

June 4, 2003

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555

Subject: Duke Energy Corporation
Catawba Nuclear Station, Units 1 and 2
Docket Numbers 50-413 and 50-414
McGuire Nuclear Station, Units 1 and 2
Docket Numbers 50-369 and 50-370
Proposed Technical Specification Amendment to
Modify Requirements Applicable When Actions
Require No Positive Reactivity Additions

Reference: 1) Letter from M. S. Tuckman to U.S. Nuclear
Regulatory Commission dated November 20,
2002.
2) Letter from G. R. Peterson to U.S. Nuclear
Regulatory Commission dated January 21, 2003.

This letter provides revised Technical Specification (TS) changes for the subject proposed TS amendment. In References 1 and 2 Duke Energy requested an amendment to the Catawba and McGuire Nuclear Station Facility Operating Licenses and Technical Specifications (TS). The proposed changes would revise the Required Actions requiring suspension of operations involving positive reactivity additions and various Notes that preclude reduction in boron concentration.

Recent discussions with the NRC staff have identified that certain wording in TS Task Force (TSTF) 286, revision 1 would no longer be found as acceptable. The revised language is editorial in nature, and does not change the intent of the previous submittals.

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U.S. Nuclear Regulatory Commission

Page 2

June 4, 2003

The items discussed in this letter and in the revised TS pages have been reviewed against the No Significant Hazards Evaluation previously submitted. Duke has determined that the previous No Significant Hazards Evaluation still remains valid and has not been affected by any of these changes. There are no commitments contained within this letter.

Pursuant to 10 CFR 50.91, a copy of this letter is being sent to the appropriate state officials.

Inquiries on this matter should be directed to R. D. Hart at (803) 831-3622.

Very truly yours,

A handwritten signature in black ink, appearing to read "G.R. Peterson". The signature is written in a cursive, flowing style.

G.R. Peterson

RDH/s

Attachments

U.S. Nuclear Regulatory Commission

Page 3

June 4, 2003

Gary R. Peterson affirms that he the person who subscribed his name to the foregoing statement, and that all statements and matters set forth herein are true and correct to the best of his knowledge.



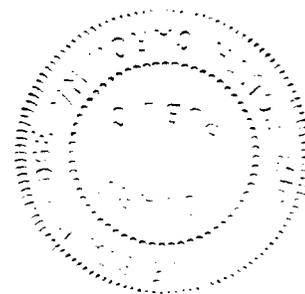
Gary R. Peterson, Site Vice President

Subscribed and sworn to me: 6-4-2003
Date



Notary Public

My commission expires: 7-10-2012
Date



SEAL

U.S. Nuclear Regulatory Commission

Page 4

June 4, 2003

xc (with attachments):

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ATTACHMENT 1

REPRINTED TECHNICAL SPECIFICATION PAGES FOR CATAWBA

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.5 RCS Loops — MODE 3

LCO 3.4.5 Three RCS loops shall be OPERABLE, and either:

- a. Three RCS loops shall be in operation when the Rod Control System is capable of rod withdrawal; or
- b. One RCS loop shall be in operation when the Rod Control System is not capable of rod withdrawal.

-----NOTE-----

All reactor coolant pumps may be de-energized for ≤ 1 hour per 8 hour period provided:

- a. No operations are permitted that would cause introduction of coolant into the RCS with boron concentration less than required to meet SDM of LCO 3.1.1 and maintain $k_{eff} < 0.99$; and
 - b. Core outlet temperature is maintained at least 10°F below saturation temperature.
-

APPLICABILITY: MODE 3.

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|---|--|-----------------|
| A. One or two required RCS loop(s) inoperable. | A.1 Restore required RCS loop(s) to OPERABLE status. | 72 hours |
| B. Required Action and associated Completion Time of Condition A not met. | B.1 Be in MODE 4. | 12 hours |

(continued)

ACTIONS (continued)

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|--|--|
| <p>C. One or two required RCS loop(s) not in operation and Rod Control System capable of rod withdrawal.</p> | <p>C.1 Restore required RCS loop(s) to operation.</p> <p><u>OR</u></p> <p>C.2 De-energize all control rod drive mechanisms (CRDMs).</p> | <p>1 hour</p> <p>1 hour</p> |
| <p>D. Three required RCS loops inoperable.</p> <p><u>OR</u></p> <p>No RCS loop in operation.</p> | <p>D.1 De-energize all CRDMs.</p> <p><u>AND</u></p> <p>D.2 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet SDM of LCO 3.1.1.</p> <p><u>AND</u></p> <p>D.3 Initiate action to restore one RCS loop to OPERABLE status and operation.</p> | <p>Immediately</p> <p>Immediately</p> <p>Immediately</p> |

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.6 RCS Loops — MODE 4

LCO 3.4.6 Two loops consisting of any combination of RCS loops and residual heat removal (RHR) loops shall be OPERABLE, and one loop shall be in operation.

