage Power Supply (HVPS) voltage at the Sensor and Convertors (detectors) is within its design limits. A channel functional test as defined in Section 1.0, "Definitions" shall be performed once per 18 months as part of the RBVRM channel calibration.
31. Calibration shall consist of an electronic calibration of the channel, not including the detector, for range decades above 10R/hr and a one-point source check of the detector below 10R/hr with an installed or portable gamma source.

8. Secondary Containment Leak Rate Testing*	4.7.C.	Within 90 days of completion of each test.
9. High Range Primary Containment Radiation Monitors and Recorders	3.2.F	Within 7 days after 7 days of inoperability.
10. Wide Range Gaseous Effluent Radiation Monitor and Recorder	3.2.F	Within 7 days after 7 days of inoperability.

\*Each integrated leak rate test of the secondary containment shall be the subject of a summary technical report. This report should include data on the wind speed, wind direction, outside and inside temperatures during the test, concurrent reactor building pressure, and emergency ventilation flow rate. The report shall also include analyses and interpretations of those data which demonstrate compliance with the specified leak rate limits.

#### 6.10 STATION OPERATING RECORDS AND RETENTION

6.10.1 Records and/or logs shall be kept in a manner convenient for review as indicated below:

- a. All normal plant operation including such items as power level, fuel exposure, and shutdowns
- b. Principal maintenance activities
- c. Reportable Events
- d. Checks, inspections, tests, and calibrations of components and systems, including such diverse items as source leakage
- e. Reviews of changes made to the procedures or equipment or reviews of tests and experiments to comply with 10 CFR 50.59
- f. Radioactive shipments
- g. Test results in units of microcuries for leak tests performed pursuant to Specification 3.8.D

PROPOSED TECHNICAL SPECIFICATION CHANGE  
BROWNS FERRY NUCLEAR PLANT  
UNIT 2

(TVA BFN TECHNICAL SPECIFICATION NO. 313)

TABLE 3.2.F (cont'd)  
Surveillance Instrumentation

Minimum # of Operable Instrument Channels	Instrument #	Instrument	Type Indication and Range	Notes
2	H <sub>2</sub> M - 76 - 94 H <sub>2</sub> M - 76 - 104	Drywell and Torus Hydrogen Concentration	0.1 - 20%	(1)
2	PdI-64-137 PdI-64-138	Drywell to Suppression Chamber Differential Pressure	Indicator 0 to 2 psid	(1) (2) (3)
1/Valve		Relief Valve Tailpipe Thermocouple Temperature or Acoustic Monitor on Relief Valve Tailpipe		(5)
1	RR-90-272 RR-90-273 RM-90-272C RM-90-273C	High Range Primary Containment Radiation Monitors and Recorders	Recorder, Monitor 1-10 <sup>7</sup> R/Hr	(7)(8)
2	LI-64-159A XR-64-159	Suppression Chamber Water Level-Wide Range	Indicator, Recorder 0-240"	(1) (2) (3)
2	PI-64-160A XR-64-159	Drywell Pressure Wide Range	Indicator, Recorder) 0-300 psig )	(1) (2) (3)
2	TI-64-161 TR-64-161 TI-64-162 TR-64-162	Suppression Pool Bulk Temperature	Indicator, Recorder) 30° - 230° F )	(1) (2) (3) (4) (6)
1	RM-90-306 RR-90-360	Wide Range Gaseous Effluent Radiation Monitor and Recorder	Monitor and Recorder (Noble Gas 10 <sup>-7</sup> - 10 <sup>+5</sup> μCi/cc)	(7)(8)(9)

