

# US-APWR

## DCWG Meeting

3/7/2012

# Overall Agenda



1. **Review of actions from previous meeting**
2. **Review of goals from previous meeting**
3. General NRC update
4. **DC review status**
5. **RCOLA review status**
6. **SCOLA review status**
7. **ACRS Meeting Schedule**
8. **Integrated DCWG Schedules**
9. **Special Generic Topics (e.g. Fukushima)**
10. **Review of goals for next meeting**
11. Review of actions items from this meeting

**BOLD** items are included in this presentation.

# 1. Review of Actions

- Mitsubishi/NRC to schedule a meeting before 1/31/2013 to discuss eRAI status, specifically for In Evaluation >90 days, Confirmatory Actions Closeable, Confirmatory Actions Needing Discussion and Unresolved-Closed Needing Discussion. – **COMPLETE**, meeting held 2/20/2013 to discuss 'actionable' RAIs.
- NRC to provide a plan for resolving 3.7/3.8 RAIs (U-C) by 12/14/2012. – **ACTION CLOSED**, NRC has confirmed RAIs will be reviewed as part of TeR review, and will not start until acceptance review has completed.
- Mitsubishi/NRC to schedule a meeting around the end of January for 3.7/3.8. Topic is flexible, may be Staff presenting the results of the acceptance review or Mitsubishi presenting the contents of the submitted Technical Reports. – **ACTION CLOSED**, meeting considered for 1/30/2013, decided and agreed that meeting is not necessary. Interactions will occur as needed.
- NRC to provide more detail on the Staff's Fuel Seismic discussion by 12/14/2012. – **COMPLETE**, discussion held 12/13/2012.
- NRC to complete the review of Ch 12 Confirmatory Action RAIs by 1/31/2013, and provide a status update on the 1/8/2013 bi-weekly DCD call. – **COMPLETE**, Ch 12 CA RAIs closed by 12/11/2012.

# 1. Review of Actions

- NRC to provide the Staff's plan for Boron Precipitation and Phase 4 of Chapter 15 by 12/21/2012. – **COMPLETE**, Staff have communicated position.
- Mitsubishi to arrange a call with the NRC to discuss Risk Significant Components in TS, to discuss the Staff's position and consider if any formal communication is needed, by mid-January. – **COMPLETE**, call held 12/18/2012.
- Luminant to propose a call for RESRAD and HEC-RAS. – **COMPLETE**, call held.
- Mitsubishi to propose a call with the NRC to discuss procurement specifications and the Staff's needs for a future audit, by 12/21/2012. – **COMPLETE**, call held 1/16/2013.
- Luminant to propose a call to discuss the specifics of the Staff's position related to GDC 5. – **COMPLETE**, call held 2/6/2013.
- Dominion to provide communication on a schedule. - **COMPLETE**
- Mitsubishi/Luminant/Dominion will provide an update on planned DCD/COLA revisions by 12/21/2012. – **COMPLETE** for DCD and COLAs.
- Mitsubishi/Luminant/Dominion/NRC to schedule an end-game meeting to be arranged for mid-January. – **COMPLETE**, meeting held 2/20/2013.

## 2. Review of Goals



### ➤ Goals from previous DCWG Meeting

1. DCD and R-COLA ISCP deliverables submitted that were scheduled to be completed during the period
2. Unresolved – Closed: Discussion Needed RAI's not tied to 3.7/3.8, reduce to zero
3. Number of RAI Questions In Evaluation > 90 days below 84
4. SERs completed per NRC's schedule
5. ACRS meetings completed that were scheduled
6. Draft DCD Review Schedule provided
7. Provide a schedule for next DCD and COL Revisions

### 3. General NRC Update



- **Update of Staff review of current DCD, RCOLA and SCOLA schedules to be provided.**

## 4. DC Review Status



### ➤ **RAI responses and closure status**

### ➤ **Focus topics**

- ✓ Fuel Seismic (Ch 4)
- ✓ I&C (Ch 7)
- ✓ Bulletin 2012-01 (Ch 8)
- ✓ Fuel Rack Mechanical Report (Ch 9 and 12)
- ✓ DRAP Audit (Ch 17)
- ✓ HFE (Ch 18)
- ✓ PRA Closure Plan (Ch 19)

### ➤ **Discussion topics**

- ✓ Seismic (Ch 3)
- ✓ GSI-191 (Ch 6)
- ✓ ACC (Ch 6)
- ✓ SECY 12-0093 (Ch 15)
- ✓ Risk Significant Components in TS (Ch 16 and 19)

### ➤ **Resolved topics**

- ✓ Chapter 12 RAI Closure

## 4. DC Review Status



### ➤ RAI responses and closure status

Table 3-1 - eRAI Status Overall Summary

eRAI Data Date		12/5/2011	2/21/2012	4/30/2012	7/5/2012	9/10/2012	11/26/2012	3/4/2013	Difference
Issued/Waiting for Response		221	214	215	316	323	317	331	+16
In Evaluation	<90 days	79	80	104	77	118	72	25	-47
	>90 days	87	94	82	123	119	167	88*	-79
	total	166	174	186	200	237	239	113	-126
Confirmatory Action (total)		517	500	476	445	406	421	504	+83
Confirmatory Action (closable)					71	37	21	1**	-20
Unresolved – Closed (total)		897	888	879	807	740	732	713	-19
Unresolved – Closed (need disc)					225	61	45	31***	-12
Resolved – Closed		3138	3249	3354	3496	3566	3607	3690	+83
Total		4939	5025	5110	5264	5272	5316	5351	+35