-----NOTES-----

1. All reactor coolant pumps (RCPs) and RHR pumps may be de-energized for ≤ 1 hour per 8 hour period provided:
 - a. No operations are permitted that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1 and maintain $k_{eff} < 0.99$; and
 - b. Core outlet temperature is maintained at least 10°F below saturation temperature.
2. No RCP shall be started with any RCS cold leg temperature $\leq 285^\circ\text{F}$ unless the secondary side water temperature of each steam generator (SG) is $\leq 50^\circ\text{F}$ above each of the RCS cold leg temperatures.

APPLICABILITY: MODE 4.

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|--|-----------------|
| A. One RCS loop OPERABLE. <u>AND</u> Two RHR loops inoperable. | A.1 Initiate action to restore a second loop to OPERABLE status. | Immediately |

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.7 RCS Loops — MODE 5, Loops Filled

LCO 3.4.7 One residual heat removal (RHR) loop shall be OPERABLE and in operation, and either:

- a. One additional RHR loop shall be OPERABLE; or
- b. The secondary side water level of at least two steam generators (SGs) shall be \geq 12% narrow range.

NOTES

1. The RHR pump of the loop in operation may be de-energized for \leq 1 hour per 8 hour period provided:
 - a. No operations are permitted that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1; and
 - b. Core outlet temperature is maintained at least 10°F below saturation temperature.
 2. One required RHR loop may be inoperable for up to 2 hours for surveillance testing provided that the other RHR loop is OPERABLE and in operation.
 3. No reactor coolant pump shall be started with one or more RCS cold leg temperatures \leq 285°F unless the secondary side water temperature of each SG is \leq 50°F above each of the RCS cold leg temperatures.
 4. All RHR loops may be removed from operation during planned heatup to MODE 4 when at least one RCS loop is in operation.
-

APPLICABILITY: MODE 5 with RCS loops filled.

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|---|--|---------------------------------------|
| <p>A. One RHR loop inoperable.</p> <p><u>AND</u></p> <p>Required SGs secondary side water levels not within limits.</p> | <p>A.1 Initiate action to restore a second RHR loop to OPERABLE status.</p> <p><u>OR</u></p> <p>A.2 Initiate action to restore required SG secondary side water levels to within limits.</p> | <p>Immediately</p> <p>Immediately</p> |
| <p>B. Required RHR loops inoperable.</p> <p><u>OR</u></p> <p>No RHR loop in operation.</p> | <p>B.1 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet SDM of LCO 3.1.1.</p> <p><u>AND</u></p> <p>B.2 Initiate action to restore one RHR loop to OPERABLE status and operation.</p> | <p>Immediately</p> <p>Immediately</p> |

SURVEILLANCE REQUIREMENTS

| SURVEILLANCE | FREQUENCY |
|---|-----------------|
| <p>SR 3.4.7.1 Verify one RHR loop is in operation.</p> | <p>12 hours</p> |
| <p>SR 3.4.7.2 Verify SG secondary side water level is \geq 12% narrow range in required SGs.</p> | <p>12 hours</p> |
| <p>SR 3.4.7.3 Verify correct breaker alignment and indicated power are available to the required RHR pump that is not in operation.</p> | <p>7 days</p> |

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.8 RCS Loops—MODE 5, Loops Not Filled

LCO 3.4.8 Two residual heat removal (RHR) loops shall be OPERABLE and one RHR loop shall be in operation.

-----NOTES-----

1. All RHR pumps may be de-energized for ≤ 15 minutes when switching from one loop to another provided:
 - a. The core outlet temperature is maintained at least 10°F below saturation temperature.
 - b. No operations are permitted that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1; and
 - c. No draining operations to further reduce the RCS water volume are permitted.
 2. One RHR loop may be inoperable for ≤ 2 hours for surveillance testing provided that the other RHR loop is OPERABLE and in operation.
-

APPLICABILITY: MODE 5 with RCS loops not filled.

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|-----------------------------|---|-----------------|
| A. One RHR loop inoperable. | A.1 Initiate action to restore RHR loop to OPERABLE status. | Immediately |

(continued)

3.9 REFUELING OPERATIONS

3.9.2 Nuclear Instrumentation

LCO 3.9.2 Two Boron Dilution Mitigation System (BDMS) trains shall be OPERABLE.

-----NOTE-----
Automatic actuation of the BDMS may be blocked during core reloading until two assemblies are loaded into the core.

APPLICABILITY: MODE 6.

