



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-259

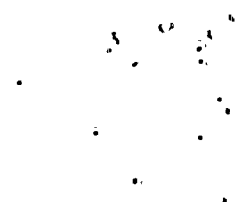
BROWNS FERRY NUCLEAR PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 209
License No. DPR-33

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Tennessee Valley Authority (the licensee) dated July 2, 1992 complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

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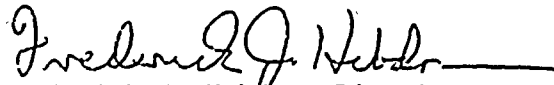
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-33 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 209, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days from the date of issuance.

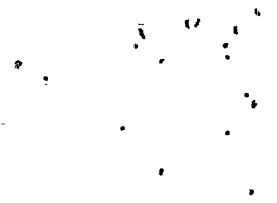
FOR THE NUCLEAR REGULATORY COMMISSION



Frederick J. Hebeon, Director
Project Directorate II-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 30, 1994



ATTACHMENT TO LICENSE AMENDMENT NO. 209

FACILITY OPERATING LICENSE NO. DPR-33

DOCKET NO. 50-259

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change. Overleaf* pages are provided to maintain document completeness.

REMOVE

3.2/4.2-16
3.2/4.2-17
3.2/4.2-40
3.2/4.2-41
3.2/4.2-44
3.2/4.2-45
3.2/4.2-61
3.2/4.2-61a

INSERT

3.2/4.2-16
3.2/4.2-17*
3.2/4.2-40
3.2/4.2-41*
3.2/4.2-44*
3.2/4.2-45
3.2/4.2-61
3.2/4.2-61a*

REVISIONS
DATE

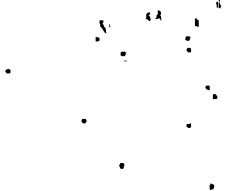


TABLE 3.2.B (Continued)

Minimum No. Operable Per Trip Sys(1)	Function	Trip Level Setting	Action	Remarks
2	Instrument Channel - Reactor Low Pressure (PS-3-74 A & B, SW #2) (PS-68-95, SW #2) (PS-68-96, SW #2)	450 psig \pm 15	A	1. Below trip setting permissive for opening CSS and LPCI admission valves.
2	Instrument Channel - Reactor Low Pressure (PS-3-74 A & B, SW #1) (PS-68-95, SW #1) (PS-68-96, SW #1)	230 psig \pm 15	A	1. Recirculation discharge valve actuation.
2	Core Spray Auto Sequencing Timers (5)	$6 \leq t \leq 8$ sec.	B	1. With diesel power 2. One per motor
2	LPCI Auto Sequencing Timers (5)	$0 \leq t \leq 1$ sec.	B	1. With diesel power 2. One per motor
1	RHR SW A1, B3, C1, and D3 Timers	$13 \leq t \leq 15$ sec.	A	1. With diesel power 2. One per pump
2	Core Spray and LPCI Auto Sequencing Timers (6)	$0 \leq t \leq 1$ sec. $6 \leq t \leq 8$ sec. $12 \leq t \leq 16$ sec. $18 \leq t \leq 24$ sec.	B	1. With normal power 2. One per CSS motor 3. Two per RHR motor
1	RHR SW A1, B3, C1, and D3 Timers	$27 \leq t \leq 29$ sec.	A	1. With normal power 2. One per pump

BEN
Unit 1

3.2/4.2-16

AMENDMENT NO. 209



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TABLE 3.2.B (Continued)

Minimum No. Operable Per Trip Sys(1)	Function	Trip Level Setting	Action	Remarks
2	Instrument Channel - RHR Discharge Pressure	100 \pm 10 psig	A	1. Below trip setting defers ADS actuation.
2	Instrument Channel CSS Pump Discharge Pressure	185 \pm 10 psig	A	1. Below trip setting defers ADS actuation.
1(3)	Core Spray Sparger to Reactor Pressure Vessel d/p	2 psid \pm 0.4	A	1. Alarm to detect core spray sparger pipe break.
1	RHR (LPCI) Trip System bus power monitor	N/A	C	1. Monitors availability of power to logic systems.
1	Core Spray Trip System bus power monitor	N/A	C	1. Monitors availability of power to logic systems.
1	ADS Trip System bus power monitor	N/A	C	1. Monitors availability of power to logic systems and valves.

BEN
Unit 1

3.2/4.2-17

AMENDMENT NO. 205



BEN
Unit 1

TABLE 4.2.A
SURVEILLANCE REQUIREMENTS FOR PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

<u>Function</u>	<u>Functional Test</u>	<u>Calibration Frequency</u>	<u>Instrument Check</u>
Instrument Channel - Reactor Low Water Level (LIS-3-203A-D, SW 2-3)	(1)	(5)	once/day
Instrument Channel - Reactor High Pressure (PS-68-93 & -94)	(31)	once/18 months	None
Instrument Channel - Reactor Low Water Level (LIS-3-56A-D, SW #1)	(1)	once/3 month	once/day
Instrument Channel - High Drywell Pressure (PS-64-56A-D)	(1)	(5)	N/A
Instrument Channel - High Radiation Main Steam Line Tunnel	once/3 months (29)	(5)	once/day
Instrument Channel - Low Pressure Main Steam Line (PT-1-72, -76, -82, -86)	once/3 months (27) (29)	once/operating cycle (28)	None
Instrument Channel - High Flow Main Steam Line (dPT-1-13A-D, -25A-D, -36A-D, -50A-D)	once/3 months (27) (29)	once/operating cycle (28)	once/day

