

US-APWR

DCWG Meeting

7/12/2012

Overall Agenda



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

BOLD items are included in this presentation.

1. Review of actions



Carry over actions from 12/5/2011 meeting

2) MHI – Identify RAIs that need clarification/NRC staff to provide reconciliation.

- Updates provided to the NRC on a regular basis, statistics provided in this presentation.

1. Review of actions

Carry over actions from 2/21/2012 meeting

16) MHI and NRC – NRO PMs work with the NRC technical staff management and create a coordinated effort with the technical staff to reduce the numbers of “responded,” “confirmatory” and “closed/unresolved” items prior to the next DCWG. If the numbers do not come down enough to reasonably talk about each question, then the questions should be grouped by subjects and put in buckets to track and discuss them. MHI to add another column to their table on slide 18 (of previous meeting) to highlight the deltas.

- Work continues, with some reduction seen. Statistics provided in this presentation.

19) NRC and DCWG - Generate an initial end game integrated schedule to be discussed at the next DCWG Meeting.

- Integrated DCWG Schedule shows a high level schedule.
- Will continue to develop and refine schedule.

1. Review of actions

New actions from 5/2/12 Meeting

20) NRC and DCWG – Seismic schedule progress is to be reviewed at the next DCWG meeting and added as a standard agenda item for subsequent meetings.

- Will add to future meeting presentation material, Strainer schedule progress is included in this meeting material.

21) DCWG – Comments regarding the Staff's seismic review schedule are to be provided by the DCWG.

- Completed.

22) MHI – Inform Staff of estimated date of completion for Ch 18 roadmap.

- Completed, Ch 18 roadmap submitted June.

23) NRC – Items in eRAI which have been identified as needing action are to be addressed by the Staff.

- Ongoing, update needed from Staff.

24) NRC – Schedule of ongoing ITAAC work is to be determined and communicated.

- Completed, RAIs issued.

2. General NRC Update



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

3. DC Review Status



- **RAI responses and closure status**
- **Status of Topical Reports**
- **Discussion topics**
 - ✓ Seismic (Ch 3)
 - ✓ GSI-191 (Ch 6)
 - ✓ Risk Significant Components in TS (Ch 19 and 16)
 - ✓ Chapter 18
 - ✓ ITAAC

3. DC Review Status

➤ RAI responses and closure status

✓ Overall summary of status, shown in Table 3-1, shows the following trends:

- Issued RAIs – rise due to numerous ITAAC related RAIs
- Responded RAIs – **continue to rise**
- Confirmatory Actions – small reduction continues
- QC/IU – drop overall, but **discussion is still required**
- Resolved/Closed – upward trend continues

Table 3-1 - eRAI Status Overall Summary						
eRAI Data Date	12/5/2011	2/21/2012	4/30/2012	7/5/2012	Difference	
Issued/Open Action Applicant	221	214	215	316	+101	
Responded	<90 days	79	80	104	77	-17
	>90 days	87	94	82	123	+41
	total	166	174	186	200	+24
Confirmatory Action (total)	517	500	476	445	-31	
Question Closed/Issue Unresolved	897	888	879	807	-72	
Resolved/Closed	3138	3249	3354	3496	+142	
Total	4939	5025	5110	5264	+154	



3. DC Review Status



➤ RAI responses and closure status

- ✓ First area of focus – Responded RAIs
 - “Responded” category count continues to rise.
 - “Responded” > 90 days has also climbed higher, and eliminated a drop seen at the previous DCWG meeting.
 - A breakdown by Chapter is shown in Table 3-4.
 - Oldes RAI Questions in the “Responded” category are shown on the next slide.

