Duke Energy

NQA-1 Based QA Program Conversion

Duke Energy & NRC Meeting
July 15, 2008

Agenda

- Introductions
- Meeting Purpose
- Conversion Reasons
- Conversion Methodology
- Submittal Package
- Schedule
- Closing Remarks

Conversion Team

- Jim Fisicaro – NRC Interface
- Bob Gill – Licensing Manager
- Jerry Standridge – QA SPOC
- Kevin Rhyne – Team Lead
- 40 Contributors – QA Criteria SMEs
- Management Review Team

Meeting Purpose

- Communicate Duke's plan to convert the operating plant fleet to an ASME NQA-1-1994 based QA program
- Share QA program conversion methodology
- Obtain NRC feedback prior on QAPD package completion and submittal

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Conversion Reasons

- Adopt a more current standard, incorporating years of industry operating experience
- Use a single, comprehensive, and actively maintained standard
- Benefit from a simpler, easier to understand standard
- Synchronize with the currently approved standard for new plant construction and operation
- Obtain consistency with the QAPD for new plant licensing (e.g. Lee Nuclear)
- Conform with the utility conversion trend

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Conversion Methodology

- Meet 10CFR50, Appendix B requirements for a QA Program Description (QAPD)
- Use NQA-1 standard and NEI 06-14A template as proposed QAPD basis to establish an equivalent QA program
- Address differences between current QATR and proposed QAPD documents

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Conversion Methodology (Continued)

- NEI 06-14A QAPD revisions 4 & 5 used as a template for the operating fleet program
- Duke specifics replaced bracketed template text with additional information inserted as needed to fully describe the program
- Comparison matrix developed to show where current QATR commitments are addressed within proposed QAPD

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Conversion Methodology (Continued)

Quality Assurance Program Description Comparison Matrix				
Column 1 **Current QATR Sections/Paragraphs** (Note 1)	Column 2 **Proposed QAPD and NQA-1 Sections/Paragraphs** (Note 2)	Column 3 **Differences** (Note 3)	Column 4 **R/N/I** (Note 4)	Column 5 **Basis for Acceptability** (Note 5)
17.3.2.12 Inspection	**Section 10 – Inspection**	The paragraph title was changed to a section title.	N	
In order to assure safe and reliable operation, a program of inspections for QA Condition 1 structures, systems, and components is established at each nuclear station. Inspection procedures for those activities affecting QA Condition 1 structures, systems and components are established by Nuclear Generation personnel.	Part II, Section 10 Supplement 10S-1	N/A	N	N/A

Conversion Methodology (Continued)

Comparison Matrix Format and Information Description

Notes 1 – 5 describe information found in columns 1-5, respectively.

- Column 1 – Provides verbatim text from the current QA Topical Report that is displayed in a paragraph-by-paragraph format (headings, list items too).
- Column 2 – References locations where equivalent requirement statements are found within the proposed QAPD, NQA-1, or other specifically committed standards and regulatory documents.
- Column 3 – Describes significant differences between the requirement statements found in the current and proposed QAPDs, clarifying statements, and references to notes.
- Column 4 – Notes one of three requirement statement evaluation result designations: R = Reduction in Commitment, N = No reduction in Commitment, and I = Increase in Commitment.
- Column 5 – Provides clarifying or justifying statements for commitment changes (e.g., reductions, exceptions, alternatives).

Conversion Methodology (Continued)

Comparison Matrix Format and Information Description

The following evaluation notes are typically referenced within Column 3 to minimize redundant wording entry.

- Note 6 – Descriptive requirement wording within the proposed QAPD, NQA-1 standard, or a regulatory document establishes equivalent requirements even though there may be a reduction in the level of methodology detail from the current QATR.

- Note 7 – A requirement or commitment within the current QATR is redundant to one found in a regulation or other licensing document, therefore, the requirement is not repeated in the proposed QAPD.

- Note 8 – A statement within the current QATR that provides only descriptive or clarifying information about the QA program is not considered a commitment to a regulatory requirement and is not repeated in the proposed QAPD.