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|---|---|--------------------------|
| <p>A. One or both BDMS trains inoperable.</p> | <p>A.1.1 Suspend CORE ALTERATIONS.</p> | <p>Immediately</p> |
| | <p><u>AND</u></p> | |
| | <p>A.1.2 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet the boron concentration of LCO 3.9.1.</p> | <p>Immediately</p> |
| | <p><u>AND</u></p> | |
| | <p>A.1.3 Verify unborated water source isolation valve(s) are closed and secured.</p> | <p>1 hour</p> |
| | <p><u>AND</u></p> | |
| | <p>A.1.4 Perform SR 3.9.1.1.</p> | <p>Once per 12 hours</p> |
| | <p><u>OR</u></p> | <p>(continued)</p> |

3.9 REFUELING OPERATIONS

3.9.4 Residual Heat Removal (RHR) and Coolant Circulation — High Water Level

LCO 3.9.4 One RHR loop shall be OPERABLE and in operation.

-----NOTE-----

The required RHR loop may be removed from operation for ≤ 1 hour per 8 hour period, provided no operations are permitted that would cause introduction of coolant into the Reactor Coolant System with boron concentration less than required to meet the minimum required boron concentration of LCO 3.9.1.

APPLICABILITY: MODE 6 with the water level ≥ 23 ft above the top of reactor vessel flange.

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|---|--------------------|
| <p>A. RHR loop requirements not met.</p> | <p>A.1 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet the boron concentration of LCO 3.9.1.</p> | <p>Immediately</p> |
| | <p><u>AND</u></p> | |
| | <p>A.2 Suspend loading irradiated fuel assemblies in the core.</p> | <p>Immediately</p> |
| | <p><u>AND</u></p> | |
| | <p>A.3 Initiate action to satisfy RHR loop requirements.</p> | <p>Immediately</p> |
| | <p><u>AND</u></p> | <p>(continued)</p> |

3.9 REFUELING OPERATIONS

3.9.5 Residual Heat Removal (RHR) and Coolant Circulation — Low Water Level

LCO 3.9.5 Two RHR loops shall be OPERABLE, and one RHR loop shall be in operation.

APPLICABILITY: MODE 6 with the water level < 23 ft above the top of reactor vessel flange.

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|--|---------------------------------------|
| <p>A. Less than the required number of RHR loops OPERABLE.</p> | <p>A.1 Initiate action to restore required RHR loops to OPERABLE status.</p> <p><u>OR</u></p> <p>A.2 Initiate action to establish ≥ 23 ft of water above the top of reactor vessel flange.</p> | <p>Immediately</p> <p>Immediately</p> |
| <p>B. No RHR loop in operation.</p> | <p>B.1 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet the boron concentration of LCO 3.9.1.</p> <p><u>AND</u></p> | <p>Immediately</p> <p>(continued)</p> |

ATTACHMENT 2

REPRINTED TECHNICAL SPECIFICATIONS PAGES FOR MCGUIRE

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.5 RCS Loops—MODE 3

LCO 3.4.5

Three RCS loops shall be OPERABLE, and either:

- a. Three RCS loops shall be in operation when the Rod Control System is capable of rod withdrawal; or
- b. One RCS loop shall be in operation when the Rod Control System is not capable of rod withdrawal.

-----NOTE-----

All reactor coolant pumps may be de-energized for ≤ 1 hour per 8 hour period provided:

- a. No operations are permitted that would cause introduction of coolant into the RCS with boron concentration less than required to meet SDM of LCO 3.1.1 and maintain $K_{eff} < 0.99$; and
 - b. Core outlet temperature is maintained at least 10°F below saturation temperature.
-

APPLICABILITY: MODE 3.

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|---|--|-----------------|
| A. One or two required RCS loop(s) inoperable. | A.1 Restore required RCS loop(s) to OPERABLE status. | 72 hours |
| B. Required Action and associated Completion Time of Condition A not met. | B.1 Be in MODE 4. | 12 hours |

(continued)

ACTIONS (continued)

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|--|--|
| <p>C. One or two required RCS loop(s) not in operation and Rod Control System capable of rod withdrawal.</p> | <p>C.1 Restore required RCS loop(s) to operation.</p> <p><u>OR</u></p> <p>C.2 De-energize all control rod drive mechanisms (CRDMs).</p> | <p>1 hour</p> <p>1 hour</p> |
| <p>D. Three required RCS loops inoperable.</p> <p><u>OR</u></p> <p>No RCS loop in operation.</p> | <p>D.1 De-energize all CRDMs.</p> <p><u>AND</u></p> <p>D.2 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet SDM of LCO 3.1.1.</p> <p><u>AND</u></p> <p>D.3 Initiate action to restore one RCS loop to OPERABLE status and operation.</p> | <p>Immediately</p> <p>Immediately</p> <p>Immediately</p> |

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.6 RCS Loops—MODE 4

LCO 3.4.6 Two loops consisting of any combination of RCS loops and residual heat removal (RHR) loops shall be OPERABLE, and one loop shall be in operation.

