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October 26, 1999

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.

Gary R. Peterson

Attachment

A053

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

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

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October 26, 1999

RE: Catawba Nuclear Station
Selected Licensee Commitments Manual
Revision Date 9/20/99

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	
Page 2 of 8 (06/10/99)	Page 2 of 8 (09/20/99)
Page 4 of 8 (07/26/99)	Page 4 of 8 (09/20/99)
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Chapter 16.7-4, pages 1 & 2 of 2 dated 01/16/99	Chapter 16.7-4, pages 1 & 2 of 2, dated 9/20/99
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Chapter 16.9-5, page 5 of 6 dated 05/05/99	Chapter 16.9-5, page 5 of 6 dated 9/20/99
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Chapter 16.11-2, pages 3 & 4 of 6 dated 01/16/99	Chapter 16.11-2, pages 3 & 4 of 6 dated 9/20/99
Chapter 16.11-2, page 5 of 6 dated 03/11/99	Chapter 16.11-2, page 5 of 6 dated 9/20/99
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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

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16.7 INSTRUMENTATION

16.7-4 LOOSE-PART DETECTION SYSTEM

COMMITMENT:

The Loose-Part Detection System shall be OPERABLE.

APPLICABILITY:

MODES 1 and 2.

REMEDIAL ACTION:

a. With all channels of one or more Loose-Part Collection Region(s) inoperable for more than 30 days:

   1. Restore at least one channel per Loose Part Collection Region to OPERABLE status, or

   2. Prepare and submit a Special Report to the Commission within the next 10 days outlining the cause of the malfunction and the plans for restoring the channels to OPERABLE status.

TESTING REQUIREMENTS:

a. Each Collection Region channel of the Loose-Part Detection Systems shall be demonstrated OPERABLE by performance of:

   1. A CHANNEL CHECK at least once per 24 hours,

   2. An Channel Functional Test at least once per 31 days as follows:

      i. Verify each analog channel by listening to the audio signal,

      ii. Verify each digital channel by confirming stored data is within expected limits, and

      iii. Inject a simulated signal into one or more channels and verify the alarm function.

   3. A CHANNEL CALIBRATION at least once per 18 months.

REFERENCES:

N/A

BASES:

The OPERABILITY of the loose-part detection instrumentation ensures that sufficient capability is available to detect loose metallic parts in the Reactor Coolant System Loose Part Collection Regions and avoid or mitigate damage to Reactor Coolant System components. The allowable out-of-service times and surveillance requirements are consistent with the recommendations of Regulatory Guide 1.133, "Loose-Part Detection Program for the Primary System of Light-Water-Cooled Reactors," May 1981..

A Loose Part Collection Region is an area within the Reactor Coolant System where loose parts can possibly collect and which is monitored by the Loose Part Detection System. Collection Regions are:

1) Lower Reactor Vessel – Consisting of Channels 1, 2, and 3
2) Upper Reactor Vessel – Consisting of Channels 4, 5, and 6
3) Primary side of Steam Generator A – Consisting of Channels 9 and 10
4) Primary side of Steam Generator B – Consisting of Channels 13 and 14
5) Primary side of Steam Generator C – Consisting of Channels 17 and 18
6) Primary side of Steam Generator D – Consisting of Channels 21 and 22

The following Loose Part Detection System channels are not a part of a Loose Part Collection Region required by Regulatory Guide 1.133; therefore, the Testing Requirements and Remedial Action responses do not apply to these channels:

1) Reactor Coolant Pump A – Consisting of Channel 7
2) Reactor Coolant Pump B – Consisting of Channel 11
3) Reactor Coolant Pump C – Consisting of Channel 15
4) Reactor Coolant Pump D – Consisting of Channel 19
5) Secondary side of Steam Generator A – Consisting of Channel 8
6) Secondary side of Steam Generator B – Consisting of Channel 12
7) Secondary side of Steam Generator C – Consisting of Channel 16
8) Secondary side of Steam Generator D – Consisting of Channel 20

16.7 INSTRUMENTATION

16.7-9 STANDBY SHUTDOWN SYSTEM

COMMITMENT:

The Standby Shutdown System (SSS) shall be OPERABLE.

APPLICABILITY:

MODES 1, 2, and 3.