3.2/4.2-40

AMENDMENT NO. 209

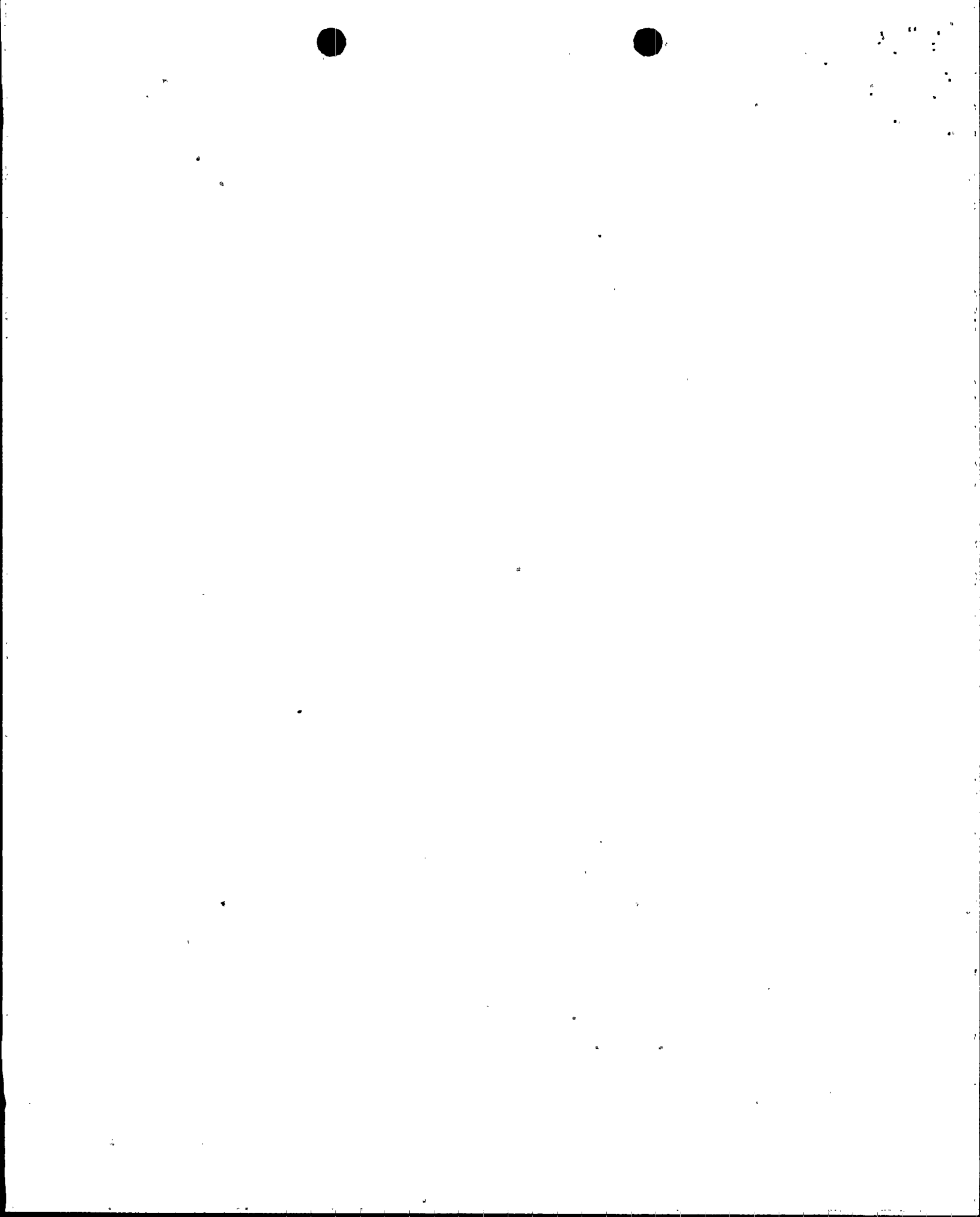


TABLE 4.2.A (Cont'd)
SURVEILLANCE REQUIREMENTS FOR PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

<u>Function</u>	<u>Functional Test</u>	<u>Calibration Frequency</u>	<u>Instrument Check</u>
Instrument Channel - Main Steam Line Tunnel High Temperature	once/3 months (27)	once/operating cycle	None
Instrument Channel - Reactor Building Ventilation High Radiation - Reactor Zone	(1) (30)	once/18 months	once/day (8)
Instrument Channel - Reactor Building Ventilation High Radiation - Refueling Zone	(1) (30)	once/18 Months	once/day (8)
Instrument Channel - SGTS Train A Heaters	(4)	(9)	N/A
Instrument Channel - SGTS Train B Heaters	(4)	(9)	N/A
Instrument Channel - SGTS Train C Heaters	(4)	(9)	N/A
Reactor Building Isolation Timer (refueling floor)	(4)	once/operating cycle	N/A
Reactor Building Isolation Timer (reactor zone)	(4)	once/operating cycle	N/A

BEN
Unit 1

3.2/4.2-41

AMENDMENT NO. 195



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TABLE 4.2.B
SURVEILLANCE REQUIREMENTS FOR INSTRUMENTATION THAT INITIATE OR CONTROL THE CSCS

<u>Function</u>	<u>Functional Test</u>	<u>Calib</u>	<u>Instrument Check</u>
Instrument Channel - Reactor Low Water Level (LIS-3-58A-D)	(1)	once/3 months	once/day
Instrument Channel - Reactor Low Water Level (LIS-3-184 & 185)	(1)	once/3 months	once/day
Instrument Channel - Reactor Low Water Level (LITS-3-52 & 62)	(1)	once/3 months	once/day
Instrument Channel - Drywell High Pressure (PS-64-58E-H)	(1)	once/3 months	none
Instrument Channel - Drywell High Pressure (PS-64-58A-D)	(1)	once/3 months	none
Instrument Channel - Drywell High Pressure (PS-64-57A-D)	(1)	once/3 months	none
Instrument Channel - Reactor Low Pressure (PS-3-74A & B) (PS-68-95) (PS-68-96)	(1)	once/3 months	none

