



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

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-325

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 73  
License No. DPR-71

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Carolina Power & Light Company (the licensee) dated March 2, 1984 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-71 is hereby amended to read as follows:


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2. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 73, 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 the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Domenic B. Vassallo, Chief  
Operating Reactors Branch #2  
Division of Licensing

Attachment:  
Changes to the  
Technical Specifications

Date of Issuance: August 13, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 73

FACILITY OPERATING LICENSE NO. DPR-71

DOCKET NO. 50-325

Revise the Appendix A Technical Specifications as follows:

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INSTRUMENTATIONACCIDENT MONITORING INSTRUMENTATIONLIMITING CONDITION FOR OPERATION

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3.3.5.3 The accident monitoring instrumentation channels shown in Table 3.3.5.3-1 shall be OPERABLE.

APPLICABILITY: As shown in Table 3.3.5.3-1.

ACTION:

- a. With one or more accident monitoring instrumentation channels inoperable, take the ACTION required by Table 3.3.5.3-1.
- b. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

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4.3.5.3 Each of the above required accident monitoring instrumentation channels shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3.5.3-1.

TABLE 3.3.5.3-1  
ACCIDENT MONITORING INSTRUMENTATION

| <u>INSTRUMENT AND INSTRUMENT NUMBER</u>   | <u>REQUIRED NUMBER<br/>OF CHANNELS</u> | <u>MINIMUM<br/>CHANNELS<br/>OPERABLE</u> | <u>APPLICABLE<br/>OPERATIONAL<br/>CONDITIONS</u> | <u>ACTION</u> |
|---|--|--|--|---------------|
| 1. Reactor Vessel Pressure<br>(B21-PI-R004A,B; C32-LPR-R608;<br>and C32-PT-N005A,B)   | 2                                      | 1  | 1, 2   | 82            |
| 2. Reactor Vessel Water Level<br>(B21-LITS-N026A,B; B21-LR-R615;<br>B21-LI-R604A,B; B21-LT-N037;<br>and B21-LTM-N037-1)           | 2                                      | 1  | 1, 2   | 82            |
| 3. Suppression Chamber Water Level<br>(CAC-LT-2601; CAC-LI-2601-1)<br>(CAC-LT-2602; CAC-LR-2602)                                  | 2                                      | 1  | 1, 2   | 82            |
| 4. Suppression Chamber Water Temperature<br>(CAC-TR-1258-14, 21; and C91-P602)  | 2                                      | 1  | 1, 2   | 82            |
| 5. Suppression Chamber Atmosphere Temperature<br>(CAC-TR-1258-17 thru 20; and C91-P602)   | 2                                      | 1  | 1, 2   | 82            |
| 6. Drywell Pressure<br>(CAC-PI-4176; CAC-PT-4176;<br>CAC-PR-1257-1; and CAC-PT-4175)  | 2                                      | 1  | 1, 2   | 82            |
| 7. Drywell Temperature<br>(CAC-TR-1258-1 thru 13, 22, 23, 24 and C91-P602)  | 2                                      | 1  | 1, 2   | 82            |
| 8. Drywell Radiation<br>(CAC-AR-1260; CAC-AQH-1260-1,2,3;<br>CAC-AR-1261; CAC-AQH-1261-1,2,3;<br>CAC-AR-1262; CAC-AQH-1262-1,2,3) | 2                                      | 2  | 1, 2, 3  | 81            |

