



North Anna 3 COLA Orientation November 29, 2007



Agenda

- Introduction
- Near-term Activities
- North Anna COLA Description
- Licensing Approach
- Overview of COLA Parts
- Managing Future COLA Revisions

Introduction

- Today is orientation
 - Analogous to college orientation
- Goal is to introduce NRC Staff to North Anna COL application
 - COLA organization
 - Insight into Dominion's preparation
 - Application "features"
- No intent to discuss content

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Near-Term Activities

Today	North Anna COLA Orientation
December 3	NRC Acceptance Review Begins
Mid-December	Introduction to COLA Content
~February 11	End of Nominal Acceptance Review

Communications between NRC and Dominion throughout acceptance review

- Coordinated through NRC Project Management
- Conference calls twice a week

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North Anna COLA

- Tendered to NRC on Nov. 27, 2007
 - Submitted via two letters dated November 26, 2007
 - First letter is COL Application (except for Security Plan)
 - Second letter transmits Security Plan (Safeguards Information)

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North Anna COLA

- North Anna COLA is on DVDs
 - ADAMS Edition DVD
 - Intended to be loaded into ADAMS
 - Link to other documents within ADAMS
 - Convenience Copy DVD
 - Intended for use when access to ADAMS not available
 - Link to other documents within DVD

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ADAMS Edition v. Convenience Copy

	ADAMS Edition	Convenience Copy
North Anna COLA	X	X
ESBWR DCD (Public Version)	X *	
ESBWR DCD (Non-public Version)	X *	X
North Anna ESP Application	X	X
NRC ESP FSER and Supplement	X	X
NRC ESP FEIS	X	X
Packing Slip	X	

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* Links to public version on DVD; links to non-public in ADAMS



Licensing Approach

Incorporation by reference (IBR) in FSAR

- Incorporated North Anna ESP Application SSAR by reference
- Incorporated ESBWR DCD Revision 4 by reference
- Appearance is different from “traditional” FSAR
- Adhered to the original vision of Part 52: Submit COLA based on ESP and DCD

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Licensing Approach (cont.)

Design-centered approach

- Consistent with NRC's 2006 and 2007 RISs and Dominion's responses
- Dominion and others formed the ESBWR Design-Centered Working Group
 - Focused on achieving high degree of standardization among potential ESBWR COL applicants
 - Developed Standardization Matrix
 - North Anna is Reference COL Application
 - Used Industry Templates

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Standardization Matrix

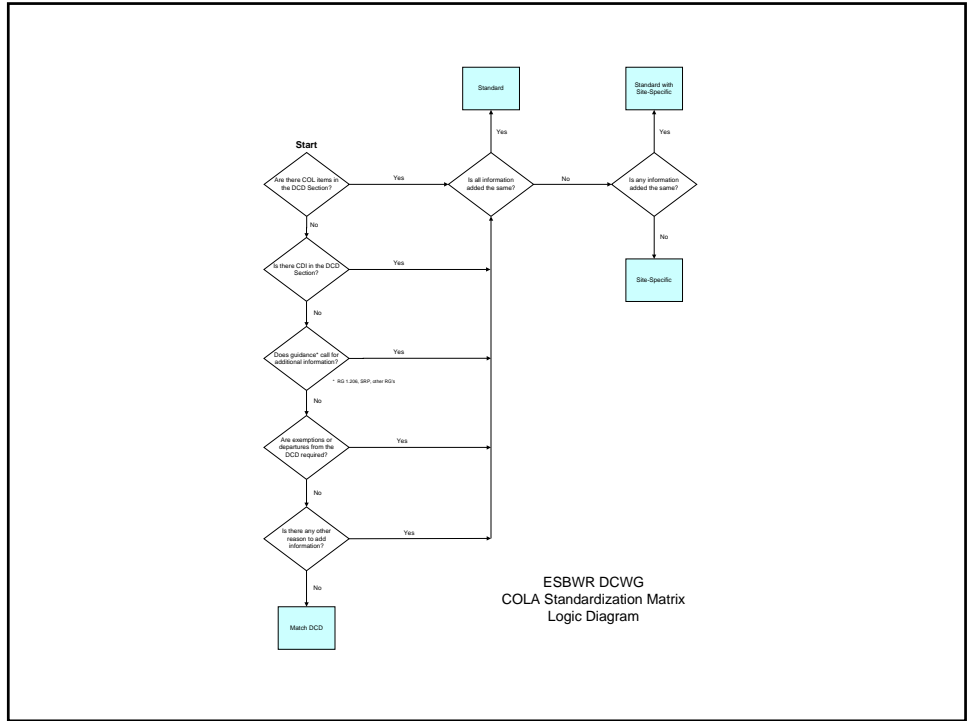
ESBWR Design-Centered Working Group
Revision 8, November 26, 2007

