

US-APWR

DCWG Meeting

9/13/2012

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 using eRAI spreadsheet, resolution continues.

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. Summary 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

Carry over 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.

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

- Ongoing, update needed from Staff.

1. Review of actions

New actions from 7/12/12 Meeting

- 25) MHI/MNES – Hold a public meeting(s) for the DCD chapters 3 (except 3.7/3.8), 4, 6 and 19 (except AIA) to discuss each individual RAI that requires further information. Feed the results of this meeting(s) into the MHI RAI tracking spreadsheet to officially track. MHI to propose the schedule for the meeting(s).**
- Meeting held 8/21/12. Action complete.
- 26) MHI/MNES – MHI will consider adding comments or notes section to their tracking spreadsheet to capture the status of RAIs in the ‘responded’ category.**
- Additional column added to eRAI spreadsheet to capture the status. Action complete.

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

➤ Discussion topics

- ✓ Seismic (Ch 3)
- ✓ GSI-191 (Ch 6)
- ✓ ACC (Ch 6)
- ✓ I&C (Ch 7)
- ✓ Risk Significant Components in TS (Ch 19 and 16)
- ✓ HFE (Ch 18)
- ✓ RAI 953-6437 (Ch 4)
- ✓ GTG Nozzle Cleaning TS (Ch 8)

3. DC Review Status



➤ RAI responses and closure status

- ✓ 8/21/12 meeting, 138 RAIs identified for discussion reduced to 26
- ✓ No additional meeting is required in the near-term. Resolution of RAI questions will be followed during normal communications. An additional meeting will be arranged as-needed.

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	Difference
Issued/Waiting for Response	221	214	215	316	323	+7
In Evaluation	<90 days	79	80	104	77	+41
	>90 days	87	94	82	123	-4
	total	166	174	186	200	+37
Confirmatory Action (total)	517	500	476	445	406	-39
Confirmatory Action (closeable)				71	37	-34
Unresolved – Closed (total)	897	888	879	807	740	-67
Unresolved – Closed (need disc)				225	61	-164
Resolved – Closed	3138	3249	3354	3496	3566	+70
Total	4939	5025	5110	5264	5272	+8

3. DC Review Status



➤ Discussion topics

- ✓ Seismic (Ch 3)
 - Revision to Seismic Closure Plan (SCP) officially submitted 8/29/12.
 - Details of SCP discussed during 9/12/12 meeting.

3. DC Review Status



➤ GSI-191 Update

- ✓ Completed Milestones
 - Mark-up for all GSI-191 changes since DCD Rev. 3
 - Revised four technical reports
 - 2012 test results
 - Incorporation of Staff feedback
 - Responses provided for all RAIs
- ✓ Upcoming Milestones
 - ACRS informational briefing on 9/20
 - Public meeting #3, if staff requests
 - Phase 2 SER completion
- ✓ Outstanding Milestone
 - April 2012 audit report

3. DC Review Status



GSI-191 Activity	2012						2013		
	Jul.	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
NRC Issue April Audit Report			X						
Reflect 2012 Test Results Into DCD & TeRs	complete								
ACRS Briefing / Public Meeting #3, if needed			▼ 9/20 ACRS						
				▼ Pub. Mtg. #3					
NRC Issue New RAIs, if needed			[Blue bar]						
MHI Response to New RAIs, if issued				[Blue bar]					
Phase 2 SE Completion					[Blue bar]				
ACRS Review of Phase 2 SE								[Blue bar]	
ACRS Phase 3 Meeting									▼ 3/21-22

3. DC Review Status



➤ ACC

- ✓ On 8/20 Staff requested additional supporting information for RAI 84, 85, and 94
 - Information was provided on 9/6 and the remaining information will be provided 9/24
- ✓ ACRS informational briefing by Staff scheduled on 9/20
- ✓ Additional CFD work for RAI 92 is still on-going
- ✓ ToR SE target completion date of 10/31/12

3. DC Review Status



➤ **I&C (Ch 7)**

- ✓ Nonconcurrency and ACRS.

➤ **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.