(\*) 20 RAIs can move out of this category, discussed at 2/20/13 meeting

(\*\*) Staff have now provided feedback for 8.3.1-41, no longer 'closable'

(\*\*\*) 3 RAIs can move out of this category, discussed at 2/20/13 meeting

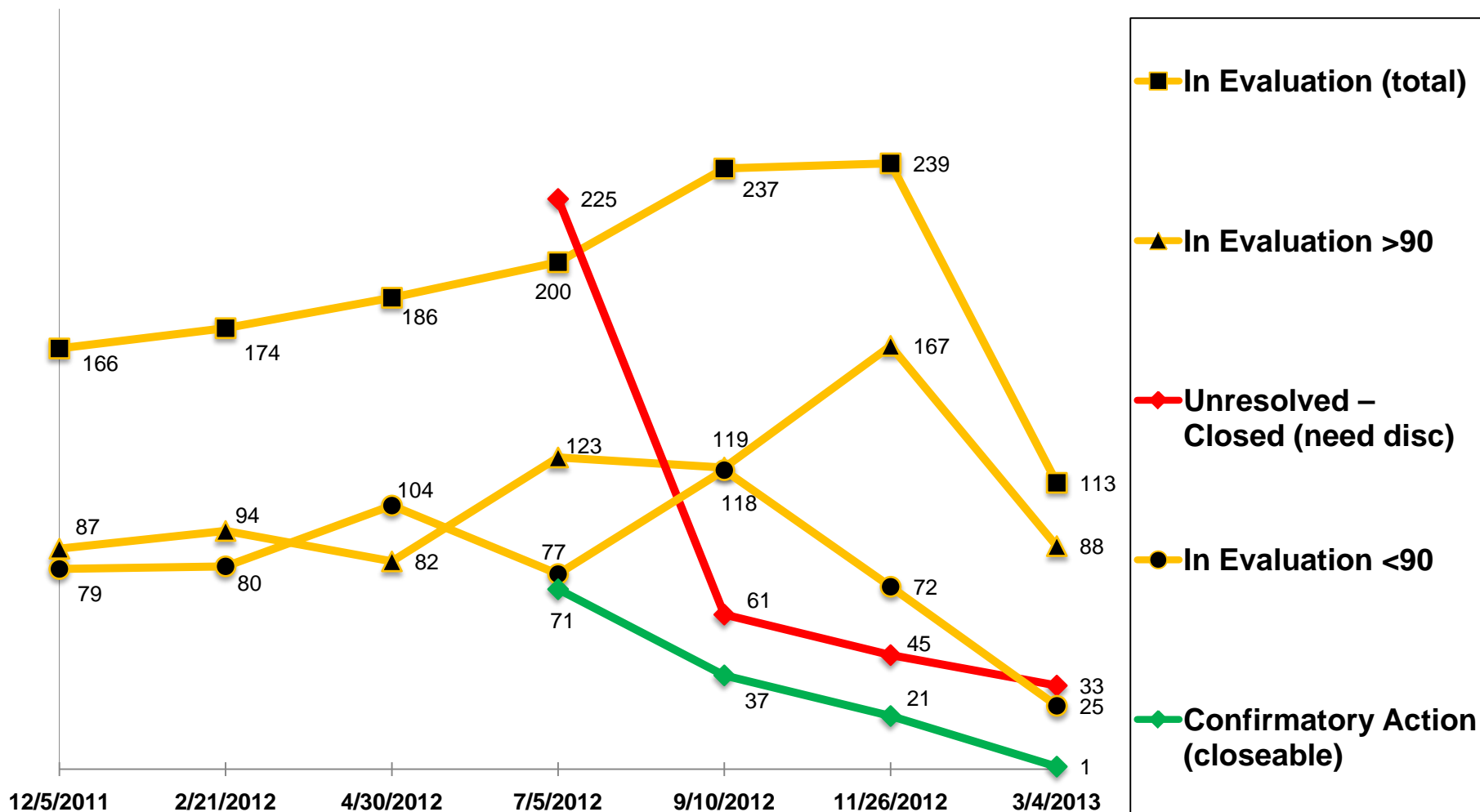




## 4. DC Review Status



### ➤ RAI responses and closure status - Trending



## 4. DC Review Status



- Results of meeting held 2/20/2013 can be seen in eRAI data before and after the meeting date

	eRAI Data Date	
	2/12/2013	3/4/2013
<b>In-Evaluation &gt;90 (non 3.7/3.8)</b>	76	63*
<b>In-Evaluation, Discussion Needed (non 3.7/3.8)</b>	43	21
<b>Confirmatory Action, Closable</b>	2	1**
<b>Confirmatory Action, Discussion Needed</b>	3	0
<b>Unresolved-Closed, Discussion Needed</b>	12	11***