BFN  
Unit 2

3.2/4.2-32



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

<u>Instrument Channel</u>	<u>Calibration Frequency</u>	<u>Instrument Check</u>
16) Drywell to Suppression Chamber Differential Pressure	Once/6 months	Each Shift
17) Relief Valve Tailpipe Thermocouple Temperature	N/A	Once/month (24)
18) Acoustic Monitor on Relief Valve Tailpipe	Once/cycle (25)	Once/month (26)
19) High Range Primary Containment Radiation Monitors and Recorders (RR-90-272, RR-90-273, RM-90-272C, and RM-90-273C)	Once/18 Months (30)	Once/month
20) Suppression Chamber Water Level-Wide Range (LI-64-159A) (XR-64-159)	Once/18 Months	Once/shift
21) Drywell Pressure - Wide Range (PI-64-160A) (XR-64-159)	Once/18 Months	Once/shift
22) Suppression Pool Bulk Temperature (TI-64-161) (TR-64-161) (TI-64-162) (TR-64-162)	Once/18 Months	Once/shift
23) Wide Range Gaseous Effluent Radiation Monitor and Recorder (RM-90-306 and RR-90-360)	Once/18 Months	Once/shift

8. Secondary Containment Leak Rate Testing*	4.7.C.	Within 90 days of completion of each test.
9. High-Range Primary Containment Radiation Monitors and Recorders	3.2.F	Within 7 days after 7 days of inoperability.
10. Wide-Range Gaseous Effluent Radiation Monitor and recorder	3.2.F	Within 7 days after 7 days of inoperability.

\*Each integrated leak rate test of the secondary containment shall be the subject of a summary technical report. This report should include data on the wind speed, wind direction, outside and inside temperatures during the test, concurrent reactor building pressure, and emergency ventilation flow rate. The report shall also include analyses and interpretations of those data which demonstrate compliance with the specified leak rate limits.

#### 6.10 STATION OPERATING RECORDS AND RETENTION

6.10.1 Records and/or logs shall be kept in a manner convenient for review as indicated below:

- a. All normal plant operation including such items as power level, fuel exposure, and shutdowns
- b. Principal maintenance activities
- c. Reportable Events
- d. Checks, inspections, tests, and calibrations of components and systems, including such diverse items as source leakage
- e. Reviews of changes made to the procedures or equipment or reviews of tests and experiments to comply with 10 CFR 50.59
- f. Radioactive shipments
- g. Test results in units of microcuries for leak tests performed pursuant to Specification 3.8.D

PROPOSED TECHNICAL SPECIFICATION CHANGE  
BROWNS FERRY NUCLEAR PLANT  
UNIT 3

(TVA BFN TECHNICAL SPECIFICATION NO. 313)

TABLE 3.2.F (cont'd)  
Surveillance Instrumentation

SFN Unit	Minimum # of Operable Instrument Channels	Instrument	Instrument	Type Indication and Range	Notes
3.2/4.2-31	2	H <sub>2</sub> M - 94 H <sub>2</sub> M - 76 - 104	Drywell and Torus Hydrogen Concentration	0.1 - 20%	(1)
	2	PdI-64-137 PdI-64-138	Drywell to Suppression Chamber Differential Pressure	Indicator 0 to 2 psid	(1) (2) (3)
	1/Valve		Relief Valve Tailpipe Thermocouple Temperature or Acoustic Monitor on Relief Valve Tailpipe		(5)
	2	LI-64-159A XR-64-159	Suppression Chamber Water Level-Wide Range	Indicator, Recorder 0-240"	(1) (2) (3)
	2	PI-64-160A XR-64-159	Drywell Pressure Wide Range	Indicator, Recorder) 0-300 psig )	(1) (2) (3)
	2	TI-64-161 TR-64-161 TI-64-162 TR-64-162	Suppression Pool Bulk Temperature	Indicator, Recorder) 30° - 230° F )	(1) (2) (3) (4) (6)
	1	RR-90-272 RR-90-273 RM-90-272A RM-90-273A	High Range Primary Containment Radiation Monitors and Recorders	Monitor, Recorder 1 - 10 <sup>7</sup> R/Hr	(7) (8)
	1	RM-90-306 RR-90-360	Wide Range Gaseous Effluent Radiation Monitor and Recorder	Monitor, Recorder (Noble Gas 10 <sup>-7</sup> - 10 <sup>+5</sup> µCi/cc)	(7)(8)(9)

