Duke Energy®

BRUCE H HAMILTON
Vice President
McGuire Nuclear Station

Duke Energy Corporation
MG01VP / 12700 Hagers Ferry Road
Huntersville, NC 28078

704-875-5333
704-875-4809 fax
bhhamilton@duke-energy.com

February 24, 2009

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

SUBJECT: Duke Energy Carolinas, LLC (Duke)
Oconee Nuclear Station, Units 1, 2, and 3
Docket Numbers 50-269, 50-270, and 50-287
McGuire Nuclear Station, Units 1 and 2
Docket Numbers 50-369 and 50-370
Catawba Nuclear Station, Units 1 and 2
Docket Numbers 50-413 and 50-414
Relief Request 09-GO-001

Pursuant to 10 CFR 50.55a(a)(3)(i), Duke hereby submits Relief Request 09-GO-001 to propose alternative examination for certain buried components of the Condenser Circulating Water System at Oconee Nuclear Station and Nuclear Service Water Systems at McGuire and Catawba Nuclear Stations in lieu of system pressure tests as required by ASME Section XI, IWA-5244(b).

The enclosure to this letter contains this relief request. If you have any questions or require additional information, please contact P. T. Vu at (704) 875-4302.

Sincerely,

S D Capps for
Bruce H. Hamilton

Enclosure

A047
NRR

xc:

L. A. Reyes, Region II Administrator
U.S. Nuclear Regulatory Commission
Sam Nunn Atlanta Federal Center, 23 T85
61 Forsyth St., SW
Atlanta, GA 30303-8931

J. H. Thompson, Project Manager
U. S. Nuclear Regulatory Commission
11555 Rockville Pike
Mail Stop O-8G9A
Rockville, MD 20852-2738

J. F. Stang, Jr., Senior Project Manager
U. S. Nuclear Regulatory Commission
11555 Rockville Pike
Mail Stop O-8G9A
Rockville, MD 20852-2738

G. A. Hutto
NRC Senior Resident Inspector
Oconee Nuclear Station

J. B. Brady
NRC Senior Resident Inspector
McGuire Nuclear Station

A. T. Sabisch
NRC Senior Resident Inspector
Catawba Nuclear Station

Enclosure

Duke Energy Corporation

Oconee Nuclear Station, Units 1, 2, and 3
McGuire Nuclear Station, Units 1 and 2
Catawba Nuclear Station, Units 1 and 2

Relief Request Serial # 09-GO-001

Proposed Alternative in Accordance with 10 CFR 50.55a(a)(3)(i) for Pressure Testing Buried Components of the Condenser Circulating and Nuclear Service Water Systems

Duke Energy Corporation

Oconee Nuclear Station, Units 1, 2, and 3
McGuire Nuclear Station, Units 1 and 2
Catawba Nuclear Station, Units 1 and 2

Relief Request Serial #09-GO-001

Proposed Alternative in Accordance with 10 CFR 50.55a(a)(3)(i) for Pressure Testing Buried Components of the Condenser Circulating and Nuclear Service Water Systems

1. ASME Code Component(s) Affected

1.1. Oconee Nuclear Station, Units 1, 2, and 3

ASME Class 3 Condenser Circulating Water (CCW) System buried piping bounded by valves listed in Table 1. Separate sections of buried piping are listed in the table, and are identified below.

Note: Copies of referenced Flow Diagrams are included in Attachment C. The designation "EM" on the flow diagrams refers to portions of components that are embedded in concrete.

Buried Piping Section 1 consists of 42", 36", 30", 18", 12", and 2" diameter piping from CCW Intake Pumps 1A, 1B, 1C, 1D, 2A, 2B, 2C, and 2D bounded by valves listed in Table 1.

Buried Piping Section 2 consists of 42", 36", 30", and 14" diameter piping from CCW Intake Pumps 3A, 3B, 3C, and 3D, bounded by valves listed in Table 1.

