

ALWR Requirements Safety Evaluation Report

Status
March, 1992

Prepared By the EPRI ALWR Program

April 1, 1991

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Introduction

This is the monthly report prepared by the EPRI/ALWR Staff concerning the progress toward completion of Safety Evaluation Reports (SERs) on Volume II and Volume III of the Utility Requirements Document. Three measures of progress are noted:

	page
Central Issues	1
Safety Evaluation Issues	3
SECY 91-161 Milestones	5

This report is summary in nature and does not include background or explanation of individual entries. For further explanation or comments, please contact George Bockhold, ALWR Senior Program Manager (415-855-2613) or John Trotter, ALWR Regulatory Interface Manager (415-855-2786).

NOTES FOR THIS MONTH

- NRC Staff progress on preparation of the Evolutionary Plant Final SER (FSER) and of the Passive Plant Draft SER(DSER) was substantial in March although official release of both documents is still in the future (APRIL for the DSER, August for the FSER).
- The March 27 meeting with the Utility Steering Committee and NRC Management ended with a specific action list and, overall, indicated that the ALWR Requirements review was proceeding quite well.
- Five additional Policy Issues were identified by the NRC on March 27. This has the effect of making some of the SECY-91-161 milestones "not complete" however, overall schedules may not be affected. Full descriptions of the additional Policy Issues are expected in June.

Central Issues

- SEE LIST ON NEXT PAGE

- MARCH ACTIVITIES

MEETINGS

- March 4, ACRS, Digital Control Systems
- March 20, Passive Plant System Classification, Reliability Assurance and Technical Specifications
- March 27, NRC Management (Denver)

REPORTS/SUBMITTALS

- March 20, Passive Plant System Classification (part of meeting)

- STATUS AS OF END OF MARCH

	Evolutionary Plant	Passive Plant
Issues Identified (NRC list)	25	30
Issue resolutions available("done")	8	20
Issues Closed	16	2

NOTE: This list of "issues" is from the February 27 NRC letter. It does not reflect the five additional Policy Issues identified in the March 27 meeting.

- PLANNED APRIL ACTIVITIES

MEETINGS

- Discussion of Passive Plant RAP, Management-level only
- April 20, NRC Staff brief of Commission on Source Term

REPORTS/SUBMITTALS

- April 10, Comments on February 27 Policy letter

Requirements Central Issues List

ISSUE	EP Status*	PP Status*	BWR-PWR
I SECY-90-016 Issues	-	-	-
A use of physically-based source term	done	done	both
B anticipated transients without scram	closed	done	both
C mid-loop operation	done		PWR
D station blackout	closed	NA	both
E fire protection	closed	done	both
F intersystem loss-of-coolant-accident	closed	done	both
G hydrogen control	closed	done	both
H core concrete interaction - ability to cool core debris	done	done	both
I high pressure core melt ejection	closed	done	both
J containment performance	done		both
K dedicated containment vent penetration	closed	done	both
L equipment survivability	closed	done	both
M elimination of operating basis earthquake	closed	done	both
N in-service testing of pumps and valves	closed	closed	both
II Other Evolutionary and Passive Design Issues	-	-	-
A industry codes and standards	closed	closed	both
B electrical distribution	done	NA	both
C seismic hazard curves and design parameters	done	don	both
D leak-before-break	closed	done	both
E classification of main steamlines of boiling water reactors (BWRs)	closed	done	BWR
F tornado design basis	closed	done	both
G containment bypass			both
H containment leakrate testing	closed	done	both
I post-accident sampling system	closed	done	both
M reliability assurance program	done		both
N site specific probabilistic risk assessments	done	done	both
III Passive Design Issues Only	-	-	-
A regulatory treatment of non-safety systems	NA		both
B definition of passive failure	NA		both
C thermal-hydraulic stability of the simplified boiling water reactor (SBWR)	NA	done	BWR
D safe shutdown requirements	NA	done	both
E control room habitability	NA		both
F radionuclide attenuation	NA		both
G simplification of off-site emergency planning	NA		both

* "Status" Codes:

NA = not applicable to Evolutionary or Passive Designs

done = all EPRI/ALWR work done and available for discussion with the NRC

closed = no additional interaction expected between EPRI/ALWR and the NRC for SER