BEN
Unit 1

3.2/4.2-44

AMENDMENT NO. 164



TABLE 4.2.B (Continued)
 SURVEILLANCE REQUIREMENTS FOR INSTRUMENTATION THAT INITIATE OR CONTROL THE CSCS

<u>Function</u>	<u>Functional Test</u>	<u>Calibration</u>	<u>Instrument Check</u>
Core Spray Auto Sequencing Timers (Normal Power)	(4)	once/operating cycle	none
Core Spray Auto Sequencing Timers (Diesel Power)	(4)	once/operating cycle	none
LPCI Auto Sequencing Timers (Normal Power)	(4)	once/operating cycle	none
LPCI Auto Sequencing Timers (Diesel Power)	(4)	once/operating cycle	none
RHRWS A1, B3, C1, D3 Timers (Normal Power)	(4)	once/operating cycle	none
RHRWS A1, B3, C1, D3 Timers (Diesel Power)	(4)	once/operating cycle	none
ADS Timer	(4)	once/operating cycle	none
ADS High Drywell Pressure Bypass Timer	(4)	once/operating cycle	none

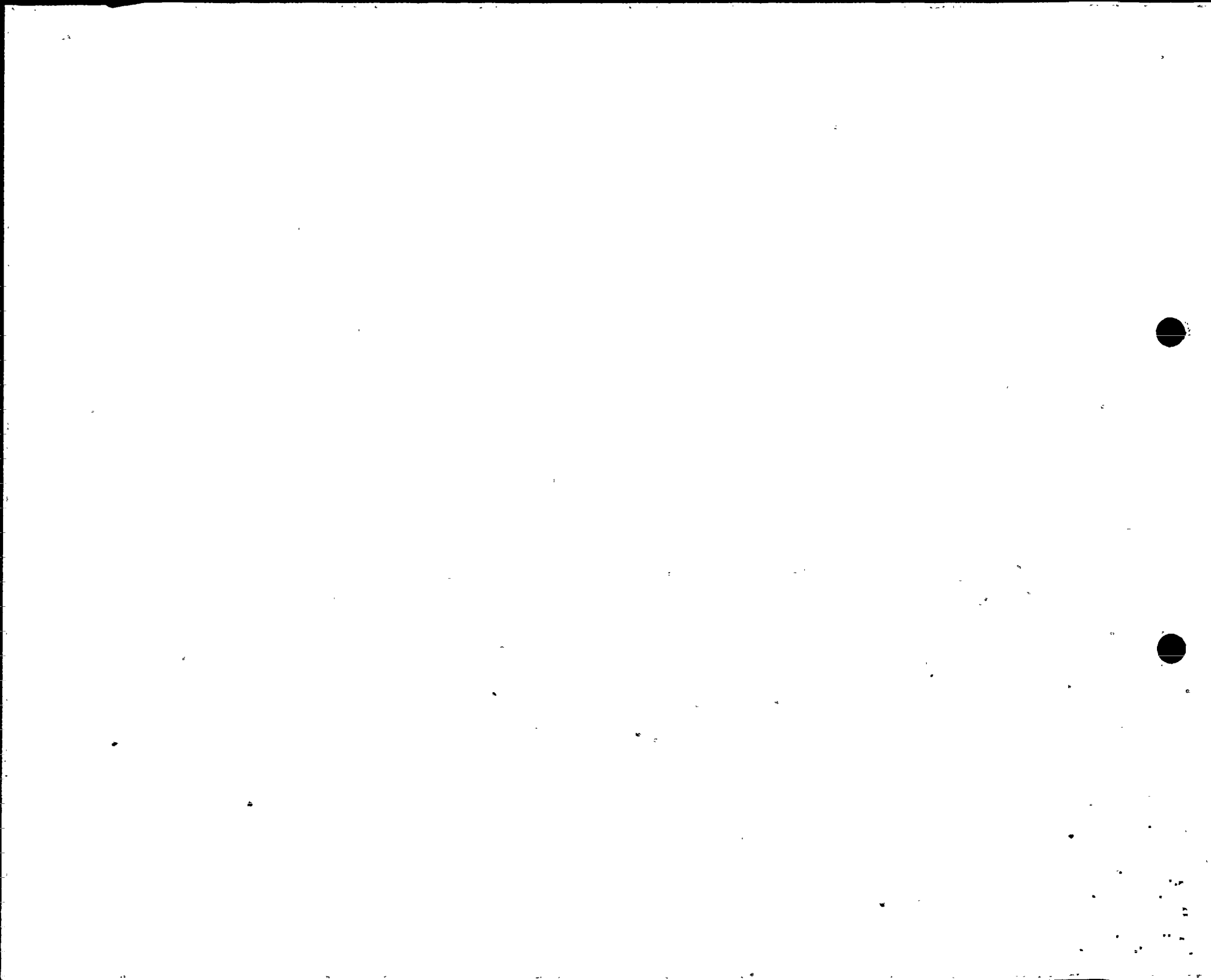
BEN
 Unit 1

3.2/4.2-45

AMENDMENT NO. 209

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. Functional tests shall be performed once/3 months.