➤ **HFE (Ch 18)**

- ✓ Meeting held with NRC 9/6/2012 to discuss FRA/FA methodology and results.
- ✓ Revisions planned to be submitted by the end of September, with ACRS meeting planned for April 2013.

3. DC Review Status



➤ **RAI 953-6437 (4.2)**

- ✓ Staff issued RAI requesting evaluation of LB-LOCA forces.
- ✓ MHI plans to respond to the RAI by the end of September.
- ✓ Disagreement exists with the Staff request since US-APWR applies LBB criteria.

➤ **GTG Nozzle Cleaning TS (8)**

- ✓ Staff has issued a series of RAIs requesting a TS be added for GTG manufacturer's recommended maintenance.
- ✓ MHI has provided responses to previous RAIs. NRC Staff are reviewing previous responses prior to issuing new RAI final.
- ✓ Disagreement exists with Staff request since the activity is not essential to operation and is preventative maintenance.

4. RCOLA Review Status

➤ Phase Status by Chapter – as of September 5

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

Phase 1 - RAIs Issued to Applicant
 Phase 2 - SER w Open Items
 Phase 3 Sub - ACRS Sub-Committee
 Phase 3 Full - ACRS full Committee
 Phase 4 - SER w/o Open Items
 Phase 5 - ACRS
 Phase 6 - Final SER

Completed prior to 7/12/12 DCWG
 Completed subsequent to 7/12/12 DCWG
 Date has not changed since 7/12/12 DCWG
 Not complete (date indicates forecast date for completion)
 Moved (delayed) subsequent to 7/12/12 DCWG

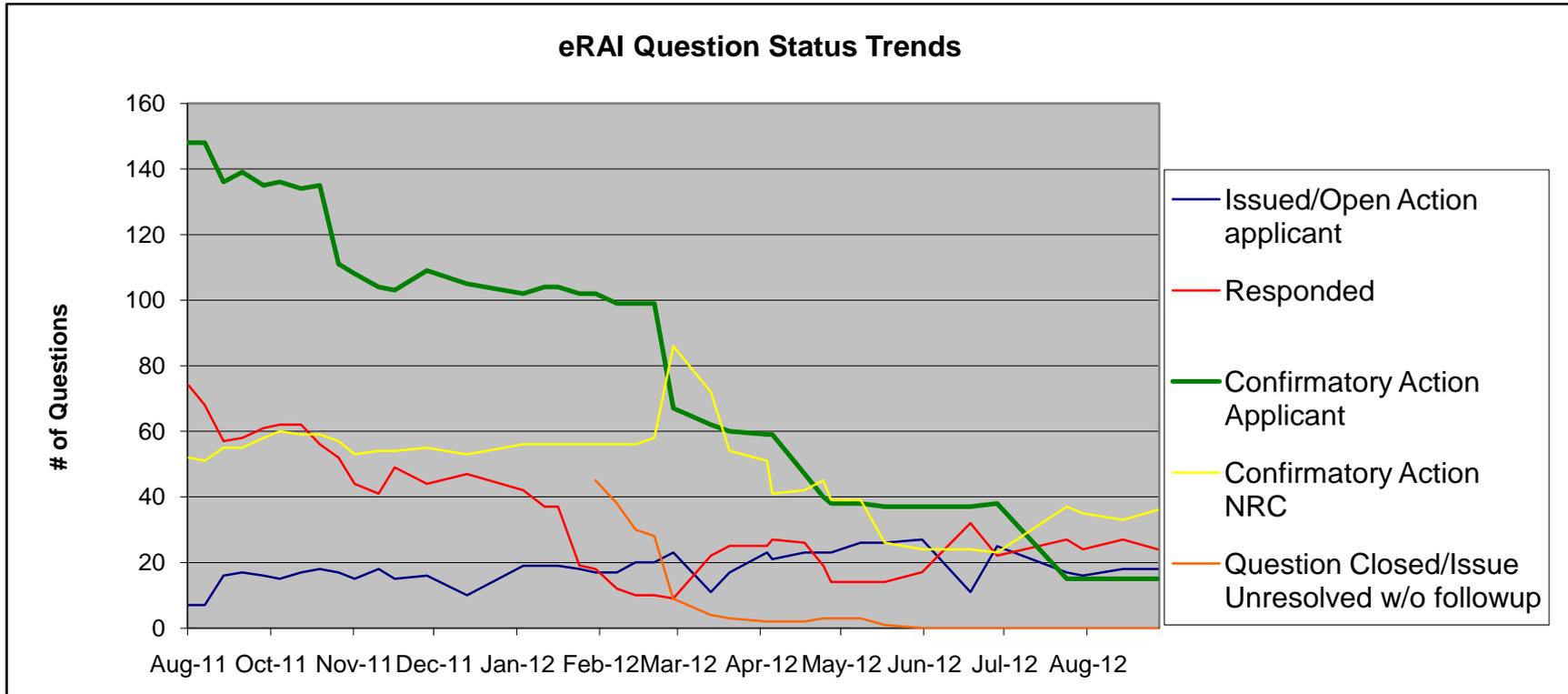
Complete Not complete (date indicates forecast date for completion) Date not changed subsequent to 7/12/12 DCWG
 Complete subsequent to 7/12/12 DCWG Date changed subsequent to 7/12/12 DCWG