(\*) 20 RAIs can move out of this category, discussed at 2/20/13 meeting

(\*\*) Staff have now provided feedback for 8.3.1-41, no longer 'closable'

(\*\*\*) 3 RAIs can move out of this category, discussed at 2/20/13 meeting



## 4. DC Review Status



### ➤ Focus topics

- ✓ Fuel Seismic (Ch 4)
  - Conference call planned for 3/8/2013
  - Meeting planned for 3/13/2013
  - Closure plan will be discussed, continued Staff involvement and feedback is needed
- ✓ I&C (Ch 7)
  - Staff have completed SER with Open Items
  - 4/25-26/2013 ACRS SC Meeting on-track
- ✓ Bulletin 2012-01 (Ch 8)
  - Staff position is unclear

## 4. DC Review Status



- ✓ Fuel Rack Mechanical Report (Ch 9 and 12)
  - Mitsubishi has identified portions of reports not changing as a result of seismic-related revision
  - Staff to provide feedback on current revision
  - Staff have indicated review starting in March
- ✓ DRAP Audit (Ch 17)
  - Staff mentioned possible audit of MHI documents during Ch 17 ACRS SC meeting
  - Expected documents and timing will be needed to prepare for the potential audit

## 4. DC Review Status



### ✓ HFE (Ch 18)

- Staff have issued several RAIs to Mitsubishi on HFE documentation in the DCD and Technical Reports
- Mitsubishi understands the issues identified and has communicated a plan for providing revised documents
- A closure plan will be provided

### ✓ PRA Closure Plan (Ch 19)

- Closure plan will be created following proposed discussion with Staff in mid-March
- Closure plan will include PRA submittal date, OI/RAI resolution plans and ACRS actions as needed

## 4. DC Review Status



### ➤ Discussion topics

- ✓ Seismic (Ch 3)
  - Submittals have been made 11/2012, 12/2012, 1/2013, 2/2013.
  - Preliminary focus areas have been provided by the Staff.
  - Seismic Impacts (Various Chapters)
    - Majority of remaining submittals are in non-3.7/8 section (e.g. Fuel Racks for Ch 9/12)
    - Staff have incorporated submittal dates into phase dates.
- ✓ Strainer (Ch 6)
  - Previous feedback had indicated no technical issues remain
  - New RAIs related to the GSI-191 review
  - Conference call planned for 3/18/2013 to gain clarification on the Staff's requests

## 4. DC Review Status



- ✓ ACC (Ch 6)
  - RAI 94 remains
  - Mitsubishi to provide material 3/20/2013
- ✓ OI 15.6.5-14 Boron Precipitation/HLSO time (Ch 15)
  - Mitsubishi to provide material to Staff 3/20/2013
  - Staff are also performing an analysis
- ✓ Risk Significant Components in TS (Ch 16 and 19)
  - Official letter provided with Staff position
  - RAI response will be revised to include TS wording if needed to meet safety goals

## 4. DC Review Status



### ➤ Resolved topics

- ✓ Chapter 12 RAI Closure
  - Closeable Ch 12 RAIs were closed shortly after previous DCWG meeting.



# 5. RCOLA Review Status



## ➤ Phase Status by Chapter – as of Feb 25

	Chapter																				
	1	2	2.4, .5	3	3.7, .8	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Phase 1																					
Phase 2	8/13	3/13		7/13				6/13	3/13		5/13					8/13					
Phase 3 Sub	9/13	4/13		8/13				8/13	4/13		6/13					9/13					
Phase 3 Full						4/13									4/13		4/13	4/13	4/13		4/13
Phase 4																					
Phase 5																					
Phase 6																					