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Conversion Methodology (Continued)

QAPD Differences Evaluation Process

1. Benchmark other utility submittals
2. Initial evaluation by Team Lead
3. Validation by Subject Matter Experts
4. QA SPOC 10CFR50.54 review
5. Management review

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Conversion Methodology (Continued)

QAPD Differences Evaluation Criteria

1. **No Reduction in Commitment:**
   a. Statements found within the proposed QAPD, NQA-1 standard, or other regulatory document establishes <u>equivalent</u> requirements and commitments.
   b. Detailed statements on <u>how</u> requirements are met may not be carried over into the proposed QAPD, provided the related requirements are addressed.
   c. A commitment to a requirement within the current QATR is redundant to one already made to a regulation within another licensing document.
   d. A statement that provides only descriptive or clarifying information about the QA program may not be carried over.
   e. Document format changes.

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Conversion Methodology (Continued)

QAPD Differences Evaluation Criteria (continued)

2. **Increase in Commitment:**
   - Commitment statements made within the proposed QAPD are beyond those found in the current QATR.

3. **Reduction in Commitment:**
   - Commitment statements made within the current QATR are deliberately not included within the proposed QAPD.

Preliminary Evaluation Results

N = No Reduction in Commitment

(100% of preliminary paragraph comparison results fall into this category.)

I = Increase in Commitment

(0% of preliminary paragraph comparison results fall into this category.)

R = Reduction in Commitment

(0% of preliminary paragraph comparison results fall into this category.)

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No Reduction In Commitment Example 1

Quality Assurance Program Description Comparison Matrix				
Current QATR Sections/Paragraphs (Note 1)	**Proposed QAPD and NQA-1 Sections/Paragraphs** (Note 2)	**Differences** (Note 3)	**R/N/I** (Note 4)	**Basis for Acceptability** (Note 5)
17.3.2.8 Test Control	**Section 11 – Test Control**	The paragraph title was changed to a section title.	N	
a) Requirements and acceptance limits contained in applicable design and vendor documents.	QAPD Part II, Section 11 NQA-1 Supplement 11S-1 Supplement 11S-1 excerpt provided for this example: "Test requirements and acceptance criteria shall be provided or approved by the organization responsible for the design of the item to be tested. … Test requirements and acceptance criteria shall be based upon specified requirements contained in applicable design and other pertinent technical documents."	None	N	N/A

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No Reduction In Commitment Example 2

Quality Assurance Program Description Comparison Matrix				
Current QATR Sections/Paragraphs (Note 1)	**Proposed QAPD and NQA-1 Sections/Paragraphs** (Note 2)	**Differences** (Note 3)	**R/N/I** (Note 4)	**Basis for Acceptability** (Note 5)
17.3.2.2 Design Control	**Section 3 – Design Control**	The paragraph title was changed to a section title.	N	
Abbreviated QAPD excerpt provided for this example: "Final approval prior to implementation of each station engineering change shall be by the Nuclear Station Manager or the Manager of Engineering; or for the Nuclear Station Manager by the Operations Superintendent, the Maintenance Superintendent, the Work Control Superintendent, or the On-Duty Emergency Coordinator as previously designated by the Nuclear Station Manager."	QAPD Part II, Section 1 NQA-1 Basic Requirement 1 QAPD Part II, Section 2 QAPD Part II, Section 3 NQA-1 Basic Requirement 3 QAPD Part II, Section 5 NQA-1 Basic Requirement 5	Note 6 Requirements for establishing QA program responsibilities, control, and procedural prescription and performance of activities affecting quality are found within the proposed QAPD and NQA-1 standard. However, no statements are included within the proposed QAPD that specify detailed administrative statements on how final approval of engineering changes are made. Such details are provided within QA program implementation directives and procedures.	N	N/A

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No Reduction In Commitment Example 3