ACRS Dates only moved slightly since last DCWG, but many remain unscheduled.

4. RCOLA Review Status



➤ RAI Questions – Progress to Closure – as of Aug 27

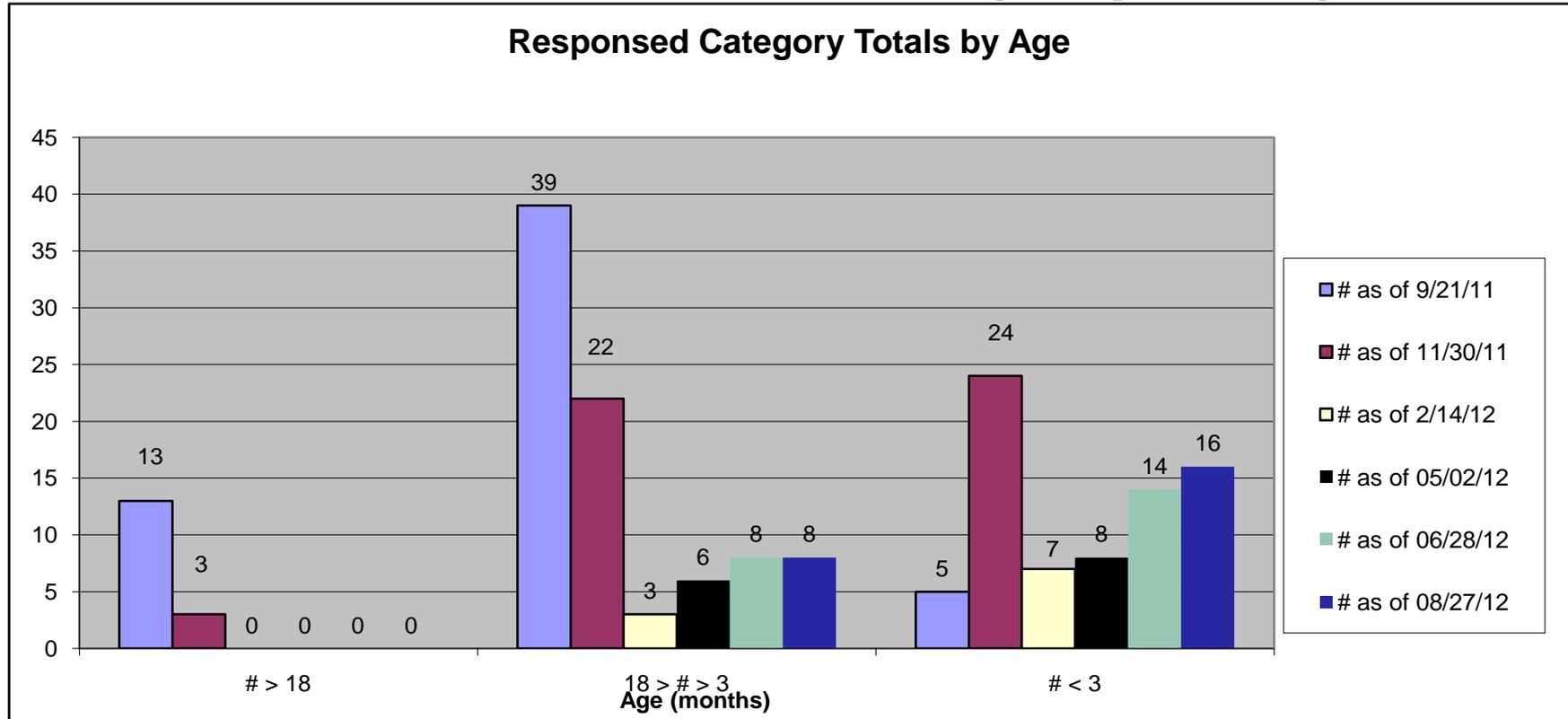


Progress on closing out questions has leveled off in recent months. Renewed effort needed to drive remaining issues to closure.

4. RCOLA Review Status



➤ RAI Questions – “In Evaluation” (Responded) Status



The number of “Responded” questions greater than 3 months remains small.

4. RCOLA Open Questions



➤ **Luminant Action – 18**

- ✓ 12 associated with ISCP & IHCP
- ✓ 6 associated with miscellaneous RAIs

➤ **NRC Action – 24**

- ✓ 8 > 3 months since response was provided
- ✓ 10 nearing 3 month date
- ✓ 6 others < 3 months since response was provided

➤ **Confirmatory (awaiting NRC action) – 27**

- ✓ 22 incorporated into COLA Rev 3 issued in June 2012
- ✓ 5 incorporated in prior COLA revisions

➤ **Confirmatory (awaiting Luminant action) – 24**

- ✓ 13 awaiting ISCP
- ✓ 11 will be incorporated into COLA Rev 4 in June 2013



4. RCOLA Review Challenges



- **Site-specific Seismic** – Closure plan dated April 16, 2012, public meeting on May 24.
 - ✓ Product submittals to staff September 2012 through June 2013
 - ✓ Update in mid September. Deliverable dates changed by several months.
- **Hydrology** – Closure Plan dated April 27, 2012, public meeting on May 24
 - ✓ Product submittals to staff November 2012 through February 2013
 - ✓ Update in mid September. Deliverable dates changed by several months.
- **Negation Action Plan** – Reinstate discussion with NRC on or before second quarter of 2013.
- **Chapter 3** – DCWG coordinated response to request from NRC staff for procurement specifications.
- **Chapter 8** – NRC staff and Luminant have not come to an agreement re the application of GDC 5 to the Offsite Power System.
- **Fukushima** – Plan being developed re applicable recommendations.