Safety Evaluation Issues (Evolutionary Plant Only)

MARCH ACTIVITIES

MEETINGS

- March 4, 5, 11, 12 and 20 Open Issues discussion

REPORTS/SUBMITTALS

- March 3, Bockhold to Wilson, "Project 669 - Miscellaneous"
- March 11, Marston to Crutchfield, "Continued Discussion Issues"
- March 19, Bockhold to Wilson, "Project 669 - Miscellaneous Changes to Volume II"
- March 30, Bockhold to Wilson, "Project 669 - Change to Chapter 11"
- March 31, Bockhold to Wilson, "Miscellaneous Changes to Volume II"

STATUS AS OF END OF MARCH

Issues Identified	417
Issues Closed	376

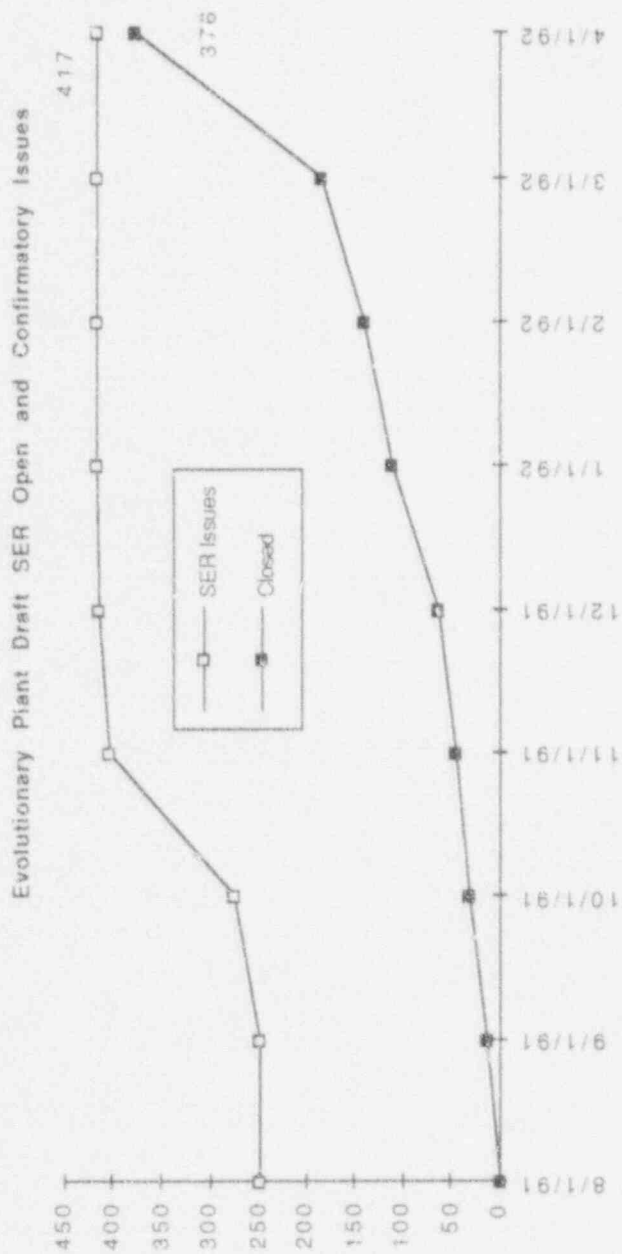
PLANNED APRIL ACTIVITIES

MEETINGS

- April 1 Evolutionary Plant Open Issues

REPORTS/SUBMITTALS

- None planned



No Passive Plant DSERs

SECY 91-161 Milestones

- SEE LIST ON NEXT TWO PAGES
- MILESTONES DUE IN MARCH
 - PP- DSER to Project Manager
- MILESTONE ACTIVITIES IN MARCH MEETINGS
 - March 27 meeting identifies five additional Policy Issues

REPORTS/SUBMITTALS

- March 30, last DSER response for Evolutionary Plant
- Essentially all FSER inputs to PM for Passive Plant

