Luminant

MNES

US-APWR Design Centered Working Group Meeting with NRC

US-APWR COL Items

July 16, 2009

Luminant

MHI/MNES

Luminant

MNES

Purposes

- Discuss the following items for the planned US-APWR DCD Rev.2 and R-COLA FSAR Rev.1
  1. Proposed updates of COL Information Items in the planned DCD Rev. 2
  2. Closure plan of COL Holder Items originally defined in R-COLA FSAR Rev. 0
  3. Summary of changes
- Obtain NRC feedback regarding the proposed approach

Luminant

MNES

Background (1/2)

- During the R-COLA acceptance review, NRC raised questions about COL Holder Items in the R-COLA FSAR Chapter 6.
- MHI performed the comprehensive review of COL Items in the DCD that are identified as COL Holder Items in the R-COLA.

  As a result of the examination, MHI has informed NRC of the proposed updates to be made to the COL items in the DCD including deletion of some COL items.
  (MHI Letter UAP-HF-08259, November 7, 2008)
- Luminant submitted the resolution for COL holder items for FSAR Chapter 6 on November 10, 2008 (Luminant Letter CP-200801602)

Luminant

MNES

Background (2/2)

- Although the DCD and R-COLA are under the NRC's review, MHI and Luminant have been working together to re-evaluate COL information items, mainly "Holder Items."
- In addition, in the process of DCD RAI response to NRC or at the DCWG meetings, NRC has raised questions about COL items.

  As responses to the NRC, MHI has also informed NRC of further updates of the COL items in the DCD including new COL items.

Luminant

MNES

1. Proposed Updates of COL Information Items in the Planned DCD Rev. 2

1.1 Update Strategy

1.2 Update Examples

Luminant

MNES

1.1 Update Strategy

(1) Incorporating RAI responses and NRC comments (including those at DCWG Meeting)

=> Updates of the COL Items in the DCD including new COL Items and restored COL Items

(2) Re-evaluating the ability of COL Applicants to close COL Holder Items

Luminant

MNES

1.2 Update Examples (1/3)

(1) New COL Items due to DCD RAI responses (Example)

COL Item No.	COL Item Defined in DCD Rev.1	COL Item in DCD Rev.2
COL 14.2(12)	-	The COL holder makes available approved test procedures for satisfying testing requirements described in Section 14.2 to the NRC approximately 60 days prior to their intended use.

Luminant

MNES

1.2 Update Examples (2/3)

(2) Restored COL Items due to DCD RAI responses (Example)

COL Item No.	COL Item Defined in DCD Rev.1	COL Item in DCD Rev.2
COL 9.1(6)	Deleted	To assure proper handling of heavy loads during the plant life, the COL Applicant is to establish a heavy load handling program, including associated procedural and administrative controls, ...

Luminant

1.2 Update Examples (3/3)

(3) Updated COL Items due to DCD RAI responses(Example)

COL Item No.	COL Item Defined in DCD Rev.1	COL Item Re-proposed in DCD Rev.2
COL 10.3(1)	The Combined License Applicant is to address preparation of a FAC monitoring program for carbon steel portions of the steam and power conversion systems that contain water or wet steam.	The Combined License Applicant will provide a description of the FAC monitoring program for carbon steel portions of the steam and power conversion systems that contain water or wet steam. The description will address consistency with Generic Letter 89-08 and NSAC-202L-R3 and will provide a milestone schedule for implementation of the program.

Luminant

2. Closure Plan of COL Holder Items Originally Defined in R-COLA FSAR Rev. 0

2.1 Definition of COL Items

2.2 Categories of COL Holder Items in R-COLA FSAR Rev.0

2.3 Approach for Re-evaluation of COL Holder Items

2.4 Plan for COL Item Closure (for the Original COL Holder Items)

2.5 Examples of Proposed COL Item Closure for Original COL Holder Items

Luminant

MNES

2.1 Definition of COL Items

Breakdown of COL Items

COL Item Category	Definition
COL Applicant Item	▪ Information needed in the COL application to meet the guidelines of RG 1.206 ▪ Additional or supplementary information was submitted or will be submitted before COL Issuance to NRC for review. ▪ Acceptable tools are identified to close the COL items
COL Holder Item [#]	▪ Information that will be addressed after COL Issuance

[#] Sufficient information will be provided in the COLA to allow the NRC to issue a final SER

Luminant

MNES

2.2 Categories of COL Holder Items in R-COLA Rev.0

- ❑ Operational programs / Plant procedures
- ❑ Detailed design information changed due to minor modification in as-procured / as-built information
- ❑ Detailed schedule
  - Impossible to be finalized during the COLA review phase, which is subject to change depending on design progress or construction.
  - Only milestones are included.