Quality Assurance Program Description Comparison Matrix				
Current QATR Sections/Paragraphs (Note 1)	**Proposed QAPD and NQA-1 Sections/Paragraphs** (Note 2)	**Differences** (Note 3)	**R/N/I** (Note 4)	**Basis for Acceptability** (Note 5)
17.3.2.12 Inspection	**Section 10 – Inspection**	The paragraph title was changed to a section title.	N	
For inspections of concrete containments, personnel fulfilling the role of Responsible Engineer, shall be a Registered Professional Engineer experienced in evaluating the inservice condition of structural concrete and knowledgeable of the design and construction codes and other criteria used in the design and construction of the concrete containment structure. The Responsible Engineer may also perform inspections as discussed in this section.	QAPD Part II, Section 10 NQA-1 Basic Requirement 10	Note 7 No detailed statements are included within the proposed QAPD that specify Responsible Engineer qualifications and responsibilities. The Responsible Engineer qualifications and responsibilities are described in the ASME Boiler and Pressure Vessel Code, Section XI, Subsection IWL, Requirements for Class CC Concrete Components of Light-water Cooled Plants, paragraph IWL-2320, Responsible Engineer. Section XI of the ASME Code is endorsed by the NRC via reference within 10CFR50.55a(b)(2).	N	N/A

No Reduction In Commitment Example 4

Quality Assurance Program Description Comparison Matrix				
Current QATR Sections/Paragraphs (Note 1)	**Proposed QAPD and NQA-1 Sections/Paragraphs** (Note 2)	**Differences** (Note 3)	**R/N/I** (Note 4)	**Basis for Acceptability** (Note 5)
The Group Executive, Nuclear Generation and Chief Nuclear Officer, appoints a Nuclear Safety Review Board (NSRB) to serve as a nuclear safety review and audit backup to the normal operating organization.	QAPD Part II, Section 2	Note 6 No statements are included within the proposed QAPD that specify the appointment or use of a Nuclear Safety Review Board (NSRB). Rather, Duke commits to Option 1 - Independent Review Body (IRB) as described in Part II, Section 2 of the NEI 06-14A QAPD template. Standard Review Plan 17.5 references approval of this option via SE (Accession No. ML050210276). Approval of the NEI template was via SE (Project No. 689, TAC No. MD3406, dated April 25, 2007).	N	N/A

Proposed Submittal Package

Submittal Pursuant to 10CFR50.54

- Duke QAPD Conversion Submittal Letter
- Enclosure 1 – Marked Template Change Copy of Proposed QAPD
- Enclosure 2 – Final Unmarked Copy of Proposed QAPD
- Enclosure 3 – Old Versus New QAPD Comparison Matrix
- Enclosure 4 – Summary of Comparison Results
- Enclosure 5 – Summary of Proposed QAPD Alternatives/Exceptions

Proposed Schedule

- Duke Submittal – October 2008
- NRC Approval – Spring 2009?
- Implementation – 6 to 9 Months After Approval

Closing Remarks

PARTICIPANTS: Participants from the NRC include members of the Office of Nuclear Reactor Regulation (NRR)

ATTENDEES

NRR	DUKE
D. Thatcher	J. Fisicaro
P. Prescott	R. Gill
~~C. Roquecruz~~	K. Rhyne Kevin
L. Olshan	~~B. Travis~~ Bruce
~~J. Stang~~ Vic Hall	J. Standridge → JERRY

ALL PRB-REGISTERED (7/8/08)

Docket Nos. 50-269, 50-270, 50-287, 50-369, 50-370, 50-413, and 50-414

Enclosure:
Agenda

cc w/encl: See next page

Distribution:

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

July 1, 2008

MEMORANDUM TO: Melanie C. Wong, Branch Chief
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

FROM: Leonard N. Olshan, Project Manager
Plant Licensing Branch II-1
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

SUBJECT: FORTHCOMING MEETING WITH DUKE ENERGY CAROLINAS, LLC, REGARDING OCONEE NUCLEAR STATION, UNITS 1, 2, AND 3, MCGUIRE NUCLEAR STATION, UNITS 1 AND 2, AND CATAWBA NUCLEAR STATION, UNITS 1 AND 2

DATE & TIME: Tuesday, July 15, 2008
11:00 a.m. – 1:00 p.m.