3. DC Review Status



Chap.	Question No :	NRC Letter No :	System RAI No :	Question Status **	SRP Section:	RAI Response:
14	14.03.04-38	373	2826	Responded	Reactor Systems - Inspections, Tests, Analyses, and Acceptance Criteria	6/16/2009
15	15.06.05-15	352	2369	Responded	Loss of Coolant Accidents Resulting From Spectrum of Postulated Piping Breaks Within the Reactor Coolant Pressure Boundary	7/17/2009
18	18-70	594	4429	Responded	Human Factors Engineering	7/9/2010
18	18-74	594	4429	Responded	Human Factors Engineering	7/9/2010
6	06.03-87	626	4750	Responded	Emergency Core Cooling System	10/14/2010
6	06.02.02-62	652	5194	Responded	Containment Heat Removal Systems	11/30/2010
6	06.03-98	716	5527	Responded	Emergency Core Cooling System	3/24/2011
6	06.02.02-65	746	5721	Responded	Containment Heat Removal Systems	6/7/2011
19	19-524	761	5804	Responded	Probabilistic Risk Assessment and Severe Accident Evaluation	6/28/2011
19	19-525	761	5804	Responded	Probabilistic Risk Assessment and Severe Accident Evaluation	6/28/2011
19	19-526	761	5804	Responded	Probabilistic Risk Assessment and Severe Accident Evaluation	6/28/2011
19	19-512	750	5675	Responded	Probabilistic Risk Assessment and Severe Accident Evaluation	6/30/2011
19	19-513	750	5675	Responded	Probabilistic Risk Assessment and Severe Accident Evaluation	6/30/2011
19	19-514	750	5675	Responded	Probabilistic Risk Assessment and Severe Accident Evaluation	6/30/2011
19	19-515	750	5675	Responded	Probabilistic Risk Assessment and Severe Accident Evaluation	6/30/2011
19	19-516	750	5675	Responded	Probabilistic Risk Assessment and Severe Accident Evaluation	6/30/2011
19	19-519	750	5675	Responded	Probabilistic Risk Assessment and Severe Accident Evaluation	6/30/2011
7	07.09-24	778	5866	Responded	Data Communication Systems	8/1/2011
19	19-533	773	5646	Responded	Probabilistic Risk Assessment and Severe Accident Evaluation	8/22/2011
19	19-534	773	5646	Responded	Probabilistic Risk Assessment and Severe Accident Evaluation	8/22/2011
19	19-536	773	5646	Responded	Probabilistic Risk Assessment and Severe Accident Evaluation	8/22/2011
19	19-537	773	5646	Responded	Probabilistic Risk Assessment and Severe Accident Evaluation	8/22/2011
19	19-539	773	5646	Responded	Probabilistic Risk Assessment and Severe Accident Evaluation	8/22/2011
19	19-540	773	5646	Responded	Probabilistic Risk Assessment and Severe Accident Evaluation	8/22/2011
19	19-541	773	5646	Responded	Probabilistic Risk Assessment and Severe Accident Evaluation	8/22/2011
19	19-542	773	5646	Responded	Probabilistic Risk Assessment and Severe Accident Evaluation	8/22/2011
19	19-545	773	5646	Responded	Probabilistic Risk Assessment and Severe Accident Evaluation	8/22/2011
7	07.08-17	753	5742	Responded	Diverse Instrumentation and Control Systems	9/30/2011
7	07.08-18	753	5742	Responded	Diverse Instrumentation and Control Systems	9/30/2011
7	07.08-19	753	5742	Responded	Diverse Instrumentation and Control Systems	9/30/2011
7	07.08-20	753	5742	Responded	Diverse Instrumentation and Control Systems	9/30/2011
7	07.08-21	753	5742	Responded	Diverse Instrumentation and Control Systems	9/30/2011
7	07.08-22	753	5742	Responded	Diverse Instrumentation and Control Systems	9/30/2011



3. DC Review Status



➤ RAI responses and closure status

- ✓ Second area of focus – RAIs identified with Confirmatory Actions
 - Focus is still needed on items identified as ‘Discussion Needed’ as a closure path is not understood by Mitsubishi.
 - RAI questions able to be closed have decreased in number but remain at 72.
 - A breakdown by Chapter is shown in Table 3-4.

Table 3-2 - Confirmatory Action (Applicant and NRC)

eRAI Data Date	2/21/2012	4/30/2012	7/5/2012	Difference
Discussion Needed	87	77	47	-30
No Evaluation	113	0	0	0
In DCD Docketed	114	90	57	-33
In Official Submittal	13	18	14	-4
In-Progress	97	89	68	-21
Living DCD Matches RAI	76	202	259	+57
Total	500	476	445	-31

3. DC Review Status



➤ RAI responses and closure status

- ✓ Third area of focus – RAIs identified with Question Closed/Issue Unresolved
 - Identifying follow-up RAIs or confirming closure of RAI responses with the status QC/IU continues to be an issue, as shown by 210 questions needing discussion.
 - A breakdown by Chapter is shown in Table 3-4.

Table 3-3 - Question Closed/Issue Unresolved

eRAI Data Date	2/21/2012	4/30/2012	7/5/2012	Difference
Discussion Needed	226	290	225	-65
No Evaluation	84	0	0	0
Follow-up Question Identified	481	492	485	-7
Issue Closure Confirmed	97	97	97	0
Total	888	879	807	-72

3. DC Review Status



➤ RAI responses and closure status

Table 3-4 - MNES Evaluation based on Chapter, 07/05/12 vs. 04/30/12 Data

Chapter	Responded - < 90 days	Responded - > 90 days	Confirmatory Action - In DCD Docketed or In Official Submittal	Confirmatory Action - Discussion Needed	QC/IU - Discussion Needed
1					
2					
3	44 (-9)	42 (+29)	17 (+2)	17 (-8)	145(+7)
4	5 (-1)	7	1	5 (-1)	10 (-1)
5	0 (-1)	1 (+1)	0 (-1)	0 (-2)	1
6	13 (+12)	9 (-1)	1	2 (-2)	13(+1)
7		7	2 (-3)	2	0 (-3)
8		1 (-1)	0 (-2)		0 (-1)
9	0 (-1)	2	0 (-26)	0 (-1)	0 (-61)
10	0 (-4)	0 (-3)	3 (+1)	0(-3)	2
11			0 (-8)		
12	8		15		
13					
14	3 (+1)	5 (+1)	2 (-1)	1 (-14)	1
15	0 (-4)	7 (-4)			
16			3	1	
17					
18	0 (-16)	18 (+14)	7 (-2)	3 (-1)	
19	4 (-4)	24 (+5)	20 (+3)	16 (-4)	53 (-7)

3. DC Review Status



➤ Status of Topical Reports

- ✓ Topical Reports under review are progressing within the associated Chapter Phase 2 review.
- ✓ Exceptions and challenges are indicated below:
 - MUAP-07001 (The Advanced Accumulator) – Closure of issued RAIs continues. Resolution of 2 outstanding RAI questions has been discussed, analysis will be completed and submitted to the Staff in July.

