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March 22, 2000

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555-0001

Subject: Duke Energy Corporation
Catawba Nuclear Station
Docket Nos. 50-413 and 50-414
UFSAR/Selected Licensee Commitment Changes

Pursuant to 10CFR 50.71(e), please find attached changes to the Catawba Nuclear Station Selected Licensee Commitments Manual. This document constitutes Chapter 16 of the Updated Final Safety Analysis Report (UFSAR).

Any questions regarding this information should be directed to L.J. Rudy, Regulatory Compliance, at (803) 831-3084.

I certify that I am a duly authorized officer of Duke Energy Corporation, and that the information contained herein accurately represents changes made to Chapter 16 of the UFSAR since the previous submittal, necessary to reflect information and analyses submitted to the Commission or prepared pursuant to Commission requirement.

FOR
Gary R. Peterson

Attachment

A053

xc: L. A. Reyes, Regional Administrator
U. S. Nuclear Regulatory Commission, Region II

C. P. Patel, Project Manager
U.S. Nuclear Regulatory Commission
Office of Nuclear Reactor Regulation, Mail Stop 0-8 H12

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March 22, 2000

RE: Catawba Nuclear Station
Selected Licensee Commitments Manual
Revision Date 03/09/00

Attached are revisions to the Catawba Nuclear Station Selected Licensee Commitments Manual. Please remove and replace the following pages:

REMOVE	INSERT
LIST OF EFFECTIVE PAGES	
Pages 1 & 5 of 8	Pages 1 & 5 of 8
TAB 16.0	
Chapter 16.0, pages 1 & 2 of 4 dated 01/16/99	Chapter 16.0, page 1 & 2 of 4 dated 03/09/00
TAB 16.5	
Chapter 16.5-1, pages 1-4 of 4 dated 01/16/99	Chapter 16.5-1, pages 1-4 of 4 dated 03/09/00
TAB 16.9	
Chapter 16.9-7, pages 1 & 2 of 2 dated 01/16/99	Chapter 16.9-7, pages 1 & 2 of 2 dated 03/09/00
Chapter 16.9-9, pages 1 & 2 of 2 dated 01/16/99	Chapter 16.9-9, pages 1 & 2 of 2 dated 03/09/00

If you have any questions concerning the contents of this package update, contact Toni Pasour at (803) 831-3566.

Gary D. Gilbert
Regulatory Compliance Manager

CATAWBA NUCLEAR STATION
SELECTED LICENSEE COMMITMENTS MANUAL

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CATAWBA NUCLEAR STATION
FINAL SAFETY ANALYSIS REPORT
SELECTED LICENSEE COMMITMENTS

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16.5 REACTOR COOLANT SYSTEM

16.5-1 REDUCED INVENTORY AND MID-LOOP OPERATION WITH IRRADIATED FUEL IN THE CORE

COMMITMENT:

Operations with Reactor Coolant (NC) system levels less than or equal to 16% with fuel in the core shall be conducted under the following conditions:

1) At least one hot leg will be maintained with no S/G nozzle dam installed until the reactor vessel head has been removed.

2) If S/G nozzle dams are to be used, one hot leg dam and a hot or cold leg manway on the associated S/G shall remain out anytime the reactor vessel head is in place. If a cold leg manway is being used, the configuration of vent path established by an open hot leg nozzle, over the U-bend tubes, and out the cold leg manway is acceptable with any combination of other cold leg or hot leg nozzle dams.

3) Two independent trains of NC level instruments are required. These instruments shall have independent transmitters and shall not include the NC System sightglass (NCLG-6450) or tygon tubing.

4) Two core exit thermocouples shall be maintained operating with temporary high alarms set at 140°F and monitored except as noted below:

   - Final disconnection of the last two core exit thermocouples shall occur no sooner than two hours prior to reactor vessel head removal.
   - Reconnection of at least two thermocouples within two hours after reinstalling the reactor vessel head.
   - The total time without thermocouple indication shall not exceed 12 hours.

5) Three power sources shall be available as follows:

   - Two off-site power sources and one D/G, or
   - One off-site power source and two D/Gs.

6) Two independent makeup paths of borated water shall be available, during each of the following conditions:

COMMITMENT (con't)

a) Reactor Coolant System intact:

- One Centrifugal Charging Pump (NV) or one Safety Injection Pump (NI) as required per SLC 16.9-7 and 16.9-9.

- One additional Safety Injection Pump (NI) or the other Centrifugal Charging Pump (NV) having its breaker installed in its associated cubicle with power removed or otherwise rendered incapable of injection per Technical Specification 3.4.12 and flow path available from the FWST to the NC System.

b) Reactor Coolant System open to Containment atmosphere via a hot leg vent path:

- One Centrifugal Charging Pump (NV) or one Safety Injection Pump (NI) as required per SLC 16.9-7 and 16.9-9.