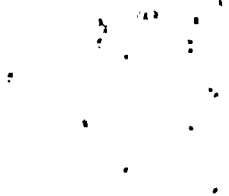


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BFN
Unit 1

3.2/4.2-61a

AMENDMENT NO. 164





UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

TENNESSEE VALLEY AUTHORITY

DOCKET NO. 50-296

BROWNS FERRY NUCLEAR PLANT, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 182
License No. DPR-68

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Tennessee Valley Authority (the licensee) dated July 2, 1992 complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.



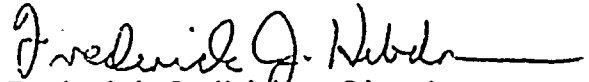
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-68 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 182, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

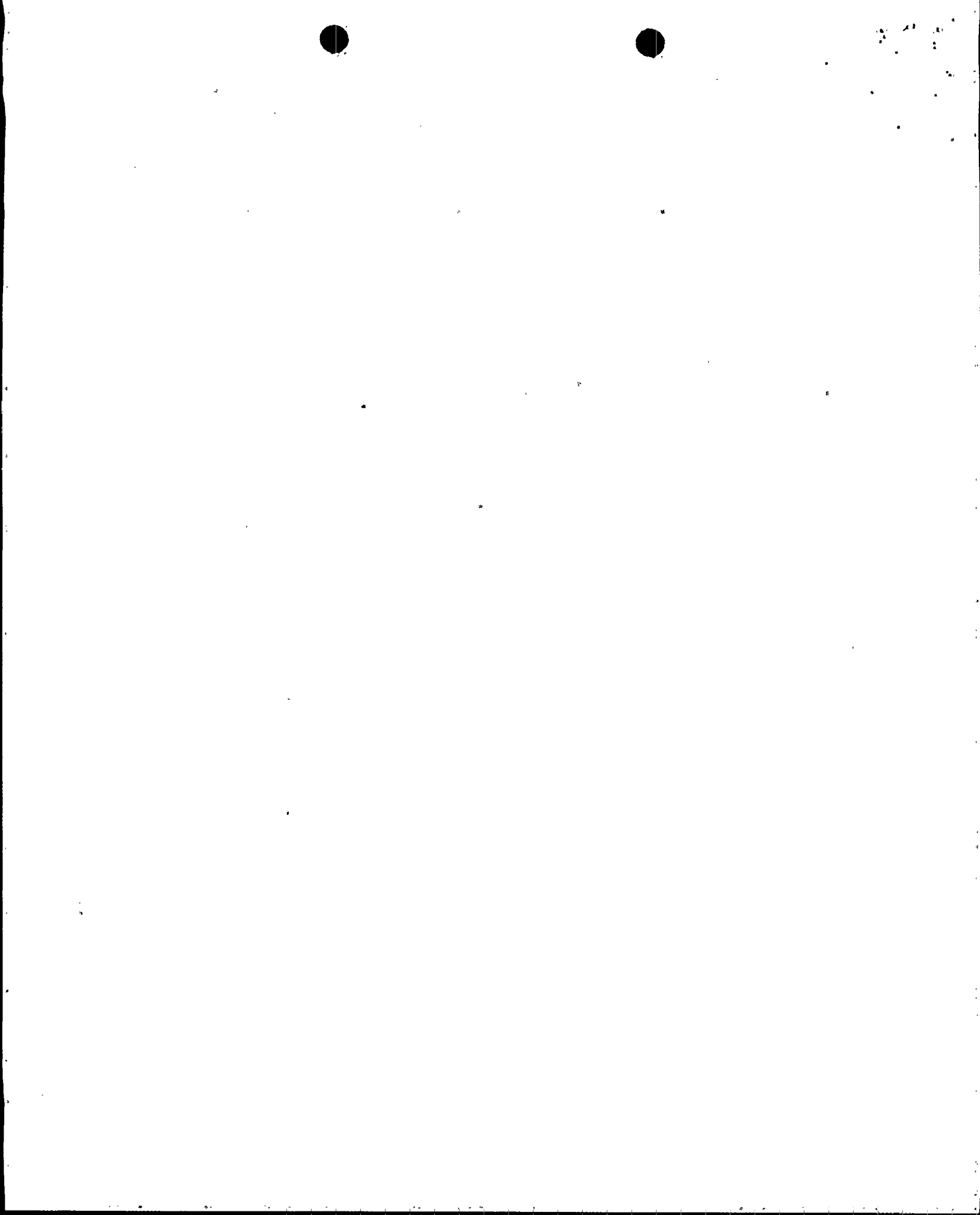
3. This license amendment is effective as of its date of issuance and shall be implemented within 30 days from the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION


Frederick J. Hebdon, Director
Project Directorate II-4
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 30, 1994



ATTACHMENT TO LICENSE AMENDMENT NO. 182

FACILITY OPERATING LICENSE NO. DPR-68

DOCKET NO. 50-296

Revise the Appendix A Technical Specifications by removing the pages identified below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain marginal lines indicating the area of change. Overleaf* pages are provided to maintain document completeness.