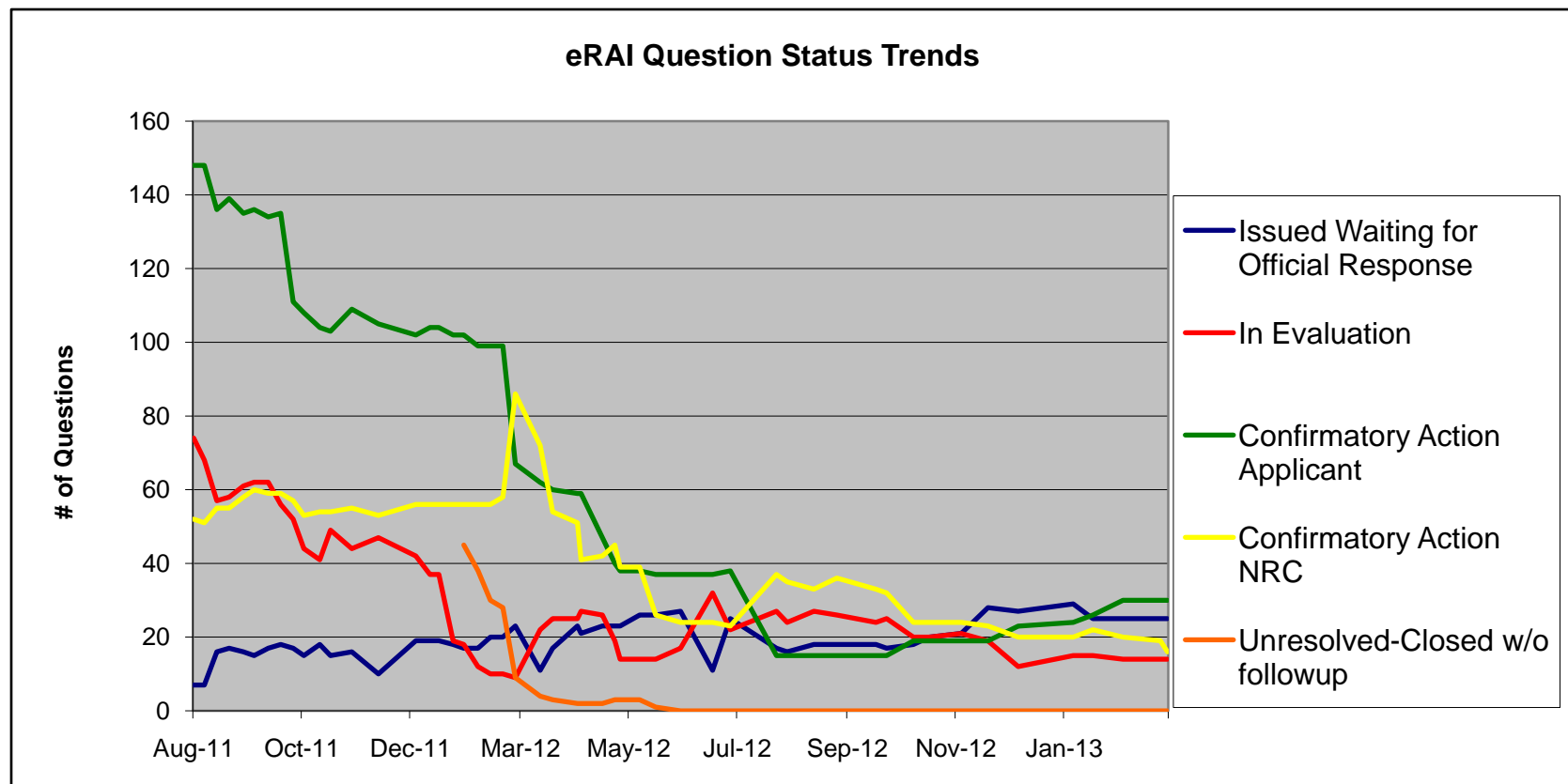
	Complete		Not complete (date indicates forecast date for completion)		Date not changed subsequent to 12/5/12 DCWG
	Complete subsequent to 12/5/12 DCWG		Date changed subsequent to 12/5/12 DCWG		

*Progress made on Ch 16, 17 & 19; Ch 1, 6 & 14 delayed; ACRS dates scheduled for all chapters, except those sections related to the Closure Plans and Chapter 18.*