Table 1

Buried Piping Section	Valve Number	Flow Diagram Drawing Number	Drawing Coordinate	Valve Type
1	1CCW-40	OFD-133A-1.1	D-9	Butterfly
1	CCW-72	OFD-133A-1.1	E-11	Butterfly
1	CCW-73	OFD-133A-1.1	E-12	Butterfly
1	1CCW-92	OFD-133A-1.4	E-1	Butterfly
1	2CCW-41	OFD-133A-2.1	D-7	Butterfly
1	3CCW-42	OFD-133A-3.1	E-10	Butterfly
1	3CCW-323	OFD-133A-3.1	E-10	Gate
1	3CCW-466	OFD-133A-3.1	D-10	Gate
1	3CCW-468	OFD-133A-3.1	D-10	Ball
2	3CCW-42	OFD-133A-3.1	E-10	Butterfly
2	3CCW-94	OFD-133A-3.1	E-7	Butterfly
2	3CCW-341	OFD-133A-3.1	D-8	Gate
2	3LPSW-120	OFD-124A-3.1	J-2	Gate
2	3LPSW-123	OFD-124A-3.1	G-2	Gate

1.2. McGuire Nuclear Station, Units 1 and 2

ASME Class 3 Nuclear Service Water (RN) System buried piping bounded by valves listed in Table 2. Separate sections of buried piping are listed in the table, and are identified below.

Note: Copies of referenced Flow Diagrams are included in Attachment D.

Buried Piping Section 1 consists of 42" and 36" diameter piping from Low Level Intake Cooling Water (RC) System at valve #1RN0001 to Containment Ventilation Cooling Water System (RV) Pumps at valve #0RN0301AC and to Crossover piping at valves #0RN0012AC (Train "A") and #0RN0010AC (Train "B").

Buried Piping Section 2 consists of 36" diameter piping from the Standby Nuclear Service Water Pond at valve #0RN0007A to Train "A" Nuclear Service Water Strainers at valves #1RN0016A and #2RN0016A, and to 36" diameter crossover piping connecting to Train "B" at valves #0RN0013A and #0RN0014A.

Buried Piping Section 3 consists of 36" diameter piping from the Standby Nuclear Service Water Pond at valve #0RN0009B to Train "B" Nuclear Service Water Strainers at valves #1RN0018B and #2RN0018B, and to 36" diameter crossover piping connecting to Train "A" at valves #0RN0011B and #0RN0015B.

Table 2

Buried Piping Section	Valve Number	Flow Diagram Drawing Number	Drawing Coordinate	Valve Type
1	0RN0010AC	MCFD-1574-01.00	F-10	Butterfly
1	0RN0012AC	MCFD-1574-01.00	I-10	Butterfly
1	0RN0301AC	MCFD-1574-01.00	F-9	Butterfly
1	1RN0001	MCFD-1574-01.00	I-9	Butterfly
1	1RN0813	MCFD-1574-01.00	H-9	Globe
1	1RN0814	MCFD-1574-01.00	H-10	Globe
1	1RN0815	MCFD-1574-01.00	H-9	Globe
1	1RN0844	MCFD-1574-01.00	I-10	Globe
1	1RN0846	MCFD-1574-01.00	G-11	Globe
2	0RN00013A	MCFD-1574-01.00	J-10	Butterfly
2	0RN0003A	MCFD-1574-01.00	K-9	Butterfly
2	0RN0007A	MCFD-1574-01.00	J-9	Butterfly
2	0RN0014A	MCFD-1574-01.00	I-13	Butterfly
2	0RN1051	MCFD-1574-01.00	J-13	Ball
2	1RN0861	MCFD-1574-01.00	J-10	Globe
2	1RN00016A	MCFD-1574-01.01	J-2	Butterfly