Luminant

MNES

2.3 Approach for Re-evaluation of COL Holder Items

Approach to re-evaluate COL Holder Items in consideration of:

COL Items that cannot be resolved before the issuance of COL will be addressed as follows [RG 1.206, C.III.4.3]:

- ❑ Propose new ITAAC to resolve the COL item
- ❑ Be a License Condition and include implementation schedules (e.g., the operational programs)
- ❑ Address a COL item in sufficient detail to support the NRC licensing finding or to inform the NRC staff of the final disposition of the COL item. ==> [[Commitment]]

Luminant

MNES

2.4 Plan of COL Item Closure

(for the Original COL Holder Items)

COL items should be closed as follows:

COL Item associated with XXX in DCD	Before COL Issuance (FSAR Rev.0 /Rev.1 / Updates)	After COL Issuance (FSRA Updates)	PART 10	Preliminary Plan of COL Items Closure		
				"A" or "H"	Reason	
Operational program (License Condition in RG 1.206 Table 13.4-1)	▪ "Fully described" description ▪ Implementation milestone	Actual program	Proposed License Condition	A	1a	"Applicant item" as License Condition for Operational program
Operational program (No License Condition in RG 1.206 Table 13.4-1)			N/A	A	1b	"Applicant item" as Commitment for Operational program
Plant procedure	▪ Brief description ▪ Implementation milestone	Actual procedure	N/A	A	2	"Applicant item" as Commitment for Plant procedure
Design information	▪ Sufficient information in FSAR Rev.0 / Rev.1	N/A	N/A	A	3a	"Applicant item" Design information provided in FSAR
	▪ Sufficient information to be provided in FSAR updates	N/A	N/A	A	3b	"Applicant item" as Commitment for Design information to be provided before COL issuance
	▪ Sufficient information to complete review for FSER	Sufficient information in FSAR updates	Proposed License Condition	H	3c	"Holder item"
Schedule information	▪ Implementation milestone	Detailed schedule in FSAR updates	N/A	A	4	"Applicant item" as Commitment for Implementation milestone

Goal is to not have 3c " Holder item "

2.5 Examples of Proposed COL Item Closure for Original COL Holder Items (1 of 7)

Luminant

MNES

Operational Program : 1a

COL Item No.	COL Item in DCD Rev.2	Proposed Description of FSAR Rev.1	Preliminary Plan of COL Item Closure
COL 5.3(2)	The COL applicant provides a reactor vessel material surveillance program based on information in Subsection 5.3.1.6.	No Change from FSAR Rev.0 The reactor vessel material surveillance program is implemented as an operational program. As the reactor vessel materials do not begin to be affected by neutron fluence until the reactor begins critical operation, this program is implemented prior to initial criticality, as identified in Table 13.4-201.	"Applicant item" as License Condition for Operational program

2.5 Examples of Proposed COL Item Closure for Original COL Holder Items (2 of 7)

Luminant

MNES

Operational Program : 1b

COL Item No.	COL Item in DCD Rev.2	Proposed Description of FSAR Rev.1	Preliminary Plan of COL Item Closure
COL 6.6(1)	The COL Applicant will be responsible for identifying the implementation milestone for ASME Section XI inservice inspection program for ASME Code Section III Class 2 and 3 systems, components (pumps and valves), piping, and supports consistent with the requirements of 10 CFR 50.55a (g).	No Change from FSAR Rev.0 A preservice inspection program (non-destructive base line examination) and an inservice inspection program for American Society of Mechanical Engineers (ASME) Code Section III Class 2 and 3 systems, components (pumps and valves), piping, and supports will be developed and implemented in accordance with Table 13.4-201.	"Applicant item" as Commitment for Operational program

2.5 Examples of Proposed COL Item Closure for Original COL Holder Items (3 of 7)

Luminant

MNES

Plant Procedures : 2

COL Item No.	COL Item in DCD Rev.2	Proposed Description of FSAR Rev.1	Preliminary Plan of COL Item Closure
COL 3.5(1)	The COL Applicant is to prepare plant procedures that specify equipment required for maintenance or undergoing maintenance is to be removed from containment prior to operation, moved to a location where it is not a potential hazard to SSCs important to safety, or seismically restrained to prevent it from becoming a missile.	No Change from FSAR Rev.0 CPNPP Unit 3 and 4 procedures will be issued prior to fuel load in accordance with Subsection 13.5.2.2 to require equipment for maintenance or undergoing maintenance to be removed from containment prior to operation, moved to a location where it is not a potential hazard to SSCs important to safety, or seismically restrained to prevent it from becoming a missile.	"Applicant item" as Commitment for Plant procedure

2.5 Examples of Proposed COL Item Closure for Original COL Holder Items (4 of 7)

Luminant

MNES

Design Information : 3a

COL Item No.	COL Item in DCD Rev.2	Proposed Description of FSAR Rev.1	Preliminary Plan of COL Item Closure
COL 5.2(2)	The COL applicant addresses Code Cases invoked in connection with the inservice inspection program that are in compliance with Regulatory Guide 1.147.	Comanche Peak Nuclear Power Plant (CPNPP) uses no Code Cases beyond those listed in the referenced DCD. [Note] Code case associated with RG 1.147 will be incorporated into DCD revision 2 due to RAI to DCD.	"Applicant item" Design information provided in FSAR Rev.1