## 5. RCOLA Review Status



### ➤ RAI Questions – Progress to Closure – as of 3/1/13

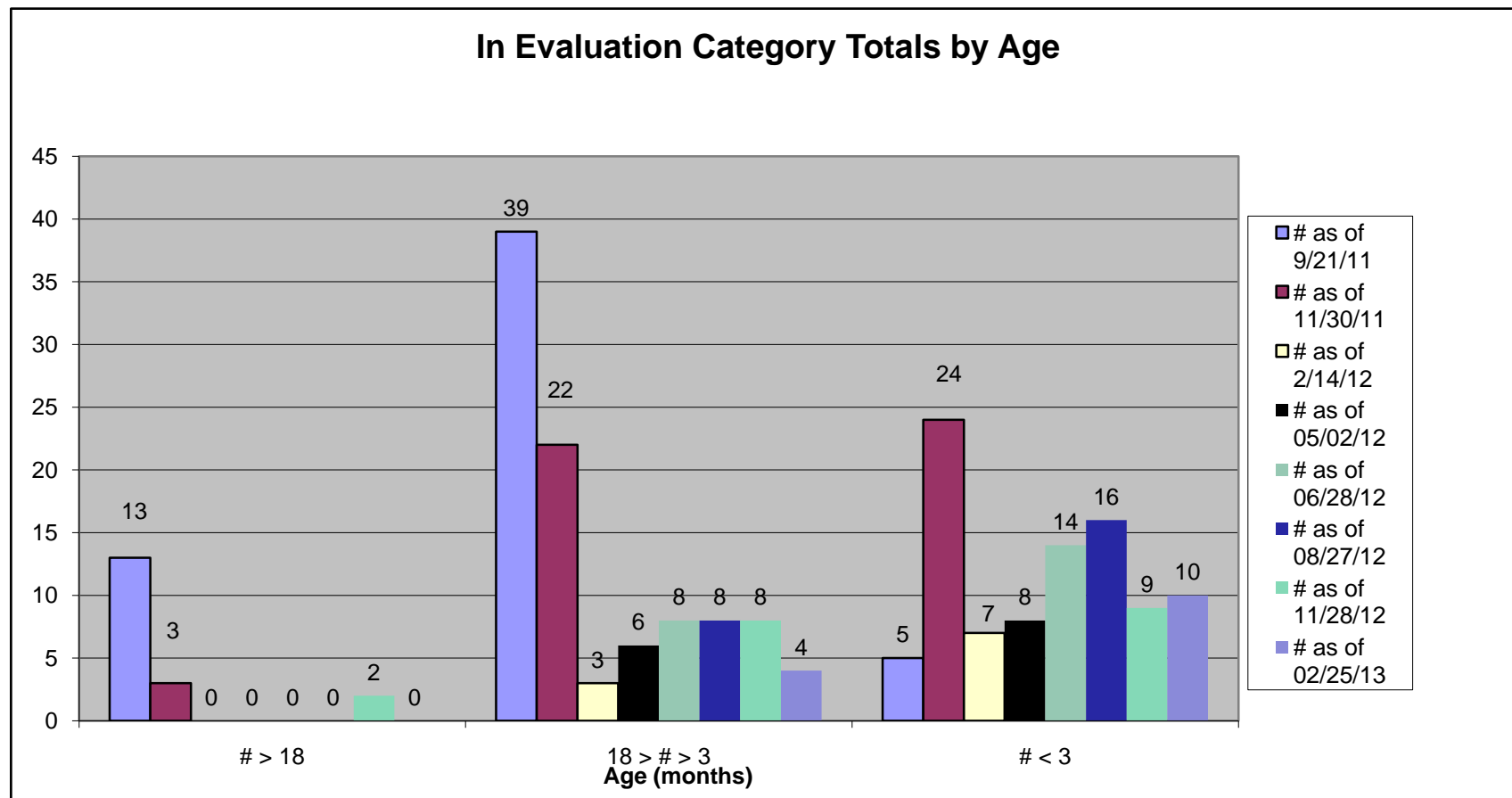


*Confirmatory Action NRC trending down and Confirmatory Action Applicant trending up, which is expected as we approach next RCOLA revision.*

## 5. RCOLA Review Status



### ➤ RAI Questions – “In Evaluation” Status



*The number of “In Evaluation” questions greater than 3 months remains small.*



## 5. RCOLA Open Questions



### ➤ Issued Waiting for Response – 25

- ✓ 5 not issued
- ✓ 12 IHCP/ISCP
- ✓ 2 Fukushima related
- ✓ 2 Luminant response provided 3/4/13
- ✓ 4 Luminant response is pending

### ➤ In Evaluation – 14

- ✓ 2 Fukushima related
- ✓ 6 Chapter 19 OIs
- ✓ 1 Chapter 8 OI
- ✓ 5 Other

## 5. RCOLA Open Questions



### ➤ **Confirmatory (awaiting NRC action) – 3**

- ✓ 2 incorporated into COLA Rev 3 issued in June 2012
- ✓ 1 incorporated in prior COLA revisions

### ➤ **Confirmatory (awaiting Luminant action) – 43**

- ✓ 33 will be incorporated into COLA Rev 4 in November 2013
- ✓ 10 associated with ISCP or IHCP – response by June 2013

## 5. RCOLA Review Topics



### ➤ **Site-specific Seismic**

- ✓ Product submittals to staff November 2012 through August 2013 on schedule

### ➤ **Hydrology**

- ✓ Public meetings on RESRAD & HEC-RAS in January 2013
- ✓ Product submittals to staff March 2013 through May 2013
  - Schedule being reassessed due to challenge found in one of the basic calculation packages

### ➤ **Negation Action Plan**

- ✓ Reinstate discussion with NRC on or before second quarter of 2013

## 5. RCOLA Review Topics



### ➤ Chapter 3

- ✓ DCWG developing coordinated response to NRC request for procurement specifications

### ➤ Chapter 8

- ✓ Luminant has submitted changes to address the GDC 5 Offsite Power System Open Item including proposed words for the FSAR. NRC to assess acceptability.

### ➤ Fukushima

- ✓ RAI response in progress. Response schedule being assessed.

### ➤ RCOLA Revision 4

- ✓ Exemption request submitted requesting a revision date of November 2013

## 6. SCOLA Topics



### ➤ NA3 Seismic Closure Plan Deferral Status

Dominion's deferral was based on two considerations:

1. Status of MHI's US-APWR DCD Seismic Closure Plan
  - Dominion is currently evaluating the NA3 SCP in light of the February 15 DCD SCP revision and the February 28, 2013 revision to NRC's DCD review schedule
2. Dominion's evaluation of methodologies used in determining NA3 site characteristics based on seismic source characterization and attenuation models
  - CEUS seismic source characterization model has been updated
  - Earthquake catalog revised to include events through 2011
  - Mineral, VA earthquake and distant but potentially significant seismic sources now included
  - A PSHA for the North Anna site has been calculated using the 04/06 GMPEs
  - Preliminary EPRI results using updated 04/06 GMPEs appear to have benefit for the North Anna site
  - Benefit includes reduced impact on site-specific structures and reduced In-Structure Response Spectra (ISRS)
  - Use of the updated GMPEs would require the PSHA to be re-calculated