5. SCOLA Topics

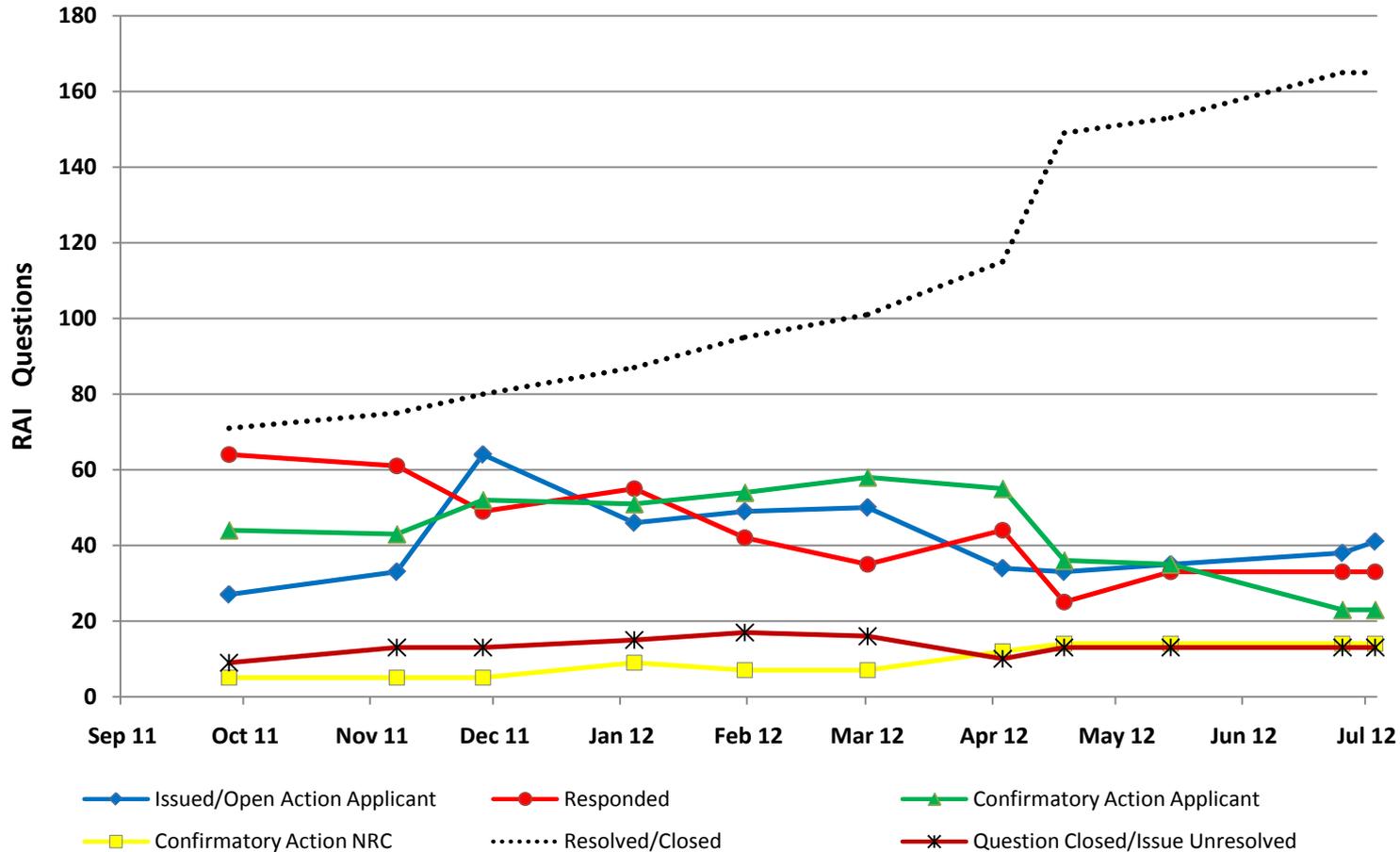


- **Dominion intends to submit a revised Seismic Closure Plan in October 2012**
 - ✓ Need for revision driven by design changes/revised SCP for the US-APWR standard plant
- **The initial set of RAI responses (RAI No. 6402, FSAR Section 9.2.5) using the “parallel” R-COLA endorsement process was submitted in August 2012**