REMEDIAL ACTION: (Units 1 and 2)

a. With the Standby Shutdown System inoperable, restore the inoperable equipment to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in at least HOT SHUTDOWN within the following 6 hours.

b. With the total accumulative leakage from UNIDENTIFIED LEAKAGE, IDENTIFIED LEAKAGE and reactor coolant pump seal leakage greater than 20 gpm, declare the Standby Makeup Pump inoperable and take REMEDIAL ACTION a., above.

c. The provisions of SLC 16.2.3 are not applicable.

TESTING REQUIREMENTS:

1. The Standby Shutdown System diesel generator shall be demonstrated OPERABLE:

   a. At least once per 31 days by verifying:

      1) The fuel level in the fuel storage tank is greater than or equal to 67 inches, and

      2) The diesel starts from ambient conditions and operates for at least 30 minutes at greater than or equal to 700 kW.

   b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank, obtained in accordance with ASTM-D270-1975, is within the acceptable limits specified in Table 1 of ASTM-D975-1977 when checked for viscosity and water and sediment; and

TESTING REQUIREMENTS (con't)

c. At least once per 18 months by subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service.

2. The Standby Shutdown System diesel starting 24-volt battery bank and charger shall be demonstrated OPERABLE:

   a. At least once per 7 days by verifying that:

      1) The electrolyte level of each battery is at or above the low mark and at or below the high mark; and

      2) The overall battery voltage is greater than or equal to 24 volts on float charge.

   b. At least once per 92 days by verifying that the individual cell voltage is greater than or equal to 1.36 volts on float charge, and

   c. At least once per 18 months by verifying that:

      1) The batteries, cell plates, and battery racks show no visual indication of physical damage or abnormal deterioration, and

      2) The battery-to-battery and terminal connections are clean, tight, and free of corrosion.

3. The Standby Makeup Pump water supply shall be demonstrated OPERABLE by:

   a. Verifying at least once per 7 days that the requirements of SLC 16.9-21 are met and the boron concentration in the storage pool is greater than or equal to the minimum specified in the Core Operating Limits Report.

   b. Verifying at least once per 92 days that the Standby Makeup Pump's developed head at the test flow point is greater than or equal to the required developed head, in accordance with the Inservice Testing Program.

4. The Standby Shutdown System 250/125-Volt Battery Bank and its associated charger shall be demonstrated OPERABLE:

   a. At least once per 31 days by verifying:

TESTING REQUIREMENTS (con't)

1) That the electrolyte level of each battery is above the plates, and

2) The total battery terminal voltage is greater than or equal to 258/129 volts on float charge.

b. At least once per 92 days by verifying that the specific gravity is appropriate for continued service of the battery, and

c. At least once per 18 months by verifying that:

1) The batteries, cell plates, and battery racks show no visual indications of physical damage or abnormal deterioration, and

2) The battery-to-battery and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material.

5. The Steam Turbine Driven Auxiliary Feedwater Pump and associated components shall be demonstrated OPERABLE at least once per 18 months by verifying that the system functions as designed from the Standby Shutdown System.

6. Each Standby Shutdown System instrumentation device shall be demonstrated OPERABLE by performance of a CHANNEL CHECK at least once per 31 days and a CHANNEL CALIBRATION at least once per 18 months.

REFERENCES:

1. Letter from NRC to Gary R. Peterson, Duke, Issuance of Improved Technical Specifications Amendments for Catawba, September 30, 1998.
2. PT/1(2)/A/4150/001D, NC System Leakage Calculation.
3. PT/1(2)/A/4150/001I, Manual NC Leakage Calculation.
4. CNC-1223.04-00-0072, Reactor Coolant Pumps No. 1 Seal Leakoff Annunciator Alarm Setpoint for Unit 1 and Unit 2.

BASES:

The Standby Shutdown System (SSS) is designed to mitigate the consequences of certain postulated fire, security, and station blackout incidents by providing capability to maintain HOT STANDBY conditions and by controlling and monitoring vital systems from locations external to the main control room. This capability is consistent with the requirements of 10 CFR Part 50, Appendix R, NUREG 0800 Section 9.5-1 and Appendix A to Branch Technical Position APSCB 9.5-1.

BASES (con't)

The Testing Requirements ensure that the SSS systems and components are capable of performing their intended functions. The required level in the SSS diesel generator fuel storage tank ensures sufficient fuel for 72 hours uninterrupted operation. It is assumed that, within 72 hours, either offsite power can be restored or additional fuel can be added to the storage tank.