REMOVE

3.2/4.2-16
3.2/4.2-17
3.2/4.2-39
3.2/4.2-40
3.2/4.2-43
3.2/4.2-44
3.2/4.2-60
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INSERT

3.2/4.2-16
3.2/4.2-17*
3.2/4.2-39
3.2/4.2-40*
3.2/4.2-43*
3.2/4.2-44
3.2/4.2-60
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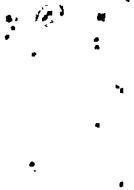


TABLE 3.2.B (Continued)

Unit	Minimum No. Operable Per Trip Sys(1)	Function	Trip Level Setting	Action	Remarks
BRN	2	Instrument Channel - Reactor Low Pressure (PS-3-74 A & B, SW #2) (PS-68-95, SW #2) (PS-68-96, SW #2)	450 psig \pm 15	A	1. Below trip setting permissive for opening CSS and LPCI admission valves.
Unit 3	2	Instrument Channel - Reactor Low Pressure (PS-3-74 A & B, SW #1) (PS-68-95, SW #1) (PS-68-96, SW #1)	230 psig \pm 15	A	1. Recirculation discharge valve actuation.
	2	Core Spray Auto Sequencing Timers (5)	$6 \leq t \leq 8$ sec.	B	1. With diesel power 2. One per motor
	2	LPCI Auto Sequencing Timers (5)	$0 \leq t \leq 1$ sec.	B	1. With diesel power 2. One per motor
	1	RHR SW A3, B1, C3, and D1 Timers	$13 \leq t \leq 15$ sec.	A	1. With diesel power 2. One per pump
	2	Core Spray and LPCI Auto Sequencing Timers (6)	$0 \leq t \leq 1$ sec. $6 \leq t \leq 8$ sec. $12 \leq t \leq 16$ sec. $18 \leq t \leq 24$ sec.	B	1. With normal power 2. One per CSS motor 3. Two per RHR motor
	1	RHR SW A3, B1, C3, and D1 Timers	$27 \leq t \leq 29$ sec.	A	1. With normal power 2. One per pump

3.2/4.2-16

AMENDMENT NO. 182

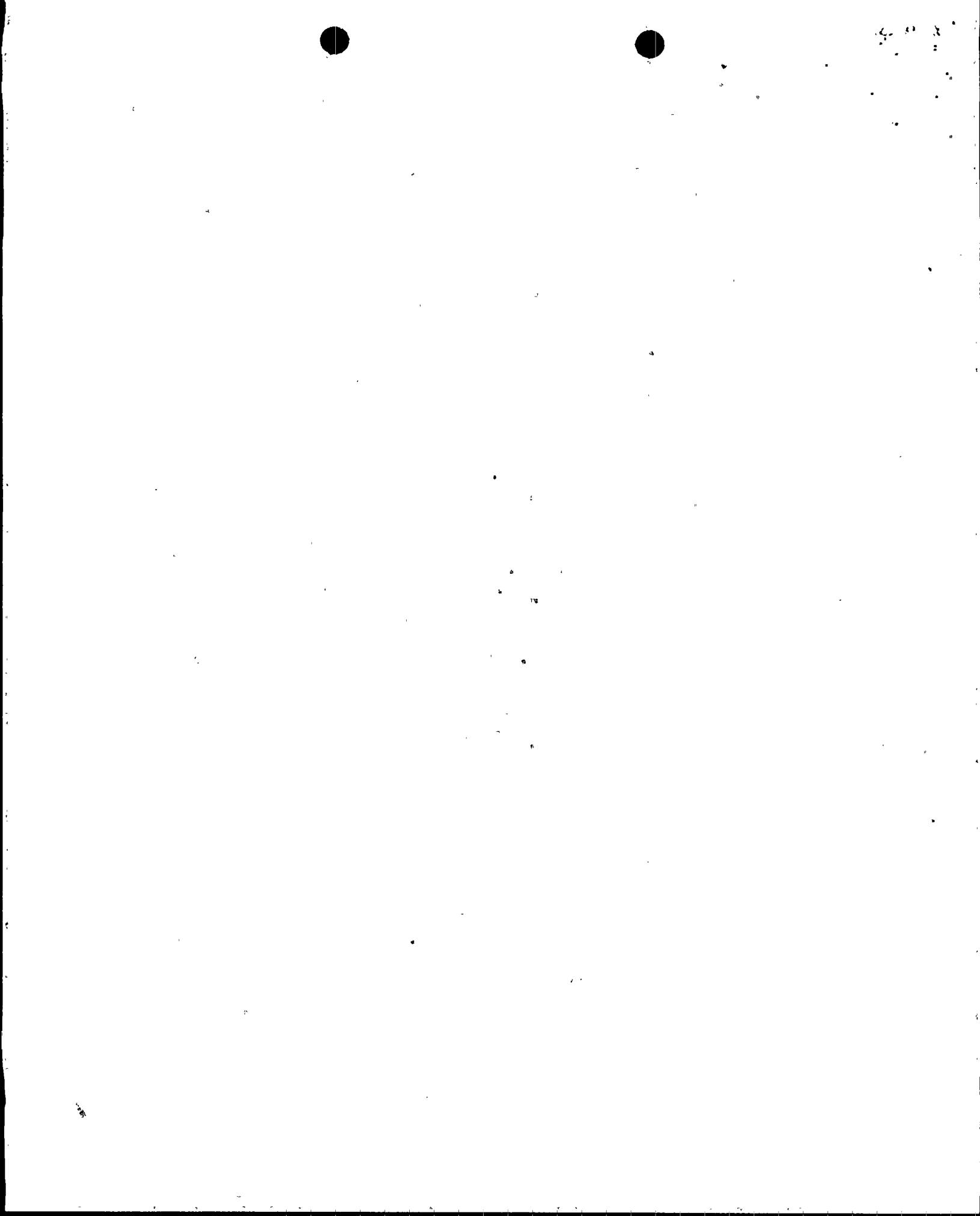


TABLE 3.2.B (Continued)

Minimum No. Operable Per Trip Sys(1)	Function	Trip Level Setting	Action	Remarks
2	Instrument Channel - RHR Discharge Pressure	100 \pm 10 psig	A	1. Below trip setting defers ADS actuation.
2	Instrument Channel CSS Pump Discharge Pressure	185 \pm 10 psig	A	1. Below trip setting defers ADS actuation.
1(3)	Core Spray Sparger to Reactor Pressure Vessel d/p	2 psid \pm 0.4	A	1. Alarm to detect core spray sparger pipe break.
1	RHR (LPCI) Trip System bus power monitor	N/A	C	1. Monitors availability of power to logic systems.
1	Core Spray Trip System bus power monitor	N/A	C	1. Monitors availability of power to logic systems.
1	ADS Trip System bus power monitor	N/A	C	1. Monitors availability of power to logic systems and valves.