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ESBWR Standardization Matrix ¹						
Part Chapter Section	Title	Lead Organization Preparing Section	Standardization Assessment			
			Match DCD	Standard	Standard With Site- Specific	Site- Specific
		Entergy				
9.3.1	Compressed Air Systems	GE	X			
9.3.2	Process Sampling System	GE		X		
9.3.3	Equipment and Floor Drain System	GE	X			
9.3.4	Chemical and Volume Control System	GE	X			
9.3.5	Standby Liquid Control System	GE		X		
9.3.6	Instrument Air System	GE	X			
9.3.7	Service Air System	GE	X			
9.3.8	High Pressure Nitrogen Supply System	GE	X			
9.3.9	Hydrogen Water Chemistry System	GE			X(1)	
9.3.10	Oxygen Injection System	GE				X
9.3.11	Zinc Injection System	GE		X		
9.3.12	Auxiliary Boiler System	GE	X			
9.4.1	Control Room Area Ventilation System	GE	X			

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Overview of COLA Content

- Part 1 General and Administrative Information
- Part 2 FSAR
- Part 3 Environmental Report
- Part 4 Technical Specifications
- Part 5 Emergency Plan
- Part 6 Not used
- Part 7 Departures Report (Variances, Supp. Info)
- Part 8 Security Plan
- Part 9 Not used
- Part 10 Tier 1/ITAAC

Overview of COLA Content (cont)

Helpful Tools

- Bookmarks
- Electronic links

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Part 1: General and Admin. Info.

- Identifies Dominion Virginia Power and ODEC as the applicants
- Provides estimated construction costs based on publicly available information for financial qualifications
- Calculates decommissioning cost based on NRC formula
- Commits to fund decommissioning by external sinking fund method (like existing units)

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Part 2: FSAR Overview

FSAR created using 10 CFR 52 process

- Incorporated GE ESBWR DCD Tier 2 design information by reference
- Incorporated NAPS ESP SSAR by reference
- Added new information to address DCD Conceptual Design Information (CDI)
- Added new information to address DCD and ESP COL items and ESP Permit Conditions
- Added new information to address NRC guidance (RG 1.206, SRP)

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Part 2: FSAR Overview (cont)

- No departures from ESBWR DCD
- One exemption request
- Eleven variances

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Part 2: FSAR Overview (cont)

Helpful Tools

- Electronic links within FSAR and to documents incorporated by reference
- Left Margin Annotations (LMAs)
 - Identify new standard or site-specific information
 - Identify reason information is added

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Part 2: FSAR Overview (cont)

More Helpful Tools

- Chapter 1
 - SRP, RG, and RG 1.206 conformance tables
 - COL Items table
 - Other tables (CDI, drawings, Topical Reports, etc.)
 - DCD revision number
 - General info (LMA table, numbering of figures & tables, etc.)

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Part 2: FSAR Overview (cont)

RG 1.206 Conformance Table (Table 1.9-203)

- Evaluates conformance with C.III.2, C.III.1, and C.I, as applicable
- References other DCD or other COLA sections when requested information is located elsewhere
- Makes positive statements when RG 1.206 guidance does not apply beyond the scope of the DCD
- Explicit definitions of 'Conforms' and 'Not applicable'

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Part 2: FSAR Overview (cont)

SRP Conformance Table (Table 1.9-201)

- Evaluates conformance with the SRP in effect six months prior to the submittal of the COLA
- Does not re-address conformance with SRP for those portions of the facility design included in the DCD
- Does not re-address SSAR conformance with the applicable RS-002 sections
- Identifies differences with the SRP acceptance criteria and provides justifications
- Explicit definitions of 'Conforms' and 'Not applicable'

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Part 2: FSAR Overview (cont)

DCD COL Items

- DCD COL Items are either:
 - Applicant Item – information is provided in the COLA
 - Holder Item – information will be provided after license is issued. COLA contains commitment to provide information
- Consistent with RG 1.206

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Part 2: FSAR Overview (cont)

Examples of FSAR sections

- Match DCD (IBR only)
- IBR DCD and add new information to address COL items or NRC guidance
- IBR DCD and replace Conceptual Design Information (CDI) from DCD with actual design information

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Part 2: FSAR Overview (cont)

Examples of FSAR sections

- Operational Programs
 - Incorporated NEI templates (Table 1.6-201)
 - Some programs described in DCD
 - Table 13.4-201 provides implementation schedules

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Part 2: FSAR Overview (cont)

