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CNS-16-050

10 CFR 50.71(e)

July 12, 2016

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

Subject: Duke Energy Carolinas, LLC  
Catawba Nuclear Station, Unit 1 and Unit 2  
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 Tolani Owusu, Regulatory Affairs, at (803) 701-5385.

I certify that I am a duly authorized officer of Duke Energy Carolinas, LLC, and that the information contained herein accurately represents changes made to Chapter 16 of the UFSAR since the previous submittal.

A handwritten signature in black ink, appearing to read 'KH', written over a horizontal line.

Kelvin Henderson  
Vice President, Catawba Nuclear Station

Attachment

A053  
NRR

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xc: Catherine Haney, Regional Administrator  
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July 12, 2016

Re: Catawba Nuclear Station  
Selected Licensee Commitments Manual  
Revision Date: 06/10/2016

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

**REMOVE THESE PAGES**

**INSERT THESE PAGES**

**LIST OF EFFECTIVE SECTIONS**

Pages 1 through 5  
Revision 64

Pages 1 through 5  
Revision 65

**TAB 16.7-6**

16.7-6-1 through 16.7-6-3  
Revision 2

16.7-6-1 through 16.7-6-3  
Revision 3

**TAB 16.7-13**

16.7-13-1 through 16.7-13-5  
Revision 2

16.7-13-1 through 16.7-13-5  
Revision 3

If you have any questions concerning the contents of this package update, contact Toni Lowery at (803)701-5046.

Cecil Fletcher  
Regulatory Affairs Manager

Attachment

## LIST OF EFFECTIVE SECTIONS

<u>SECTION</u>	<u>REVISION NUMBER</u>	<u>REVISION DATE</u>
TABLE OF CONTENTS	15	05/10/16
16.1	1	08/27/08
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16.3	1	08/21/09
16.5-1	3	08/19/15
16.5-2	Deleted	
16.5-3	1	02/20/04
16.5-4	0	10/09/02
16.5-5	1	01/28/10
16.5-6	1	08/21/09
16.5-7	2	02/06/15
16.5-8	2	12/22/08
16.5-9	1	02/20/12
16.5-10	Deleted	
16.6-1	0	10/09/02
16.6-2	Deleted	
16.6-3	1	08/21/09
16.6-4	1	08/21/09
16.6-5	2	01/09/13
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16.7-4	2	08/21/09
16.7-5	2	08/21/09

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16.7-8	2	08/21/09
16.7-9	9	06/06/13
16.7-10	7	03/28/16
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16.9-5	6	06/23/10
16.9-6	10	02/10/15

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16.9-9	3	08/21/09
16.9-10	5	08/21/09
16.9-11	3	08/21/09
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16.9-13	3	08/21/09
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16.9-15	2	08/21/09
16.9-16	2	08/21/09
16.9-17	0	10/09/02
16.9-18	0	10/09/02
16.9-19	3	02/20/12
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16.9-21	0	10/09/02
16.9-22	1	08/21/09
16.9-23	4	10/24/11
16.9-24	2	10/24/06
16.9-25	2	08/21/09
16.9-26	0	03/05/12
16.10-1	1	08/21/09
16.10-2	1	10/24/06
16.10-3	1	08/21/09
16.11-1	1	07/27/13

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<u>SECTION</u>	<u>REVISION NUMBER</u>	<u>REVISION DATE</u>
16.11-2	4	02/10/15
16.11-3	0	10/09/02
16.11-4	1	08/21/09
16.11-5	0	10/09/02
16.11-6	3	08/03/15
16.11-7	9	02/10/15
16.11-8	0	10/09/02
16.11-9	0	10/09/02
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16.11-20	2	03/28/16
16.11-21	0	10/09/02
16.12-1	0	10/09/02
16.13-1	0	10/09/02
16.13-2	Deleted	
16.13-3	Deleted	

LIST OF EFFECTIVE SECTIONS

<u>SECTION</u>	<u>REVISION NUMBER</u>	<u>REVISION DATE</u>
16.13-4	0	10/09/02



16.7 INSTRUMENTATION

16.7-6 RN Discharge Instrumentation

COMMITMENT The following shall be FUNCTIONAL:

Instrument Components:  
Loops:

1RNLP7520	1RNFE7520	RN Pump A Discharge Flow Annubar
	1RNFT7520	RN Pump A Discharge Flow
	1RNP7520	RN Pump A Discharge Flow (Control Room Indication)