Table 2				
Buried Piping Section	**Valve Number**	**Flow Diagram Drawing Number**	**Drawing Coordinate**	**Valve Type**
2	1RN0830	MCFD-1574-01.01	J-2	Globe
2	2RN0016A	MCFD-2574-01.01	J-2	Butterfly
2	2RN0817	MCFD-2574-01.01	J-2	Globe
3	0RN0005B	MCFD-1574-01.00	F-11	Butterfly
3	0RN0009B	MCFD-1574-01.00	D-9	Butterfly
3	0RN0011B	MCFD-1574-01.00	F-10	Butterfly
3	0RN0015B	MCFD-1574-01.00	F-13	Butterfly
3	1RN0862	MCFD-1574-01.00	D-12	Globe
3	1RN00018B	MCFD-1574-01.01	E-2	Butterfly
3	1RN0831	MCFD-1574-01.01	F-2	Globe
3	2RN0018B	MCFD-2574-01.01	E-2	Butterfly
3	2RN0814	MCFD-2574-01.01	F-2	Globe

1.3. Catawba Nuclear Station, Units 1 and 2

ASME Class 3 Nuclear Service Water (RN) System buried piping bounded by valves listed in Table 3. Separate sections of buried piping are listed in the table, and are identified below.

Note: Copies of referenced Flow Diagrams are included in Attachment E.

Buried Piping Section 1 consists of 42", 36", and 10" diameter piping from Nuclear Service Water Pumps 1A and 2A at valves #1RN29 and #2RN29 to the Diesel Generator Cooling Water Supply Headers 1A and 2A , and to the Auxiliary Building where RN System Train "A" connects to other systems.

Buried Piping Section 2 consists of 42", 36", and 10" diameter piping from Nuclear Service Water Pumps 1B and 2B at valves #1RN39 and #2RN39 to the Diesel Generator Cooling Water Supply Headers 1B and 2B, and to the Auxiliary Building where RN System Train "B" connects to other systems.

Table 3

Buried Piping Section	Valve Number	Flow Diagram Drawing Number	Drawing Coordinate	Valve Type
1	1RN29	CN-1574-1.0	B-4	Butterfly
1	1RN34	CN-1574-1.0	B-4	Butterfly
1	1RN67A	CN-1574-1.1	F-9	Butterfly
1	1RN866	CN-1574-1.1	L-12	Globe
1	1RN867	CN-1574-1.1	J-11	Plug
1	1RN899	CN-1574-1.1	I-13	Plug
1	1RN950	CN-1574-1.1	I-13	Ball
1	1RNP03	CN-1574-1.1	J-13	Butterfly
1	1RNP06	CN-1574-1.1	K-13	Butterfly
1	1RNP21	CN-1574-1.1	F-8	Butterfly
1	1RNP33	CN-1574-1.1	G-9	Ball
1	1RNP34	CN-1574-1.1	F-8	Ball
1	1RNP40	CN-1574-1.1	F-12	Ball
1	1RNP41	CN-1574-1.1	G-13	Ball
1	2RN29	CN-1574-1.0	B-9	Butterfly
1	2RN67A	CN-1574-1.1	F-13	Butterfly
1	2RN899	CN-1574-1.1	I-9	Plug
1	2RNP03	CN-1574-1.1	J-9	Butterfly
1	2RNP06	CN-1574-1.1	K-9	Butterfly

Table 3				
Buried Piping Section	**Valve Number**	**Flow Diagram Drawing Number**	**Drawing Coordinate**	**Valve Type**
1	2RNP16	CN-1574-1.1	I-8	Ball
1	2RNP21	CN-1574-1.1	F-12	Butterfly
2	1RN39	CN-1574-1.2	C-4	Butterfly
2	1RN45	CN-1574-1.2	C-4	Butterfly
2	1RN69B	CN-1574-1.1	G-2	Butterfly
2	1RN868	CN-1574-1.1	L-5	Globe
2	1RN869	CN-1574-1.1	J-4	Plug
2	1RN898	CN-1574-1.1	I-2	Plug
2	1RN956	CN-1574-1.1	I-2	Ball
2	1RNP02	CN-1574-1.1	J-2	Butterfly
2	1RNP04	CN-1574-1.1	K-2	Butterfly
2	1RNP22	CN-1574-1.1	F-3	Butterfly
2	1RNP35	CN-1574-1.1	G-3	Ball
2	1RNP36	CN-1574-1.1	F-3	Ball
2	1RNP42	CN-1574-1.1	G-7	Ball
2	1RNP43	CN-1574-1.1	G-6	Ball
2	2RN39	CN-1574-1.2	C-10	Butterfly
2	2RN69B	CN-1574-1.1	F-6	Butterfly
2	2RN898	CN-1574-1.1	I-6	Plug
2	2RNP02	CN-1574-1.1	J-6	Butterfly
2	2RNP04	CN-1574-1.1	K-6	Butterfly
2	2RNP10	CN-1574-1.1	I-7	Butterfly
2	2RNP22	CN-1574-1.1	F-7	Butterfly