2.5 Examples of Proposed COL Item Closure for Original COL Holder Items (5 of 7)

Luminant MNES

Design Information : 3b

COL Item No.	COL Item in DCD Rev.2	Proposed Description of FSAR Rev.1	Preliminary Plan of COL Item Closure
COL 8.3(2)	The COL applicant is to provide ground grid and lightning protection.	The station ground grid and lightning protection system designs are based on soil resistivity data at CPNPP site, the maximum ground fault current level, ground fault clearing time, and the type and configuration of the structures to be protected from lightning strikes. Design information will be provided and incorporated in the updated FSAR before the issuance of COL.	"Applicant item" as Commitment for Design information to be provided before COL Issuance

2.5 Examples of Proposed COL Item Closure for Original COL Holder Items (6 of 7)

Luminant MNES

Design Information : 3c

Currently no example

Luminant

2.5 Examples of Proposed COL Item Closure for Original COL Holder Items (7 of 7)

MNES

Schedule Information : 4

COL Item No.		COL Item in DCD Rev.2	Proposed Description of FSAR Rev.1	Preliminary Plan of COL Item Closure
COL 14.2(7)	The COL applicant provides an event-based schedule, relative to fuel loading, for conducting each major phase of the test program, and a schedule for the development of plant procedures that assures required procedures are available for use during the preparation, review and performance of preoperational and startup testing. For multiunit sites, the COL applicant discusses the effects of overlapping initial test program schedules on organizations and personnel participating in each ITP. The COL applicant identifies and cross-references each test or portion of a test required to be completed prior to fuel load which satisfies ITAAC requirements. [14.2.9] [14.2.11]	No Change from FSAR Rev.0 A schedule for the development of plant procedures required for use during preoperational testing will be provided to the U.S. Nuclear Regulatory Commission (NRC) 12 months prior to the start of the corresponding preoperational tests. A schedule for the development of plant procedures required for use during startup testing is provided to the NRC 12 months prior to the start of fuel loading. The schedules provide sufficient detail to assure that the procedures required to support testing are available for test procedure preparation, review and performance.	"Applicant item" as Commitment for Implementation milestone

Luminant

3. Summary (1/3)

MNES

Re-evaluation results of COL Items in DCD Rev.2 and R-COLA FSAR Rev.1

Chapter	DCD Rev.1	DCD Rev.2	R-COLA FSAR Rev.1				
	COL Item	COL Item	Applicant Item				Holder Item
			Fully addressed			Open [#]	
			Closed (3a)	License Condition (1a)	Commitment (1b, 2, 4)	(3b)	
Ch.1	8	8	7	0	1	0	0
Ch. 2	7	7	7	0	0	0	0
Ch. 3	108	93	82	4	7	0	0
Ch. 4	1	0	0	0	0	0	0
Ch. 5	11	10	7	2	1	0	0
Ch. 6	21	7	3	0	4	0	0
Ch. 7	3	3	3	0	0	0	0
Ch. 8	13	13	12	0	0	1	0
Ch. 9	37	38	37	1	0	0	0
Ch. 10	6	6	5	0	1	0	0

[#] : Open to be fully addressed before COL issuance

Luminant

3. Summary (2/3)

MNES

Re-evaluation results of COL Items in DCD Rev.2 and R-COLA FSAR Rev.1

Chapter	DCD Rev.1	DCD Rev.2	R-COLA FSAR Rev.1				
	No. of COL Item	No. of COL Item	Applicant item				Holder item
			Fully addressed			Open [#]	
			Closed (3a)	License Condition (1a)	Commitment (1b, 2, 4)	(3b)	
Ch. 11	24	23	19	3	1	0	0
Ch. 12	9	11	9	1	0	1	0
Ch. 13	28	28	25	1	2	0	0
Ch. 14	12	7	6	0	1	0	0
Ch. 15	1	1	1	0	0	0	0
Ch. 16	27	27	23	0	0	4	0
Ch. 17	4	4	1	0	3	0	0
Ch. 18	0	0	0	0	0	0	0
Ch. 19	5	2	0	0	2	0	0
Total	325	288	247	12	23	6	0

[#] : Open to be fully addressed before COL issuance

Luminant

MNES

3. Summary (3/3)

- MHI will incorporate today's proposal into the US-APWR DCD Rev.2 planned in October 2009.
- Luminant will incorporate US-APWR DCD Rev.2 by reference and today's proposal into CPNPP Units 3 and 4 COLA Rev.1 planned in November 2009.

Luminant

MNES

End