NOTES FOR TABLE 3.2.F

- (1) From and after the date that one of these parameters is reduced to one indication, continued operation is permissible during the succeeding 30 days unless such instrumentation is sooner made operable.
- (2) From and after the date that one of these parameters is not indicated in the control room, continued operation is permissible during the succeeding seven days unless such instrumentation is sooner made operable.
- (3) If the requirements of notes (1) and (2) cannot be met, and if one of the indications cannot be restored in (6) hours, an orderly shutdown shall be initiated and the reactor shall be in a COLD SHUTDOWN CONDITION within 24 hours.
- (4) These surveillance instruments are considered to be redundant to each other.
- (5) From and after the date that both the acoustic monitor and the temperature indication on any one valve fails to indicate in the control room, continued operation is permissible during the succeeding 30 days, unless one of the two monitoring channels is sooner made available. If both the primary and secondary indication on any SRV tailpipe is inoperable, the torus temperature will be monitored at least once per shift to observe any unexplained temperature increase which might be indicative of an open SRV.
- (6) A channel consists of eight sensors, one from each alternating torus bay. Seven sensors must be operable for the channel to be operable.
- (7) When one of these instruments is inoperable for more than seven days, in lieu of any other report required by Specification 6.9.1.4, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next seven days outlining the action taken, the cause of inoperability, and the plans and schedule for restoring the system to OPERABLE status.
- (8) With the plant in REACTOR POWER OPERATION, STARTUP CONDITION, HOT STANDBY CONDITION OR HOT SHUTDOWN CONDITION and with the number of OPERABLE channels less than the required OPERABLE channels, either restore the inoperable channel(s) to OPERABLE status within 72 hours, or initiate the preplanned alternate method of monitoring the appropriate parameter.
- (9) Noble Gas only.

TABLE 4.2.F (Cont'd)  
MINIMUM TEST AND CALIBRATION FREQUENCY FOR SURVEILLANCE INSTRUMENTATION

<u>Instrument Channel</u>	<u>Calibration Frequency</u>	<u>Instrument Check</u>
16) Drywell to Suppression Chamber Differential Pressure	Once/6 months	Each Shift
17) Relief Valve Tailpipe Thermocouple Temperature	N/A	Once/month (24)
18) Acoustic Monitor on Relief Valve Tailpipe	Once/cycle (25)	Once/month (26)
19) Suppression Chamber Water Level-Wide Range (LI-64-159A) (XR-64-159)	Once/cycle	Once/month
20) Drywell Pressure - Wide Range (PI-64-160A) (XR-64-159)	Once/cycle	Once/shift
21) Suppression Pool Bulk Temperature (TI-64-161) (TR-64-161) (TI-64-162) (TR-64-162)	Once/cycle	Once shift
22) High Range Primary Containment Radiation Monitors and Recorders (RR-90-272, RR-90-273, RM-90-272A, RM-90-273A)	Once/18 months (31)	Once/month
23) Wide Range Gaseous Effluent Radiation Monitor and Recorder (RM-90-306 and RR-90-360)	Once/18 months	Once/shift

NOTES FOR TABLES 4.2.A THROUGH 4.2.L except 4.2.D AND 4.2.K (Cont'd)

26. This instrument check consists of comparing the background signal levels for all valves for consistency and for nominal expected values (not required during refueling outages).
27. Functional test frequency decreased to once/3 months to reduce the challenges to relief valves per NUREG-0737, Item II.K.3.16.
28. Functional test consists of the injection of a simulated signal into the electronic trip circuitry in place of the sensor signal to verify OPERABILITY of the trip and alarm functions.
29. Calibration consists of the adjustment of the primary sensor and associated components so that they correspond within acceptable range and accuracy to known values of the parameter which the channel monitors, including adjustment of the electronic trip circuitry, so its output relay changes state at or more conservatively than the analog equivalent of the trip level setting.
30. Functional testing for the Reactor Building Ventilation Radiation Monitoring System (RBVRMS) shall consist of verifying the High Voltage Power Supply (HVPS) voltage at the Sensor and Convertors (detectors) is within its design limits. A channel functional test as defined in Section 1.0, "Definitions" shall be performed once per 18 months as part of the RBVRM channel calibration.
31. Calibration shall consist of an electronic calibration of the channel, not including the detector, for range decades above 10R/hr and a one-point source check of the detector below 10R/hr with an installed or portable gamma source.