2. Applicable Code Edition and Addenda

ASME Boiler and Pressure Vessel Code, Section XI, 1998 Edition through the 2000 Addenda.

3. Applicable Code Requirement

The ASME Code, Section XI, Subsection IWA, IWA-5244(b) specifies examination requirements for buried components where a VT-2 visual examination cannot be performed. The requirement of IWA-5244(b) is as follows:

> (b) For buried components where a VT-2 visual examination cannot be performed, the examination requirement is satisfied by the following:
>
> (1) The system pressure test for buried components that are isolable by means of valves shall consist of a test that determines the rate of pressure loss. Alternatively, the test may determine the change in flow between the ends of the buried components. The acceptable rate of pressure loss or flow shall be established by the Owner.
>
> (2) The system pressure test for nonisolable buried components shall consist of a test to confirm that flow during operation is not impaired.

4. Reason for Request

The requirements of IWA-5244 have been the subject of a number of relief requests and NRC violations, as cited in Sections 7.0 and 8.0 of this request. The alternative proposed in this request will eliminate the risk of misinterpreting (or misapplying) the requirements of either IWA-5244(b)(1) or IWA-5244(b)(2), and will eliminate or minimize the risk of receiving additional NRC violations for non-compliance with the ASME Code, Section XI during the current inservice inspection intervals.

The following additional information is provided in support of this request:

1. Catawba recently received a violation for performing an unimpaired flow test on buried portions of the Nuclear Service Water (RN) System during the previous inspection interval in accordance with the requirements of the ASME Code, Section XI, 1989 Edition (Reference 8.6). This violation appears to support the position that licensees must request relief to allow the use of an unimpaired flow test in lieu of either a pressure drop test or a change in flow test.

2. Reference 8.8 documents an NRC Inspection at Point Beach Nuclear Plant in which an NRC Inspector documented a position that Point Beach failed to meet the requirements of the ASME Code, Section XI, IWA-5244 (1998 Edition through the 2000 Addenda). This NRC Inspection Report supports the need to seek relief from the requirement of IWA-5244(b)(1) of the 1998 Edition through the 2000 Addenda, to allow the use of IWA-5244(b)(2) for buried components.

3. ASME has issued the following interpretations pertaining to IWA-5244:

   a. On November 21, 2007, ASME issued an interpretation that clarified examination requirements specified in IWA-5244(b)(2). This inquiry (ASME File #IN07-09), and ASME's response, is included as Attachment A to this request. Using this interpretation would require a licensee to comply with IWA-5244(b)(2) when testing buried components with valves that are not capable of isolating the portion of the component under test. The test required by IWA-5244(b)(2) is a test to confirm that flow during operation is not impaired. Complying with IWA-5244(b)(2) [which ASME has stated is required when following the 1998 Edition with the 2000 Addenda], could subject Oconee, McGuire, and Catawba Nuclear Stations to potential NRC violations during the current inservice inspection intervals which use the 1998 Edition through the 2000 Addenda of the ASME Code, Section XI.

   b. On October 14, 2008, ASME issued an interpretation pertaining to the intent of IWA-5244(b)(1) as it applies to buried components with butterfly valves that are not designed to be leak-tight. This inquiry (ASME File #08-701), and ASME's response, is included as Attachment B to this request. This interpretation supports the position that buried components with butterfly valves that are not leak-tight should receive an unimpaired flow test.