TABLE 3.3.5.3-1 (Continued)  
ACCIDENT MONITORING INSTRUMENTATION

| <u>INSTRUMENT AND INSTRUMENT NUMBER</u>   | <u>REQUIRED NUMBER<br/>OF CHANNELS</u> | <u>MINIMUM<br/>CHANNELS<br/>OPERABLE</u> | <u>APPLICABLE<br/>OPERATIONAL<br/>CONDITIONS</u> | <u>ACTION</u> |
|---|--|--|--|---------------|
| 9. Drywell Oxygen Concentration<br>(CAC-AT-4409-37; CAC-AI-4409-40;<br>CAC-X-XY-4348-2; CAC-X-XY-4349-2;<br>CAC-AR-4409-41)<br><br>(CAC-AT-4410-37; CAC-AI-4410-40;<br>CAC-X-XY-4362-2; CAC-X-XY-4363-1;<br>CAC-AR-4410-41)                         | 2 <sup>(a)</sup>                       | 1 <sup>(a)</sup>                         | 1, 2   | 82            |
| 10. Drywell Hydrogen Concentration Analyzer and Monitor<br>(CAC-AT-4409-38; CAC-AI-4409-32;<br>CAC-X-XY-4348-1; CAC-X-XY-4349-1;<br>CAC-AR-4409-42)<br><br>(CAC-AT-4410-38; CAC-AI-4410-32;<br>CAC-X-XY-4362-1; CAC-X-XY-4363-1;<br>CAC-AR-4410-42) | 2 <sup>(a)</sup>                       | 1 <sup>(a)</sup>                         | 1, 2   | 82            |
| 11. Drywell Area Radiation Monitors<br>(D22-RM-4195; D22-RI-4195)<br>(D22-RM-4196; D22-RI-4196)<br>(D22-RM-4197; D22-RI-4197)<br>(D22-RM-4198; D22-RI-4198)   | 2                                      | 2  | 1, 2   | 81            |
| 12. Safety/Relief valve Position Indication<br><br>a. Primary - Sonic (B21-FY-4157 thru 4167)<br>b. Secondary - Temp. (B21-TR-R614, points 1-11)  | 2/valve                                | 1/valve                                  | 1, 2   | 82            |

TABLE 3.3.5.3-1 (Continued)

ACCIDENT MONITORING INSTRUMENTATION

| <u>INSTRUMENT AND INSTRUMENT NUMBER</u>  | <u>REQUIRED NUMBER<br/>OF CHANNELS</u> | <u>MINIMUM<br/>CHANNELS<br/>OPERABLE</u> | <u>APPLICABLE<br/>OPERATIONAL<br/>CONDITIONS</u> | <u>ACTION</u> |
|--|--|--|--|---------------|
| 13. Turbine Building Ventilation Monitor#<br>(D12-RE-4561; D12-RE-4562;<br>D12-RR-4548-2; D12-RR-4548-3) | 1                                      | 1  | 1, 2, 3  | 81            |
| 14. Off-gas Stack Ventilation Monitor#<br>(D12-RE-4573; D12-RE-4574;<br>D12-RR-4599-2; D12-RR-4599-3)    | 1                                      | 1  | 1, 2, 3  | 81            |

# High range noble gas monitors

- (a) An OPERABLE instrument channel shall consist of the AT instrument and either the AI instrument or the XY-XY-AR instruments.

Table 3.3.5.3-1 (Continued)ACCIDENT MONITORING INSTRUMENTATION  
ACTION STATEMENTS

## ACTION 81 -

With the number of OPERABLE channels less than required by the minimum channels OPERABLE requirements, initiate the preplanned alternate method of monitoring the appropriate parameter(s) within 72 hours, and:

- 1) either restore at least the minimum number of operable channel(s) to OPERABLE status within 7 days of the event, or
- 2) prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 14 days outlining the action taken, the cause of the inoperability, and the plans and schedule for restoring the system to OPERABLE status.

## ACTION 82 -

- a. With the number of OPERABLE channels one less than the required number of channels shown in Table 3.3.5.3-1, restore the inoperable channel to OPERABLE status within 31 days or be in at least HOT SHUTDOWN within the next 12 hours.
- b. With the number of OPERABLE channels less than the minimum channels OPERABLE requirements of Table 3.3.5.3-1, restore at least the minimum number of operable channel(s) to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours.