8. Secondary Containment Leak Rate Testing*	4.7.C.	Within 90 days of completion of each test.
9. High Range Primary Containment Radiation Monitors and Recorders	3.2.F	Within 7 days after 7 days of inoperability.
10. Wide Range Gaseous Effluent Radiation Monitor and Recorder	3.2.F	Within 7 days after 7 days of inoperability.

\*Each integrated leak rate test of the secondary containment shall be the subject of a summary technical report. This report should include data on the wind speed, wind direction, outside and inside temperatures during the test, concurrent reactor building pressure, and emergency ventilation flow rate. The report shall also include analyses and interpretations of those data which demonstrate compliance with the specified leak rate limits.

#### 6.10 STATION OPERATING RECORDS AND RETENTION

6.10.1 Records and/or logs shall be kept in a manner convenient for review as indicated below:

- a. All normal plant operation including such items as power level, fuel exposure, and shutdowns
- b. Principal maintenance activities
- c. Reportable Events
- d. Checks, inspections, tests, and calibrations of components and systems, including such diverse items as source leakage
- e. Reviews of changes made to the procedures or equipment or reviews of tests and experiments to comply with 10 CFR 50.59
- f. Radioactive shipments
- g. Test results in units of microcuries for leak tests performed pursuant to Specification 3.8.D



## ENCLOSURE 2

BROWNS FERRY NUCLEAR PLANT (BFN)  
UNITS 1, 2, AND 3  
(TVA BFN TECHNICAL SPECIFICATION NC. 313)  
DESCRIPTION AND JUSTIFICATION FOR THE PROPOSED CHANGES

### REASON FOR THE CHANGE

The high range primary containment radiation monitors and recorders are being added to Units 1 and 3 prior to their restart in response to NUREG 0737, Item II.F.1.3. The wide range gaseous effluent radiation monitor and recorder which were added to the plant in response to NUREG 0737, Item II.F.1.1, during the Unit 2 restart effort, monitor potential releases from any of the three units. The proposed change for Unit 2 clarifies that the high range primary containment radiation monitors and recorders are both part of the instrument loop. The proposed changes for Units 1 and 3 are essentially the same as the changes that were submitted for Unit 2 as BFN-TS-199 and BFN-TS-266 and approved by the NRC as Amendments 125 and 171.

### DESCRIPTION OF THE PROPOSED CHANGE

1. Add the following to Table 3.2.F on page 3.2/4.2-32 for Unit 1 and page 3.2/4.2-31 for Unit 3:

<u>Minimum # of Operable Instrument Channels</u>	<u>Instrument #</u>	<u>Instrument</u>	<u>Type Indication and Range</u>	<u>Notes</u>
1	RR-90-272 RR-90-273 RM-90-272A RM-90-273A	High Range Primary Containment Radiation Monitors and Recorders	Monitor, Recorder $1 - 10^7$ R/Hr	(7) (8)
1	RM-90-306 RR-90-360	Wide Range Gaseous Effluent Radiation Monitor and Recorder	Monitor, Recorder (Noble Gas $10^{-7} - 10^{+5}$ $\mu\text{Ci/cc}$ )	(7) (8) (9)

2. For Unit 2 Table 3.2.F on page 3.2/4.2-31 reads:

<u>Minimum # of Operable Instrument Channels</u>	<u>Instrument #</u>	<u>Instrument</u>	<u>Type Indication and Range</u>	<u>Notes</u>
1	RR-90-272 RR-90-273	High Range Primary Containment Radiation Recorders	Monitor, Recorder  1 - $10^7$ R/Hr	(7) (8)

The revised specification reads:

1	RR-90-272 RR-90-273 RM-90-272C RM-90-273C	High Range Primary Containment Radiation Monitors and Recorders	Monitor, Recorder  1 - $10^7$ R/Hr	(7) (8)
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3. Add the following Notes to Table 3.2.F on page 3.2/4.2-33 for Unit 1 and page 3.2/4.2-32 for Unit 3:

- (7) When one of these instruments is inoperable for more than seven days, in lieu of any other report required by TS Section 6.9.1.4, prepare and submit a Special Report to the Commission pursuant to TS Section 6.9.2 within the next seven days outlining the action taken, the cause of inoperability, and the plans and schedule for restoring the system to OPERABLE status.
- (8) With the plant in REACTOR POWER OPERATION, STARTUP CONDITION, HOT STANDBY CONDITION or HOT SHUTDOWN CONDITION and with the number of OPERABLE channels less than the required OPERABLE channels, either restore the inoperable channel(s) to OPERABLE status within 72 hours, or initiate the preplanned alternate method of monitoring the appropriate parameter.
- (9) Noble Gas only.

DESCRIPTION OF THE PROPOSED CHANGE (Continued)

4. For Unit 1 add the following to Table 4.2.F, on page 3.2/4.2-55:

<u>Instrument Channel</u>	<u>Calibration Frequency</u>	<u>Instrument Check</u>
23) High Range Primary Containment Radiation Monitors and Recorders (RR-90-272, RR-90-273, RM-90-272A, RM-90-273A)	Once/18 months (31)	Once/month
24) Wide Range Gaseous Effluent Radiation Monitor and Recorder (RM-90-306 and RR-90-360)	Once/18 months	Once/shift

5. For Unit 2 Table 4.2.F on page 3.2/4.2-55 reads:

<u>Instrument Channel</u>	<u>Calibration Frequency</u>	<u>Instrument Check</u>
19) High Range Primary Containment Radiation Monitors and Recorders (RR-90-272)(RR-90-273)	Once/18 months (30)	Once/month

The revised specification reads:

19) High Range Primary Containment Radiation Monitors and Recorders (RR-90-272, RR-90-273, RM-90-272C, and RM-90-273C)	Once/18 months (30)	Once/month
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6. For Unit 3 add the following to Table 4.2.F, on page 3.2/4.2-54:

<u>Instrument Channel</u>	<u>Calibration Frequency</u>	<u>Instrument Check</u>
22) High Range Primary Containment Radiation Monitors and Recorders (RR-90-272, RR-90-273, RM-90-272A, RM-90-273A)	Once/18 months (31)	Once/month
23) Wide Range Gaseous Effluent Radiation Monitor and Recorder (RM-90-306 and RR-90-360)	Once/18 months	Once/shift

7. Add the following Note to Table 4.2.F, on page 3.2/4.2-61 for Unit 1 and page 3.2/4.2-60 for Unit 3:

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

8. For Units 1 and 3, add to TS Section 6.9.2, "Special Reports" the following:

9. High Range Primary Containment Radiation Monitors and Recorders	3.2.F	Within 7 days after 7 days of inoperability.
10. Wide Range Gaseous Effluent Radiation Monitor and Recorder	3.2.F	Within 7 days after 7 days of inoperability.

9. For Unit 2, TS Section 6.9.2.9 reads in part:

9. High Range Primary Containment Radiation Monitors

The revised specification reads in part:

9. High Range Primary Containment Radiation Monitors and Recorders.

#### JUSTIFICATION FOR THE PROPOSED CHANGE

NUREG 0737, "Clarification of TMI Action Plan Requirements," requires the installation of high range primary radiation containment monitors. In response to NUREG 0737, Item II.F.1.3, TVA has already installed this equipment in BFN Unit 2 prior to that unit restart and is proposing to install equipment in BFN Units 1 and 3 prior to their respective restart dates which will perform the same function.

The design is to upgrade the existing normal range drywell radiation channels. This will be accomplished by expanding the range of the existing detectors to 1 to 10<sup>7</sup> R/hr, upgrading the control room radiation monitors from General Electric (GE) INMAC analog logarithmic monitors to GE NUMAC digital logarithmic monitors, replacing the detector cables to meet Environmental Qualification (EQ) requirements, qualifying the existing detectors to EQ requirements, demonstrating by calculations that the instrument channels are capable of measuring the radiation level within the drywell during and following an accident, and performing other modifications to ensure the safety-related instrument channels meet Class 1E and Seismic Class I requirements. The design for Unit 1 will be similar to the Unit 3 design.