1RNLP7510	1RNFE7510	RN Pump B Discharge Flow Annubar
	1RNFT7510	RN Pump B Discharge Flow
	1RNP7510	RN Pump B Discharge Flow (Control Room Indication)

2RNLP7520	2RNFE7520	RN Pump A Discharge Flow Annubar
	2RNFT7520	RN Pump A Discharge Flow
	2RNP7520	RN Pump A Discharge Flow (Control Room Indication)

2RNLP7510	2RNFE7510	RN Pump B Discharge Flow Annubar
	2RNFT7510	RN Pump B Discharge Flow
	2RNP7510	RN Pump B Discharge Flow (Control Room Indication)

Annunciators:

1AD12-A/1	RN Pump A Flow Hi/Low
1AD12-A/4	RN Pump B Flow Hi/Low
2AD12-A/1	RN Pump A Flow Hi/Low
2AD12-A/4	RN Pump B Flow Hi/Low

APPLICABILITY: Whenever the associated unit's RN train is required to be OPERABLE.

REMEDIAL ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more instrument loop(s) and/or annunciator(s) non-functional.	A.1.1 Ensure associated RN pump(s) are not in service.  <u>OR</u>	Immediately
	A.1.2 Align affected RN loop(s) discharge(s) to Standby Nuclear Service Water Pond (SNSWP).  <u>AND</u>	Immediately
	A.2 Restore non-functional instrument loop(s) and/or annunciator(s) to FUNCTIONAL status.	72 hours
B. Required Action and associated Completion Time for Condition A not met.	B.1 Contact Station Management for additional guidance.	Immediately

TESTING REQUIREMENTS

TEST	FREQUENCY
TR 16.7-6-1 Perform CHANNEL CALIBRATION.	18 months

BASES

The basis for this SLC is stated in Reference 1, page 11, "Part of the licensing bases of the RN system included the ability for operators to manually change the discharge path for the RN system from the non-safety related Lake Wylie to the safety related SNSWP."

This SLC was developed to address the NRC concerns about actions to be taken in the event instrumentation/alarms were out of service which would impair the ability of operators to recognize loss of the non-safety discharge. This SLC shall ensure the proper actions are taken based on plant equipment conditions.

REFERENCES

1. NRC Inspection Report, 50-413, 414/94-17, September 9, 1994.
2. Catawba Nuclear Station PIP 0-C94-1555.

16.7 INSTRUMENTATION

16.7-13 Auxiliary Feedwater (AFW) Pump Turbine Steam Supply Piping Temperature Monitoring System

- COMMITMENT
- a. The AFW Pump Turbine Steam Supply Piping Temperature Monitoring System, which is comprised of an Operator Aid Computer (OAC) temperature display graphic, shall be FUNCTIONAL, and
  - b. The AFW Pump Turbine Steam Supply Piping Temperature Monitoring System high temperature alarm setpoints shall be set to ensure that the design temperature of the steam supply piping (600°F) is not exceeded, and
  - c. The AFW Pump Turbine Steam Supply Piping Temperature Monitoring System low average temperature alarm setpoint shall be set such that a low temperature condition is identified prior to the piping system reaching the minimum average temperature required for turbine driven AFW pump OPERABILITY (375°F), and
  - d. The AFW Pump Turbine Steam Supply Piping Temperature Monitoring System low temperature alarm setpoints shall be set such that a low temperature condition is identified prior to an individual piping section reaching the minimum temperature required for turbine driven AFW pump OPERABILITY (225°F).

APPLICABILITY: MODES 1, 2, and 3.

REMEDIAL ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. OAC steam supply piping temperature monitoring function non-functional.	A.1 Verify that backup control room steam supply piping temperature monitoring capability is available.	Immediately

(continued)

AFW Pump Turbine Steam Supply Piping Temperature Monitoring  
System  
16.7-13

REMEDIAL ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. Required Action and associated Completion Time for Condition A not met.</p>	<p>B.1 Initiate action to obtain steam supply piping temperature using alternate means.</p>	<p>Immediately</p>
	<p><u>AND</u></p> <p>B.2 Monitor steam supply piping temperature using alternate means to ensure it is within established limits.</p>	<p>-----NOTE----- The provisions of SLC 16.2.6 are not applicable. -----</p> <p>Once per 15 minutes</p>
<p>C. All steam supply piping temperature monitoring capability lost.</p>	<p>C.1 Declare the turbine driven AFW pump inoperable.</p>	<p>Immediately</p>
	<p><u>AND</u></p> <p>C.2 Enter applicable Conditions and Required Actions of Technical Specification 3.7.5, AFW System, for the inoperable turbine driven AFW pump.</p>	<p>Immediately</p>
	<p><u>AND</u></p> <p>C.3 Isolate steam supply to turbine driven AFW pump.</p>	<p>15 minutes</p>
	<p><u>AND</u></p> <p>C.4 De-energize turbine driven AFW pump steam supply piping heat trace.</p>	<p>15 minutes</p>