3. DC Review Status



➤ Discussion topics

- ✓ Seismic (Ch 3)
 - Identified Issues:
 - Time History
 - ESWPT
 - Studying options, analytical solutions and impacts (deliverables' content and schedule)
 - Meeting requested July 26th to provide an update

3. DC Review Status



➤ Discussion topics (continued)

✓ GSI-191 (Ch 6)

- Additional testing has been completed and overview discussed with the Staff. Some RAIs remain and are being discussed with the Staff.
- Public meeting will be held 7/19/2012 with another planned for September.
- Test results to be completed and submitted by the end of August 2012.
- Schedule is shown on the following slide.

3. DC Review Status



	Start	Finish	April	May	June	July	August	September	October
Interaction with NRC									
Public Meeting #1 (Closure Plan)	2/8	2/8							
Public Meeting #2 (Test Results)	7/19	7/19							
Public Meeting #3 (MHI Output Summary)	Sept TBD								
Audit									
Audit (Design Change and DCD Impact)	4/16	4/17							
NRC Audit Report	4/18	8/17							
Re-Test									
Head Loss Test	4/1	6/30							
CIB Test	4/1	7/31							
DCD/TEC									
DCD Mark-up	4/1	5/31							
Technical Reports w/o Test Results	4/1	5/31							
Technical Reports w/ Test Results	7/1	8/31							
RAI Responses to be Revised									
Round 1 (RAI 373, 530, 695, 715, 740, 839, 815)	5/1	5/31							
Round 2 (RAI 912, 354, 839)	7/1	7/31							
New RAIs									
Pre-Audit									
NRC Issue - Planned	4/1	4/6							
NRC Issue - Actual	4/16	4/16							
MHI Responses	4/17	5/31							
Post-Audit									
NRC Issue - Target	4/17	5/18							
NRC Issue - Actual	4/24	6/28							
MHI Responses	5/30	7/31							
Safety Evaluation Report									
Tech Staff Completion Date	10/31	10/31							
Chapter Completion	11/1	1/31							
Issue Ph 2 SE to ACRS	2/1	3/20							
ACRS Review of Ph 2 SE	2/1	3/20							
ACRS Subcommittee Meeting	3/21	3/22							

3. DC Review Status



➤ Discussion topics (continued)

- ✓ Risk Significant Components in TS (Ch 19 and 16)
 - Staff have identified the need for TS control of risk significant components, rather than relying on administrative controls already in place.
 - New guidance is being developed, had been expected in mid-May. Mitsubishi will review and consider the new guidance when available.
- ✓ Chapter 18
 - Roadmap was submitted to the Staff. Review of documents completed at the end of June. Revisions to documents are planned by the end of September.
 - Mitsubishi is finalizing the plan to submit document revisions.
- ✓ ITAAC
 - CIB review of DCD R3 ITAAC was completed, with 107 RAI questions issued to Mitsubishi. 2 RAIs responded and 6 RAIs in-process.

4. RCOLA Review Status



➤ Phase Status by Chapter – as of July 11

	Chapter																		
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Phase 1	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete	Complete
Phase 2	Not complete	TBD	Not complete (8/12)	Complete	Complete	Complete (2/13)	Complete (10/12)	Complete	TBD	Complete	Complete	Complete	Complete	Not complete	Complete subsequent to 5/2/12 DCWG	TBD	Complete (1/13)	TBD	Complete (1/13)
Phase 3 Sub	Not complete	TBD	Complete (9/12)	Complete	Complete	Complete (3/13)	Complete (11/12)	Complete	TBD	Complete	Complete	Complete	Complete (10/12)	Not complete	Complete subsequent to 5/2/12 DCWG	TBD	Complete (2/13)	TBD	Complete (2/13)
Phase 3 Full																			
Phase 4																			
Phase 5																			
Phase 6																			