- STATUS AS OF END OF MARCH

	Evolutionary Plant (23 Tasks)	Notes	Passive Plant (31 Tasks)	Notes
Tasks Completed	11		7	
Tasks Due But Not Done	6	Policy Review	6	DSER input and Policy Review
Longest slip	12 months	Policy Papers and Review	0 months	Policy Papers and Review
Final SER Scheduled per SECY-91-161	August 18, 1992		September 24, 1993	
Final SER: EPRI/ALWR staff estimate	July 31, 1992	Impact of last five Policy Issues Unknown	February 15, 1993	No "New Policy Issues" identified after DSER

- MILESTONES DUE IN APRIL
 - PP- (NRC) PM Prepare DSER
 - PP- (NRC) DSER to Commission/ACRS
 - PP- (NRC) DSER Issued to Applicant

- PLANNED APRIL ACTIVITIES

MEETINGS

- none

REPORTS/SUBMITTALS

- PP- (ALWR) Last RAI Response
 - PP- (NRC) DSER to Applicant
- March 1992 NRC Interface Report - Requirements Document SER

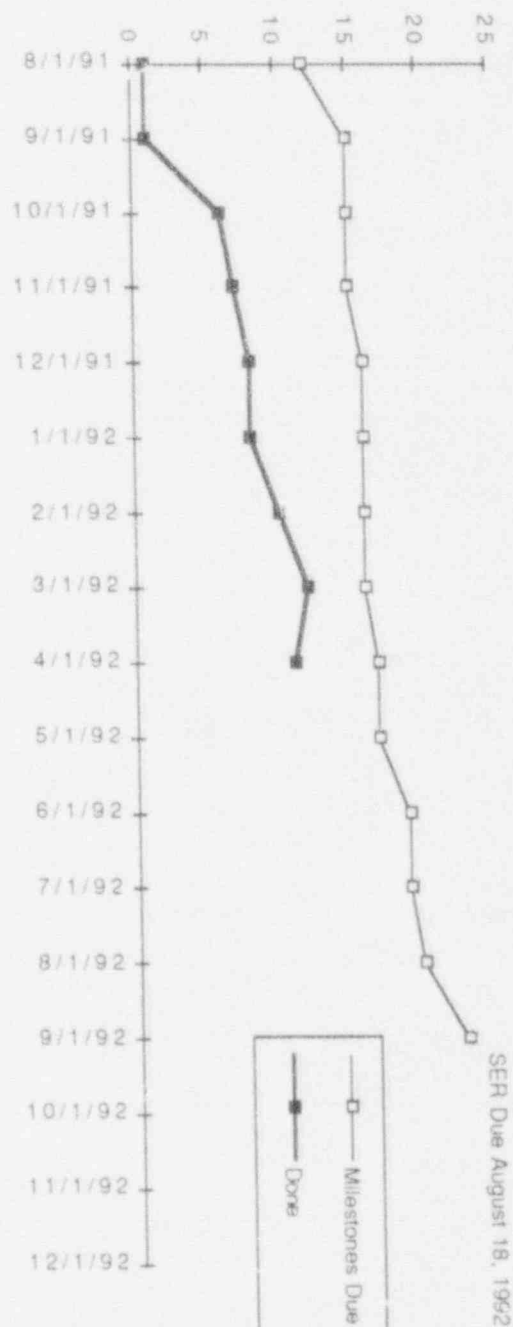
SECY-91-161 Evolutionary Plant SER Milestones