- One of the following gravity flowpaths:

  1. FWST through ND-33 to the cold legs via NI-173A and/or NI-178B.
  2. FWST through the ND suction lines to the hotlegs.
  3. FWST through ND-33 to the hotlegs via NI-183B.

NOTE: The number of open containment penetrations is limited such that the penetrations can be closed within two hours of losing ND.

7) Containment Closure must be established. Containment Closure is verified by the performance of PT/1/(2)/A/4200/02C-I, Containment Closure Verification, with penetrations not verified acceptable, administratively controlled per OP/0/A/6100/14, Penetration Control During Modes 5 and 6.

8) The reactor has been subcritical for at least 7 days; or Engineering has provided a required subcritical time based on plant operating history and actual reduced NCS level.

APPLICABILITY:

Whenever irradiated fuel is in the reactor vessel and NC System wide range level is less than or equal to 16%.

REMEDIAL ACTION:

a) If the primary method of monitoring core exit thermocouples is unavailable then the backup means shall be used to check core exit temperatures. The backup means is the use of the Incore Instrument Panel.

The thermocouple temperatures on the Incore Instrument Panel are to be periodically checked and recorded by an operator in the control room at no greater that 15 minutes.

b) If any of the above commitments cannot be met during the time that the reactor vessel is in a reduced inventory or mid-loop condition, take immediate corrective actions to bring the plant into compliance with the COMMITMENT and contact station management for additional guidance.

TESTING REQUIREMENTS:

None

REFERENCES:

1) Generic Letter 88-17 (Loss of Decay Heat Removal)

2) NUREG 1410 (Loss of Vital AC Power and Residual Heat Removal during Mid-Loop Operation at Vogtle)

3) Catawba Nuclear Station Directive 3.1.30 Unit Shutdown Configuration Control (Mode 5, 6 and No Mode)

4) OP/1(2)/A/6150/06 (Draining the Reactor Coolant System)

5) Catawba Nuclear Station Technical Specifications

6) Catawba Design Basis Specification for the Reactor Coolant (NC) System

7) Oconee Nuclear Station Selected Licensee Commitment 16.5.3

8) Work Processes Manual, Sections 602 (Outage Management) and 603 (Unit Trip Forced Outage Management)

9) Catawba Nuclear Station responses to Generic Letter 88-17 dated January 3, 1989

BASES:

Generic Letter 88-17 and NUREG 1410 involve concerns associated with a loss of Residual Heat Removal during NC System reduced inventory. Numerous events have occurred in the industry that resulted in a loss of residual heat removal during reduced inventory operation. This is of great concern due to the potential for substantial core damage occurring in a relatively short time period.

This Selected Licensee Commitment depicts those commitments which are extremely important to nuclear safety, however, are not presently covered by Technical Specifications.

16.9 AUXILIARY SYSTEMS

16.9-7 BORATION SYSTEMS FLOW PATHS – SHUTDOWN

COMMITMENT:

As a minimum, one of the following boron injection flow paths shall be OPERABLE and capable of being powered from an OPERABLE emergency power source:

a. A flow path from the boric acid tank via a boric acid transfer pump and a charging pump to the Reactor Coolant System if the boric acid storage tank in SLC 16.9.11a. is OPERABLE, or

b. The flow path from the refueling water storage tank via a charging pump to the Reactor Coolant System if the refueling water storage tank in SLC 16.9.11b. is OPERABLE, or

c. The flow path from the refueling water storage tank via one RHR pump (Notes 1, 2) to the Reactor Coolant System through at least two RCS cold legs is OPERABLE in MODE 6 with the water level $\geq$ 23 feet above the reactor vessel flange AND the refueling water storage tank OPERABLE per SLC 16.9.11b. The RHR pump may not be the pump that is being applied to meet LCO 3.9.4, or

d. The flow path from the refueling water storage tank via one SI pump (Notes 1, 2) to the Reactor Coolant System through four RCS cold legs is OPERABLE in MODE 6 with the reactor vessel head removed AND the refueling water storage tank OPERABLE per SLC 16.9.11b.

Notes:
1. Since BDMS is inoperable when the RHR and SI pump options are used, the operator must log BDMS inoperable and enter the appropriate action per Technical Specification 3.9.2.
2. This option is technically approved for use in satisfying the SLC for boration flowpath requirements; however, operating and surveillance procedures will depend on specific outage schedule and plant configuration. Therefore, before use of this option is invoked, the operating and surveillance procedures needed to ensure compliance must be approved and in place.