Approval of the alternative in this request will clarify the examination requirements for buried components of the Condenser Circulating and Nuclear Service Water Systems subject to examination in accordance with IWA-5244(b) for the current inservice inspection intervals at Oconee, McGuire, and Catawba Nuclear Stations.

5. Proposed Alternative and Basis for Use

In lieu of performing a system pressure test in accordance with the requirements of IWA-5244(b) for buried components of the Condenser Circulating Water (CCW) System at Oconee and Nuclear Service Water (RN) Systems at McGuire and Catawba identified in Section 1 of this request, Duke proposes the following alternative in accordance with 10CFR50.55a(a)(3)(i):

(1) A test that confirms that flow during operation is not impaired (unimpaired flow test) shall be performed.

(2) A visual examination of the ground surface areas (includes surfaces of asphalt or other pavement materials) above components buried in soil shall be performed during all current and subsequent inspection periods to detect evidence of through-wall leakage in the buried components. This visual examination shall be performed during the unimpaired flow test, or may be performed at any time after the buried component has been in operation at nominal operating conditions for at least 24 hours.

The basis for the proposed alternative is as follows:

Neither the change in flow test [IWA-5244(b)(1)] nor the unimpaired flow test [IWA-5244(b)(2)] are sufficiently sensitive to detect small through-wall leakage in these buried components, due to relatively high system flow rates and accuracy of flow measurement instrumentation. As such, there is no appreciable difference between the level of quality and safety achieved by performing either of these tests.

Visual examinations of ground surface areas are capable of detecting potentially small through-wall leakage in the buried component. These visual examinations and unimpaired flow tests will provide reasonable assurance of the structural and leak-tight integrity of the buried components.

For these reasons, the proposed alternative to IWA-5244 provides an acceptable level of quality and safety for buried components of the Condenser Circulating Water (CCW) System at Oconee and Nuclear Service Water (RN) Systems at McGuire and Catawba.

6. Duration of Proposed Alternative

The proposed alternative is requested for use during the following inservice inspection intervals:

Station	Unit	ISI Interval Number	Interval Start Date	Interval End Date (Tentative)
Oconee	1	4	January 1, 2004	July 14, 2013
Oconee	2	4	September 9, 2004	September 8, 2014
Oconee	3	4	January 2, 2005	December 15, 2014
Catawba	1	3	June 29, 2005	June 28, 2015
Catawba	2	3	October 15, 2005	August 19, 2016
McGuire	1	3	December 1, 2001	November 30, 2011
McGuire	2	3	March 1, 2004	February 28, 2014

7. Related Industry Relief Requests

Relief from the requirements of IWA-5244 (for various ASME Code Editions/Addenda) has been granted to other licensees, as documented in the following relief requests. Please note that the basis for Duke's relief request is not identical to any of the cited requests listed below.

7.1. Millstone Power Station, Units 2 and 3, Relief Request #IR-2-40, #RR-89-57, and #IR-2-41, Approved July 10, 2008, TAC Nos. MD7732 and MD7733.

7.2. Vermont Yankee Nuclear Power Station, Relief Request #ISI-PT-01, Approved January 31, 2008, TAC No. MD5436.

7.3. Duane Arnold Energy Center, Relief Request #NDE-R007, Approved June 12, 2007, TAC No. MD2523.

7.4. Prairie Island Nuclear Generating Plant, Units 1 and 2, Relief Request #1-RR-4-7 and #2-RR-4-7, Approved October 31, 2007, TAC Nos. MD3809 and MD3810.

7.5. Byron Station, Units 1 and 2, and Braidwood Station, Units 1 and 2, Relief Requests #I3R-07 and #I2R-46, Approved January 16, 2007, TAC Nos. MD1757, MD1758, MD1759, MD1760.