Although the Standby Makeup Pump is not nuclear safety-related and was not designed according to ASME code requirements, it is tested quarterly to ensure its OPERABILITY. The Testing Requirement concerning the Standby Makeup Pump water supply ensures that an adequate water volume is available to supply the pump continuously for 72 hours.

Total accumulative leakage is calculated in the NC System Leakage Calculation procedure as identified + unidentified + seal leakoff (References 2 and 3). The Remedial Action limit of 20 gpm total accumulative leakage provides additional margin to allow for instrument inaccuracy, and for the predicted increase in seal leakoff rate due to heatup of the NC pump seal injection water supply temperature following the SSF event (due to spent fuel pool heatup). Following the increase in seal injection temperature, the Standby Makeup Pump flow of 26 gpm is sufficient to provide in excess of this total accumulative leakage, thereby assuring that NC System inventory is maintained at hot standby condition. The supporting evaluation is provided in CNC-1223.04-00-0072 (Ref. 4).

TABLE 16.9-4
COMMITTED FIRE DOORS

Elevation 574+0

AX515	54, BB
AX516	56-57, DD
AX516A	57-58, DD
AX516K	57, AA-BB
AX517A	53-54, DD-EE
AX517B	60-61, DD-EE
AX517C	57, DD-EE
AX517D	57, DD-EE
AX517E	56-57, DD-EE
AX518	60, BB
S303A	54, AA
S304A	60, AA

Elevation 577+0

AX513B	53, CC-DD
AX514B	45-46, AA-BB
AX517	57, EE
AX525	55-56, QQ
AX525B	56, QQ
AX526D	58, QQ
A314#3	61, CC-DD
AX533C	61, CC-DD
AX534B	68-69, AA-BB
AX535A	61, AA-BB
AX536	53, AA-BB
AX656	53, CC-DD

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RADIOACTIVE LIQUID WASTE SAMPLING AND ANALYSIS PROGRAM

LIQUID RELEASE TYPE	SAMPLING FREQUENCY	MINIMUM ANALYSIS FREQUENCY	TYPE OF ACTIVITY ANALYSIS	LOWER LIMIT OF DETECTION (LLD)[1] (•Ci/ml)
1. Batch Waste Release Tanks[2]	P Each Batch	P Each Batch	Principle Gamma Emitters [3]	$5x10^{-7}$
			I-131	$1x10^{-6}$
Any tank which discharges liquid wastes by either liquid effluent monitor, EMF-49 or EMF-57	P One Batch/M	M	Dissolved and Entrained Gases (Gamma emitters)	$1x10^{-5}$
	P Each Batch	M Composite[4]	H-3	$1x10^{-5}$
			Gross Alpha	$1x10^{-7}$
	P Each Batch	Q Composite[4]	Sr-89, Sr-90	$5x10^{-8}$
2. Continuous Releases[5]	Continuous[6]	W Composite[6]	Principal Gamma Emitters[3]	$5x10^{-7}$
a. Conventional Waste Water Treatment Line				
			I-131	$1x10^{-6}$

M Grab Sample	M	Dissolved and Entrained Gases (Gamma Emitters)	$1x10^{-5}$
Continuous[6]	M Composite[6]	H-3	$1x10^{-5}$
		Gross Alpha	$1x10^{-7}$
Continuous[6]	Q Composite[6]	Sr-89, Sr-90	$5x10^{-8}$

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RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE	ACTION
1. Radioactivity Monitors Providing Alarm And Automatic Termination of Release		
a. Waste Liquid Discharge Monitor (Low Range – EMF-49)	1 per station	C
b. Turbine Building Sump Monitor (Low Range – EMF-31)	1	E
c. Deleted		
d. Monitor Tank Building Liquid Discharge Monitor (EMF-57)	1 per station	C
2. Continuous Composite Samplers And Sampler Flow Monitor		
a. Conventional Waste Water Treatment Line	1 per station	E
3. Flow Rate Measurement Devices		
a. Waste Liquid Effluent Line	1 per station	D
b. Conventional Waste Water Treatment Line	1 per station	D
c. Low Pressure Service Water Minimum Flow Interlock	1 per station	D
d. Monitor Tank Building Waste Liquid Effluent Line	1 per station	D

TABLE 16.11-2 (Page 2 of 2)

REMEDIAL ACTION STATEMENTS

ACTION C - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 14 days provided that prior to initiating a release:

a. At least two independent samples are analyzed in accordance with SLC 16.11-1; and

b. At least two technically qualified members of the facility staff independently verify:

1) The discharge line valving; and,

2) The manual portion of the computer input for the release rate calculations performed on the computer, or the entire release rate calculations if such calculations are performed manually.