5. SCOLA Review Status



➤ RAI Questions – Progress to Closure

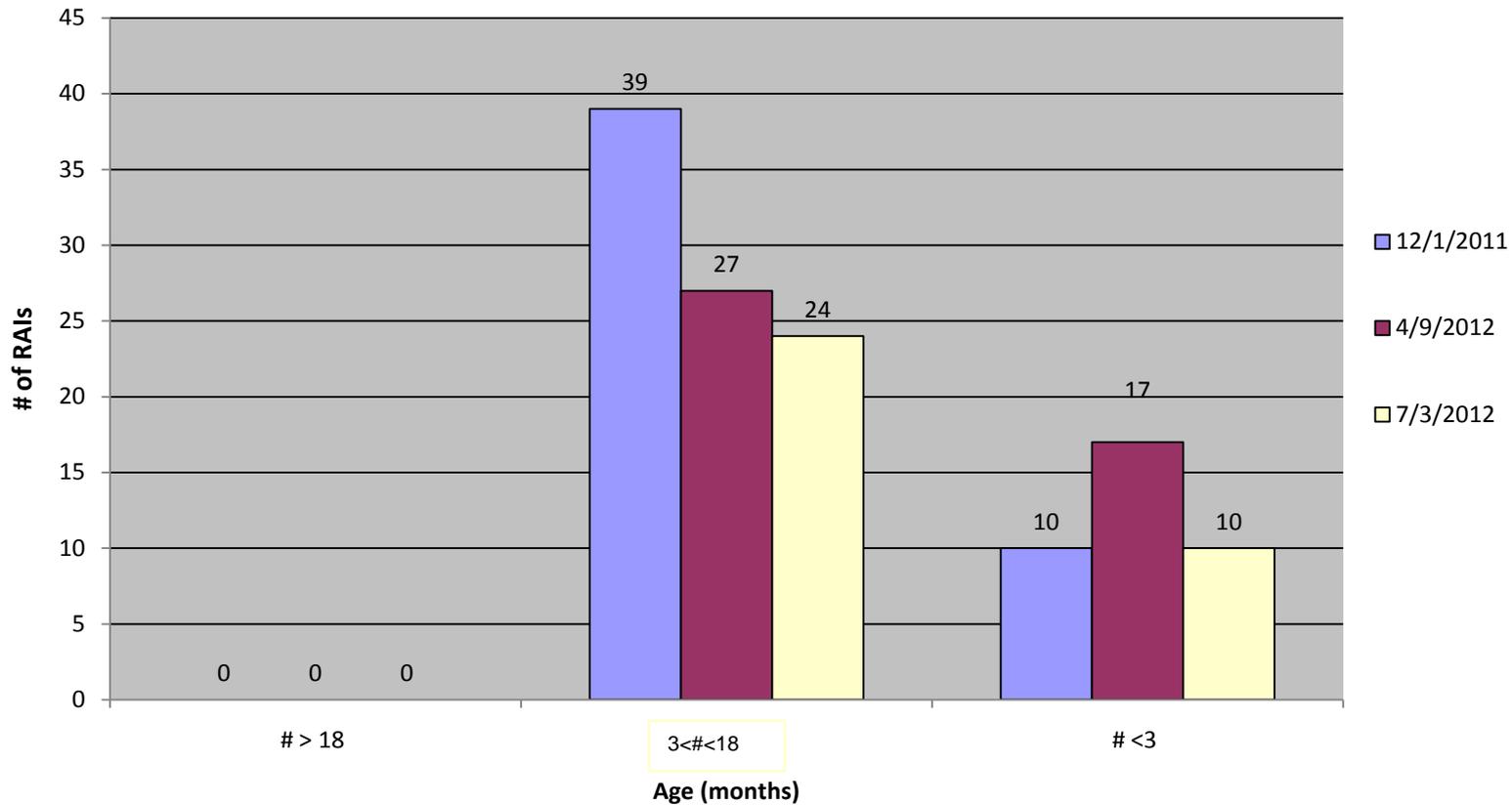


5. SCOLA Review Status



➤ RAI Questions – Responded Category Age

Age of RAIs with NRC status "Responded"



5. SCOLA Review Status



➤ Ch 12 RAI status

- ✓ The NRC review and disposition of 26 FSAR Chapter 12 RAIs appear to be lagging
- ✓ Details on following slides

eRAI Number	Number of Questions	Date Response Submitted
5784	2	12/14/2011
5786	2	12/14/2011
5972	8	1/23/2012
5976	4	1/23/2012
5977	8	4/10/2012
5979	1	1/23/2012
5980	1	1/23/2012
TOTAL	26	