TABLE 4.3.5.3-1

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

| <u>INSTRUMENT AND INSTRUMENT NUMBER</u>   | <u>CHANNEL<br/>CHECK</u> | <u>CHANNEL<br/>CALIBRATION</u> |
|---|--------------------------|--------------------------------|
| 1. Reactor Vessel Pressure<br>(B21-PI-R004A,B; C32-LPR-R608; and C32-PT-N005A,B)  | M                        | R                              |
| 2. Reactor Vessel Water Level<br>(B21-LITS-N026A,B; B21-LR-R615; B21-LI-R604A,B;<br>B21-LT-N037; and B21-LTM-N037-1)  | M                        | R                              |
| 3. Suppression Chamber Water Level<br>(CAC-LT-2601; CAC-LI-2601-1)<br>(CAC-LT-2602; CAC-LR-2602)  | M                        | R                              |
| 4. Suppression Chamber Water Temperature<br>(CAC-TR-1258-14, 21; and C91-P602)  | M                        | R                              |
| 5. Suppression Chamber Atmosphere Temperature<br>(CAC-TR-1258-17 thru 20; and C91-P602)   | M                        | R                              |
| 6. Drywell Pressure<br>(CAC-PI-4176; CAC-PT-4176; CAC-PR-1257-1; and CAC-PT-4175)   | M                        | R                              |
| 7. Drywell Temperature<br>(CAC-TR-1258-1 thru 13, 22, 23, 24; and C91-P602)   | M                        | R                              |
| 8. Drywell Radiation<br>(CAC-AR-1260; CAC-AQH-1260-1,2,3;<br>CAC-AR-1261; CAC-AQH-1261-1,2,3;<br>CAC-AR-1262; CAC-AQH-1262-1,2,3)   | M                        | R                              |
| 9. Drywell Oxygen Concentration<br>(CAC-AT-4409-37; CAC-AI-4409-40; CAC-X-XY-4348-2;<br>CAC-X-XY-4349-2; CAC-AR-4409-41)<br>(CAC-AT-4410-37; CAC-AI-4410-40; CAC-X-XY-4362-2;<br>CAC-X-XY-4363-2; CAC-AR-4410-41) | M                        | R                              |

TABLE 4.3.5.3-1 (Continued)

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

| <u>INSTRUMENT AND INSTRUMENT NUMBER</u>   | <u>CHANNEL CHECK</u> | <u>CHANNEL CALIBRATION</u> |
|---|----------------------|----------------------------|
| 10. Drywell Hydrogen Concentration Analyzer and Monitor<br>(CAC-AT-4409-33; CAC-AI-4409-32; CAC-X-XY-4348-1;<br>CAC-X-XY-4349-1; CAC-AR-4409-42)<br>(CAC-AT-4410-38; CAC-AI-4410-32; CAC-X-XY-4362-1;<br>CAC-X-XY-4363-1; CAC-AR-4410-42) | M                    | R                          |
| 11. Drywell Area Radiation Monitor<br>(D22-RM-4195; D22-RI-4195)<br>(D22-RM-4196; D22-RI-4196)<br>(D22-RM-4197; D22-RI-4197)<br>(D22-RM-4198; D22-RI-4198)  | M                    | R*                         |
| 12. Safety Relief Valve Position Indication<br>a. Primary - Sonic (B21-FY-4157 thru 4167)<br>b. Secondary - Temp. (B21-TR-R614, points 1-11)  | M<br>M               | R<br>R                     |
| 13. Turbine Building Ventilation Monitor#<br>(D12-RE-4561; D12-RE-4562;<br>D12-RR-4548-2; D12-RR-4548-3)  | M                    | R                          |
| 14. Off-gas Stack Ventilation Monitor#<br>(D12-RE-4573; D12-RE-4574;<br>D12-RR-4599-2; D12-RR-4599-3)   | M                    | R                          |

\* 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.

# High range noble gas monitors.

INSTRUMENTATION

CHLORINE DETECTION SYSTEM

LIMITING CONDITION FOR OPERATION

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3.3.5.5 A chlorine detection system shall be OPERABLE with the alarm setpoint adjusted to actuate at a chlorine concentration of less than or equal to 5 ppm.

APPLICABILITY: OPERATIONAL CONDITIONS 1\*, 2\*, and 3\*.

ACTION:

- a. With the chlorine detection system inoperable, restore the inoperable detection system to OPERABLE status within 8 hours or be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the following 24 hours.
- b. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

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4.3.5.5 The chlorine detection system (X-AT-2977) shall be demonstrated OPERABLE by performance of a CHANNEL FUNCTIONAL TEST at least once per 31 days and a CHANNEL CALIBRATION at least once per 18 months.