7.6. Cooper Nuclear Station, Relief Request #PR-06, Approved October 2, 2006, TAC No. MD0286.

7.7. Brunswick Steam Plant, Relief Request #RR-11 SER, Dated February 17, 2000, TAC Nos. MA2108 and MS2109.

8. References

8.1. Letter from ASME to M. J. Ferlisi, Dated November 21, 2007, issuing interpretation pertaining to requirement of IWA-5244(b)(2). Reference File #IN07-09 (Attachment A).

8.2. Letter from ASME to J. M. Boughman, Dated October 14, 2008, issuing interpretation pertaining to requirement of IWA-5244(b)(1). (Attachment B).

8.3. Oconee Flow Diagrams for Condenser Circulating Water (CCW) System (Attachment C):

8.3.1. #OFD-124A-3.1
8.3.2. #OFD-133A-1.1
8.3.3. #OFD-133A-1.4
8.3.4. #OFD-133A-2.1
8.3.5. #OFD-133A-3.1

8.4. McGuire Flow Diagrams for Nuclear Service Water (RN) System (Attachment D):

8.4.1. #MCFD-1574-01.00
8.4.2. #MCFD-1574-01.01
8.4.3. #MCFD-2574-01.01

8.5. Catawba Flow Diagrams for Nuclear Service Water (RN) System (Attachment E):

8.5.1. #CN-1574-1.0
8.5.2. #CN-1574-1.1
8.5.3. #CN-1574-1.2

8.6. Catawba Nuclear Station - NRC Integrated Inspection Report 05000413/2007005 and 05000414/2007005, Dated January 31, 2008.

8.7. NRC Letter Dated January 31, 2008 to Mr. David Baxter, Vice President, Oconee Nuclear Station, Oconee Integrated Inspection Report.

Activity #4OA7 in this report documents a Licensee Identified Violation of very low significance related to compliance with the requirements of IWA-5244. It should be noted that there are two errors in this report, as follows:

1. The 1998 Edition of the ASME Code, Section XI was cited. The correct Code of record for this violation should have been the 1989 Edition.
2. PIP #O-07-06007 was cited, instead of PIP #O-07-05502.

8.8. Point Beach Nuclear Plant, Units 1 And 2 NRC Safety System Design And Performance Capability Inspection 05000266/2004004(DRS); 05000301/2004004(DRS), Dated September 7, 2004.

ASME
SETTING THE STANDARD
CODES & STANDARDS

Three Park Avenue
New York, NY
10016-5990 U.S.A.

tel 1.212.591.8500
fax 1.212.591.8501
www.asme.org

November 21, 2007

Mark J. Ferlisi, P.E.
Senior Engineer
Duke Energy Corporation
Nuclear Generation Dept
Po Box 1006
Charlotte, NC 28201-1006

Subject: ASME BPVC Section XI, IWA-5244, 1995 Edition with the 1995 Addenda through the 2007 Edition

File #: IN07-09

Dear Mr. Ferlisi:

Our understanding of the question in your letter and our reply is as follows:

Question: Does the requirement of IWA-5244(b)(2) apply to buried components with valves that are not capable of isolating the portion of the component under test?

Reply: Yes.

Sincerely,

Ryan L. Crane, P.E.
Secretary, SC XI Interpretation Committee
(212) 591-7004
FAX: (212)-591-8501
craner@asme.org

CC: Joel Feldstein
Thomas Pastor
Gary Park
Rick Swayne

ASME
SETTING THE STANDARD

CODES & STANDARDS

Three Park Avenue
New York, NY
10016-5990 U.S.A.

tel 1.212.591.8500
fax 1.212.591.8501
www.asme.org

October 14, 2008

James M. Boughman
Pressure Test Program Owner
Duke Energy
PO Box 1006 - EC05A
Charlotte, NC 28201-1006

Subject: ASME BPVC Section XI, IWA-5244, 1995 Edition through the 2007 Edition with the 2008 Addenda

File #: 06-701 (previously 08-416)

Dear Mr. Boughman:

Our understanding of the question in your letter and our reply is as follows:

Question: Is it the intent of IWA-5244(b)(1) that the configuration of isolable by means of valves apply to buried components with Butterfly valves that are not designed to be leak-tight?