5. SCOLA Review Status



Chapter 12 RAIs with Status "In Evaluation"
(Based on August 29, 2012 eRAI Report)

eRAI #	RAI Question #	Subject	Date Response Submitted
5784	12.02-14	Describe actual waste processing radiological impacts	12/14/2011
5784	12.02-15	Describe methods, models, and assumptions that support Table 12.2-202, and explain consistency with Tables 12.2-73R and 12.2-75R	12/14/2011
5980	12.02-16	Provide methods and assumptions used to determine source term activity values for the degasifier	12/14/2011
5977	12.03-12.04-14	Provide additional information for certain lines in the degasifier subsystem (e.g., purpose of each line, impact on area dose rates)	04/10/2012
5977	12.03-12.04-15	Describe degasifier's ALARA design features	04/10/2012
5977	12.03-12.04-16	Describe CVCS holdup tanks' impact on dose rates	04/10/2012
5977	12.03-12.04-17	Provide ALARA design feature information for the site-specific line that connects the CVCS Holdup tanks to the suction of the charging pumps	04/10/2012
5977	12.03-12.04-18	Describe methods to prevent introduction of resin fines from CVCS Holdup Tanks into the RCS	04/10/2012
5977	12.03-12.04-19	Describe methods to prevent potential damage to the RCP Seal Packages from use of CVCS Holdup Tank Pumps	04/10/2012
5977	12.03-12.04-20	FSAR Table 9.3.2-6R to describe chemistry analysis parameters consistent with RCS makeup water requirements	04/10/2012
5977	12.03-12.04-21	Provide basis for removal of the Chemical Drain Tank Sample line purge connection	04/10/2012
5786	12.03-12.04-22	Describe method to incorporate estimated exposure to construction workers from FEIS into FSAR	01/23/2012
5786	12.03-12.04-23	Include IRSF, SG Storage Building, and old reactor pressure vessel head as sources of direct radiation exposure to construction workers	01/23/2012
5972	12.03-12.04-24	Describe physical barriers to prevent inadvertent access to potential VHRAs within the Interim Radwaste Storage Facility	01/23/2012
5972	12.03-12.04-25	Describe methods to prevent radiation from streaming from radiation sources located within storage vaults	01/23/2012
5972	12.03-12.04-26	Describe the waste storage container and design features provided to protect structural integrity	01/23/2012
5972	12.03-12.04-27	Describe IRSF compliance with 10 CFR 20.2007	01/23/2012
5972	12.03-12.04-28	Describe IRSF compliance with 40 CFR 190 design criteria; describe contribution of direct radiation to site boundary dose	01/23/2012



5. SCOLA Review Status



Chapter 12 RAIs with Status "In Evaluation" (Based on August 29, 2012 eRAI Report)

eRAI #	RAI Question #	Subject	Date Response Submitted
5972	12.03-12.04-30	Describe basis for assumed gas generation rates in IRSF	01/23/2012
5972	12.03-12.04-31	Provide occupational dose estimate associated with IRSF	01/23/2012
5976	12.03-12.04-32	Describe source term content of IRSF	01/23/2012
5976	12.03-12.04-33	Provide radiation zone information for cooling tower blowdown sump	01/23/2012
5976	12.03-12.04-34	Describe design features to minimize radiological exposure from cooling tower blowdown sump	01/23/2012
5976	12.03-12.04-35	Describe design features to minimize contamination from pipes containing radioactive fluids leading to and from the blowdown sump	01/23/2012
5979	12.03-12.04-36	Describe use of zinc injection system	01/23/2012

- Proposed path forward is to hold near-term conference call or meeting to discuss