\*With chlorine within the Exclusion Area.

INSTRUMENTATIONBASESMONITORING INSTRUMENTATION (Continued)3/4.3.5.2 REMOTE SHUTDOWN MONITORING INSTRUMENTATION

The OPERABILITY of the remote shutdown monitoring instrumentation ensures that sufficient capability is available to permit shutdown and maintenance of HOT SHUTDOWN of the facility from locations outside of the control room. This capability is required in the event control room habitability is lost and is consistent with General Design Criteria 19 of CFR 50.

3/4.3.5.3 ACCIDENT MONITORING INSTRUMENTATION

The OPERABILITY of the accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess important variables following an accident. This capability is consistent with the recommendations of Regulatory Guide 1.97, "Instrumentation for Light Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," December 1975 and NUREG-0578, "TMI-2 Lessons Learned Task Force Status Report and Short Term Recommendations."

3/4.3.5.4 SOURCE RANGE MONITORS

The source range monitors provide the operator with information on the status of the neutron level in the core at very low power levels during start-up. At these power levels, reactivity additions should not be made without this flux level information available to the operator. When the intermediate range monitors are on scale adequate information is available without the SRMs and they can be retracted.

3/4.3.5.5 CHLORINE DETECTION SYSTEM

The OPERABILITY of the chlorine detection systems ensures that an accidental chlorine release will be detected promptly and the necessary protective actions will be automatically initiated to provide protection for control room personnel. Upon detection of a high concentration of chlorine, the control room emergency ventilation system will automatically isolate the control room and initiate operation in the recirculation mode to provide the required protection. The detection systems required by this specification are consistent with the recommendations of Regulatory Guide 1.95 "Protection of Nuclear Power Plant Control Room Operators Against an Accidental Chlorine Release."



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

CAROLINA POWER & LIGHT COMPANY

DOCKET NO. 50-324

BRUNSWICK STEAM ELECTRIC PLANT, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 99  
License No. DPR-62

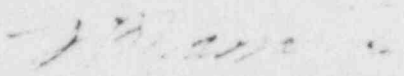
1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Carolina Power & Light Company (the licensee) dated March 2, 1984 complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules 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-62 is hereby amended to read as follows:

2. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 99, 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 the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Domenic B. Vassallo, Chief  
Operating Reactors Branch #2  
Division of Licensing

Attachment:  
Changes to the  
Technical Specifications

Date of Issuance: August 13, 1984

ATTACHMENT TO LICENSE AMENDMENT NO. 99

FACILITY OPERATING LICENSE NO. DPR-62

DOCKET NO. 50-324

Revise the Appendix A Technical Specifications as follows:

| <u>Remove</u> | <u>Insert</u> |
|---------------|---------------|
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3.3.5.3 The accident monitoring instrumentation channels shown in Table 3.3.5.3-1 shall be OPERABLE.

APPLICABILITY: As shown in Table 3.3.5.3-1.

ACTION:

- a. With one or more accident monitoring instrumentation channels inoperable, take the ACTION required by Table 3.3.5.3-1.
- b. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

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4.3.5.3 Each of the above required accident monitoring instrumentation channels shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3.5.3-1.