LOCATION: U.S. Nuclear Regulatory Commission (NRC)
One White Flint North
11555 Rockville Pike, Room O-1F22
Rockville, Maryland

PURPOSE: To discuss Duke's transition to American Society for Mechanical Engineers NQA [Nuclear Quality Assurance]-1-1994

CATEGORY 1: * This is a Category 1 Meeting. The public is invited to observe this meeting and will have one or more opportunities to communicate with the NRC after the business portion, but before the meeting is adjourned.

MEETING CONTACTS:

Leonard N. Olshan, NRR
301-415-1419
lno@nrc.gov

John F. Stang, NRR
301-415-1345
jfs2@nrc.gov

* Commission's Policy Statement on "Enhancing Public Participation in NRC Meetings" (67 FR 36920), May 28, 2002

PARTICIPANTS: Participants from the NRC include members of the Office of Nuclear Reactor Regulation (NRR)

NRR	DUKE
D. Thatcher	J. Fisicaro
P. Prescott	R. Gill
C. Roquecruz	K. Rhyne
L. Olshan	B. Travis
J. Stang	

Docket Nos. 50-269, 50-270, 50-287, 50-369, 50-370, 50-413, and 50-414

Enclosure:
Agenda

cc w/encl: See next page

FORTHCOMING MEETING ON JULY 15, 2008, TO DISCUSS DUKE ENERGY CAROLINAS, LLC (DUKE) TRANSITION TO ASME NQA-1-1994

JULY 15, 2008

AGENDA

11:00 a.m. – 11:10 a.m.	Introductions and purpose of meeting
11:10 a.m. – 11:55 a.m.	Discussion of transition from Duke's current quality assurance program (QA) program to American Society of Mechanical Engineers NQA [Nuclear QA]-1-1994
11:55 a.m. – 12:50 p.m.	Discuss comparison of NQA-1-1994 to Nuclear Energy Institute QA Topical Report
12:50 p.m. – 1:00 p.m.	Closing remarks
1:00 p.m.	Adjourn

Oconee Nuclear Station, Units 1, 2, and 3

cc:

Mr. Bruce H. Hamilton
Vice President, Oconee Site
Duke Power Company LLC
7800 Rochester Highway
Seneca, SC 29672

Ms. Lisa F. Vaughn
Associate General Counsel and Managing Attorney
Duke Energy Carolinas, LLC
526 South Church Street - EC07H
Charlotte, North Carolina 28202

Manager, LIS
NUS Corporation
2650 McCormick Dr., 3rd Floor
Clearwater, FL 34619-1035

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
7812B Rochester Highway
Seneca, SC 29672

Mr. Henry Porter, Director
Division of Radioactive Waste Management
Bureau of Land and Waste Management
Dept. of Health and Env. Control
2600 Bull St.
Columbia, SC 29201-1708

Mr. Michael A. Schoppman
Framatome ANP
1911 North Ft. Myer Dr.
Suite 705
Rosslyn, VA 22209

Mr. B. G. Davenport
Regulatory Compliance Manager
Oconee Nuclear Site
Duke Energy Corporation
ON03RC
7800 Rochester Highway
Seneca, SC 29672

Mr. Leonard G. Green
Assistant Attorney General
NC Department of Justice
P.O. Box 629
Raleigh, NC 27602

Mr. R. L. Gill, Jr.
Manager - Nuclear Regulatory Issues and Industry Affairs
Duke Power Company LLC
526 S. Church St.
Mail Stop EC05P
Charlotte, NC 28202

Division of Radiation Protection
NC Dept of Environment, Health, & Natural Resources
3825 Barrett Dr.
Raleigh, NC 27609-7721