Reply: No.

Sincerely,

Ryan L. Crane, P.E.
Secretary, SC XI Interpretation Committee
(212) 591-7004
FAX: (212)-591-8501
craner@asme.org

CC: Joel Feldstein
Thomas Pastor
Gary Park
Rick Swayne

Duke Energy Corporation

Relief Request Serial #09-GO-001

Attachment C - Oconee Flow Diagrams for Condenser Circulating Water (CCW) System and Low Pressure Service Water System

THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

THAT CAN BE VIEWED AT THE RECORD TITLED:

DWG. NO. OFD-124A-3.1,EV. 33 "FLOW DIAGRAM OF LOW PRESSURE SERVICE WATER SYSTEM TURBINE BLDG. (LOW PRESSURE SERVICE WATER PUMPS."

WITHIN THIS PACKAGE... OR BY SEARCHING USING THE

D-01

THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

THAT CAN BE VIEWED AT THE RECORD TITLED:

DWG. NO. OFD-133A-1.1
REV. 28
"FLOW DIAGRAM OF CONDENSER CIRCULATING WATER SYSTEM , (CCW INTAKE PUMPS DISCHARGE)."

WITHIN THIS PACKAGE... OR BY SEARCHING USING THE

D-02

THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

THAT CAN BE VIEWED AT THE RECORD TITLED:

DWG. NO. OFD-133A-1.4, REV. 25 "FLOW DIAGRAM OF CONDENSER CIRCULATION WATER SYSTEM, (RCW COOLERS)."

WITHIN THIS PACKAGE... OR BY SEARCHING USING THE

D-03

THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

THAT CAN BE VIEWED AT THE RECORD TITLED:

DWG. NO. OFD-133A-2.1, REV. 26 "FLOW DIAGRAM OF CONDENSER CIRCULATING WATER SYSTEM, (CCW INTAKE PUMPS DISCHARCH)."

WITHIN THIS PACKAGE... OR BY SEARCHING USING THE

D-04

THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

THAT CAN BE VIEWED AT THE RECORD TITLED:

DWG. NO. OFD-133A-3.1, REV. 33 "FLOW DIAGRAM OF CONDENSER CIRCULATING WATER SYSTEM, (CCW INTAKE PUMPS DISCHARGE)."

WITHIN THIS PACKAGE... OR BY SEARCHING USING THE

D-05

Duke Energy Corporation

Relief Request Serial #09-GO-001

Attachment E- Catawba Flow Diagrams for Nuclear Service Water (RN) System

THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

THAT CAN BE VIEWED AT THE RECORD TITLED:

DWG. NO. CN-1574-1.0,
REV. 52
"FLOW DIAGRAM OF NUCLEAR SERVICE WATER SYSTEM, (RN)"

WITHIN THIS PACKAGE... OR BY SEARCHING USING THE

D-06

THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

THAT CAN BE VIEWED AT THE RECORD TITLED:

DWG. NO. CN-1574-1.1
REV. 49
"FLOW DIAGRAM OF NUCLEAR SERVICE WATER SYSTEM (RN)."

WITHIN THIS PACKAGE... OR BY SEARCHING USING THE

D-07

THIS PAGE IS AN OVERSIZED DRAWING OR FIGURE,

THAT CAN BE VIEWED AT THE RECORD TITLED:

DWG. NO. CN-1574-1.2,
REV. 49
"FLOW DIAGRAM OF NUCLEAR SERVICE WATER SYSTEM (RN)."

WITHIN THIS PACKAGE... OR BY SEARCHING USING THE

D-08

Duke Energy Corporation

Relief Request Serial #09-GO-001

Attachment D - McGuire Flow Diagrams for Nuclear Service Water (RN) System

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