	SECY-91-161 Start Date	SECY-91-161 End Date	Status	Actual/ALWR Estimated End Date
Receipt of Application	6/30/86	10/26/89	complete	10/26/89
Preliminary Evaluation Phase				
Review of Appl/RAIs to PM	6/30/86	8/30/90	complete	9/5/91
PM Issues RAIs	1/5/87	8/30/90	complete	9/5/91
Policy Issue Identification				
Identify Policy Issues	9/6/88	11/26/90	complete	3/27/92
Prepare Policy Papers	11/3/88	3/25/91	overdue	6/1/92
Trans. Policy Papers to Com./ACRS	1/19/89	3/25/91	overdue	6/1/92
ACRS Review of Policy Paper	1/19/89	4/23/91	overdue	4/17/92
Com. Review of Policy Paper	1/19/89	6/17/91	overdue	5/1/92
Commission Guidance to Staff	6/26/90	6/17/91	overdue	5/15/92
Appl. Responds to RAIs	3/27/87	12/21/90	complete	1/9/92
DSER Preparation/Issuance				
DSER to PM	3/27/87	6/10/91	complete	9/13/91
PM Prepare DSER	2/18/88	6/28/91	complete	4/1/92
DSER to Commission/ACRS	2/18/88	6/28/91	complete	10/15/91
DSER Issued to Applicant	2/18/88	7/12/91	complete	11/4/91
ACRS Review of DSER	2/18/88	8/9/91	complete	1/22/92
Appli. Reviews DSER & Responds	2/18/88	11/1/91	complete	3/6/92
FSER Preparation/Issuance				
FSER to PM	9/7/90	3/11/92	overdue	4/1/92
PM Prepares FSER	2/10/92	5/12/92		5/1/92
FSER to Commission/ACRS	5/13/92	5/13/92		5/12/92
ACRS Review of FSER	5/13/92	7/15/92		7/10/92
Commission Review of FSER	5/13/92	8/14/92		7/30/92
Commission Decision	8/17/92	8/17/92		7/31/92
FSER Issued to Applicant	8/17/92	8/18/92		7/31/92

SECY-91-161 Passive Plant SER Milestones

	SECY-91-161 Start Date	SECY-91-161 End Date	Status	Actual/ALWR Estimated End Date
Receipt of Application	9/7/90	9/7/90	complete	9/7/90
Preliminary Evaluation Phase				
Review of Appl/RAIs to PM	9/7/90	6/14/91	complete	9/13/91
Initial Review	9/7/90	11/29/90	complete	11/29/90
Technical Review/RAI Development	9/7/90	6/14/91	complete	9/23/91
PM Issues RAIs	11/20/90	6/20/91	complete	9/23/91
Policy Issue Identification				
Identify Policy Issues	3/19/90	6/6/91	complete	3/27/92
Prepare Policy Papers	11/19/90	9/11/91	overdue	2/19/92
Trans. Policy Papers to Com./ACRS	12/17/90	9/12/91	overdue	2/20/92
ACRS Review of Policy Paper	12/17/90	11/14/91	overdue	4/17/92
Com. Review of Policy Paper	12/17/90	12/17/91	overdue	5/1/92
Commission Guidance to Staff	12/17/91	12/17/91	overdue	5/15/92
Appl. Responds to RAIs	5/9/91	10/14/91	overdue	2/14/92
DSER Preparation/Issuance				
DSER to PM	9/3/91	2/10/92	complete	3/13/92
PM Prepare DSER	12/23/91	4/13/92		4/13/92
DSER to Commission/ACRS	4/14/92	4/14/92		4/14/92
DSER Issued to Applicant	4/14/92	4/28/92		5/15/92
ACRS Review of DSER	4/14/92	5/13/92		7/15/92
Appl. Reviews DSER & Responds	4/30/92	9/2/92		8/15/92
FSER Preparation/Issuance				
FSER to PM	8/4/92	4/16/93		10/1/92
PM Prepares FSER	3/18/93	6/18/93		11/1/92
FSER to Commission/ACRS	6/21/93	6/21/93		12/1/92
ACRS Review of FSER	6/21/93	8/20/93		1/1/93
Commission Review of FSER	6/21/93	9/22/93		2/1/93
Commission Decision	9/23/93	9/23/93		2/15/93
New Policy Issue Identification				
Identify New Policy Issues	9/3/92	10/5/92		N/
Prepare Policy Papers	10/6/92	12/9/92		NA
Trans. Policy Papers to Com./ACRS	12/10/92	12/10/92		NA
ACRS Review of Policy Paper	12/10/92	2/12/93		NA
Com. Review of Policy Paper	12/10/92	3/17/93		NA
Commission Guidance to Staff	3/18/93	3/18/93		NA
FSER Issued to Applicant	9/23/93	9/24/93		2/15/93

Evolutionary Plant SECY 91-161 Milestone



Passive Plant SECY 91-161 Milestone