(continued)

AFW Pump Turbine Steam Supply Piping Temperature Monitoring  
System  
16.7-13

REMEDIAL ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. OAC steam supply piping temperature monitoring function alarm setpoints not set per COMMITMENT.	D.1 Initiate action to restore OAC steam supply piping temperature monitoring function alarm setpoints per COMMITMENT.	Immediately
	<u>AND</u> D.2 Verify that backup control room steam supply temperature monitoring capability is available.	Immediately

TESTING REQUIREMENTS

TEST	FREQUENCY
TR 16.7-13-1 -----NOTE----- Instrument calibration includes verification of OAC output and OAC alarm setpoints. ----- Perform calibration of applicable instrumentation and heat trace controllers.	18 months
TR 16.7-13-2 Perform a visual and thermography inspection of the steam supply piping heat trace circuitry.	18 months
TR 16.7-13-3 Perform a visual inspection of selected portions of the turbine driven AFW pump steam supply piping for high temperature damage.	Each refueling outage

BASES

The turbine driven AFW pump steam supply piping is equipped with heat trace to minimize condensate generation during turbine startup operations. The heat trace control system is designed to maintain the piping temperature within a narrow operating band. The heat trace is energized and deenergized to maintain the piping temperature within the band.

BASES (continued)

The primary means of monitoring turbine driven AFW pump steam supply piping temperature is the OAC. The OAC data is obtained via piping thermocouples and a local chart recorder (EHCR002). Backup control room temperature monitoring capability is provided via a control room annunciator. The annunciator is fed via a reflash panel, from the same local chart recorder as the OAC. Alternate means of monitoring turbine driven AFW pump steam supply piping temperature include: the chart recorder local temperature display, the heat trace controller local temperature display, or calibrated, hand-held temperature measuring instruments. It is only when all steam supply piping temperature monitoring capability (including any alternate means) is lost that Condition C is required to be entered. This indicates a condition where the actual temperature of the piping is unknown.

Failure of the heat trace to deenergize could result in the design temperature for the steam supply piping being exceeded. The AFW Pump Turbine Steam Supply Piping Temperature Monitoring System ensures the OPERABILITY of the turbine driven AFW pump by providing control room indication of high steam supply piping temperatures. The OAC high temperature alarm setpoint is established to ensure that the design temperature of the steam supply piping of 600°F is not exceeded. Upon receipt of the OAC alarm due to high temperature on the steam supply piping, personnel are required to open the heat trace supply breaker for the appropriate high temperature section of piping within 15 minutes. The time limit prevents the possibility of the actual piping temperature reaching the piping design temperature of 600°F.

Low steam supply piping temperatures result in increased condensate formation during turbine driven AFW pump startup. A large volume of condensate in the steam supply piping could result in turbine damage, water hammer, or turbine overspeed trips. The AFW Pump Turbine Steam Supply Piping Temperature Monitoring System further ensures the OPERABILITY of the turbine driven AFW pump by providing control room indication of low steam supply piping temperatures. The OAC low average temperature alarm setpoints are set such that a low average system temperature condition is identified prior to the piping system reaching the minimum average temperature required for turbine driven AFW pump OPERABILITY (375°F). The OAC low temperature alarm setpoints for individual piping sections are set such that a low temperature condition is identified prior to the piping reaching the minimum temperature required for turbine driven AFW pump OPERABILITY (225°F). The 225°F limit is provided to prevent the accumulation of condensate in the piping during periods of standby readiness.

- REFERENCES      1.      Problem Investigation Process (PIPs) C-97-0616 and C-04-1431.

REFERENCES (continued)

2. CNC-1223.43-02-0012, Calculation of Maximum Operator Response Time for SA System Heat Trace Failure to De-energize Scenario.
3. CNC-1223.43-02-0009, SA System TDAFWP Steam Supply Pipe Heat Tracing Operability Determination.