TABLE 3.3.5.3-1

ACCIDENT MONITORING INSTRUMENTATION

| <u>INSTRUMENT AND INSTRUMENT NUMBER</u>   | <u>REQUIRED NUMBER<br/>OF CHANNELS</u> | <u>MINIMUM<br/>CHANNELS<br/>OPERABLE</u> | <u>APPLICABLE<br/>OPERATIONAL<br/>CONDITIONS</u> | <u>ACTION</u> |
|---|--|--|--|---------------|
| 1. Reactor Vessel Pressure<br>(B21-PI-R004A,B; C32-LPR-R608;<br>and C32-PT-N005A,B)   | 2                                      | 1  | 1, 2   | 82            |
| 2. Reactor Vessel Water Level<br>(B21-LITS-N026A,B; B21-LR-R615;<br>B21-LI-R604A,B; B21-LT-N037;<br>and B21-LTM-N037-1)           | 2                                      | 1  | 1, 2   | 82            |
| 3. Suppression Chamber Water Level<br>(CAC-LT-2601; CAC-LI-2601-1)<br>(CAC-LT-2602; CAC-LR-2602)                                  | 2                                      | 1  | 1, 2   | 82            |
| 4. Suppression Chamber Water Temperature<br>(CAC-TR-1258-14, 21; and C91-P602)  | 2                                      | 1  | 1, 2   | 82            |
| 5. Suppression Chamber Atmosphere Temperature<br>(CAC-TR-1258-17 thru 20; and C91-P602) <sup>e</sup>                              | 2                                      | 1  | 1, 2   | 82            |
| 6. Drywell Pressure<br>(CAC-PI-4176; CAC-PT-4176;<br>CAC-PR-1257-1; and CAC-PT-4175)  | 2                                      | 1  | 1, 2   | 82            |
| 7. Drywell Temperature<br>(CAC-TR-1258-1 thru 13, 22, 23, 24 and C91-P602)  | 2                                      | 1  | 1, 2   | 82            |
| 8. Drywell Radiation<br>(CAC-AR-1260; CAC-AQH-1260-1,2,3;<br>CAC-AR-1261; CAC-AQH-1261-1,2,3;<br>CAC-AR-1262; CAC-AQH-1262-1,2,3) | 2                                      | 2  | 1, 2, 3  | 81            |

TABLE 3.3.5.3-1 (Continued)

ACCIDENT MONITORING INSTRUMENTATION

| <u>INSTRUMENT AND INSTRUMENT NUMBER</u>   | <u>REQUIRED NUMBER<br/>OF CHANNELS</u> | <u>MINIMUM<br/>CHANNELS<br/>OPERABLE</u> | <u>APPLICABLE<br/>OPERATIONAL<br/>CONDITIONS</u> | <u>ACTION</u> |
|---|--|--|--|---------------|
| 9. Drywell Oxygen Concentration<br>(CAC-AT-4409-37; CAC-AI-4409-40;<br>CAC-X-XY-4348-2; CAC-X-XY-4349-2;<br>CAC-AR-4409-41)<br><br>(CAC-AT-4410-37; CAC-AI-4410-40;<br>CAC-X-XY-4362-2; CAC-X-XY-4363-2;<br>CAC-AR-4410-41)                         | 2(a)                                   | 1(a)                                     | 1, 2   | 82            |
| 10. Drywell Hydrogen Concentration Analyzer and Monitor<br>(CAC-AT-4409-38; CAC-AI-4409-32;<br>CAC-X-XY-4348-1; CAC-X-XY-4349-1;<br>CAC-AR-4409-42)<br><br>(CAC-AT-4410-38; CAC-AI-4410-32;<br>CAC-X-XY-4362-1; CAC-X-XY-4363-1;<br>CAC-AR-4410-42) | 2(a)                                   | 1(a)                                     | 1, 2   | 82            |
| 11. Drywell Area Radiation Monitors<br>(D22-RM-4195; D22-RI-4195)<br>(D22-RM-4196; D22-RI-4196)<br>(D22-RM-4197; D22-RI-4197)<br>(D22-RM-4198; D22-RI-4198)   | 2                                      | 2  | 1, 2   | 81            |
| 12. Safety/Relief Valve Position Indication<br><br>a. Primary - Sonic (B21-FY-4157 thru 4167)<br>b. Secondary - Temp. (B21-TR-R614, points 1-11)  | 2/valve                                | 1/valve                                  | 1, 2   | 82            |

TABLE 3.3.5.3-1 (Continued)

ACCIDENT MONITORING INSTRUMENTATION

| <u>INSTRUMENT AND INSTRUMENT NUMBER</u>  | <u>REQUIRED NUMBER<br/>OF CHANNELS</u> | <u>MINIMUM<br/>CHANNELS<br/>OPERABLE</u> | <u>APPLICABLE<br/>OPERATIONAL<br/>CONDITIONS</u> | <u>ACTION</u> |
|--|--|--|--|---------------|
| 13. Turbine Building Ventilation Monitor#<br>(D12-RE-4561; D12-RE-4562;<br>D12-RR-4548-2; D12-RR-4548-3) | 1                                      | 1  | 1, 2, 3  | 81            |
| 14. Off-gas Stack Ventilation Monitor#<br>(D12-RE-4573; D12-RE-4574;<br>D12-RR-4599-2; D12-RR-4599-3)    | 1                                      | 1  | 1, 2, 3  | 81            |

# High range noble gas monitors.

- (a) An OPERABLE instrument channel shall consist of the AT instrument and either the AI instrument or the XY-XY-AR instruments.