Mr. Peter R. Harden, IV
VP-Customer Relations and Sales
Westinghouse Electric Company
6000 Fairview Road
12th Floor
Charlotte, NC 28210

Mr. Henry Barron
Group Vice President, Nuclear Generation and Chief Nuclear Officer
P.O. Box 1006-EC07H
Charlotte, NC 28201-1006

Mr. Charles Brinkman
Director, Washington Operations
Westinghouse Electric Company
12300 Twinbrook Parkway, Suite 330
Rockville, MD 20852

Ms. Kathryn B. Nolan
Senior Counsel
Duke Energy Carolinas, LLC
526 South Church Street - EC07H
Charlotte, NC 28202

McGuire Nuclear Station, Units 1 & 2

cc:

Vice President
McGuire Nuclear Station
Duke Power Company, LLC
12700 Hagers Ferry Road
Huntersville, NC 28078

Associate General Counsel and Managing Attorney
Duke Energy Carolinas, LLC
526 South Church Street - EC07H
Charlotte, North Carolina 28202

County Manager of Mecklenburg County
720 E. Fourth St.
Charlotte, NC 28202

Regulatory Compliance Manager
Duke Energy Corporation
McGuire Nuclear Site
12700 Hagers Ferry Road
Huntersville, NC 28078

Senior Resident Inspector
U.S. Nuclear Regulatory Commission
12700 Hagers Ferry Road
Huntersville, NC 28078

Mecklenburg County
Department of Environmental Protection
700 N. Tryon St
Charlotte, NC 28202

Vice President
Customer Relations and Sales
Westinghouse Electric Company
6000 Fairview Road, 12th Floor
Charlotte, NC 28210

NCEM REP Program Manager
4713 Mail Service Center
Raleigh, NC 27699-4713

Assistant Attorney General
NC Department of Justice
P.O. Box 629
Raleigh, NC 27602

Manager
Nuclear Regulatory Issues &
Industry Affairs
Duke Energy Corporation
526 S. Church St.
Mail Stop EC05P
Charlotte, NC 28202

Division of Radiation Protection
NC Dept of Environment, Health & Natural Resources
3825 Barrett Dr.
Raleigh, NC 27609-7721

Owners Group (NCEMC)
Duke Energy Corporation
4800 Concord Road
York, SC 29745

Group Vice President, Nuclear Generation
& Chief Nuclear Officer
P.O. Box 1006-EC07H
Charlotte, NC 28201-1006

Senior Counsel
Duke Energy Carolinas, LLC
526 South Church Street - EC07H
Charlotte, NC 28202

Leonard Olshan

From: Paul Prescott
Sent: Friday, June 27, 2008 10:28 AM
To: Leonard Olshan
Subject: RE:

NQA - Nuclear Quality Assurance
QATR - Quality Assurance Topical Report

From: Leonard Olshan
Sent: Friday, June 27, 2008 10:27 AM
To: Paul Prescott
Subject: RE:

Whoops, there is one question. What do "NQA" and "QATR" stand for? (I'll guess that NQA is nuclear quality assurance.)

From: Paul Prescott
Sent: Friday, June 27, 2008 10:18 AM
To: Leonard Olshan
Cc: Carla Roquecruz; Dale Thatcher
Subject:

Hi Lenny,

Just talked to Jim Fisicaro again. He had nothing planned for an agenda, so how's this: "The meeting is to discuss Duke's transition from their current quality assurance program to ASME NQA-1-1994 and format of this program to the NEI QATR template that was developed for new reactors." NRC will do introduction. Duke will provide discussion. We will close with any questions.

Just let me know if you need anything else.

Paul Prescott
Senior Operations Engineer
NRR/DE/EQVB
(301)415-3026
MS: 0-9E3

Leonard Olshan

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Sent: Friday, June 27, 2008 10:18 AM
To: Leonard Olshan
Cc: Carla Roquecruz; Dale Thatcher

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Paul Prescott
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NRR/DE/EQVB
(301)415-3026
MS: 0-9E3