The proposed amendment lists on Table 3.2.F, two high range primary containment radiation monitors and recorders and requires a minimum of one operable channel. The action provisions proposed as Note (7) to Table 3.2.F require that with one of the two instruments inoperable for more than seven days, in lieu of any other report required by Specification 6.9.1.4, a Special

JUSTIFICATION FOR THE PROPOSED CHANGE (Continued)

Report be prepared and submitted to the Commission pursuant to TS Section 6.9.2 within the next seven days. This Special Report will outline the action taken, the cause of inoperability, and the plans and schedule for restoring the system to operable status. Proposed Note (8) to Table 3.2.F will require that with the plant in reactor power operation, startup condition, hot standby condition or hot shutdown condition and with no channels operable, either restore one inoperable channel to operable status within 72 hours, or initiate the preplanned alternate method of monitoring the primary containment.

The channel calibration frequency is once/18 months. Accuracy calculations performed for Unit 3 demonstrate the instrument channels are sufficiently accurate to monitor drywell radiation for all required environments and events for a period of 22.5 months (18 months plus the 25% calibration extension allowed by the Technical Specifications). Unit 1 calculations will be performed prior to its restart to confirm its calibration frequency.

Per the special calibration requirements of NUREG 0737 for Item II.F.1, an electronic calibration (excluding the detector) is required for range decades above 10 R/hr, and a one point calibrated radiation source is used at the detector below 10 R/hr. As noted in the NUREG, no adequate sources exist for high-range calibration. This calibration method is sufficient to ensure channel integrity and accuracy.

An instrument check of once/month is easily accomplished from the control room recorders as well as from the front panel displays on the radiation monitors. The redundant channels are located in adjacent panels.

The operability, surveillance, and reporting requirements are essentially identical to those previously approved for Unit 2 and meet the intent of recommendations in Generic Letter (GL) 83-36, "NUREG-0737" Technical Specifications.

In response to NUREG 0737, Item II.F.1.1, the wide range gaseous effluent radiation monitor and recorder were installed during the Unit 2 restart effort and they monitor potential releases from any of the three units. This proposed amendment request will add the high range primary containment radiation recorders and the wide range gaseous effluent radiation monitor and recorder to the Units 1 and 3 Technical Specifications. The proposed changes meet the intent of recommendations in Generic Letter 83-36, "NUREG-0737 Technical Specifications."

JUSTIFICATION FOR THE PROPOSED CHANGE (Continued)

The proposed amendment lists one monitor and one recorder on Table 3.2.F for wide range gaseous effluent radiation. As described in the paragraph above, proposed notes (7) and (8) are also applied as actions for the wide range gaseous effluent radiation monitor and recorder. In addition, proposed Note 9 clarifies that the only function of this instrumentation is noble gas monitoring and recording. Proposed surveillance requirements specified in Table 4.2.F will require an instrument check once/shift and a calibration once/18 months. Since this is common equipment for the three units, the operability, surveillance, and reporting requirements for Units 1 and 3 are identical to the approved Unit 2 requirements.

The proposed changes for Unit 2 revise Tables 3.2.F, 4.2.F, and TS Section 6.9.2.9 to clarify that the high range primary containment radiation recorders and monitors are part of the instrument loop. This is an administrative change to include the correct instrument numbers and instrument types.