APPLICABILITY:

MODE 4 with any RCS cold leg temperature $\leq$ 285°F,
MODES 5 and 6.

REMEDIAL ACTION:

With none of the above flow paths OPERABLE or capable of being powered from an OPERABLE emergency power source, suspend all operations involving CORE ALTERATIONS or positive reactivity changes.

TESTING REQUIREMENTS:

At least one of the above required flow paths shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying that the temperature of the heated portion of the flow path is greater than or equal to 65°F when a flow path from the boric acid tanks is used, and

b. At least once per 31 days by verifying that each valve (manual, power-operated, or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.

REFERENCES:

1. Letter from NRC to Gary R. Peterson, Duke, Issuance of Improved Technical Specifications Amendments for Catawba, September 30, 1998.

BASES:

The Boration System Flow Paths ensures that negative reactivity control is available during each mode of facility operation. The components required to perform this function include a flow path and boric acid transfer pump.

In MODE 4 with any RCS cold leg temperature ≤ 285°F, and in MODES 5 and 6, one Boron Injection flow path is acceptable without single failure consideration on the basis of the stable reactivity condition of the reactor and the additional restrictions prohibiting CORE ALTERATIONS and positive reactivity changes in the event the single Boron Injection flow path becomes inoperable. The boration capability of one path, in association with a charging pump, RHR pump, or SI pump, and borated water source, is sufficient to provide a SHUTDOWN MARGIN of 1.3% Δk/k after xenon decay and cooldown to 200°F and of 1% Δk/k after xenon decay and cooldown from 200°F to 140°F.

16.9 AUXILIARY SYSTEMS

16.9-9 BORATION SYSTEMS PUMPS – SHUTDOWN

COMMITMENT:

a. One charging pump in the boron injection flow path required by SLC 16.9.7 shall be OPERABLE and capable of being powered from an OPERABLE emergency power source, or

b. One RHR pump (Notes 1, 2) in the boron injection flow path required by SLC 16.9.7 shall be OPERABLE and capable of being powered by an OPERABLE emergency power source, or

c. One SI pump (Notes 1, 2) in the boron injection flow path required by SLC 16.9.7 shall be OPERABLE and capable of being powered by an OPERABLE emergency power source.

Notes:
1. Since BDMS is inoperable when the RHR and SI pump options are used, the operator must log BDMS inoperable and enter the appropriate action per Technical Specification 3.9.2.
2. This option is technically approved for use in satisfying the SLC for boration pump requirements; however, operating and surveillance procedures will depend on specific outage schedule and plant configuration. Therefore, before use of this option is invoked, the operating and surveillance procedures needed to ensure compliance must be approved and in place.

APPLICABILITY:

MODE 4 with any RCS cold leg temperature ≤ 285°F,
MODES 5 and 6.

REMEDIAL ACTION:

With no charging pump, or RHR pump, or SI pump OPERABLE or capable of being powered from an OPERABLE emergency power source, suspend all operations involving CORE ALTERATIONS or positive reactivity changes.

TESTING REQUIREMENTS:

The above required charging pump, or RHR pump, or SI pump shall be demonstrated OPERABLE by testing in accordance with the Inservice Test Program.

REFERENCES:

1. Letter from NRC to Gary R. Peterson, Duke, Issuance of Improved Technical Specifications Amendments for Catawba, September 30, 1998.

BASES:

The Boration System Pumps ensures that negative reactivity control is available during each mode of facility operation.

In MODE 4 with any RCS cold leg temperature ≤ 285°F, and in MODES 5 and 6, one charging pump, one RHR pump, or one SI pump is acceptable without single failure consideration on the basis of the stable reactivity condition of the reactor and the additional restrictions prohibiting CORE ALTERATIONS and positive reactivity changes in the event the single pump becomes inoperable. The boration capability of one charging pump, RHR pump, or SI pump in association with a flow path and borated water source, is sufficient to provide a SHUTDOWN MARGIN of 1.3% Δk/k after xenon decay and cooldown to 200°F and of 1% Δk/k after xenon decay and cooldown from 200°F to 140°F.

When the temperature of one or more RCS cold legs drops below 285°F in Mode 4, the potential for low temperature overpressurization of the reactor vessel makes it necessary to render all but one charging pump or safety injection pump inoperable. The Technical Specification 3.4.12 limitation for a maximum of one centrifugal charging or safety injection pump to be OPERABLE and the associated Surveillance Requirement to verify a maximum of one charging pump or one safety injection pump is capable of injecting into the RCS below 285°F provides assurance that a mass addition pressure transient can be relieved by the operation of a single PORV.