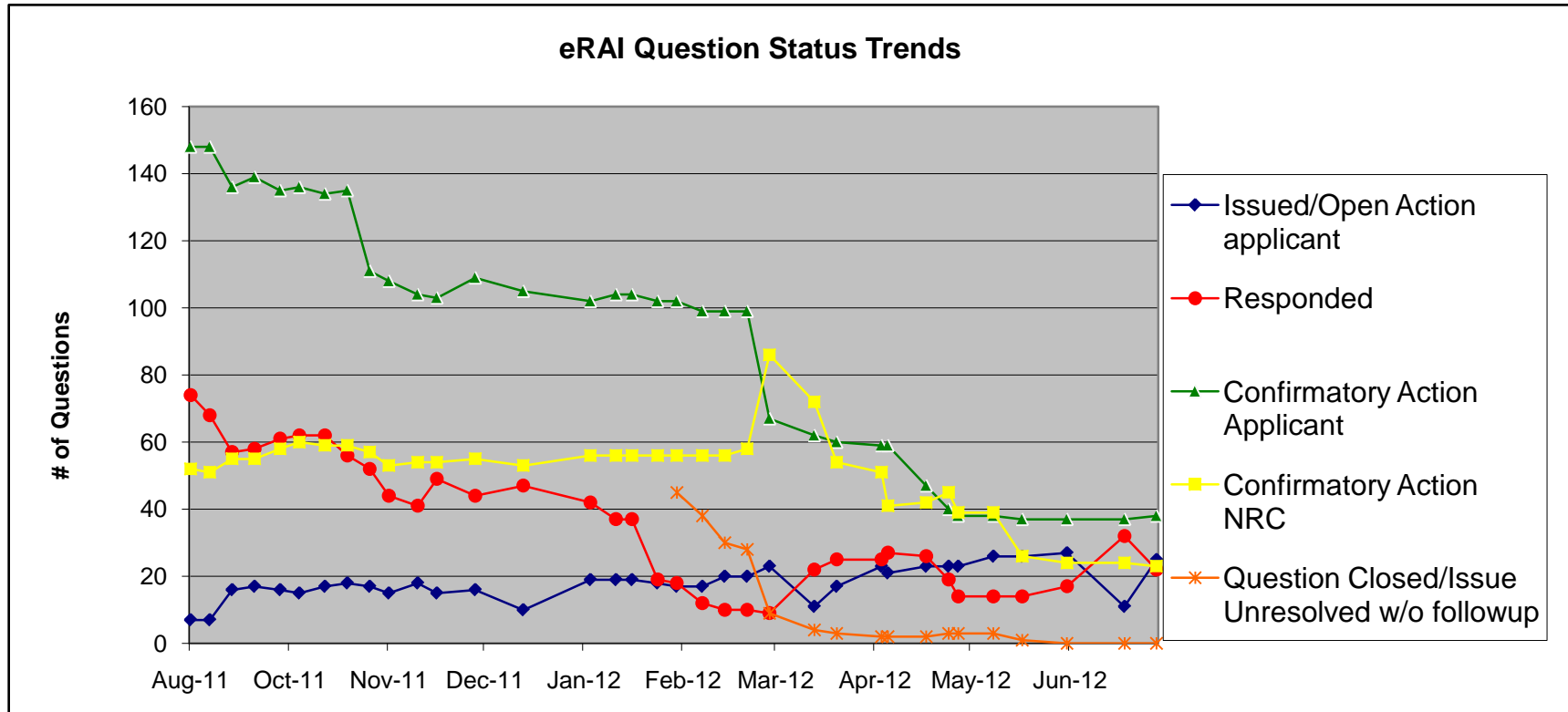
- Complete
- Not complete (date indicates forecast date for completion)
- Date not changed subsequent to 5/2/12 DCWG
- Complete subsequent to 5/2/12 DCWG
- Date changed subsequent to 5/2/12 DCWG

ACRS Dates continue to move and numerous briefings are unscheduled.