### ENCLOSURE 3

#### BROWNS FERRY NUCLEAR PLANT (BFN) UNITS 1 AND 3

#### (TVA BFN TECHNICAL SPECIFICATIONS NO. 313) PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATIONS DETERMINATION

#### DESCRIPTION OF THE PROPOSED TECHNICAL SPECIFICATION CHANGE

The proposed amendments for Units 1 and 3 add the high range primary containment radiation monitors and recorders to Tables 3.2.F, 4.2.F, and TS Section 6.9.2 in response to NUREG 0737, Item II.F.1.3. In response to NUREG 0737, Item II.F.1.1, the wide range gaseous effluent radiation monitor and recorder were added to the plant during the Unit 2 restart effort and they monitor potential releases from any of the three units. The proposed changes for Unit 2 clarifies that the high range primary containment radiation recorders and monitors are part of the instrument loop and are required to be operable. The proposed changes for Units 1 and 3 are essentially the same as the changes that were submitted for Unit 2 as BFN-TS-199 and BFN-TS-266 and approved by the NRC as Amendments 125 and 171.

#### BASES FOR PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

The NRC has provided standards for determining whether a significant hazards consideration exists as stated in 10 CFR 50.92(c). A proposed amendment to an operating license involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the possibility of a new or different kind of accident from an accident previously evaluated, or (3) involve a significant reduction in a margin of safety.

1. The proposed change does not significantly increase the probability or consequences of an accident previously evaluated.

The proposed addition of the high range primary containment radiation monitors and recorders represents an additional control not presently included in the BFN Units 1 and 3 TSs. The proposed change are made in order to meet a TVA commitment to install this instrumentation prior to restart of each BFN unit. This new instrumentation will help to

BASES FOR PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION  
DETERMINATION (Continued)

monitor post-accident conditions and will not result in any new modes of plant operation. The addition of this instrumentation for BFN Units 1 and 3 does not affect the probability of occurrence of any accident previously evaluated. In addition, Unit 3 specific calculations support the high range primary containment radiation monitors calibration frequency of once/18 months. Unit 1 calculations will be performed prior to its restart to confirm its calibration frequency.

The proposed addition of the wide range gaseous effluent radiation monitor and recorder to the TS does not involve any physical plant modifications, since it only adds appropriate operability, surveillance and reporting requirements for the existing instrumentation. The proposed technical specifications meet the intent of recommendations in Generic Letter 83-36, "NUREG-0737 Technical Specifications." The proposed change for Unit 2 is an administrative change which adds/corrects instrument type and instrument numbers. Therefore, the proposed change does not significantly increase the probability or consequences of an accident previously evaluated.

2. The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed addition to the plant of the high range primary containment radiation monitors and recorders will enhance the post-accident monitoring capability in the primary containment. This new instrumentation does not initiate trips of safety systems or equipment. There are no new modes of plant operation added as a result of this change. In addition, Unit 3 specific calculations support the high range primary containment radiation monitors calibration frequency of once/18 months. The proposed addition of the wide range gaseous effluent radiation monitor and recorder to the TS does not involve any physical plant modification since it only adds appropriate operability, surveillance and reporting requirements for the existing instrumentation. The proposed change for Unit 2 is an administrative change which adds/corrects instrument type and instrument numbers. Therefore, the proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.



BASES FOR PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION  
DETERMINATION (Continued)

3. The proposed change does not involve a significant reduction in a margin of safety.

The proposed change adds controls that are not presently in the technical specifications for BFN Units 1 and 3. These same controls were implemented in the Unit 2 TS prior to restart of that unit. The changes enhance the capability for monitoring and recording post-accident radiation levels in the primary containment and noble gas effluent releases. In addition, Unit 3 specific calculations support the high range primary containment radiation monitors calibration frequency of once/18 months. Unit 1 calculations will be performed prior to its restart to confirm its calibration frequency. The proposed change for Unit 2 is an administrative change which adds/corrects instrument type and instrument numbers. Therefore, the proposed changes do not involve a significant reduction in any margin of safety.

CONCLUSION

TVA has evaluated the proposed amendment described above against the criteria given in 10 CFR 50.92(c) in accordance with the requirements of 10 CFR 50.91(a)(1). This evaluation has determined that the proposed amendment will not (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the possibility for a new or different kind of accident from any accident previously evaluated, or (3) involve a significant reduction in a margin of safety. Thus, TVA has concluded that the proposed amendment does not involve a significant hazards consideration.