BFN
Unit 3

3.2/4.2-17

AMENDMENT NO. 178

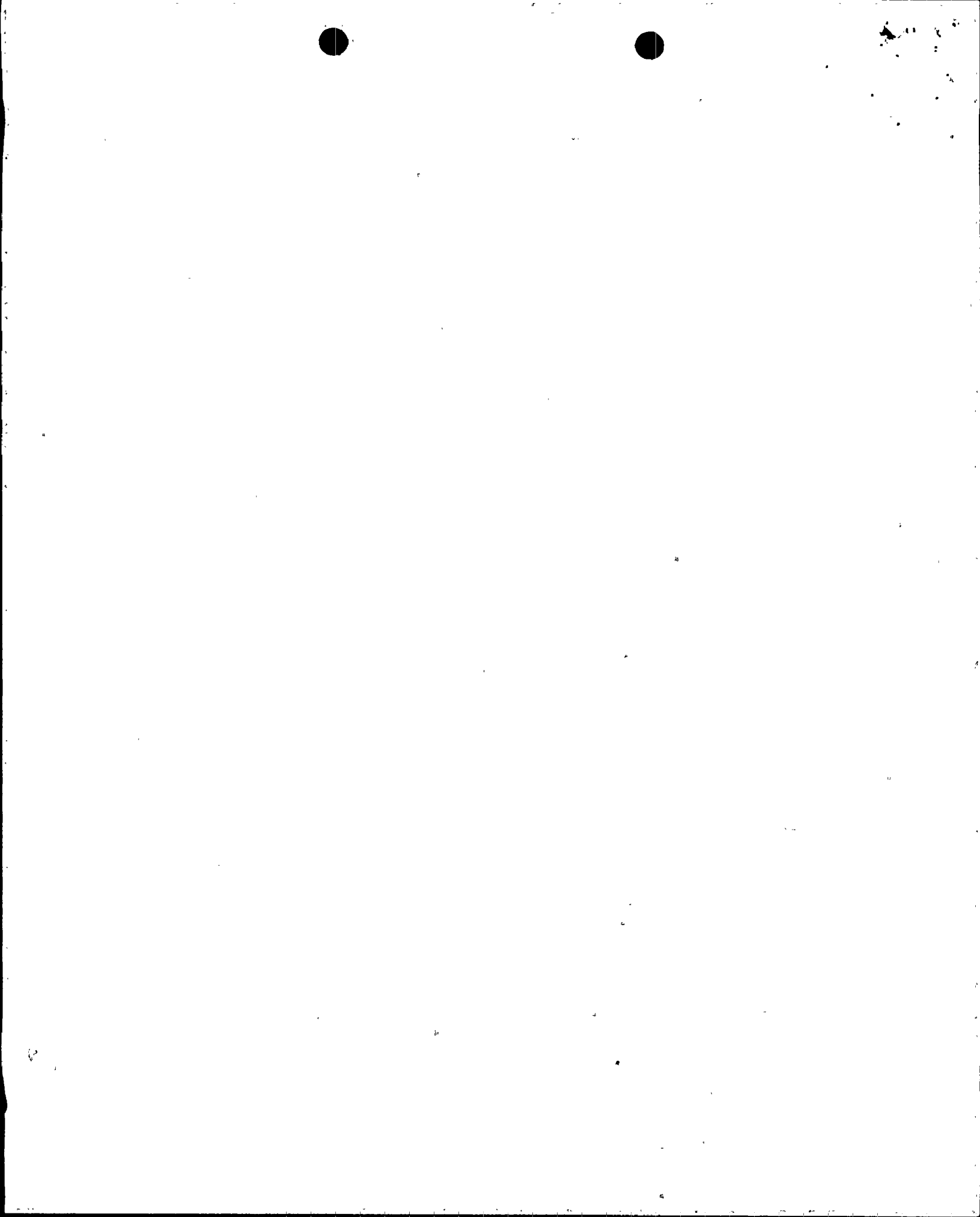


TABLE 4.2.A
SURVEILLANCE REQUIREMENTS FOR PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

<u>Function</u>	<u>Functional Test</u>	<u>Calibration Frequency</u>	<u>Instrument Check</u>
Instrument Channel - Reactor Low Water Level (LIS-3-203A-D, SW 2-3)	(1)	(5)	once/day
Instrument Channel - Reactor High Pressure (PS-68-93 & -94)	(31)	once/18 months	None
Instrument Channel - Reactor Low Water Level (LIS-3-56A-D, SW #1)	(1)	once/3 month	once/day
Instrument Channel - High Drywell Pressure (PS-64-56A-D)	(1)	(5)	N/A
Instrument Channel - High Radiation Main Steam Line Tunnel	once/3 months (27)	(5)	once/day
Instrument Channel - Low Pressure Main Steam Line	once/3 months (27)	once/3 months	None
Instrument Channel - High Flow Main Steam Line	once/3 months (27)	once/3 months	once/day