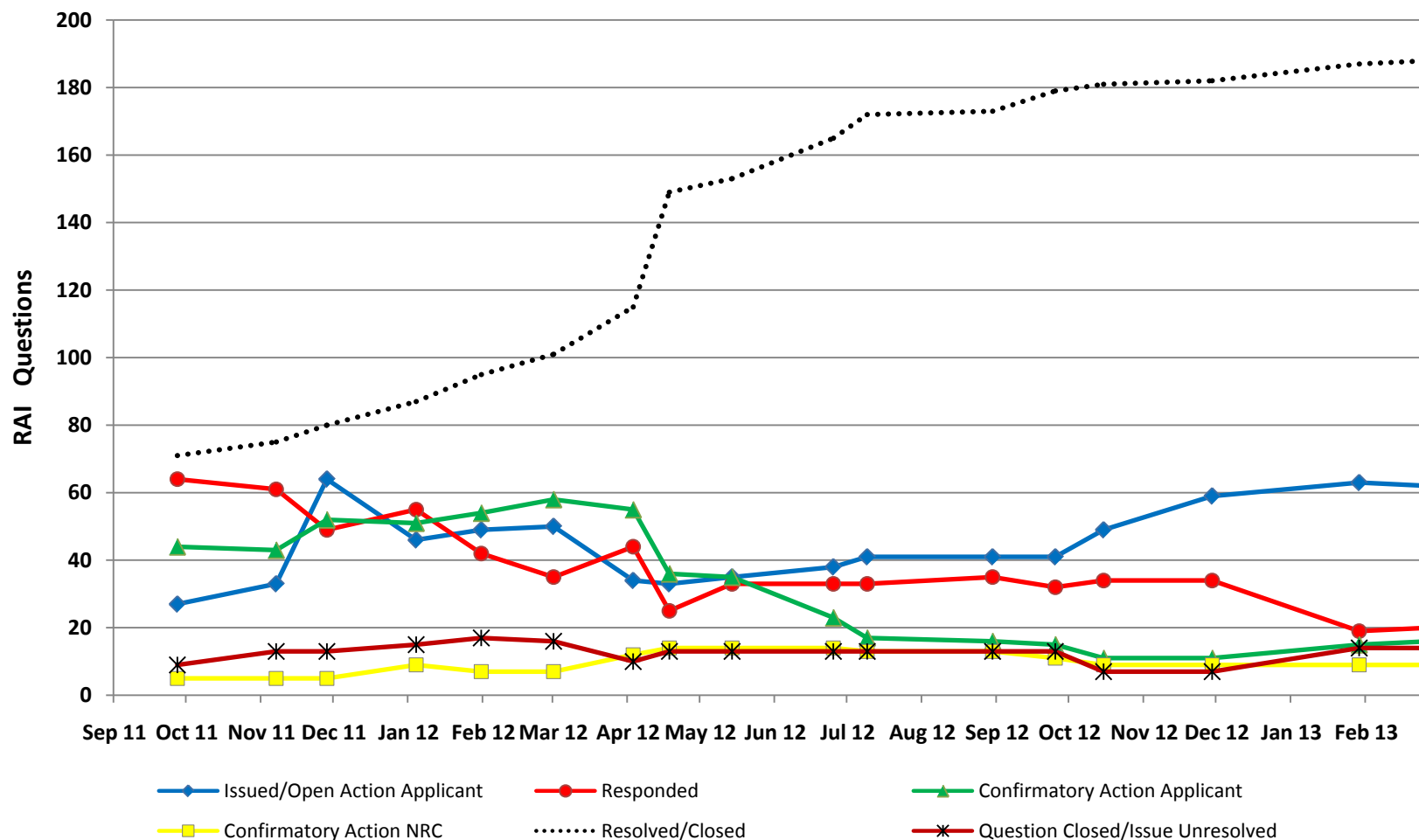
## 6. SCOLA Topics



### ➤ **Dominion may defer the SCP beyond 1Q 2013**

- ✓ NRC and EPRI/industry are currently discussing use of the updated GMPE models
  - EPRI is working to make them available to the industry
- ✓ Dominion would perform a sensitivity study to determine whether the anticipated benefits would be realized
  - If beneficial, the PSHA would be re-calculated with the updated GMPEs, then proceed to determining GMRS and FIRS
  - If not, calculation of GMRS and FIRS would proceed directly
- ✓ Either approach is expected to support the anticipated revision to the S-COLA review schedule