Table 3.3.5.3-1 (Continued)ACCIDENT MONITORING INSTRUMENTATION  
ACTION STATEMENTS

## ACTION 81 -

With the number of OPERABLE channels less than required by the minimum channels OPERABLE requirements, initiate the preplanned alternate method of monitoring the appropriate parameter(s) within 72 hours, and:

- 1) either restore at least the minimum number of operable channel(s) to OPERABLE status within 7 days of the vent, or
- 2) prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 14 days outlining the action taken, the cause of the inoperability, and the plans and schedule for restoring the system to OPERABLE status.

## ACTION 82 -

- a. With the number of OPERABLE channels one less than the required number of channels shown in Table 3.3.5.3-1, restore the inoperable channel to OPERABLE status within 31 days or be in at least HOT SHUTDOWN within the next 12 hours.
- b. With the number of OPERABLE channels less than the minimum channels OPERABLE requirements of Table 3.3.5.3-1, restore at least the minimum number of operable channel(s) to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours.

TABLE 4.3.5.3-1

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

| <u>INSTRUMENT AND INSTRUMENT NUMBER</u>   | <u>CHANNEL<br/>CHECK</u> | <u>CHANNEL<br/>CALIBRATION</u> |
|---|--------------------------|--------------------------------|
| 1. Reactor Vessel Pressure<br>(B21-PI-R004A,B; C32-LPR-R608; and C32-PT-N005A,B)  | M                        | R                              |
| 2. Reactor Vessel Water Level<br>(B21-LITS-N026A,B; B21-LR-R615; B21-LI-R604A,B;<br>B21-LT-N037; and B21-LTM-N037-1)  | M                        | R                              |
| 3. Suppression Chamber Water Level<br>(CAC-LT-2601; CAC-LI-2601-1)<br>(CAC-LT-2602; CAC-LR-2602)  | M                        | R                              |
| 4. Suppression Chamber Water Temperature<br>(CAC-TR-1258-14, 21; and C91-P602)  | M                        | R                              |
| 5. Suppression Chamber Atmosphere Temperature<br>(CAC-TR-1258-17 thru 20; and C91-P602)   | M                        | R                              |
| 6. Drywell Pressure<br>(CAC-PI-4176; CAC-PT-4176; CAC-PR-1257-1; and CAC-PT-4175)   | M                        | R                              |
| 7. Drywell Temperature<br>(CAC-TR-1258-1 thru 13, 22, 23, 24; and C91-P602)   | M                        | R                              |
| 8. Drywell Radiation<br>(CAC-AR-1260; CAC-AQH-1260-1,2,3;<br>CAC-AR-1261; CAC-AQH-1261-1,2,3;<br>CAC-AR-1262; CAC-AQH-1262-1,2,3)   | M                        | R                              |
| 9. Drywell Oxygen Concentration<br>(CAC-AT-4409-37; CAC-AI-4409-40; CAC-X-XY-4348-2;<br>CAC-X-XY-4349-2; CAC-AR-4409-41)<br>(CAC-AT-4410-37; CAC-AI-4410-40; CAC-X-XY-4362-2;<br>CAC-X-XY-4363-2; CAC-AR-4410-41) | M                        | R                              |

TABLE 4.3.5.3-1 (Continued)

ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

| <u>INSTRUMENT AND INSTRUMENT NUMBER</u>   | <u>CHANNEL<br/>CHECK</u> | <u>CHANNEL<br/>CALIBRATION</u> |
|---|--------------------------|--------------------------------|
| 10. Drywell Hydrogen Concentration Analyzer and Monitor<br>(CAC-AT-4409-38; CAC-AI-4409-32; CAC-X-XY-4348-1;<br>CAC-X-XY-4349-1; CAC-AR-4409-42)<br>(CAC-AT-4410-38; CAC-AI-4410-32; CAC-X-XY-4362-1;<br>CAC-X-XY-4363-1; CAC-AR-4410-42) | M                        | R                              |
| 11. Drywell Area Radiation Monitor<br>(D22-RM-4195; D22-RI-4195)<br>(D22-RM-4196; D22-RI-4196)<br>(D22-RM-4197; D22-RI-4197)<br>(D22-RM-4198; D22-RI-4198)  | M                        | R*                             |
| 12. Safety Relief Valve Position Indication<br>a. Primary - Sonic (B21-FY-4157 thru 4167)<br>b. Secondary - Temp. (B21-TR-R614, points 1-11)  | M<br>M                   | R<br>R                         |
| 13. Turbine Building Ventilation Monitor#<br>(D12-RE-4561; D12-RE-4562;<br>D12-RR-4548-2; D12-RR-4548-3)  | M                        | R                              |
| 14. Off-gas Stack Ventilation Monitor#<br>(D12-RE-4573; D12-RE-4574;<br>D12-RR-4599-2; D12-RR-4599-3)   | M                        | R                              |

\* 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.

# High range noble gas monitors.

• INSTRUMENTATION

CHLORINE DETECTION SYSTEM

LIMITING CONDITION FOR OPERATION

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3.3.5.5 A chlorine detection system shall be OPERABLE with the alarm setpoint adjusted to actuate at a chlorine concentration of less than or equal to 5 ppm.

APPLICABILITY: OPERATIONAL CONDITIONS 1\*, 2\*, and 3\*.

ACTION:

- a. With the chlorine detection system inoperable, restore the inoperable detection system to OPERABLE status within 8 hours or be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the following 24 hours.
- b. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

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4.3.5.5 The chlorine detection system (X-AT-2977) shall be demonstrated OPERABLE by performance of a CHANNEL FUNCTIONAL TEST at least once per 31 days and a CHANNEL CALIBRATION at least once per 18 months.

\*With chlorine within the Exclusion Area.

## INSTRUMENTATION

### BASES

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#### MONITORING INSTRUMENTATION (Continued)

##### 3/4.3.5.2 REMOTE SHUTDOWN MONITORING INSTRUMENTATION

The OPERABILITY of the remote shutdown monitoring instrumentation ensures that sufficient capability is available to permit shutdown and maintenance of HOT SHUTDOWN of the facility from locations outside of the control room. This capability is required in the event control room habitability is lost, and is consistent with General Design Criterion 19 of CFR 50.

##### 3/4.3.5.3 ACCIDENT MONITORING INSTRUMENTATION

The OPERABILITY of the accident monitoring instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess important variables following an accident. This capability is consistent with the recommendations of Regulatory Guide 1.97, "Instrumentation for Light Water-Cooled Nuclear Power Plants to Assess Plant Conditions During and Following an Accident," December 1975, and NUREG-0578, "TMI-2 Lessons Learned Task Force Status Report and Short-Term Recommendations."

##### 3/4.3.5.4 SOURCE RANGE MONITORS

The source range monitors provide the operator with information on the status of the neutron level in the core at very low power levels during start-up. At these power levels, reactivity additions should not be made without this flux level information available to the operator. When the intermediate range monitors are on scale, adequate information is available without the SRMs and they can be retracted.

##### 3/4.3.5.5 CHLORINE DETECTION SYSTEM

The OPERABILITY of the chlorine detection systems ensures that an accidental chlorine release will be detected promptly and the necessary protective actions will be automatically initiated to provide protection for control room personnel. Upon detection of a high concentration of chlorine, the control room emergency ventilation system will automatically isolate the control room and initiate operation in the recirculation mode to provide the required protection. The detection systems required by this specification are consistent with the recommendations of Regulatory Guide 1.95, "Protection of Nuclear Power Plant Control Room Operators Against an Accidental Chlorine Release."