Chapter 2, Site Characteristics

- Incorporates DCD by reference
- Table 2.0-201 evaluates DCD site parameters, ESP site characteristic values, and Unit 3 site characteristic values to determine if actual characteristics of site and design “fall within” the parameters assumed in the other licensing actions
- Table 2.0-2R identifies the FSAR section that addresses each DCD Chapter 2 COL Item and its associated SRP section
- Sections 2.1 thru 2.5 provide information on Unit 3 site characteristics to address DCD and ESP COL items and ESP Permit Conditions by incorporating SSAR sections by reference and adding new information, as required

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Part 3 Environmental Report

- Follows the NUREG-1555 ESRP Table of Contents
- Chapter 1 Introduction provides *not only* what is laid out in ESRP, *but also* other key information regarding the architecture and content for the reviewer
- In accordance with 10 CFR 51.50(c)(1):
 - This ER "...incorporates by reference the assessment of environmental issues that were resolved in the ESP proceeding..."
- IBR best represented by explicit statements regarding information for Subject X "...is provided in ESP-ER Section X.Y and in FEIS X.Y...", and that in most instances, issues were "resolved"

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Part 3 Environmental Report

- Where and when necessary, we state that supplemental information is provided in the appropriate subject matter section
- Supplemental information may include:
 - How unresolved or deferred issues, and commitments identified in the ESP proceeding are addressed
 - Water quality; Need for power; Visual impact study
 - A description of the new & significant information process & procedure were implemented for environmental assessment
 - Results of new & significant information evaluations
 - Transmission & grid connection
 - Demonstration that the selected design falls within the ESP site characteristics (or not)
 - Demonstration that ESP Terms & Conditions will be satisfied
- Environmental Protection Plan

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Part 4: Technical Specifications

- Incorporates and presents ESBWR generic TS and TS Bases
- No changes to generic TS or TS Bases
- Completes 14 bracketed items
- ~380 bracketed items to be completed
 - Mostly generic
 - Most awaiting detailed design information
 - Some require as-built information

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Part 5: Emergency Plan

- EP 'major features' approved in ESP
- COLA includes:
 - Complete and integrated plan
 - Stand-alone Unit 3 plan and emergency response organization
 - Shares offsite features, e.g., sirens, offsite agency resources
 - Supplemental information
 - ETE
 - State and local plans
- EP ITAAC provided in COLA Part 10

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Part 7: Departures Report

Summary section required by NRC

- No departures
- 4 variances from ESP site characteristics
 - Long-term dispersion estimates (X/Q and D/Q)
 - Hydraulic conductivity
 - Hydraulic gradient
 - Vibratory ground motion

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Part 7: Departures Report (cont)

- 7 variances from ESPA SSAR:
 - Distribution coefficients (K_d)
 - Void ratio, porosity, and seepage velocity
 - NAPS water supply well information
 - Stability of slopes
 - Gaseous pathway doses
 - Annual thyroid dose
 - Annual liquid effluent releases

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Part 7: Departures Report (cont)

- One exemption request (FFD program description based on proposed rule schedule)
- Provides reasons for adding supplemental information to FSAR
 - Typically to meet RG 1.206 or SRP

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Part 8 Security Plan

- Consists of:
 - Security Plan
 - Training and Qualification Plan
 - Contingency Plan
- Portions implemented prior to fuel onsite
- Submitted to NRC under separate correspondence

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Part 10 Tier 1/ITAAC

- Incorporates DCD Tier 1 by reference
 - Includes standard design ITAAC
 - Physical security ITAAC
- Added emergency planning ITAAC
- Added site-specific ITAAC
 - Backfill
 - PSWS interface requirements

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Submittal Description (cont)

COLA Submission 1 Summary

<u>COLA Part</u>	<u>Pages</u>	<u>Bookmarks</u>	<u>Links</u>
1 (Gen. & Fin. Info)	310	27	1
2 (FSAR)	906	353	4,588
2 (MACTEC Rpt)	1,923	0	0
3 (ER)	326	275	1,540
4 (TS)	769	37	7
5 (EP)/ETE	236/300	34/150	0/0
7 (Departures Rpt)	16	24	86
8 (Security)/SGI	2/177	20	0
10 (Tier 1/ITAAC)	34	43	0
Total	4,999	963	6,222

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Managing COLA Revisions

- Revisions to the DCD will drive COLA revisions
 - DCD Revision 5, scheduled early 2008, will drive a COLA revision
 - COL issuance must be based on certified design
- Other drivers:
 - Changes to other parts of the application will drive COLA revisions
- Process COLA revisions in a timely manner
- Each time Dominion one or more changed parts of the COLA, it is a new “submission”

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