4. RCOLA Review Status



➤ RAI Questions – Progress to Closure – as of June 28

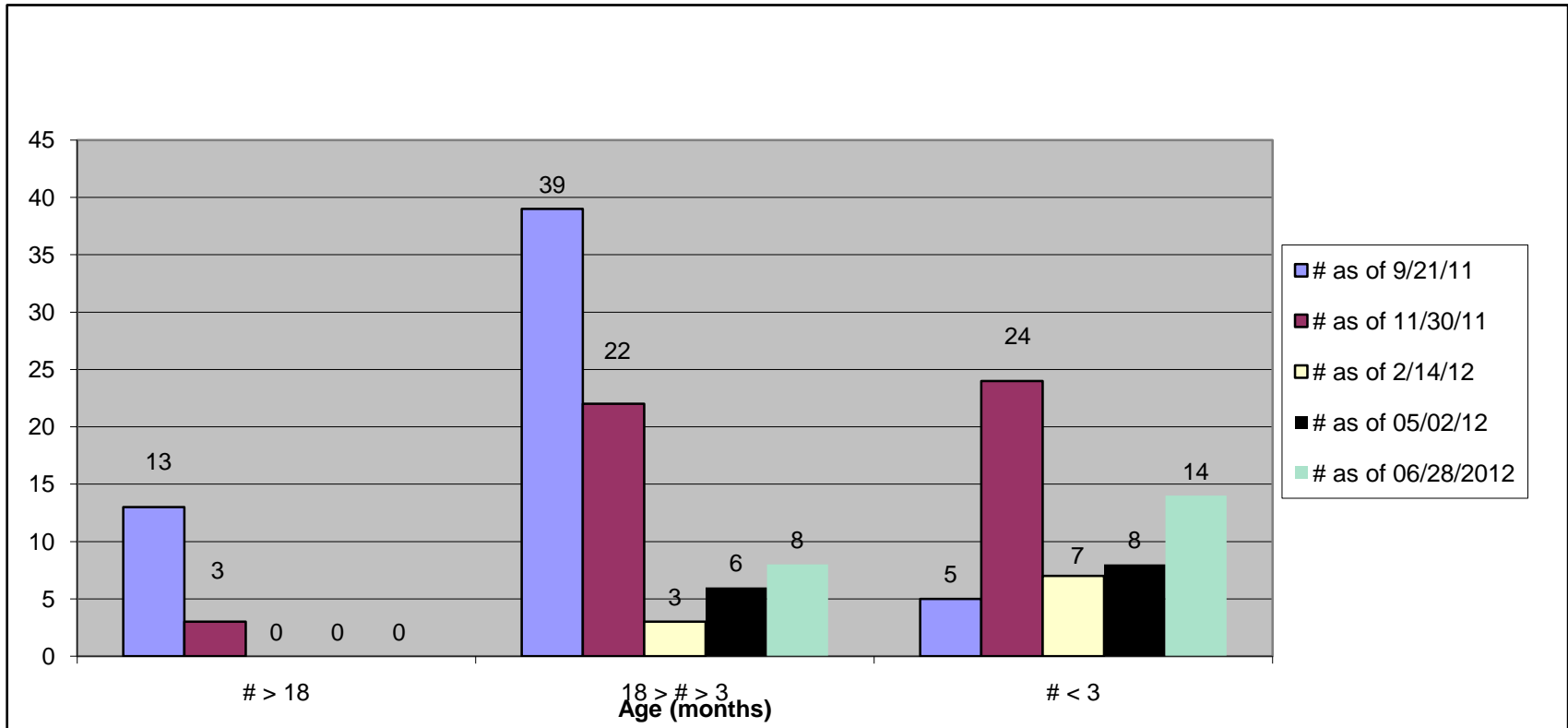


Progress on Confirmatory questions has leveled off, but should trend down due to R-COLA Rev 3. Questions Closed/Issue Unresolved without followup remain at zero.

4. RCOLA Review Status



➤ RAI Questions – Responded Category Age



The number of “Responded” questions greater than 3 months old is small but is trending up.

4. RCOLA Confirmation Required



- **R-COLA Rev 3 issued June 28, 2012**
- **35 Confirmatory status questions responses incorporated in COLA Rev. 3**
- **38 Confirmatory status questions now available for NRC reviewer confirmation of proper incorporation**
- **23 Confirmatory status questions require Luminant action**
 - ✓ 14 linked to IHCP or ISCP
 - ✓ 9 currently planned for COLA R4
- **List of all confirmatory questions is available**

4. RCOLA Review Challenges



- **Site-specific Seismic** – Closure plan submitted April 16, 2012 with a public meeting May 24, 2012
 - ✓ Product submittals to staff September 2012 through June 2013
 - Potential standard plant layout changes are pushing the September evaluation work and October deliverables but dates have not changed yet.

- **Hydrology** – Closure Plan submitted April 27, 2012 with a public meeting May 24, 2012
 - ✓ Product submittals to staff November 2012 through February 2013
 - Potential standard plant layout changes are pushing grading, drainage, surface water and erosion work. December deliverables may be impacted but the schedule has not changed yet.