Otherwise, suspend release of radioactive effluents via this pathway.

ACTION D - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided the flow rate is estimated at least once per 4 hours during actual releases. Pump performance curves generated in place may be used to estimate flow.

ACTION E - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided grab samples are analyzed for radioactivity at a lower limit of detection of no more than 10^{-7} microCurie/ml:

a. At least once per 12 hours when the specific activity of the secondary coolant is greater than 0.01 microCurie/gram DOSE EQUIVALENT I-131, or

b. At least once per 24 hours when the specific activity of the secondary coolant is less than or equal to 0.01 microCurie/gram DOSE EQUIVALENT I-131.

TABLE 16.11-3 (Page 1 of 2)

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

	INSTRUMENT	CHANNEL CHECK	SOURCE CHECK	CHANNEL CALIBRATION	CHANNEL OPERATIONAL TEST
1.	Radioactivity Monitors Providing Alarm and Automatic Termination of Release				
	a. Waste Liquid Discharge Monitor (Low Range – EMF-49)	D	P	R(2)	Q(1)
	b. Turbine Building Sump Monitor (Low Range – EMF-31)	D	M	R(2)	Q(1)
	c. Deleted				
	d. Monitor Tank Building Liquid Discharge Monitor (EMF-57)	D	P	R(2)	Q(1)
2.	Continuous Composite Samplers and Sampler Flow Monitor				
	a. Conventional Waste Water Treatment Line	D(3)	N.A.	R	N.A.
3.	Flow Rate Measurement Devices				
	a. Waste Liquid Effluent Line	D(3)	N.A.	R	N.A.
	b. Conventional Waste Water Treatment Line	D(3)	N.A.	R	N.A.
	c. Low Pressure Service Water Minimum Flow Interlock	D(3)	N.A.	R	Q
	d. Monitor Tank Building Waste Liquid Effluent Line	D(3)	N.A.	R	N.A.

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TABLE NOTATIONS

(1) The CHANNEL OPERATIONAL TEST shall also demonstrate that automatic isolation of this pathway and control room alarm annunciation* occur if any of the following conditions exists:

a. Instrument indicates measured levels above the Alarm/Trip Setpoint; or,

b. Circuit failure/Instrument downscale failure (alarm only)

(2) The initial CHANNEL CALIBRATION shall be performed using one or more of the reference standards certified by the National Bureau of Standards (NBS) or using standards that have been obtained from suppliers that participate in measurement assurance activities with NBS. These standards shall permit calibrating the system over its intended range of energy and measurement range. For subsequent CHANNEL CALIBRAITON, sources that have been related to the initial calibration shall be used.

(3) CHANNEL CHECK shall consist of verifying indication of flow during periods of release. CHANNEL CHECK shall be made at least once per 24 hours on days on which continuous, periodic, or batch releases are made.

* For EMF-57, the alarm annunciation is in the Monitor Tank Building Control Room and on the MTB Control Panel Remote Annunciator panel.

TABLE 16.11-6 (Page 3 of 3)

TABLE NOTATIONS

* At all times except when the isolation valve is closed and locked.
** At all times.

1. The CHANNEL OPERATIONAL TEST shall also demonstrate that automatic isolation of this pathway and control room alarm annunciation occur if any of the following conditions exists:

   a. Instrument indicates measured levels above the Alarm/Trip Setpoint; or,

   b. Circuit failure/Instrument downscale failure (Alarm only)

2. The CHANNEL OPERATIONAL TEST shall also demonstrate that control room alarm annunciation[#] occurs if any of the following conditions exists:

   a. Instrument indicates measured levels above the Alarm Setpoint; or,

   b. Circuit failure/Instrument downscale failure

3. The initial CHANNEL CALIBRATION shall be performed using one or more of the reference standards certified by the National Bureau of Standards (NBS) or using standards that have been obtained from suppliers that participate in measurement assurance activities with NBS. These standards shall permit calibrating the system over its intended range of energy and measurement range. For subsequent CHANNEL CALIBRATION, sources that have been related to the initial calibration shall be used.

4. A source check for these channels shall be the qualitative assessment of channel response when the channel sensor is exposed to a light emitting diode.

[#] For EMF-58, the alarm annunciation is in the Monitor Tank Building Control Room and on the MTB Control Panel Remote Annunciator Panel.