



API1000-ESBWR
Design Centered Work Group

Joint Meeting with NRC Staff

October 24, 2006



Dominion

Agenda

- Opening remarks
- Industry topics
- COL Application format
- Environmental pre-review
- Standardization challenge: organization descriptions
- Overview of NuStart QA program
- Followup from prior joint session questions

The background of the slide is a dark blue gradient with a faint, light blue technical drawing or blueprint pattern. The pattern consists of various geometric shapes, including circles, rectangles, and lines, typical of an engineering drawing.

Industry Topics

Peter Hastings
AP1000 DCWG

COL Application Format Update

Gina Borsh
ESBWR DCWG

Environmental Pre-Review

Chuck Pierce
AP1000 DCWG

Environmental Pre-Review

- Six-step plan proposed as part of Vogtle ESP submittal
- Goal: maximize efficiency of and shorten NRC environmental review
- Relevance for sites with recent or pending ESPs?
- Challenge to existing COL application development and submittal schedules

NRC-Proposed Six-Step Pre-Submittal Environmental Review Plan

| Days Before Submittal | Description |
|-----------------------|---|
| 660-600 | Begin initial interaction to discuss expectations, scope, etc. |
| 550-450 | Perform initial site visit to selected and alternate sites |
| 420-360 | Conduct site visit to observe environmental sampling activities (scheduled to allow at least 12 month period for additional data collection, if needed) |
| 350-250 | Begin stakeholder involvement; meet with state/local environmental agencies, community leaders; evaluate facility compliance history, status in community, etc. |
| 200-150 | Begin records review; NRC onsite assessment of draft Environmental Report |
| 100-50 | NRC public Information meeting; last round of pre-submittal discussions with applicant (note: For SNC, this meeting occurred before item 5) |

COLA Schedule

 **You are here**

Various Technical Reports



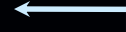
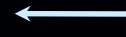
May 2007
Possible
DCD Rev 16

Feb 2006 – Oct 2007

Pre-Application Interactions & Submittals

Mar-Dec 2006
1st Drafts

Jul 2006 – Aug 2007
2nd Drafts



Aug-Oct 2007
Review

Aug 2006
DG-1145
Published

Oct 2006
10 CFR 52
PFR

Mar 2007
SRP Updates
Published

Submit
COLA



October 24, 2006

Joint API1000-ESBWR DCWG Meeting

Alternative Approach to the Six Steps

- Begin initial interaction: *complete*
- Initial site visit and observation of site characterization activities: *complete*
- Begin stakeholder involvement: *begin anytime*
- Begin records review; NRC onsite assessment of draft Environmental Report: *spring-summer 2007*
- NRC public Information meeting: *anytime*
- Pre-submittal discussions with DCWGs and individual applicants: *ongoing*

Standardization Challenge: Organizational Descriptions

Amy Monroe
AP1000 DCWG

Standardization Challenge: Organizational Descriptions

- FSAR Section 13.1 - Organization
- Guidance
 - DG-1145
 - SRP
- Significant level of detail proposed
 - Drives applications to site-specific level
 - Timing issues associated with information
 - Drives applicants to FSAR changes in future
- Industry proposal: functional level of detail
 - Allows for standardization
 - Matches level of detail commensurate with DCD
 - Provides adequate information to make reasonable assurance finding

NuStart QA Program Overview

George Zinke
ESBWR & AP1000 DCWGs

Overview of NuStart QA Program

- NuStart QA Program addresses activities performed by NuStart
- QA attributes are applied to provide complete and accurate Combined Construction and Operating License (COL) Applications for nuclear power facilities
- NuStart does not directly conduct any design, construction, or operation activities for any structures, systems, or components (SSCs) of potential nuclear facility.
- NuStart maintains oversight of the COL application development ensuring proper configuration control and consistency of information is maintained.

Overview of NuStart QA Program

- NuStart Energy maintains oversight of COL Application development
- Quality-affecting design activities performed by reactor vendor or COL application contractor
- NuStart does not perform quality-affecting design activities
- NuStart QA criteria based on requirements from 10 CFR Part 50 Appendix B
- Requirements documented in NuStart Project Instruction (PI)

NuStart QA Program Criteria

- Design Control
 - NuStart scope includes development of information supporting site suitability
 - NuStart does not directly conduct design activities
 - Reactor vendors and COL application contractor exercise design control under their QA programs
 - COL application contractor responsible for maintaining traceability between their work and information provided by reactor vendors
 - NuStart monitors activities for compliance with 10 CFR Part 50 Appendix B
 - NuStart uses ASME NQA-1-1994 in reviewing implementation
- Procurement
 - Scope does *not* include fabrication, construction, or purchase of SSCs
 - Procurement documents include applicable regulatory requirements, design bases, regulatory bases, and other requirements necessary to assure adequate quality
 - Require QA program consistent with 10 CFR Part 50 Appendix B

NuStart QA Program Criteria (cont'd)

- Sampling, Testing, Data Collection
 - COL application contractor performs site specific design basis activities including sampling, testing, data collection, and supporting engineering calculations and reports
 - NuStart monitors activities (e.g., test control, measuring and test equipment, handling, storage, and shipping) for compliance with 10 CFR 50 Appendix B
 - NuStart uses ASME NQA-1-1994 in reviewing implementation
- Corrective Action
 - Includes measures for prompt identification and correction of conditions adverse to quality
 - Significant conditions adverse to quality require cause determination and action to preclude repetition
 - Process follows NQA-1-1994

NuStart QA Program Criteria (cont'd)

- QA Records
 - Sufficient records maintained to furnish evidence of activities affecting quality
 - Records include corrective action documentation, reports of reviews, audits, assessments, or other monitoring of work performance
 - Records will be identifiable and retrievable
- Assessments
 - Monitoring processes and activities to assess adequacy, effectiveness and conformance to specified requirements
 - Performed by qualified, but not necessarily certified, personnel
 - Typically do not utilize a detailed checklist

NuStart QA Program Criteria (cont'd)

- Audits
 - Performed to determine adequacy of and compliance with established procedures and effectiveness of implementation
 - Performed with written procedures and check lists by personnel not having direct responsibilities in areas being audited
 - Results will be documented by auditing personnel and reviewed by management of area audited
 - Documentation includes audit plan, completed checklist, audit team qualifications, audit report, audit findings

Comparison to FSAR Ch 17

- NuStart QA program (in NuStart PI)
 - Scope limited to COLA-phase activities performed by NuStart
 - Bulk of quality-affecting work conducted by vendors/contractors under their QA Programs
 - Uses NQA-1 1994 in oversight activities consistent with FSAR Ch 17 approach

Comparison to FSAR Ch 17

- COL application Chapter 17
 - Working with NEI to develop standard template
 - Commits to full-scope QA program for licensee during construction, startup, and operations
 - Consistent with NRC revision of NUREG-0800
- Both programs based on NQA-1-1994

Follow-up from Prior Joint DCWVG Meeting

NRC Staff

Prior Questions to NRC Staff

- Scope of “other site work to support plant construction”
- Analysis needed to support offsite power analysis with RTO
- Information needed on fabrication schedule
- Inclusion of program information in DCD