4. RCOLA Review Challenges

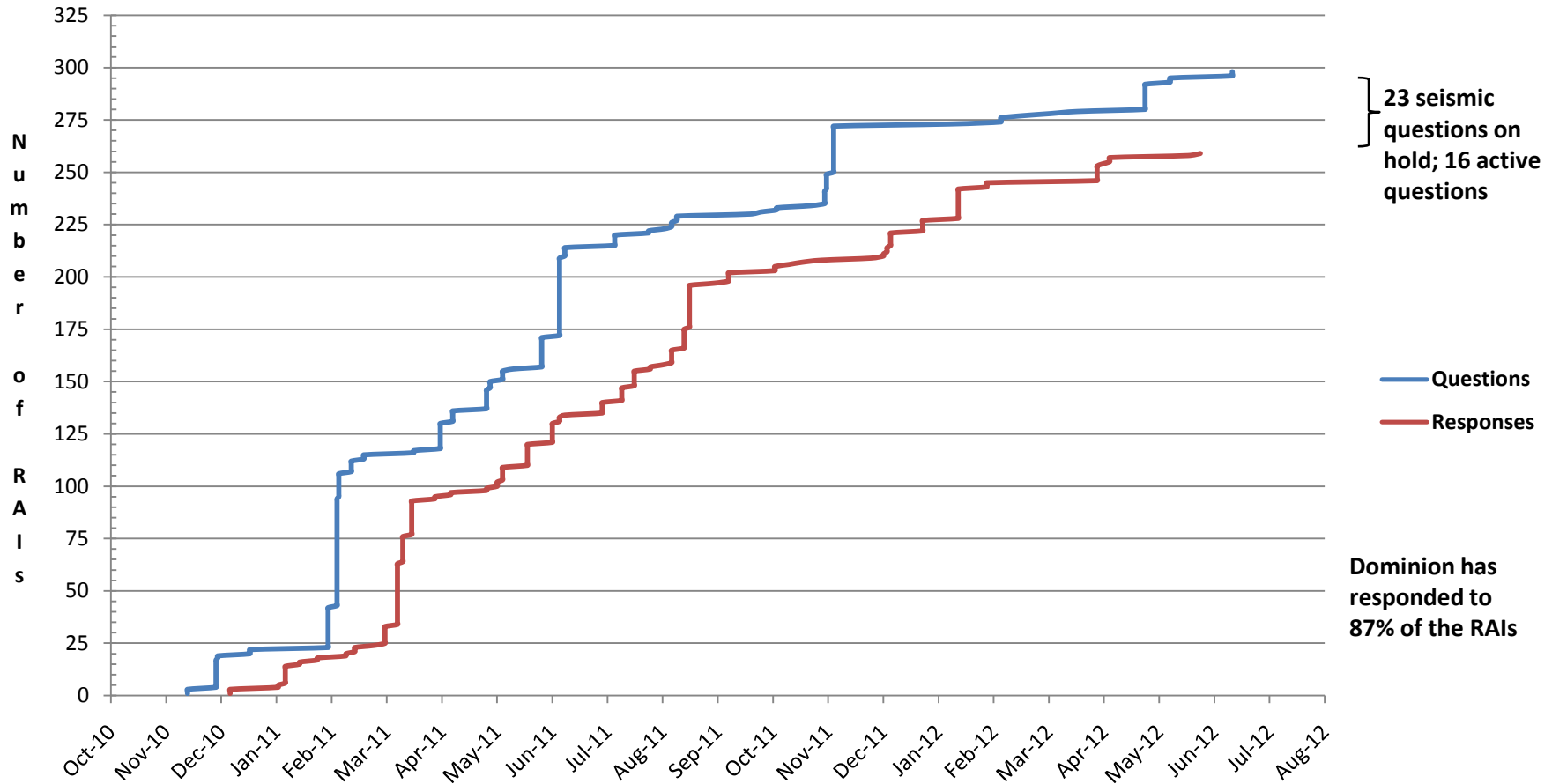


- **Negation Action Plan** – Reinstate discussion with NRC on or before second quarter of 2013
- **Chapter 3** – Review scheduled being pushed by request from NRC staff for procurement specifications which do not yet exist
- **Chapter 9** – Review started late and significant focus from Luminant and NRC staff needed to maintain overall review schedule