# 6. SCOLA Review Status

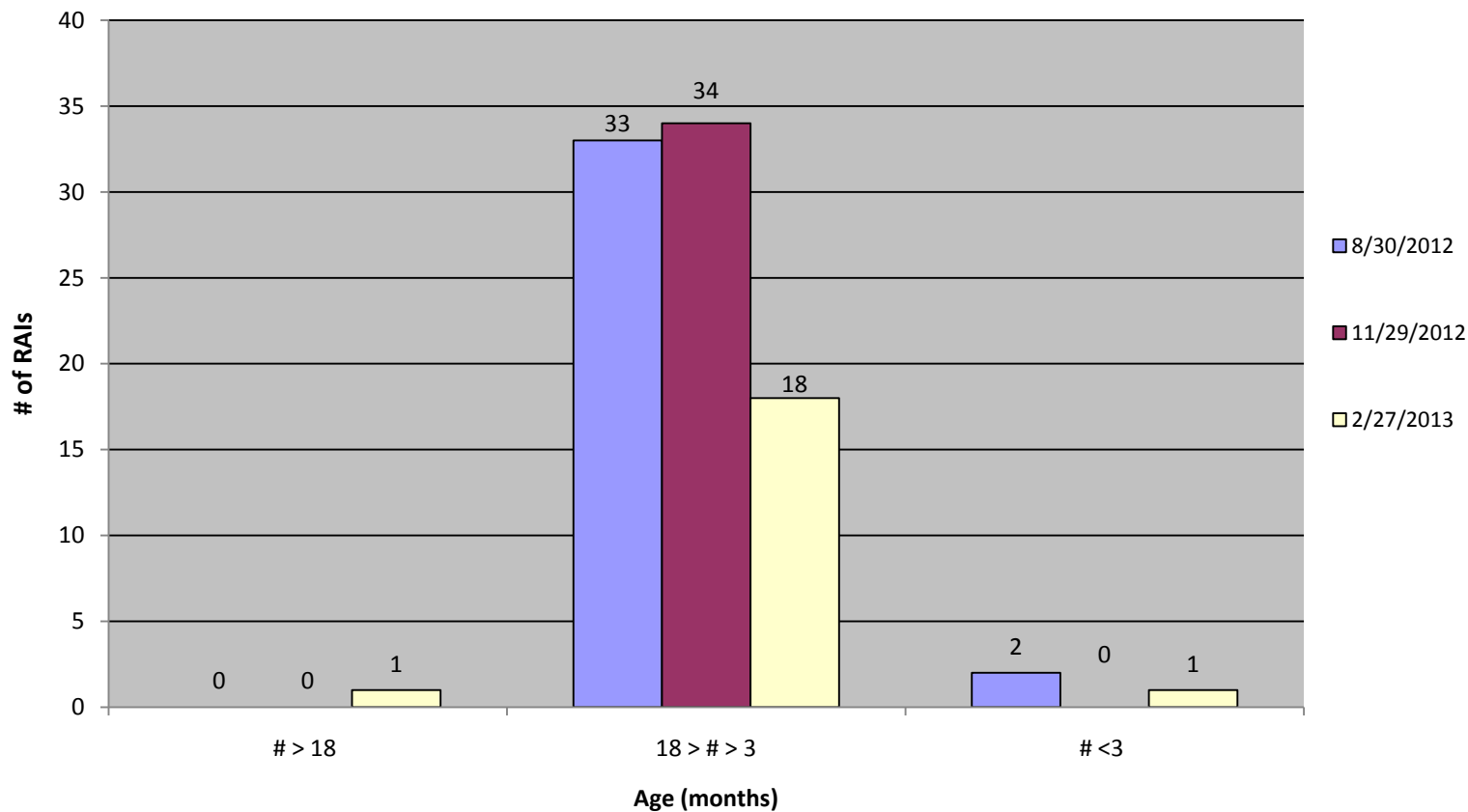


*Overall trends continue to indicate effective RAI management*

## 6. SCOLA Review Status



Age of RAIs with NRC status "Responded"