6. ACRS Meeting Schedule



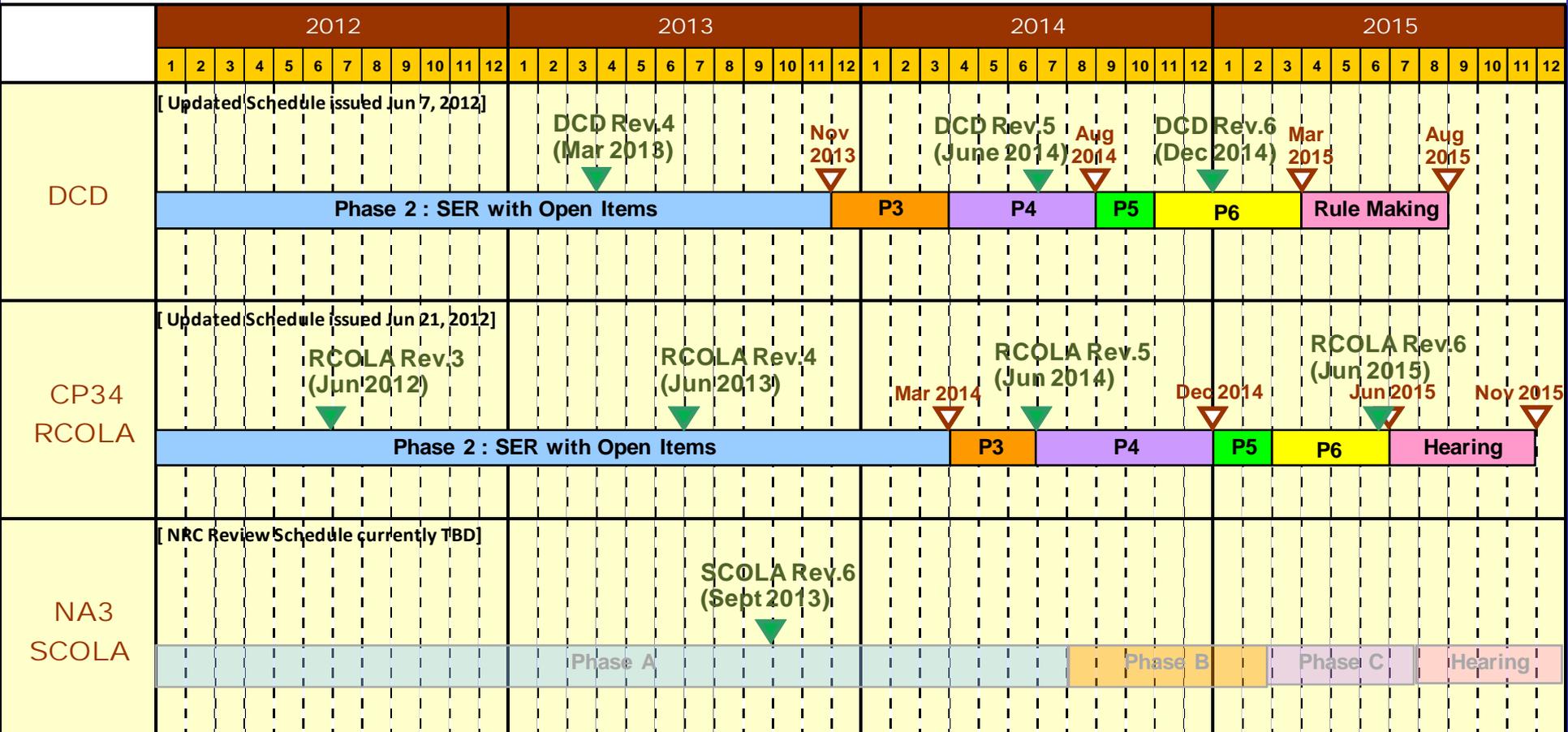
Chapter	Phase Completion Dates (Comparison to 7/12/2012 DCWG Meeting)					
	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6
1	Complete	11/29/13	TBD			
2	Complete	Complete	Complete	9/24/13		
3	Complete	11/29/13 (+10)	TBD			
4	Complete	Complete	10/18-19/12 (+1)			
5	Complete	Complete	Complete	10/19/12		
6	Complete	1/30/13	3/21-22/13			
7	Complete	TBD	11/15-16/12			
8	Complete	Complete	Complete	11/29/12		
9	Complete	Complete	Complete	2/4/13		
10	Complete	Complete	Complete	10/25/12		
11	Complete	Complete	Complete	7/25/13 (+7)		
12	Complete	Complete	Complete	10/2/13(+5)		
13	Complete	Complete	Complete	Complete		
14	Complete	11/29/13	TBD			
15	Complete	Complete	Complete	2/4/13		
16	Complete	Complete	Complete	10/3/13 (+12)		
17	Complete	12/28/12	2/21-22/13			
18	Complete	TBD	4/25-26/13			
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 held 7/16/2012
- ✓ Topics included:
 - 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
- ✓ RCP Seal Testing continues
- ✓ Technical Report planned for February 2013

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
 - Create a end-game plan for discussion
 - ✓ Next DCWG meeting proposed November 8th, 2012