BFN
Unit 3

3.2/4.2-39

AMENDMENT NO. 182



BFN
Unit 3

3.2/4.2-40

AMENDMENT NO. 167

TABLE 4.2.A
SURVEILLANCE REQUIREMENTS FOR PRIMARY CONTAINMENT AND REACTOR BUILDING ISOLATION INSTRUMENTATION

<u>Function</u>	<u>Functional Test</u>	<u>Calibration Frequency</u>	<u>Instrument Check</u>
Instrument Channel - Main Steam Line Tunnel High Temperature	once/3 months (27)	once/operating cycle	None
Instrument Channel - Reactor Building Ventilation High Radiation - Reactor Zone	(1) (30)	once/18 months	once/day (8)
Instrument Channel - Reactor Building Ventilation High Radiation - Refueling Zone	(1) (30)	once/18 Months	once/day (8)
Instrument Channel - SGTS Train A Heaters	(4)	(9)	N/A
Instrument Channel - SGTS Train B Heaters	(4)	(9)	N/A
Instrument Channel - SGTS Train C Heaters	(4)	(9)	N/A
Reactor Building Isolation Timer (refueling floor)	(4)	once/operating cycle	N/A
Reactor Building Isolation Timer (reactor zone)	(4)	once/operating cycle	N/A



TABLE 4.2.B
SURVEILLANCE REQUIREMENTS FOR INSTRUMENTATION THAT INITIATE OR CONTROL THE CSCS

<u>Function</u>	<u>Functional Test</u>	<u>Calibration</u>	<u>Instrument Check</u>
Instrument Channel - Reactor Low Water Level (LIS-3-58A-D)	(1)	once/3 months	once/day
Instrument Channel - Reactor Low Water Level (LIS-3-184 & 185)	(1)	once/3 months	once/day
Instrument Channel - Reactor Low Water Level (LITS-3-52 & 62)	(1)	once/3 months	once/day
Instrument Channel - Drywell High Pressure (PS-64-58E-H)	(1)	once/3 months	none
Instrument Channel - Drywell High Pressure (PS-64-58A-D)	(1)	once/3 months	none
Instrument Channel - Drywell High Pressure (PS-64-57A-D)	(1)	once/3 months	none
Instrument Channel - Reactor Low Pressure (PS-3-74A & B) (PS-68-95) (PS-68-96)	(1)	once/3 months	none

BFN
Unit 3

3.2/4.2-43

AMENDMENT NO. 135



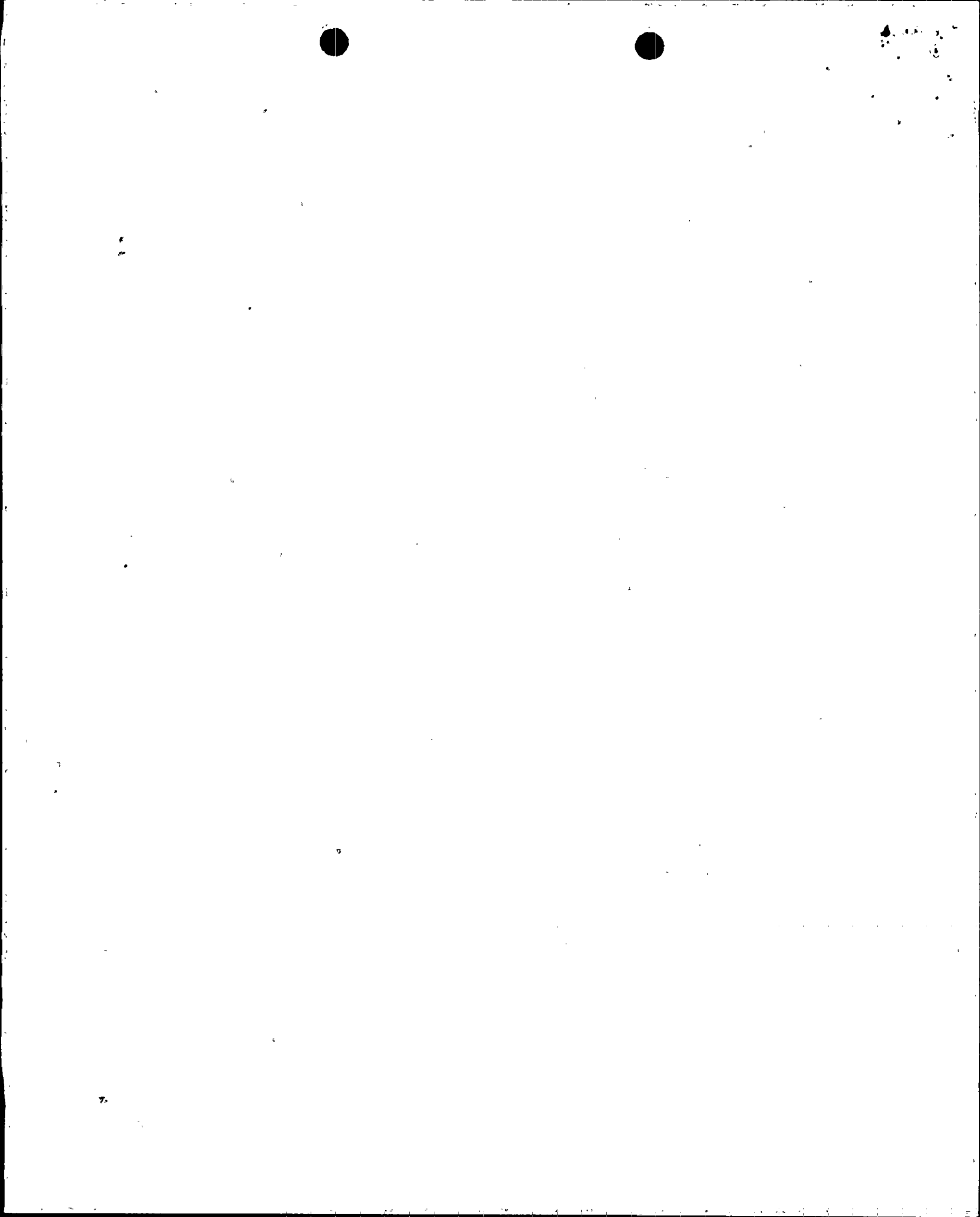
TABLE 4.2.B (Cont'd)
SURVEILLANCE REQUIREMENTS FOR INSTRUMENTATION THAT INITIATE OR CONTROL THE CSCS