*The one RAI > 18 is seismic-related and was a conscious decision to defer*

# 7. ACRS Meeting Schedule



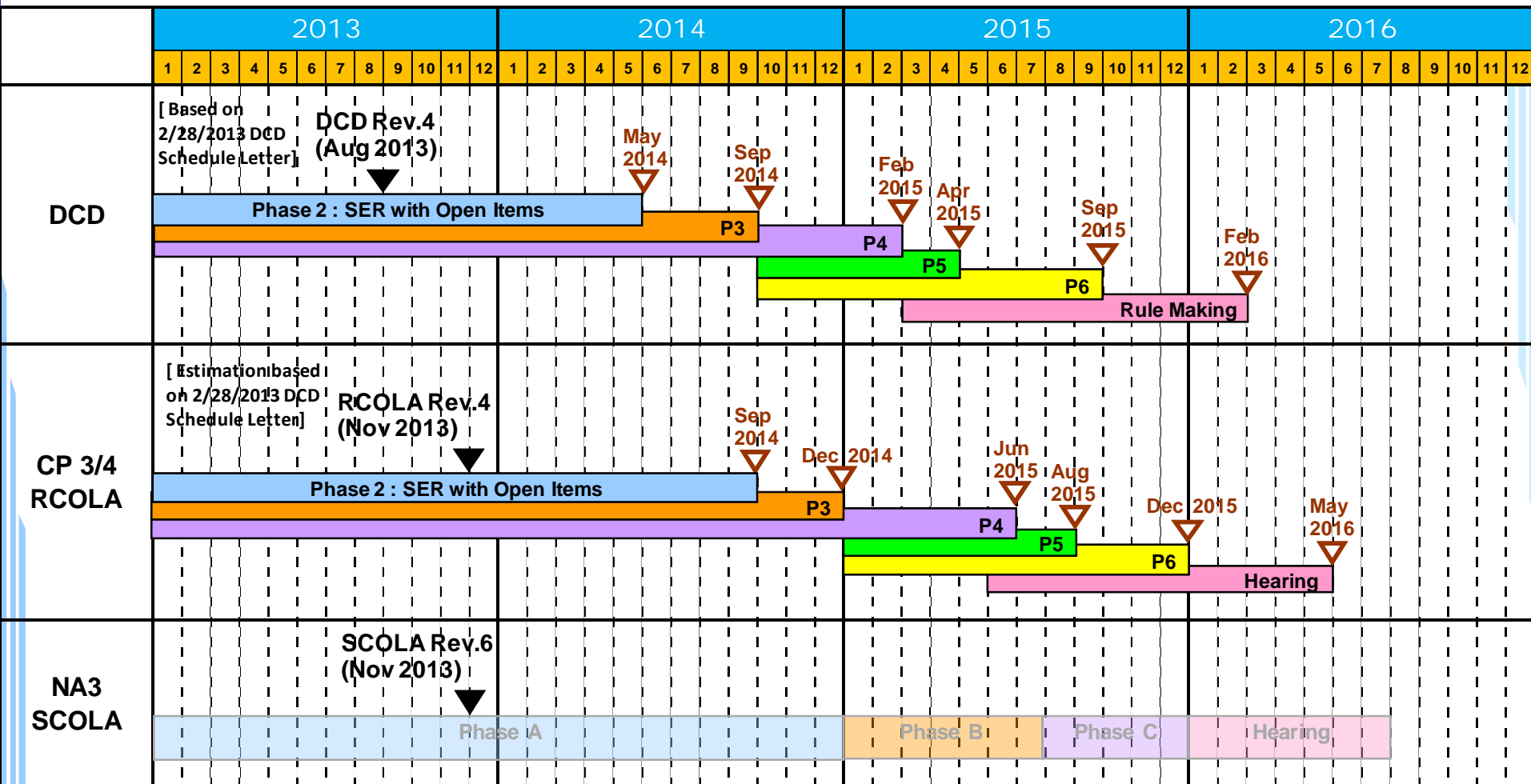
Chapter	Phase Completion Dates (Comparison to 12/5/2012 DCWG Meeting)					
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
1	Complete	8/19/13 (+3)	9/19/13 (+3)			
2	Complete	Complete	Complete	9/30/13 (+12)		
3 (except 3.7/8)	Complete	5/20/13	6/20-21/13			
3.7/8	Complete	5/14	7/14			
4	Complete	Complete	Complete	8/1/14 (+17)		
5	Complete	Complete	Complete	12/27/13 (+9)		
6	Complete	4/25/13	8/21/13			
7	Complete	2/28/13	4/25-26/13			
8	Complete	Complete	Complete	1/29/14 (+11)		
9	Complete	Complete	Complete	9/16/14 (+18)		
10	Complete	Complete	Complete	12/27/13 (+8)		
11	Complete	Complete	Complete	1/30/14 (+6)		
12	Complete	Complete	Complete	4/15/14 (+6)		
13	Complete	Complete	Complete	Complete	TBD	
14	Complete	11/29/13 (+6)	9/19/13 (+3)			
15	Complete	Complete	Complete	8/5/13 (+6)		
16	Complete	Complete	Complete	12/18/13 (+2)		
17	Complete	Complete	Complete	8/5/13		
18	Complete	2/28/14 (+10)	TBD			
19 (except SMA)	Complete	Complete	Complete	TBD		
19 SMA	Complete	5/14	7/14			

**YELLOW:** Date Change  
**BLUE:** New Information

# 8. Integrated DCWG Schedules



## US-APWR NRC Review Schedule DCD and COLAs



## 8. Integrated DCWG Schedules



### ➤ End-game planning

- ✓ Meeting held with Staff 2/20/2013
- ✓ Overview provided of work done to-date
- ✓ List of information needs provided, to be discussed by Staff
- ✓ Links to be established between DCD and COLA schedules

## 9. Special Generic Topics



### ➤ Fukushima Task Force

- ✓ Fukushima and RCP Seal Test Technical Reports submitted 3/4/2013
- ✓ Meeting to be proposed by the end of March 2013
- ✓ RCOLA FSAR update being developed
- ✓ Staff to provide review plans for US-APWR Design Center

## 10. Review of Goals



### ➤ Goals for next DCWG Meeting

1. DCD In-Evaluation RAIs submitted more than 90 days ago – reduce to 50
2. Mitsubishi and NRC aligned for anticipated Confirmatory Action Changes for DCD Rev 4
3. DCD SERs for Chapters 3, 6 and 7 held on-schedule per 3/7/2013 date
4. RCOLA SERs for Chapters 2, 7, and 9 held on-schedule per 3/7/2013 date
5. Zero “In Evaluation” RCOLA RAIs > 90 days old
6. Gain alignment for use of Integrated Schedule



# 11. Review of Actions



➤ **Actions captured throughout this meeting will be reviewed at the start of future DCWG meetings**

➤ **Going Forward**

- ✓ Maintain focus on RAI status
- ✓ Gain alignment between the applicants and the Staff for the integrated schedules
- ✓ Long-term goals (2013-14):
  - Provide quality submittals to address pending issues
  - Approaches to eliminate further schedule delay
  - Improve use of integrated schedule for end-game preparation
- ✓ Next DCWG meeting proposed May 23<sup>rd</sup>, 2013