5. SCOLA Review Status



➤ RAI Performance is Tracking Closely

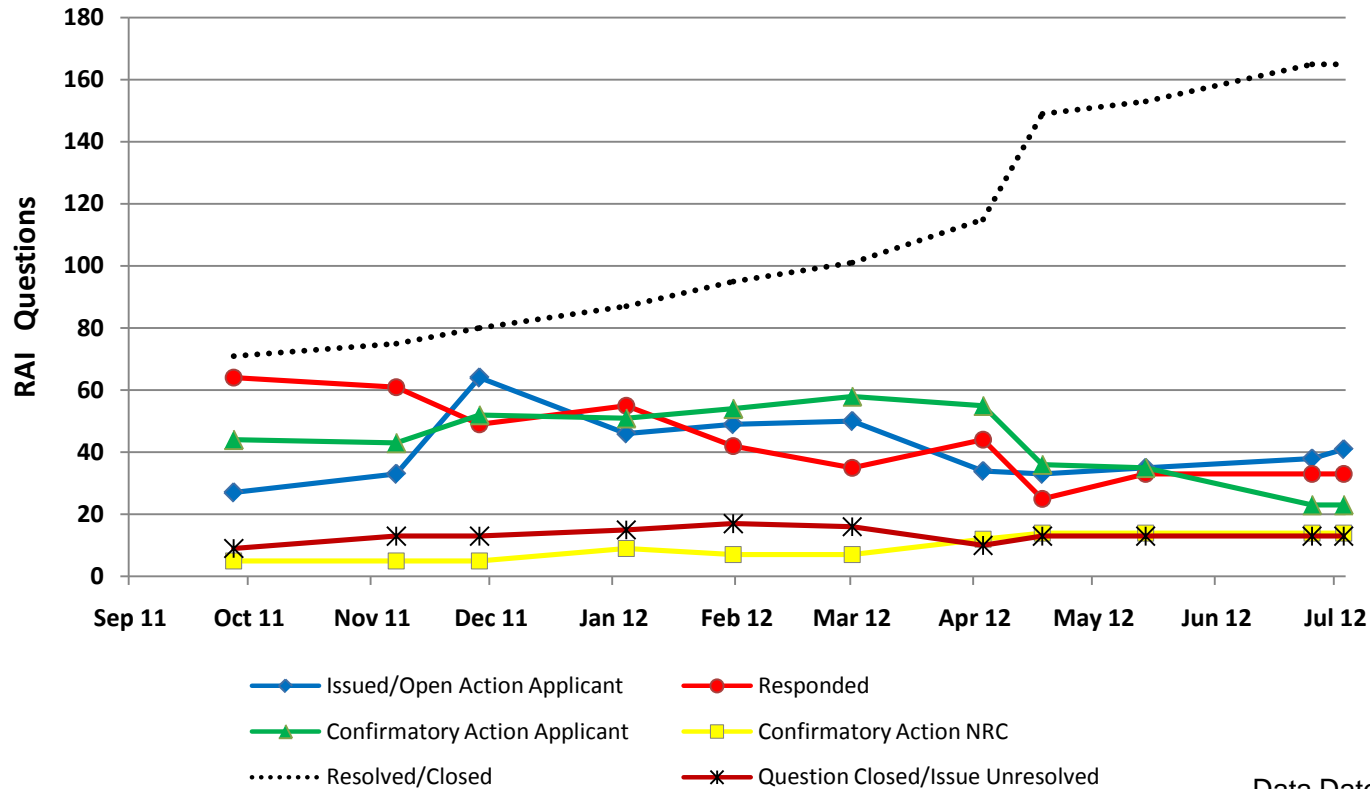


Data date: 7/3/2012

5. SCOLA Review Status



➤ RAI Questions – Progress to Closure



Data Date 7/3/2012

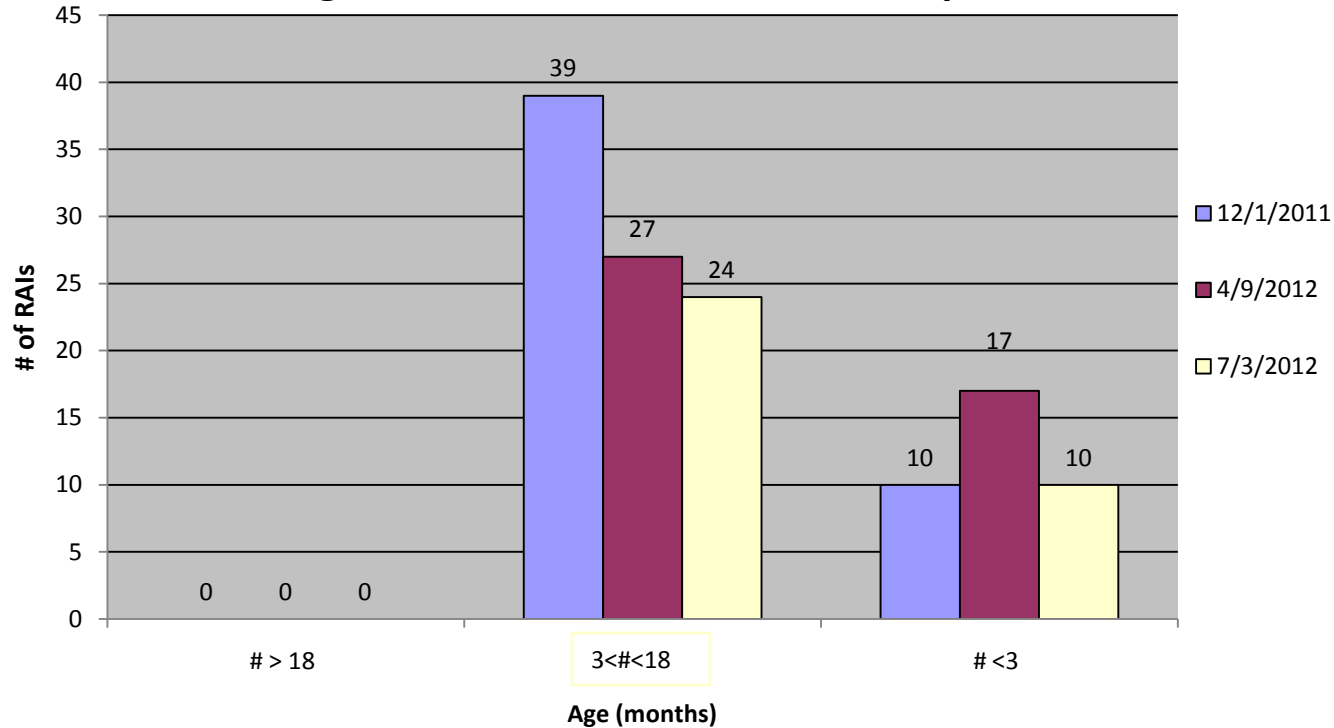
Trends in all categories continue to be favorable

5. SCOLA Review Status



➤ RAI Questions – Responded Category Age

Age of RAIs with NRC status "Responded"



Trends continue as-expected and favorable.

5. SCOLA Topics



➤ Seismic Closure Plan (SCP)

- ✓ The NA3 SCP was submitted on schedule May 29
- ✓ An SCP overview meeting was held with NRC June 7
- ✓ The NA3 SCP forms the basis for a revised NRC review schedule currently expected to be published by the NRC in the near future
- ✓ The initial SCP deliverables (FSAR 2.5, 2.5.1, and 2.5.3) are on schedule for submittal in July
- ✓ Some SCP deliverables may be impacted due to
 - CEUS SSC model update
 - Standard plant identified issues

5. SCOLA Topics



➤ RAI Endorsement Process

- ✓ Dominion announced its intent to explore alternate approaches to a more timely RAI endorsement process in May 2012
- ✓ To that end, Luminant and Dominion have been collaborating to streamline the process. We expect to realize some success in the near term:
 - Chapter 9 RAI responses
 - Certain Fukushima-related RAI responses
- ✓ However, supporting a real-time assessment and endorsement process for R-COLA RAIs, in addition to providing timely S-COLA RAI responses, has proven to be more challenging than originally anticipated and may not be 100% achievable because of its highly resource-driven nature
- ✓ Dominion's goal remains to provide a timely endorsement of R-COLA RAIs and COLA mark-ups, when appropriate