-----NOTES-----

1. All reactor coolant pumps (RCPs) and RHR pumps may be de-energized for ≤ 1 hour per 8 hour period provided:
 - a. No operations are permitted that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1 and maintain $K_{eff} < 0.99$; and
 - b. Core outlet temperature is maintained at least 10°F below saturation temperature.
 2. No RCP shall be started with any RCS cold leg temperature $\leq 300^\circ\text{F}$ unless:
 - a. Secondary side water temperature of each steam generator (SG) is $\leq 50^\circ\text{F}$ above each of the RCS cold leg temperatures, or
 - b. Pressurizer water level is $< 92\%$ (1600 ft³).
-

APPLICABILITY: MODE 4.

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|--|-----------------|
| A. One RCS loop OPERABLE. <u>AND</u> Two RHR loops inoperable. | A.1 Initiate action to restore a second loop to OPERABLE status. | Immediately |

(continued)

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.7 RCS Loops—MODE 5, Loops Filled

LCO 3.4.7 One residual heat removal (RHR) loop shall be OPERABLE and in operation, and either:

- a. One additional RHR loop shall be OPERABLE; or
- b. The secondary side water level of at least two steam generators (SGs) shall be $\geq 12\%$ narrow range.

-----NOTES-----

1. The RHR pump of the loop in operation may be de-energized for ≤ 1 hour per 8 hour period provided:
 - a. No operations are permitted that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1; and
 - b. Core outlet temperature is maintained at least 10°F below saturation temperature.
2. One required RHR loop may be inoperable for up to 2 hours for surveillance testing provided that the other RHR loop is OPERABLE and in operation.
3. No reactor coolant pump shall be started with one or more RCS cold leg temperatures $\leq 300^\circ\text{F}$ unless:
 - a. Secondary side water temperature of each SG is $\leq 50^\circ\text{F}$ above each of the RCS cold leg temperatures, or
 - b. Pressurizer water level is $< 92\%$ (1600 ft³).
4. All RHR loops may be removed from operation during planned heatup to MODE 4 when at least one RCS loop is in operation.

APPLICABILITY: MODE 5 with RCS loops filled.

| | |
|---|---------------|
| SR 3.4.7.3 Verify correct breaker alignment and indicated power are available to the required RHR pump that is not in operation. | 7 days |
|---|---------------|

3.4 REACTOR COOLANT SYSTEM (RCS)

3.4.8 RCS Loops — MODE 5, Loops Not Filled

LCO 3.4.8 Two residual heat removal (RHR) loops shall be OPERABLE and one RHR loop shall be in operation.

-----NOTES-----

1. All RHR pumps may be de-energized for ≤ 15 minutes when switching from one loop to another provided:
 - a. The core outlet temperature is maintained at least 10°F below saturation temperature.
 - b. No operations are permitted that would cause introduction of coolant into the RCS with boron concentration less than required to meet the SDM of LCO 3.1.1; and
 - c. No draining operations to further reduce the RCS water volume are permitted.
2. One RHR loop may be inoperable for ≤ 2 hours for surveillance testing provided that the other RHR loop is OPERABLE and in operation.

APPLICABILITY: MODE 5 with RCS loops not filled.

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|-----------------------------|---|-----------------|
| A. One RHR loop inoperable. | A.1 Initiate action to restore RHR loop to OPERABLE status. | Immediately |

(continued)

3.9 REFUELING OPERATIONS

3.9.5 Residual Heat Removal (RHR) and Coolant Circulation — High Water Level

LCO 3.9.5 One RHR loop shall be OPERABLE and in operation.

-----NOTE-----

The required RHR loop may be removed from operation for ≤ 1 hour per 8 hour period, provided no operations are permitted that would cause introduction of coolant into the Reactor Coolant System with boron concentration less than required to meet the minimum required boron concentration of LCO 3.9.1.

APPLICABILITY: MODE 6 with the water level ≥ 23 ft above the top of reactor vessel flange.

ACTIONS

| CONDITION | REQUIRED ACTION | COMPLETION TIME |
|--|--|--------------------|
| <p>A. RHR loop requirements not met.</p> | <p>A.1 Suspend operations that would cause introduction of coolant into the RCS with boron concentration less than required to meet the boron concentration of LCO 3.9.1</p> | <p>Immediately</p> |
| | <p><u>AND</u></p> <p>A.2 Suspend loading irradiated fuel assemblies in the core.</p> | <p>Immediately</p> |
| | <p><u>AND</u></p> <p>A.3 Initiate action to satisfy RHR loop requirements.</p> <p><u>AND</u></p> | <p>Immediately</p> |

(continued)