<u>Function</u>	<u>Functional Test</u>	<u>Calibration</u>	<u>Instrument Check</u>
Core Spray Auto Sequencing Timers (Normal Power)	(4)	once/operating cycle	none
Core Spray Auto Sequencing Timers (Diesel Power)	(4)	once/operating cycle	none
LPCI Auto Sequencing Timers (Normal Power)	(4)	once/operating cycle	none
LPCI Auto Sequencing Timers (Diesel Power)	(4)	once/operating cycle	none
RHRSW A3, B1, C3, D1 Timers (Normal Power)	(4)	once/operating cycle	none
RHRSW A3, B1, C3, D1 Timers (Diesel Power)	(4)	once/operating cycle	none
ADS Timer	(4)	once/operating cycle	none
ADS High Drywell Pressure Bypass Timer	(4)	once/operating cycle	none

BFN
Unit 3

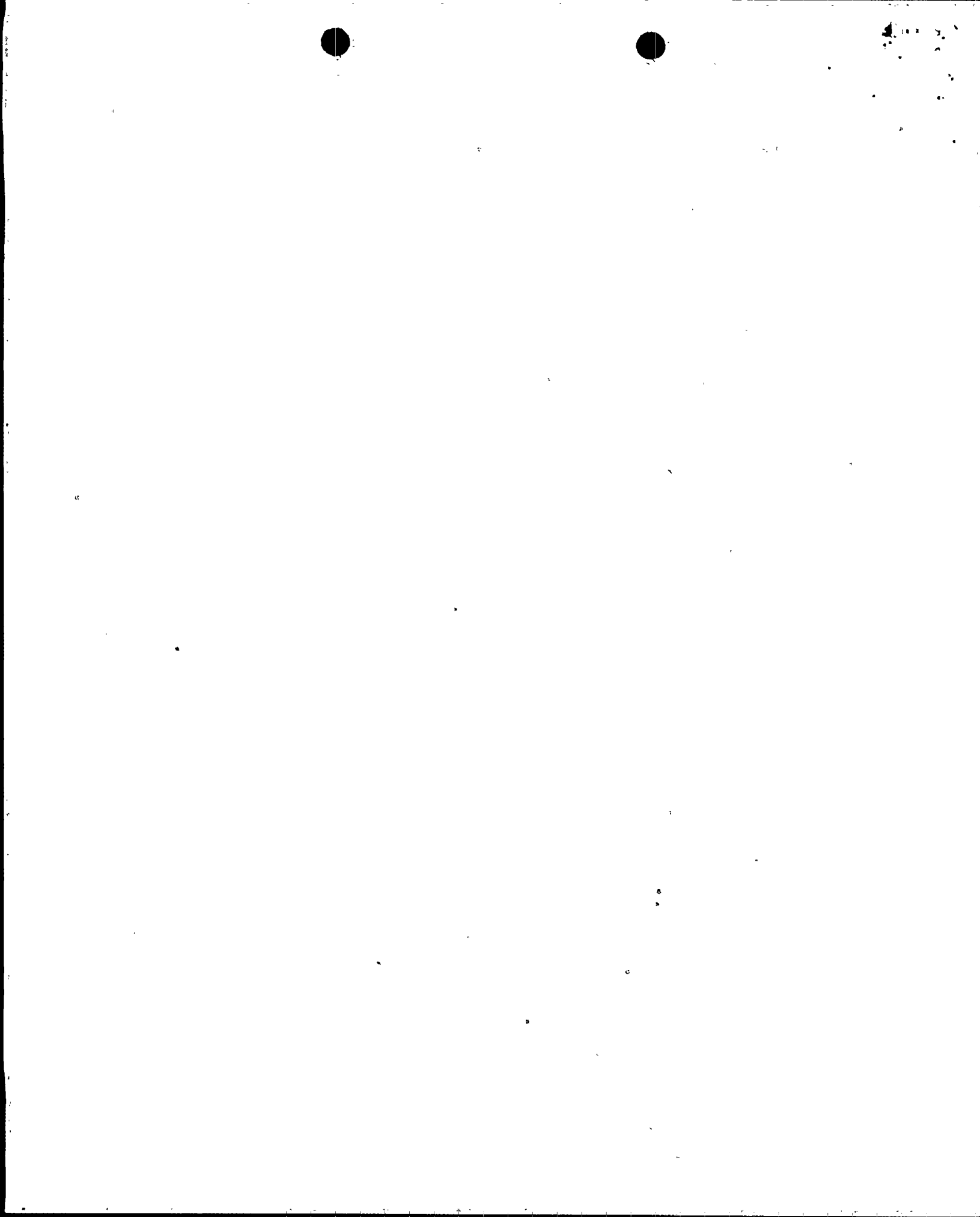
3.2/4.2-44

AMENDMENT NO. 182



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. Functional tests shall be performed once/3 months.



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Unit 3

3.2/4.2-60a

AMENDMENT NO. 135