6. ACRS Meeting Schedule



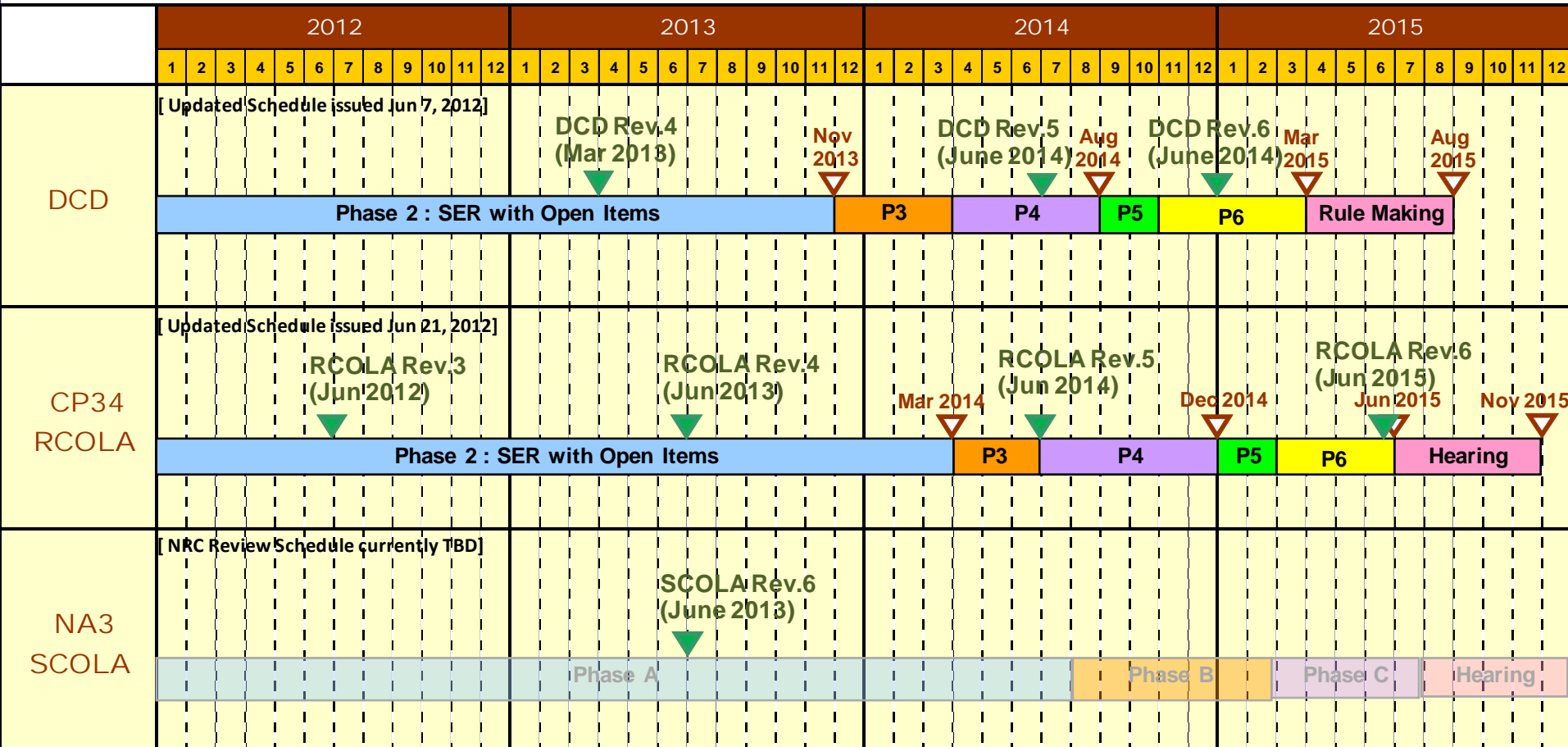
Chapter	Phase Completion Dates (Comparison to 5/2/2012 DCWG Meeting)					
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
1	Complete	11/29/13 (+10)	TBD			
2	Complete	Complete	Complete	9/24/13 (+11)		
3	Complete	11/29/13 (+10)	TBD			
4	Complete	7/25/12	9/20-21/12			
5	Complete	Complete	Complete	10/19/12 (+3)		
6	Complete	1/30/13	3/21-22/13			
7	Complete	TBD	11/15-16/12 (+5)			
8	Complete	Complete	Complete	11/29/12 (+2)		
9	Complete	Complete	Complete	2/4/13 (+1)		
10	Complete	Complete	Complete	10/25/12 (+3)		
11	Complete	Complete	Complete	12/27/12 (+4)		
12	Complete	Complete	Complete	5/24/13(+8)		
13	Complete	Complete	Complete	Complete		
14	Complete	11/29/13 (+10)	TBD			
15	Complete	Complete	7/9-10/12			
16	Complete	Complete	Complete	10/3/12		
17	Complete	12/28/12	2/21-22/13			
18	Complete	10/16/12	4/25-26/13 (+6)			
19	Complete	12/28/12	2/21-22/13			

YELLOW: Date Change
BLUE: New Information

7. Integrated DCWG Schedules



US-APWR NRC Review Schedule DCD and COLAs



8. Special Generic Topics



➤ Fukushima Task Force

- ✓ Meeting planned for 7/16/2012
- ✓ Topics include:
 - Mitigation Strategies for Beyond Design Basis Events
 - Future Technical Report contents
 - Responses to Staff feedback on the RCP Seal Test Plan
 - RCP Seal Test Status

9. Review of Actions



- **Actions captured throughout this meeting will be reviewed at the start of future DCWG meetings**
- **Going Forward**
 - ✓ Clearly understand RAI status
 - ✓ Long-term goals (2012-14):
 - Provide quality submittals to address pending issues
 - Approaches to eliminate further schedule delay
 - ✓ Next DCWG meeting proposed September 13th, 2012